

PITTCON Conference and Expo 2013

Abstracts

**Philadelphia, Pennsylvania, USA
17-21 March 2013**

Index

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Technical Sessions

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Sunday PM, March 17, 2013

PLENARY LECTURE

Session 10

The Wallace H Coulter Plenary Lecture

Sunday PM, Room: Ballroom B, Level 300

4:45 PM

(10-1)

[Examer Objects to Nanometer Ones and Back Again](#) Harold Kroto, Florida State University and University

PITTCON 2013

of Sussex

AWARDS

Session 20

Pittcon Heritage Award - arranged by Sarah Reisert, Chemical Heritage Foundation

Sunday PM, Room: Ballroom B, Level 300

Sarah Reisert, Chemical Heritage Foundation, Presiding

1:05 PM

(20-1)

[Presentation of the 2013 Pittcon Heritage Award posthumously awarded to Guenther Laukien, founder of Bruker Corporation - accepted by son, Frank H Laukien, Bruker Corporation](#)

SYMPOSIA

Session 30

ACS ANYL - Forensic Science: Preparing Students for the Job - Thomas Spudich, Maryville University

Sunday PM, Room: 123

Thomas Spudich, Consultant, Presiding

1:05 PM

(30-1)

[The Role of Virtual Laboratories in Teaching Forensic Science](#) Richard Saferstein, Consultant

1:40 PM

(30-2)

[A Multidisciplinary Approach to a Criminal Event: From Murder to Trial](#) Geriann M. Brandt, Maryville University

2:15 PM

(30-3)

[Teaching Chemical Analysis Using Examples from the Forensics Lab](#) Robert Q. Thompson, Oberlin College

2:50 PM

(30-4)

[Keeping Forensic Science Students Attention and Interest: Weeding Through a Forensic Chemistry Curriculum](#) Frank Dorman, The Pennsylvania State University, Amanda Leffler, Jessica Westland

3:25 PM

(30-5)

[Skill Sets for the Forensic Chemist](#) Douglas E. Rohde, Lake County Crime Laboratory

SYMPOSIA

Session 40

Emerging Simple and Inexpensive Microdevice Technologies for Point-of-Care Assays - arranged by Adam T. Woolley, Brigham Young University

Sunday PM, Room: 124

Adam T. Woolley, Brigham Young University, Presiding

1:05 PM

(40-1)

[Microfluidics for Global Health Diagnostics](#) Samuel Sia, Columbia University

1:40 PM

(40-2)

[Paper-Based Microelectrochemical Devices](#) Richard M. Crooks, The University of Texas at Austin, Hong Liu

2:15 PM

(40-3)

[Simple, Detectorless and Label-Free Analyte Quantitation Using "Flow Valve" Microfluidic Devices](#) Adam T. Woolley, Brigham Young University, Danielle Mansfield, Debolina Chatterjee, Sudeep Subedi

2:50 PM

(40-4)

[Toner and Paper-Based Fabrication Techniques for Microfluidic Applications](#) Emanuel Carrilho, University of São Paulo

3:25 PM

(40-5)

[Digital Microfluidics For Clinical Applications](#) Aaron Wheeler, University of Toronto

SYMPOSIA

Session 50

Human Exposome Discovery and Disease Investigation - arranged by Joachim D. Pleil, US Environmental Protection Agency

Sunday PM, Room: 125

Joachim D. Pleil, US Environmental Protection Agency, Presiding

1:05 PM

(50-1)

[Hippocrates Reloaded: Volatile Biomarkers for Non-Invasive Medical Diagnosis](#) Jochen K. Schubert, University of Rostock, Patricia Fuchs, Phillip Trefz, Wolfram Miekisch

1:40 PM

(50-2)

[The Human Exposome and Metabolomics Play Critical Roles in Clinical Breath Analysis](#) Terence H. Risby, Johns Hopkins University

2:15 PM

(50-3)

[Miniature Chemical Sensors for Field Breath Analysis](#) Cristina E. Davis, University of California - Davis

2:50 PM

(50-4)

[Complex Disease Endotypes and Implications for GWAS and Exposomics](#) Stephen Edwards, US EPA, BJ George, Brooke Heidenfelder, ClarLynda Williams-DeVane, David Reif, Elaine Cohen Hubal, Jane Gallagher

3:25 PM

(50-5)

[Some Hazards on the Road to Breath Biomarker Discovery](#) Michael Phillips, Mensanna Research

SYMPOSIA

Session 60

IAEAC - Nanoparticles and Nanomaterials: Analytical and Health Aspects - arranged by Thomas Gebel, Federal Institute for Occupational Safety and Health

Sunday PM, Room: 122B

Thomas Gebel, Cornell University, Presiding

1:05 PM

(60-1)

[Cornell Dots: From Synthesis to Health Aspects](#) Uli B. Wiesner, Cornell University

1:40 PM

(60-2)

[Physical and Physicochemical Analysis of Nanomaterials](#) Volker Bachmann, Federal Institute of Occupational Safety & Health

2:15 PM

(60-3)

[Approaches To Assess Nanomaterial Toxicity](#) Thomas Gebel, Federal Institute for Occupational Safety and Health

2:50 PM

(60-4)

[Nanomaterials Toxicology - Current Knowledge and Future Research Needs](#) Günter Oberdörster, University of Rochester

3:25 PM

(60-5)

[Interactive Discussion - Occupational Safety and Health of Nanomaterials: Approaches to Risk Management](#) Thomas Gebel, Federal Institute for Occupational Safety and Health

SYMPOSIA

Session 70

Immunoanalysis for Environmental Analysis - arranged by Rudolf J. Schneider, BAM Federal Institute for Materials Research and Testing

Sunday PM, Room: 122A

Rudolf J. Schneider, BAM Federal Institute for Materials Research and Testing, Presiding

1:05 PM

(70-1)

[Immunoassay for Human/Environmental Exposure Assessment](#) Shirley J. Gee, University of California - Davis, Bruce Hammock

1:40 PM

(70-2)

[Generation of Antibodies and Development of Environmental Application of Immunoassays for PBDEs](#) Weilin L. Shelver, USDA

2:15 PM

(70-3)

[Application of ELISA in Determining Levels of Estrogens and Antibiotics in Agricultural Fields](#) Diana S. Aga, University at Buffalo, SUNY

2:50 PM

(70-4)

[Multi-Laboratory Validation of Estrone \(E1\) ELISA Methods](#) Fernando Rubio, Abraxis LLC, Anching Tnag, Andrew Lincoff, David Russell, Eric Kleiner, Kim Byungchul, Laura Webb, Rudolf Schneider

3:25 PM

PITTCON 2013

(70-5)

[Immunoanalytics Underpinning Surface Water Screening Strategies](#) Rudolf J. Schneider, BAM Federal Institute for Materials Research and Testing

SYMPOSIA

Session 80

Nanotechnology Against Cancer: A Fight in Progress - arranged by Raoul Kopelman, University of Michigan

Sunday PM, Room: 121C

Raoul Kopelman, University of Michigan, Presiding

1:05 PM

(80-1)

[Spherical Nucleic Acid \(SNA\) Nanostructures: Establishing New Paradigms in Molecular Diagnostics and Intracellular Gene Regulation](#) Chad A. Mirkin, Northwestern University

1:40 PM

(80-2)

[Targeted and Cloaked Multifunctional NanoPlatforms Improve Medical Imaging, Therapy and Surgery](#) Raoul Kopelman, University of Michigan

2:15 PM

(80-3)

[Multi-Parameter Logic Circuits for Cancer Cell Identification and Therapy](#) Weihong Tan, University of Florida

2:50 PM

(80-4)

[Targeting with Plasmonically Scattering Enhancing Nanoparticles Changes Cell Functions and Unravels Its Secrets](#) Mostafa A. El-Sayed, Georgia Institute of Technology

SYMPOSIA

Session 90

New Instrumentation for Biofuels Research - And How to Deal with the Flood of New Data - arranged by Roland Hirsch, US Dept of Energy

Sunday PM, Room: 121B

Roland Hirsch, US Dept of Energy, Presiding

1:05 PM

(90-1)

[Application of Next-Generation Sequencing to Biofuels Research](#) Curtis G. Wilkerson, Michigan State

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University

1:40 PM

(90-2)

[Advances in High Throughput Separations and Mass Spectrometry for Biofuels Research and the Coming Deluge of Pan-omics Data](#) Richard Smith, Pacific Northwest National Laboratory, Erin Baker, Gordon Anderson, Kristin Burnum, Mary Lipton

2:15 PM

(90-3)

[Using NMR to Characterize Recalcitrance Elements in Biomass at the Molecular Scale](#) Arthur Ragauskas, Georgia Institute of Technology

2:50 PM

(90-4)

[Light, Force and \(Inter\)Action: Advanced Imaging Technologies for Biofuels Research](#) Seema Singh, Sandia National Laboratories

3:25 PM

(90-5)

[How the DOE Systems Biology Knowledgebase \(KBase\) Supports Biofuels Research](#) Bob Cottingham, Oak Ridge National Laboratory

SYMPOSIA

Session 100

New Ionization Approaches in Mass Spectrometry: Molecular Imaging - arranged by Sarah Trimpin, Wayne State University

Sunday PM, Room: 121A

Sarah Trimpin, Wayne State University, Presiding

1:05 PM

(100-1)

[New Analytical Opportunities in Ambient Surface Sampling/Ionization Mass Spectrometry: Combining Laser Ablation Sampling and Liquid Phase Collection](#) Gary J. Van Berkel, Oak Ridge National Laboratory

1:40 PM

(100-2)

[Ambient Imaging Using Nanospray Desorption Electrospray Ionization Mass Spectrometry](#) Julia Laskin, Pacific Northwest National Laboratory, Brandi Heath, Ingela Lanekoff, James Carson, Mathew Thomas

2:15 PM

(100-3)

[New Approaches to Tissue Imaging by LAESI Mass Spectrometry](#) Akos Vertes, George Washington University, Anu Vaikkinen, Bindesh Shrestha, Brian Smith, Hang Li, Linwen Zhang, Risto Kostiainen, Tiina Kauppila

2:50 PM

(100-4)

[Laserspray Ionization Imaging of Multiply-Charged Ions](#) Sarah Trimpin, Wayne State University

3:25 PM

(100-5)

[Innovations in Mass Spectrometry Based Imaging: A Route to New Applications](#) Ron M. Heeren, FOM-AMOLF

SYMPOSIA

Session 110

New Spectroscopic Approaches to Protein Structure - Understanding Amyloid Fibrils - arranged by Igor K. Lednev, University at Albany, SUNY

Sunday PM, Room: 120C

Igor K. Lednev, University at Albany, SUNY, Presiding

1:05 PM

(110-1)

[New Views of Amyloid](#) Daniel Raleigh, SUNY Stony Brook, Andisheh Abedini, Ping Cao

1:40 PM

(110-2)

[Conformational Switching Within Individual Amyloid Fibrils: An Insight From Atomic Force Fluorescent Microscopy](#) Iliia V. Baskakov, University of Maryland School of Medicine

2:15 PM

(110-3)

[VCD Determines Morphology of Amyloid Fibrils](#) Rina K. Dukor, BioTools, Inc., Dmitry Kurouski, Igor Lednev, Laurence Nafie

2:50 PM

(110-4)

[On the Basis of Fibrillation: Spectroscopic Studies of Unfolded Insulin in Non-Aqueous Solution](#) Christian Johannessen, University of Manchester

3:25 PM

(110-5)

[Structure and Composition of Insulin Fibril Surfaces Probed by TERS](#) Igor K. Lednev, University at Albany, SUNY, Dmitry Kurouski, Tanja Deckert-Gaudig, Volker Deckert

WORKSHOPS

Session 120

Standard Reference Materials (SRMs) for Food, Environmental, Nutritional, and Proteomic Measurements - arranged by Stephen A. Wise, National Institute of Standards and Technology

Sunday PM, Room: 126B

Stephen A. Wise, National Institute of Standards and Technology, Presiding

1:05 PM

(120-1)

[Energy and Energy-Related Environmental SRMs](#) Thomas A. Vetter, National Institute of Standards and Technology, Stephen Long

1:35 PM

(120-2)

[SRMs to Support Oil Spill Assessment and Remediation](#) Michele Schantz, National Institute of Standards and Technology, Bruce Benner, David Miller, Jacolin Murray, John Kucklick, Stephen Wise, Steven Hawthorne

2:05 PM

(120-3)

[Eggs, Milk, Cereal, and Meat: SRMs for Breakfast](#) Melissa M. Phillips, National Institute of Standards and Technology

2:50 PM

(120-4)

[SRMs for Human Nutritional Assessment](#) Karen W. Phinney, National Institute of Standards and Technology, Katherine Sharpless, Lane Sander, Michele Schantz, Stephen Wise

3:20 PM

(120-5)

[SRM/D: On-Line Access to Qualitative and Quantitative SRM-Derived Data](#) Paul A. Rudnick, National Institute of Standards and Technology

ORGANIZED CONTRIBUTED SESSIONS

Session 130

ACS ANYL - Pharmaceutical and Bioanalytical Chemistry - arranged by Thomas M. Rossi, Kore Pharmaceuticals

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Sunday PM, Room: 115A

Thomas M. Rossi, Kore Pharmaceuticals, Presiding

1:00 PM

(130-1)

[Automated Curve Resolution Algorithm for Overlapped Peaks in Liquid Chromatography Coupled to Diode Array Detection](#) Kyle W. Pfeiffer, Virginia Commonwealth University, Sarah Rutan

1:20 PM

(130-2)

[Far-Field Photostable Optical Nanoscopy \(PHOTON\) for Super-Resolution and Single-Molecule Imaging of Single Live Cells](#) X Nancy Xu, Old Dominion University, Lauren Browning, Tao Huang

1:40 PM

(130-3)

[Combining CITP/CZE with ESI-Triple Quadrupole MS for High Sensitivity Sample Quantification](#) Keqi Tang, Pacific Northwest National Laboratory

2:00 PM

(130-4)

[Protein Structure Analysis of Gonococcal Cell Surface Protein Antibody Binding Domains Using a Molecular Model Approach](#) Yu-Shu Ting, Zeus Scientific

2:35 PM

(130-5)

[Single Chain Fragment Variable \(scFv\) Recombinant Antibody to Characterize Therapeutic Humanized Monoclonal Antibody by ELISAs and QCM](#) Xiangqun Zeng, Oakland University, Peiling Lin, Ray Mernaugh, Yuqin Shang

2:55 PM

(130-6)

[New Methodology for Sampling and Analyzing Elemental Sulfur in Natural Gas](#) Alejandro Gonzalez, DCG Partnership

3:15 PM

(130-7)

[Fundamental Study of Microdroplet Mixing Under Low Reynolds Number Conditions](#) Mao Fukuyama, The University of Tokyo, Akihide Hibara

3:35 PM

(130-8)

[Modeling of Some Amino Acids on RPLC Using 1,3 Dialkyl Substituted Imidazolium Ionic Liquids as Mobile Phase Additives](#) Tarab Ahmad, Western Illinois University, Ahlam Alalwait, Azhar Alhijji, Divya Shekar, Kishore Kumar Aluguvelli, Prashanthi Kolanupaka, Tariq Z Ahmad, Vijaya Sree Vegesna

ORGANIZED CONTRIBUTED SESSIONS

Session 140

Molecular Spectroscopy in the Small – Advances in NMR, IR, Terahertz and Raman - arranged by Mark Druy, Physical Sciences Inc.

Sunday PM, Room: 120B

Mark Druy, Physical Sciences Inc., Presiding

1:00 PM

(140-1)

[Advances in the Miniaturization of Nuclear Magnetic Resonance Spectroscopy... NMR in a "Shoebox"](#) Jeffrey W. Sherman, picoSpin, Dean Antic, John Frost, John Price

1:20 PM

(140-2)

[Portable Open-Field THz Instrumentation](#) Albert Redo-Sanchez, Zomega Terahertz Corporation, Brian Schulkin, Thomas Tongue

1:40 PM

(140-3)

[Analytical Applications of Quantum Cascade and Interband Cascade Lasers](#) Mickey Frish, Physical Sciences Inc.

2:00 PM

(140-4)

[Molecular Detection and Imaging Using Compact, Tunable Quantum Cascade Lasers](#) Bob Shine, Daylight Solutions, Miles Weida

2:35 PM

(140-5)

[Cantilever Enhanced Photoacoustic with Laser and Other Sources](#) Jussi Raittila, Gasera Ltd., Alekski Helle, Ismo Kauppinen, Juho Uotila, Jyrki Kauppinen, Kari Roth

2:55 PM

(140-6)

[Fast and Broadly Tunable QCL Arrays for Standoff Detection and In Situ Measurement](#) Mark F. Witinski, Eos Photonics, Christian Pfluegl, Laurent Diehl

3:15 PM

(140-7)

[Improving Pass / Fail Decisions for Pharmaceutical Material Verification](#) Robert Brush, Thermo Fisher Scientific, Lin Zhang, Robert Green, Wayne Jalenak

3:35 PM

(140-8)

[Handheld Spectrometer for Oil Condition Monitoring](#) Patrick F. Henning, Spectro, Inc.

ORAL SESSIONS

Session 150

Bioanalytical Analysis - arranged by Chenzhong Li, Florida International University

Sunday PM, Room: 115C

Chenzhong Li, Florida International University, Presiding

1:00 PM

(150-1)

[Detection of Cancer Biomarker in Crude Biological Fluids by SPR on Microstructured Au Film](#) Julien Breault-Turcot, Université de Montréal, Alexandra Aubé, Jean-Francois Masson, Pierre Chaurand

1:20 PM

(150-2)

[Cancer Cell Imaging and Detection Using Upconversion Nanoparticles](#) Chuanbin Mao, University of Oklahoma

1:40 PM

(150-3)

[Carbon Nanotube Strings for Electronic Biosensors](#) Jerome P. Ferrance, J2F Engineering

2:00 PM

(150-4)

[Polymerized Porous Phospholipid Nanoshells with Enhanced Stability and Controllable Degradation for Intracellular Sensing](#) Jinyan Wang, The University of Arizona, Craig Aspinwall, Garrett Yagade

2:35 PM

(150-5)

[Diagnostic Sodium Ion Sensor for the Real-Time Screening and Diagnosis of Cystic Fibrosis: A Novel Alternative to the Sweat Test](#) Evan K. Wujcik, The University of Akron, Chelsea Monty, Daniel Trowbridge, Nathaniel Blasdel

2:55 PM

(150-6)

[Design and Characterization of Modified Mannose Ligands for Selective Recognition of E.coli Using SPR and EQCM](#) Idris Yazgan, Binghamton University

3:15 PM

(150-7)

[Microring Resonators for Investigating Membrane-Bound Protein Interactions](#) Courtney Sloan, University of Illinois, Ryan Bailey

3:35 PM

(150-8)

[Quantifying Methotrexate Level in Serum for Chemotherapy Monitoring Using SPR Sensors](#) Sandy Shuo Zhao, Universite de Montreal, Jean-Francois Masson, Pelletier Joelle

ORAL SESSIONS

Session 160

Biological Sample Preparation - arranged by Olujide T. Akinbo, Butler University

Sunday PM, Room: 116

Olujide T. Akinbo, Butler University, Presiding

1:00 PM

(160-1)

[Microextraction by Packed Sorbent and Liquid Chromatography-Tandem Mass Spectrometry as a Tool for Quantification of Peptides in Blood and Plasma Samples](#) Mohamed Abdel-Rehim, Stockholm University

1:20 PM

(160-2)

[Brain Study by Two Complementary In Vivo Techniques, Solid Phase Microextraction and Microdialysis](#) Barbara Bojko, University of Waterloo, Erasmus Cudjoe, Janusz Pawliszyn

1:40 PM

(160-3)

[Optimization of Capillary-Channeled Polymer \(C-CP\) Fiber Packed Micro-SPE Tips for Extraction of Proteins Prior to MALDI-MS Analysis](#) Benjamin T. Manard, Clemson University, R Kenneth Marcus

2:00 PM

(160-4)

[Extracted Blood Spot Sampling Coupled with Direct Analysis in Real Time \(DART\)-Tandem Mass Spectrometry](#) Fatemeh S. Mirnaghi, University of Waterloo, Janusz Pawliszyn

2:35 PM

(160-5)

[Characterizing the Chemical Composition of Extracellular Retina with High Resolution, Segmented Flow Microdialysis](#) Geovannie Ojeda-Torres, University of Illinois at Chicago, Scott Shippy

2:55 PM

(160-6)

[Elimination or Isolation of Phospholipids from Biological Matrices Using Zirconia-Based Sorbents](#) Craig R. Aurand, Sigma-Aldrich/Supelco, David Bell, Jennifer Claus, Tracy Ascah, Xiaoning Lu

3:15 PM

(160-7)

[Needle-Trap-Microextraction \(NTME\) for In Vivo Breath Analysis-Automation and Effects of Sampling Parameters](#) Phillip Trefz, University Hospital of Rostock, Dietamr Hein, Jochen Schubert, Wolfram Miekisch

ORAL SESSIONS

Session 170

Biosensors - arranged by Richard F. Vreeland, University of Arizona

Sunday PM, Room: 117

Richard F. Vreeland, University of Arizona, Presiding

1:00 PM

(170-1)

[Periplasmic Binding Protein Liposomal Reagents for Maltose Detection](#) Katie Edwards, Cornell University, Antje Baeumner

1:20 PM

(170-2)

[A Repertoire of Proximity Immunoassays for Small-Volume Hormone Quantitation](#) Christopher J. Easley, Auburn University

1:40 PM

(170-3)

[Detection of Thrombin Activity Using Pulsed Chronopotentiometry with Polyion-Selective Electrode](#) Kebede L. Gemene, Northern Kentucky University, Melissa Oehrle

2:00 PM

(170-4)

[Multiplexing Analysis of Single Protein Molecules Using Single-Molecule Nanoparticle Optical Biosensors \(SMNOBS\)](#) X Nancy Xu, Old Dominion University, Lauren Browning, Tao Huang

2:35 PM

(170-5)

[Bio-Inspired Graphene Nanosensing](#) Yue Cui, Utah State University

2:55 PM

(170-6)

[Comparative Study of Gold Nanohole Arrays Plasmonic Modes Using Kretschmann and Enhanced Optical Transmission Configurations Towards Biodetection](#) Maxime Couture, Universite de Montreal, Jean-Francois Masson

3:15 PM

(170-7)

[Amperometric Exploration of the Dynamics of Membrane Fusion Using PC12 Cell Blebs](#) Lisa J. Mellander, University of Gothenburg, Andrew Ewing, Ann-Sofie Cans, Michael Kurczy, Neda Najafinobar

3:35 PM

(170-8)

[A Microwave-Plasma Dry-Etch for Fabricating Conducting Polymer Biosensors](#) Richard F. Vreeland, University of Arizona, Michael Heien, Nicholas Laude

ORAL SESSIONS

Session 180

Environmental Sensors - arranged by Maria K. Ferguson, PA Dept of Environmental Protection

Sunday PM, Room: 118A

Maria K. Ferguson, PA Dept of Environmental Protection, Presiding

1:00 PM

(180-1)

[A Fluorescent Logic Gate for Sensing of Mercury and Iodide Based on Molecular Beacon](#) Xu Wu, University of North Dakota, Jiao Chen, Julia Xiaojun Zhao

1:20 PM

(180-2)

[Portable Sensor for Mercury Detection](#) Andres D. Campiglia, University of Central Florida, Anthony Moore, Emily Heider, Florencio Hernandez, Khang Trieu

1:40 PM

(180-3)

[The Thermodynamics of Acid-Base Interactions in Fluorous Solvents](#) Hong Zhang, University of Pittsburgh, Stephen Weber, Yiseul Cho

2:00 PM

(180-4)

[Photonic Ionic Liquid Sensor Array](#) Waduge Indika S. Galpothdeniya, Louisiana State University, Isiah Warner, Sergio de Rooy

2:35 PM

(180-5)

[Design of Calixarene-Based Fluorogenic System Which Exhibits High Selectivity for Rare Earth Metal Ions](#) Takashi Arimura, AIST, Takuya Nishioka

2:55 PM

(180-6)

[The Use of Digital Sensors for Measuring High Quality Analytical Data](#) Frank Honold, Xylem - WTW GmbH, Klaus Reithmayer, Peter Rauch

3:15 PM

(180-7)

[A Dip-Stick Toxicity Biosensor Using Smart Functional Microbeads](#) Insup Jung, Korea University, Ho Bin Seo, Ji-eun Lee, ManBock Gu

3:35 PM

(180-8)

[Integrated Electrochemical Chemotransistors: A New Strategy for Chemical Sensors for Non-Conducting Media](#) Vladimir M. Mirsky, Lausitz University of Applied Sciences

ORAL SESSIONS

Session 190

GC: Optimization - arranged by John P. Auses, University of Pittsburgh

Sunday PM, Room: 118C

John P. Auses, University of Pittsburgh, Presiding

1:00 PM

(190-1)

[A Liquid Sample Injection Method Using a New Nanoinjector for Gas Chromatography - An Alternate to Conventional Syringe Injection](#) Stanley D. Stearns, Valco Instruments Co Inc., David Miller, Huamin Cai, Martin Brisbin

1:20 PM

(190-2)

[Developing Effective Gas Chromatographic Methods Using Alternatives to Helium Carrier Gas](#) James McCurry, Agilent Technologies

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1:40 PM

(190-3)

[Addressing the Helium Shortage with Hydrogen and Nitrogen as Alternate Carrier Gases for Gas Chromatography Applications](#) Jack Cochran, Restek Corporation, Christopher Rattray, Michelle Misselwitz

2:00 PM

(190-4)

[GC Column Switching Using a Gas Nanovalve](#) Stanley D. Stearns, Valco Instruments Co Inc., Huamin Cai, Martin Brisbin

2:35 PM

(190-5)

[Novel Cyclodextrin GC Chiral Stationary Phase: Combining Thermal and Hydrolytical Stability with Chiral Specificity](#) Lillian Frink, University of Texas at Arlington, Daniel Armstrong, George Ried

2:55 PM

(190-6)

[Evaluations of a New Ionic Liquid Stationary Phase with PEG-Like Selectivity](#) Leonard M. Sidisky, Sigma-Aldrich/Supelco, Daniel Shollenberger, Greg Baney, Gustavo Serrano, James Desorcie, Katherine Stenerson

3:15 PM

(190-7)

[High-Performance Silicon Micro-Machined GC Columns](#) Fulvio Mancarella, CNR-IMM, Antonella Poggi, Enrico Cozzani, Filippo Baravelli, Gian Carlo Cardinali, Ivan Elmi, Maddalena Belluce, Mario Galli, Matteo Monticelli, Stefano Galli, Stefano Zampolli

3:35 PM

(190-8)

[A Nanovolume Gas Switch for Two Column Recycle to Achieve Multimillion Theoretical Plate Separations](#) Stanley D. Stearns, Valco Instruments Co Inc., Huamin Cai, Martin Brisbin

ORAL SESSIONS

Session 200

Liquid Chromatography: Columns - arranged by William J. Long, Agilent Technologies, Inc.

Sunday PM, Room: 120A

William J. Long, Agilent Technologies, Inc., Presiding

1:00 PM

(200-1)

[Evaluation of Enhanced Fluidity Mobile Phases for Open Tubular Liquid Chromatography](#) Martin J. Beres, The

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Ohio State University, Susan Olesik

1:20 PM

(200-2)

[Development of New Chiral Selectors Based on Cyclofructans](#) Zachary S. Breitbach, The University of Texas at Arlington, Daniel Armstrong

1:40 PM

(200-3)

[Phosphate Modified Zirconia Columns](#) Stephanie M. Archibald, San Diego State University, Christopher Harrison, James Thai

2:00 PM

(200-4)

[A Simple Graphical Representation of Column Selectivity in Hydrophilic Interaction Liquid Chromatography](#) Mohammed E. Ibrahim, University of Alberta, Charles Lucy, Yang Liu

2:35 PM

(200-5)

[Why Not Use Superficially Porous Columns](#) William J. Long, Agilent Technologies, Anne Mack, Jason Link, Maureen Joseph

2:55 PM

(200-6)

[Thin-Shell Micron-Sized Superficially Porous Particles for Liquid Chromatography](#) James W. Treadway, University of North Carolina at Chapel Hill, James Jorgenson

3:15 PM

(200-7)

[Preparation and Packing of Ultra-Stable Carbon Coated Silica](#) Imad A. Haidar Ahmad, University of Minnesota, Peter Carr

3:35 PM

(200-8)

[NBD-Cl as a Post Column Reagent for Amino and Imino Acids after Separation by Ion Exchange Chromatography](#) Pantelis G. Rigas, Alexander Technological Educational Institute of Thessaloniki, Michael Doukakis, Nikolaides George, Spiridonakos Nikos, Tsarhopoulos Kostas, Zampaka Vaia

ORAL SESSIONS

Session 210

Liquid Chromatography: Fundamentals - arranged by Keandra R. Robinson, Pfizer Global Research & Development

Sunday PM, Room: 119B

Keandra R. Robinson, Pfizer Global Research & Development, Presiding

1:00 PM

(210-1)

[Single Method Analysis of Nine Bisphenol Compounds in Aqueous Matrices by Reversed – Phase Liquid Chromatography with Fluorescence Detection](#) Virginia L. Burkel, NSF International

1:20 PM

(210-2)

[Investigation of the Volatility Limit for HPLC Aerosol-Based Detectors](#) Ryan Cohen, Merck, Xiaoyi Gong, Yong Liu

1:40 PM

(210-3)

[Characterizing Lauryl Acrylate Porous Polymer Monoliths Using HPLC](#) Charlisa R. Daniels, Trinity University, Brady Iba, Michelle Bushey, Nicholas Kuklinski

2:35 PM

(210-5)

[Bed Morphology Effects on the Efficiency of Capillary UHPLC Columns](#) James P. Grinias, University of North Carolina at Chapel Hill, Edward Franklin, James Jorgenson, Laura Blue, Stefan Bruns, Ulrich Tallarek

2:55 PM

(210-6)

[Constant Pressure vs. Constant Flow Gradient Chromatography: Which is Best?](#) Fabrice Gritti, University of Tennessee

3:15 PM

(210-7)

[New 1.3 \$\mu\text{m}\$ Core-Shell Particles: The Next Level of UHPLC Performance](#) A Carl Sanchez, Phenomenex, Jason Anspach, Jeff Layne, Joshua Heng, Mike Chitty, Tivadar Farkas

3:35 PM

(210-8)

[Comparison of Carbon-Modified Silicas, Carbon-Clad Zirconia, and Porous Graphitic Carbon for Use in High Performance Liquid Chromatography](#) Dwight R. Stoll, Gustavus Adolphus College, Douglas Fryer, Ian Gibbs-Hall, Jon Thompson, Paul Young, Tuan Tran

ORAL SESSIONS

Session 220

Polymers and Plastics Characterization - arranged by Dana Garcia, Arkema, Inc.

Sunday PM, Room: 202A

Dana Garcia, Arkema, Inc., Presiding

1:00 PM

(220-1)

[Chemical Identification of Unknown Multilayers at the Nanoscale: AFM-based IR Spectroscopy and Thermal Analysis](#) Michael Lo, Anasys Instruments, Craig Prater, Curtis Marcott, Eoghan Dillon, Kevin Kjoller, Khoren Sahagian, Tom Eby, Usha Gundusharma

1:20 PM

(220-2)

[Characterization of Biodegradable Polymers from Natural and Synthetic Sources](#) Melissa Reynolds, Colorado State University

1:40 PM

(220-3)

[Determining the Molecular Level Structural Behaviors of Plasticized PVC at Environmental Interfaces](#) Jeanne M. Hankett, University of Michigan, Emily Seeley, Yuwei Liu, Zhan Chen

2:00 PM

(220-4)

[Implementation of Near Infrared \(NIR\) Spectroscopy Coupled with Chemometrics Methods For Polymer Plasticizer Levels Determination in a Plant Environment](#) Dana Garcia, Arkema, Inc., Cindy Anderson, Eric Gamache, Guillaume Jacques, Jean Guilment, John StrokELITUS, Maria Akkara, Marilynne Hurtado

2:35 PM

(220-5)

[Industrial Applications of Photoacoustic Infrared Spectroscopy to Polymer and Catalyst Systems](#) Nancy L. Jestel, SABIC, Anne Simon, Shweta Hegde

2:55 PM

(220-6)

[Direct Determination of Temperature and Moisture Content of Nylon with Near-Infrared Spectroscopy](#) Chamathca P. Kuda-Malwathumullage, The University of Iowa, Gary Small

3:15 PM

(220-7)

[Real-Time Online Determination of Caustic in Process Scrubbers Using Near Infrared Spectroscopy and Chemometrics](#) Yusuf Sulub, SABIC, Derek Lake, Zhensheng Ding

3:35 PM

(220-8)

[Passive Microrheology: Non Intrusive Measurement of Emulsions and Gels Viscoelasticity](#) Christelle Tisserand, Formulaction, Gérard Meunier, Mathias Fleury, Pascal Bru

ORAL SESSIONS

Session 230

Raman/FTIR Analytical Applications - arranged by Emily A. Smith, Iowa State University

Sunday PM, Room: 202B

Emily A. Smith, Iowa State University, Presiding

1:00 PM

(230-1)

[Determination of Glaucoma-Induced Changes in the Eye Using Raman and Brillouin Inelastic Scattering](#) Rajesh Morampudi, Cleveland State University, John Turner

1:20 PM

(230-2)

[Quantitative Raman Microscopy of Single Nanofibers](#) Christian Pellerin, University of Montreal, Marie Richard-Lacroix

1:40 PM

(230-3)

[Raman Spectroscopy for the Identification of Body Fluid Traces: Semen and Blood Mixtures](#) Aliaksandra Sikirzhyskaya, University at Albany, SUNY, Igor Lednev, Vitali Sikirzhyski

2:00 PM

(230-4)

[Scanning Angle Raman Microscopy: Measurements of Polymer Film Thickness and Composition](#) Emily A. Smith, Iowa State University, Kristopher McKee, Matthew Meyer, Vy HT Nguyen

2:35 PM

(230-5)

[An Optical Hydrocarbon Sensor with Chromatograph Speciation Capability](#) Duane Sword, Precise, Vidi Saptari

2:55 PM

(230-6)

[True Surface Raman Imaging](#) Harald Fischer, WITec GmbH, Joachim Koenen, Ute Schmidt

3:15 PM

(230-7)

[Infrared Spectroscopy and Chemometric Approach for a Fast Classification of Different Mangroves of Guyana](#) Sandrine Amat, Aix-Marseille Universite, Daniel Guiral, Isabelle Giffard, Nathalie Dupuy

3:35 PM

(230-8)

[Characterization of Higher Order Structures in the Development of Protein Therapeutics](#) Wasfi Al-Azzam, GlaxoSmithKline

SUNDAY POSTER SESSIONS

Session 240

New Developments in Analytical Instrumentation and Software

Sunday PM, Room: Ballroom B, Level 300

(240-1P)

[Usability of a Core Shell Column Using High Performance Liquid Chromatograph for a Routine Analysis](#) Norikazu Nagae, ChromaNik Technologies Inc., Scott Silver, Tomoyasu Tsukamoto

(240-2P)

[Building and Characterizing a Micro-Volume Fluorescence Detection System](#) Raun M. Green, Maryville University, Thomas Spudich

(240-3P)

[Technique Refinements in the Analysis of Dye Droplets by Concentrated Multiple Reflection ATR Spectroscopy](#) Joseph P. Lucania, Harrick Scientific Products, Ali Kocak

(240-4P)

[The Influence of Refractive Index on the Efficacy of Absolute Reflectance References](#) Susan Berets, Harrick Scientific Products, Milan Milosevic

(240-5P)

[Physicochemical and Infrared Spectral Properties of Biodiesel Fuels Synthesized from Some Vegetable Oils](#) Edgar Coronel, Universidad Mayor de San Andrés

(240-6P)

[Determination of 11 Glucocorticoids in Cosmetics by Automated Extraction System and HPLC-ESI-MS/MS](#) Zhonghua Yue, Tianjin Bonna-Agela Technologies Co., Ltd., Jerry Wang, Jingran Zhang

(240-7P)

[Fast Analysis of Refinery Gas](#) Debbie Hutt, INFICON

(240-8P)

[Speeding Up Your Natural Gas Analysis Using a Micro GC Natural Gas Analyzer](#) Remko van Loon, Agilent Technologies, Duvekot Coen

(240-9P)

[Monitoring Activated Carbon Performance at Wastewater Plants for Odor Control](#) Henry Nowicki, PACS Testing, Consulting

(240-10P)

[Evaluating Activated Carbons: Comparison of GAED and ASTM Iodine Number Test Methods](#) Henry Nowicki, PACS Testing, Consulting

(240-11P)

[Recent Unique Applications of A GC-MS with Cold EI](#) Aviv Amirav, Tel Aviv University, Alexander Fialkov, Tal Alon

(240-12P)

[Elemental Analysis in Hair and Nails with LIBS](#) David Rusak, University of Scranton, Ann Zeleniak, Jillian Obuhosky

(240-13P)

[Gas Chromatography-Mass Spectrometry Determination of the Essential Oil Concentrations in Cedar Trees \(Juniperus Virginiana\) With Changes in Season](#) Norman E. Schmidt, Tabor College, Nikol Sandoval

(240-14P)

[A Gas Chromatography-Mass Spectrometry Procedure to Quantitate Caffeine in Human Urine](#) Norman E. Schmidt, Tabor College, Jeremy Reiswig

(240-15P)

[Fundamental Studies on the Absorption of Large Hydrocarbons in the Vapor Phase on a Solid Phase Microextraction Fiber](#) Norman E. Schmidt, Tabor College, Logan Reimer

(240-16P)

[Binding Analysis of HSP60-CypD Complex by Surface Plasmon Resonance](#) Ekaterina A. Korobkova, John Jay College of Criminal Justice at CUNY, Milan Stojanovic

Monday AM, March 18, 2013

AWARDS

Session 250

Chromatography Forum of the Delaware Valley Dal Nogare Award - arranged by Mary Ellen McNally, DuPont Crop Protection

Monday AM, Room: 126A

Mary Ellen McNally, DuPont Crop Protection, Presiding

8:10 AM

(250-1)

[Enantioselective Retention on Cellular Membrane Affinity Chromatography Columns: Using Chiral Separations as a Probe Instead of a Goal](#) Irving W. Wainer, National Institutes of Health

8:45 AM

(250-2)

[Classification of Chiral Stationary Phases - A Quarter of a Century on Chiral Stationary](#) William J. Lough, University of Sunderland

9:20 AM

(250-3)

[Development of New Derivatives of Fenoterol as Potential Ligands of the 2 Adrenergic Receptor with Novel Therapeutic Perspectives](#) Krzysztof Jozwiak, Medical University of Lublin, Anita Plazinska, Ewelina Rutkowska, Irving Wainer, Karolina Pajak, Lawrence Toll, Lucita Jimenez

9:55 AM

(250-4)

[Stereochemical Characterization of Drugs: Enantioselective HPLC and Electronic Circular Dichroism as Detection System](#) Carlo Bertucci, University of Bologna

10:30 AM

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(250-5)

[The Synthesis and Characterization of SIRT6 Protein Open Tubular Column \(SIRT6-OT\): Characterization of the Quercetin Binding Site](#) Ruin Moaddel, NIA/NIH, David Wilson, Makoto Yasuda, Nagendra Singh, Sebastian Fugmann

AWARDS

Session 260

Pittsburgh Conference Achievement Award - arranged by Jane Chan, Bechtel Bettis, Inc.

Monday AM, Room: 114

Jane Chan, Bechtel Bettis, Inc., Presiding

8:10 AM

(260-1)

[New Ionization Methods for Mass Spectrometry for the Characterization of Biological Materials Directly from Surfaces](#) Sarah Trimpin, Wayne State University

8:45 AM

(260-2)

[Protein Conformational Evolution from Solution to Gas Phase: Electrospray Ionization Yields Unfolding and New Folding](#) Fred W. McLafferty, Cornell University

9:20 AM

(260-3)

[Developing Techniques for Following Transitions Between Conformational States](#) David E. Clemmer, Indiana University

9:55 AM

(260-4)

[Innovative Technology for the Identification of Post-Translational Modifications - New Findings in Research Related to Plant Biology, Epigenetics and Immunotherapy of Cancer](#) Donald F. Hunt, University of Virginia

10:30 AM

(260-5)

[Bioconjugation in the Gas Phase: New Chemistry for Tandem Mass Spectrometry](#) Scott McLuckey, Purdue University

SYMPOSIA

Session 270

ACS ANYL w/AAPS APQ - Understanding Analytical Method Variance and the Impact for QbD Filing for Pharmaceutical Products - arranged by Kenneth Norris, Pfizer

PITTCON 2013

Monday AM, Room: 201B

Kenneth Norris, Pfizer, Presiding

8:05 AM

(270-1)

[Multi-Modality Framework for Application of Quality-by-Design for Analytical Methods](#) Beth Junker, Merck

8:40 AM

(270-2)

[Validation/Verification of the Method Operable Design Region \(MODR\)](#) James E. Morgado, Pfizer Inc, Worldwide Research and Development, Kimber Barnett

9:15 AM

(270-3)

[Post Approval Change Management of Analytical Methods in a Global Environment – Challenges and Opportunities](#) Oliver Grosche, Novartis Pharma AG

9:50 AM

(270-4)

[Acceptable Analytical Method Variation - Setting System Suitability Requirements](#) Todd Cecil, USP

10:25 AM

(270-5)

[Analytical Measurements – Decisions Made Under Uncertainty ... How Do We Convey Our Knowledge of Risk in a QbD Filing?](#) Brent Harrington, Pfizer

SYMPOSIA

Session 280

Chemical Heritage Foundation - Instrumentation Innovation: A Personal History of Instruments and Innovation - arranged by Rosie Cook, Chemical Heritage Foundation

Monday AM, Room: 201A

Rosie Cook, Chemical Heritage Foundation, Presiding

8:05 AM

(280-1)

[Engineering Realities: Ometric, the University of South Carolina and the Birth of a New Measurement Technology](#) Davis W. Baird, Clark University

8:40 AM

(280-2)

[Instruments, Automation, Bits, and Palm Trees: Instrumentation Firms and the Early Computer Industry](#) David C. Brock, Chemical Heritage Foundation

9:15 AM

(280-3)

[More Than Black Boxes – Using Instruments To Tell The Personal Side Of Chemistry](#) Rosie Cook, Chemical Heritage Foundation

SYMPOSIA

Session 290

Current Status and Emerging Trends of Chromatography and Mass Spectrometry in the Analysis of Small Molecules, Biologics and Bio Similar - arranged by Arindam Roy, Novartis Consumer Health

Monday AM, Room: 123

Arindam Roy, Novartis Consumer Health, Presiding

8:05 AM

(290-1)

[Advancing Pharmaceutical Development Through the Use of Liquid and Gas Chromatography – Mass Spectrometry for Trace Analysis of Impurities of Toxicological Concern](#) David K. Robbins, Eli Lilly and Company

8:40 AM

(290-2)

[Current Practices in Method Development-Remediation, Validation-Transfer and Investigation in the Quality Control of Drug Products](#) Arindam Roy, Novartis Consumer Health, Bruce Pierson, Joe Tang

9:15 AM

(290-3)

[Deciphering the Reversed Phase Chromatography Unknowns for Mabs: From HPLC to UHPLC](#) Taylor Y. Zhang, Genentech

9:50 AM

(290-4)

[Recent Trend in the Characterization of Protein Therapeutics by Mass Spectrometry](#) Li Tao, Bristol-Myers Squibb, Reb Russell

10:25 AM

(290-5)

[Chromatography and Mass Spectrometry, An Essential Combination for the Extensive Characterization of Biosimilars](#) Isabel Feuerstein, Analytical Characterization, Sandoz GmbH

SYMPOSIA

Session 300

Electrochemistry of Living Cells - arranged by Cynthia G. Zoski, New Mexico State University

Monday AM, Room: 124

Cynthia G. Zoski, New Mexico State University, Presiding

8:05 AM

(300-1)

[Probing Bacterial Processes with Scanning Electrochemical Microscopy](#) Allen J. Bard, University of Texas at Austin, Chen Xiaole, Dipankar Koley, Marvin Whiteley

8:40 AM

(300-2)

[Investigation of Bacteria Symbiosis by Scanning Electrochemical Microscopy](#) Cynthia G. Zoski, New Mexico State University

9:15 AM

(300-3)

[Nanoelectrochemistry of Living Cells](#) Michael V. Mirkin, CUNY, Queens College

9:50 AM

(300-4)

[Ion Transport Through the Nuclear Pore Complexes as Probed by Scanning Electrochemical Microscopy](#) Shigeru Amemiya, University of Pittsburgh

10:25 AM

(300-5)

[Assessment of Multidrug Resistance on Cell Co-Culture Patterns Using Biological Scanning Electrochemical Microscopy](#) Janine Mauzeroll, McGill University, Daniel Brassard, Matthias Geissler, Sabine Kuss

SYMPOSIA

Session 310

Integrated Metabolomics: New Strategies and Innovations - arranged by Richard A. Yost, University of Florida

Monday AM, Room: 125

Richard A. Yost, University of Florida, Presiding

8:05 AM

(310-1)

[Metabolomics for Gaining Insight into Metabolic Disease Mechanisms](#) Christopher Newgard, Duke University

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8:40 AM

(310-2)

[An Isotopic Labeling Technique for Metabolomics](#) Chris Beecher, NextGen Metabolomics

9:15 AM

(310-3)

[A Two-Step Workflow for Untargeted Metabolomics](#) Gary J. Patti, Washington University

9:50 AM

(310-4)

[Integrating Imaging Mass Spectrometry and Metabolomics](#) Richard A. Yost, University of Florida

10:25 AM

(310-5)

[Quality Assurance Standards for Metabolomics Applied to Food and Beverage Research](#) Eric Milgram, PepsiCo

SYMPOSIA

Session 320

Microfluidic Approaches to Quantitative Biology and Medicine - arranged by Yong Zeng, University of Kansas

Monday AM, Room: 122B

Yong Zeng, University of Kansas, Presiding

8:05 AM

(320-1)

[Scalable Microfluidic Design for Multi-Stage Proteomic Assays](#) Amy E. Herr, University of California - Berkeley

8:40 AM

(320-2)

[High-Throughput Profiling of Single Cell Secretomic Signatures](#) Rong Fan, Yale University

9:15 AM

(320-3)

[Digital Microfluidics For Cell Culture and Analysis](#) Aaron Wheeler, University of Toronto

9:50 AM

(320-4)

[Fully Integrated Systems for Point-of-Care Diagnostics](#) Steven A. Soper, University of North Carolina at

PITTCON 2013

Chapel Hill

10:25 AM

(320-5)

[Drop-Based Microfluidics: Biology One Picoliter at a Time](#) David A. Weitz, Harvard University

SYMPOSIA

Session 330

Recent Advances in Raman Spectroscopy and Instrumentation - arranged by Sanford Asher, University of Pittsburgh

Monday AM, Room: 201C

Sanford Asher, University of Pittsburgh, Presiding

8:05 AM

(330-1)

[Label-Free Vibrational Imaging for Biology and Medicine](#) Xiaoliang S. Xie, Harvard University

8:40 AM

(330-2)

[Advances in Stand-off Raman Spectroscopy for Planetary Exploration](#) Shiv K. Sharma, University of Hawaii

9:15 AM

(330-3)

[Taking Raman Optical Activity into New Fields: Carbohydrates, Surface Enhancement and Pharmaceuticals](#) Ewan W. Blanch, University of Manchester

9:50 AM

(330-4)

[Enhanced Raman Spectroscopy Sensitivity Using A High Throughput Virtual Slit](#) Aaron Weinroth, Tornado Spectral Systems, Arsen Hajian, Bradford Behr, Jeffrey Meade

10:25 AM

(330-5)

[SERS of Biological Cells: Diagnostics and Clinical Applications](#) Lawrence D. Ziegler, Boston University

WORKSHOPS

Session 340

A Survey of Recent Advances in Protein Analysis - arranged by Michael D. McGinley, Phenomenex

Monday AM, Room: 126B

PITTCON 2013

Michael D. McGinley, Phenomenex, Presiding

8:05 AM

(340-1)

[Amorphous Suspensions of a Model IgG](#) William Callahan, Amgen

8:35 AM

(340-2)

[Displacement Chromatography for Antibody Variants Characterization](#) Taylor Y. Zhang, Genentech

9:05 AM

(340-3)

[Performance Improvements in Peptide Mapping Realized with Core Shell Particles and Other High Performance Media](#) Michael D. McGinley, Phenomenex, Jeff Layne

9:50 AM

(340-4)

[Characterization of ADC's: Can It Ever Be Complete?](#) Carl G. Kolvenbach, Amgen

10:20 AM

(340-5)

[Biologics Primer](#) Mark M. Garner, AB SCIEX, Byung-Hee Shin, Eric Johansen, Sean Seymour, Xu Guo

WORKSHOPS

Session 350

Data Standards for Analytical Chemistry - The ASTM AnIML Solution - arranged by Gary W. Kramer, National Institute of Standards and Technology

Monday AM, Room: 202A

Gary W. Kramer, National Institute of Standards and Technology, Presiding

8:05 AM

(350-1)

[The Need for Analytical Data Standards within the Pharmaceutical Industry](#) Mark F. Bean, GlaxoSmithKline

8:35 AM

(350-2)

[EPA's Environmental Data Management Needs](#) Anand R. Mudambi, US EPA

9:05 AM

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(350-3)

[Using the AnIML Specification to Store Research Data](#) Stuart J. Chalk, University of North Florida

9:50 AM

(350-4)

[Using the AnIML Data Standard to Facilitate Collaboration Across Organizational Boundaries](#) Burkhard Schaefer, BSSN Software

10:20 AM

(350-5)

[Working on AnIML - A View from a Vendor's Representative](#) Maren Fiege, Waters GmbH

10:50 AM

(350-6)

[The Current Status of the AnIML 1.0 ASTM Standards](#) Gary W. Kramer, National Institute of Standards and Technology

ORGANIZED CONTRIBUTED SESSIONS

Session 360

Industrialized Metabolomics - From Tools to Workflow to Data - arranged by Mike Lee, Milestone Development

Monday AM, Room: 202B

Mike Lee, Milestone Development, Presiding

8:00 AM

(360-1)

[Metabolomic Screening for Toxicological and Efficacy Markers in Drug Discovery](#) Petia Shipkova, Bristol-Myers Squibb

8:20 AM

(360-2)

[Clinical Metabolomics: Translating Metabolomics from Research to Clinical Testing](#) Timothy J. Garrett, University of Florida

8:40 AM

(360-3)

[Targeted Screening/Quantitation of Small Molecule Metabolites](#) Erik Hansen, IONICS Mass Spectrometry

9:00 AM

(360-4)

[Cryoprobe-Assisted ¹³C NMR and Interactive Database Management for Mixture Analysis](#) Istvan Pelczer, Princeton University

9:35 AM

(360-5)

[Development of An Enterprise Metabolomics Workflow for Consumer Products Research](#) Eric Milgram, PepsiCo

9:55 AM

(360-6)

[Enterprise Scale Bioinformatics](#) Randall Julian, Indigo BioSystems, Inc.

10:15 AM

(360-7)

[Application of Custom Accurate Mass Libraries and MS/MS Libraries for Detection of Bioactive Compounds in Medicinal Plants and Rapid Screening of Untargeted Metabolomics Data](#) Daniel Cuthbertson, Agilent Technologies, Mark Lange, Michael Hartmann, Sean Johnson, Steve Fischer, Theo Sana

10:35 AM

(360-8)

[Technical Perspectives on Microfluidic and Nanospray Approaches for Metabolomics](#) Gary A. Valaskovic, New Objective Inc.

ORGANIZED CONTRIBUTED SESSIONS

Session 370

Ionic Liquid-Based Sensors - arranged by Sheila N. Baker, University of Missouri

Monday AM, Room: 203B

Sheila N. Baker, University of Missouri, Presiding

8:00 AM

(370-1)

[An Introduction to Ionic Liquid-Based Sensors and Their Application for Pesticide Detection](#) Sheila N. Baker, University of Missouri, Gary Baker, Jing Wang

8:20 AM

(370-2)

[Supramolecular Polysaccharide Composites: Synthesis, Characterization and Application for Removal of Pollutants and Toxins](#) Chieu D. Tran, Marquette University, Simon Duri

8:40 AM

(370-3)

[Methanol Analysis in Ionic Liquids](#) Yijun Tang, University of Wisconsin, Oshkosh

9:00 AM

(370-4)

[Novel Sensors Based on Ionic Liquids and GUMBOS](#) Isiah M. Warner, Louisiana State University, Bishnu Regmi, Nicholas Speller, Punprabhashi Vidanapathirana, Sergio de Rooy, Susmita Das, Waduge Indika Galpothdeniya

9:35 AM

(370-5)

[Ionic Liquids: New Materials for Chemical Sensing](#) Xiangqun Zeng, Oakland University, Abdul Rehman, Chunhui Xiao, Zhe Wang

9:55 AM

(370-6)

[Chemical Sensing Platforms Based on Ionic Liquids](#) Frank V. Bright, University at Buffalo, SUNY

10:15 AM

(370-7)

[Sensor Based on Nano-Confined Ionic Liquids](#) Bilal El-Zahab, Florida International University

10:35 AM

(370-8)

[Ionic Liquids for Carbon Dioxide-Responsive Optosensors](#) Gary A. Baker, University of Missouri, Justin Walensky, Matthew Vollmer, Sheila Baker

ORGANIZED CONTRIBUTED SESSIONS

Session 380

Practical Methods for Implementing the Undergraduate Analytical Science Curriculum - arranged by Michael J. Samide, Butler University

Monday AM, Room: 121C

Michael J. Samide, Butler University, Presiding

8:00 AM

(380-1)

[Analytical Chemistry Curriculum at Butler University: Content and Implementation](#) Olujide T. Akinbo, Butler University, Michael Samide

8:20 AM

(380-2)

[Replacing Analytical Chemistry Lectures with More Effective Collaborative Learning Activities](#) Thomas Wenzel, Bates College

8:40 AM

(380-3)

[Science Education for New Civic Engagements and Responsibilities \(SENCER\) in Theory and Practice](#) William David Burns, National Center for Science and Civic Engagement

9:00 AM

(380-4)

[Project Based Learning in a Large Analytical Chemistry Laboratory Course](#) Jill K. Robinson, Indiana University

9:35 AM

(380-5)

[A Student-Driven Theme-Focused Laboratory: Benefits and Challenges](#) Michael J. Samide, Butler University, Olujide Akinbo

9:55 AM

(380-6)

[Technology in Teaching](#) Christopher R. Harrison, San Diego State University

10:15 AM

(380-7)

[Instrumental Analysis: A New Way to Lecture](#) Justin Shearer, Rose-Hulman Institute of Technology

10:35 AM

(380-8)

[Guided-Inquiry Experiments in Instrumental Analysis Laboratory Course at Winston-Salem State University](#) Sayo O. Fakayode, Winston-Salem State University, David Pollard, Mamudu Yakubu

ORGANIZED CONTRIBUTED SESSIONS

Session 390

Recent Advances in Detection for Ion Analysis - arranged by Kannan Srinivasan, Thermo Fisher Scientific

Monday AM, Room: 117

Kannan Srinivasan, Thermo Fisher Scientific, Presiding

8:00 AM

(390-1)

[Analysis of Weak Organic Acids Using Suppressed IC with Universal Detection](#) Jeffrey S. Rohrer, Thermo

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Fisher Scientific, Greg Dicoski

8:20 AM

(390-2)

[Progress in Contactless and Two-Dimensional Detection in Ion Chromatography](#) Purnendu K. Dasgupta, University of Texas at Arlington, Brian Stamos, Charles Shelor, Hongzhu Liao

8:40 AM

(390-3)

[The Utility of the Charge Detector in Ion Chromatography and Selected Applications](#) Kannan Srinivasan, Thermo Fisher Scientific, Bhardwaj Sheetal, Chris Pohl, Mrinal Sengupta, Purnendu Dasgupta

9:00 AM

(390-4)

[A New Approach for Capillary Ion Chromatographic Separation of Carbohydrates and Amino Acids](#) Yan Liu, Thermo Fisher Scientific, Chris Pohl, Petr Jandik, Victor Barreto

9:35 AM

(390-5)

[Chip-Based Isotachopheresis with Indirect Fluorescence Detection Using a Field-Deployable Platform](#) Mirek Macka, University of Tasmania, Frantisek Foret, Fritz Bek, Michael Breadmore, Petr Smejkal, Rosanne Guijt

9:55 AM

(390-6)

[Opportunities with Acid Labile Surfactants and Electrospray Ionization Mass Spectrometry](#) Charles A. Lucy, University of Alberta, Bob Stanley

10:15 AM

(390-7)

[Characterization of Nano-Agglomerated Capillary Polymer Monoliths Using Scanning Contactless Conductivity Detection](#) Damian Connolly, Dublin City University

10:35 AM

(390-8)

[Ion Chromatographic Methods for Analysis of Heparin](#) Shreekant Karmarkar, Baxter Healthcare, Xiaohui Yang

ORAL SESSIONS

Session 400

Bioanalytical: Spectroscopy - arranged by Kimberly A. Frederick, Skidmore College

Monday AM, Room: 115A

PITTCON 2013

Kimberly A. Frederick, Skidmore College, Presiding

8:00 AM

(400-1)

[Microsamples of Metallo-Enzymes By A Battery-Operated Microplasma](#) Vassili Karanassios, University of Waterloo, D Lee, JH Lee, S Huang

8:20 AM

(400-2)

[The Characterization of Nucleotide-Based Media for Applications in Bioseparations](#) Lauren Cassidy, Rensselaer Polytechnic Institute, Bradley Burcar, Linda McGown

8:40 AM

(400-3)

[Apoptosis Detection](#) Meicong Dong, Texas Tech University

9:00 AM

(400-4)

[Simultaneous Detection of Bacterial Meningitis Using Lambda Exonuclease and SERS](#) Kirsten Gracie, University of Strathclyde, Duncan Graham, Jennifer Dougan, Karen Faulds

9:35 AM

(400-5)

[Peptide-Mediated Ratiometric Sensing in Trypanosoma Brucei Glycosomes](#) Sheng Lin, Clemson University, James Morris, Kenneth Christensen, Meredith Morris

9:55 AM

(400-6)

[Surface Modified Aptamer Conjugated Gold Nanorods to Selectively Capture Cancer Cells for Photothermal Therapy and Rare Proteins for Enrichment](#) Emir Yasun, University of Florida, Chunmei Li, Denisse Janvier, Huseyin Erdal, Weihong Tan

10:15 AM

(400-7)

[Development of New Fluorescent Molecular Probes for the Detection of Proteins and Application to One-Step Electrophoretic Gel Staining Method](#) Yoshio Suzuki, AIST, Nobuyuki Takagi, Takuma Sano, Tomoyuki Chimuro

ORAL SESSIONS

Session 410

Biomedical Applications of Microfluidic Devices - arranged by Stephen Gozo, Celgene Corporation

PITTCON 2013

Monday AM, Room: 120B

Stephen Gozo, Celgene Corporation, Presiding

8:00 AM

(410-1)

[Integration of Microfluidic Devices with Plate Readers for High Throughput Sample Preparation and Detection of Clinical Samples](#) Jayda Erkal, Michigan State University, Dana Spence

8:20 AM

(410-2)

[A Microfluidic Assay for Determination of Kinase Phosphorylation](#) Joseph C. Gaiteri, University of North Carolina at Chapel Hill, J Michael Ramsey, Jean Pierre Alarie, W Hampton Henley

8:40 AM

(410-3)

[Selective Isolation of CD4+ T-cells Using Microfluidics for the Analysis of Stroke Related Markers](#) Swathi R. Pullagurla, Louisiana State University, Alison Baird, Irina Nesterova, Malgorzata Witek, Mateusz Adamski, Steven Soper

9:35 AM

(410-5)

[Investigation of Cellular Interactions Between Tissue Cell Lines and Bioactive Borate Glass Nano-Fibers](#) Qingbo Yang, Missouri University of Science and Technology, Yinfa Ma

9:55 AM

(410-6)

[Developing an Integrated Optical Sensing Package for Temperature, Pressure and Humidity Measurements](#) Zeeshan Ahmed, National Institute of Standards and Technology, Douglas Olson, Fan Jingyun, Gregory Strouse, Jay Hendricks

10:15 AM

(410-7)

[Evaluating the Risk of Suffering a Lithiasic Episode Under a Stressful Event](#) Manuel Valiente, Universitat Autònoma de Barcelona, Agusti Alonso, Gustavo Perez, Jordi Fernandez, Josef Havel, Montserrat Lopez-Mesas, Silvia Edo

10:35 AM

(410-8)

[Ultrasensitive Clinical Enumeration of Rare Cells Ex Vivo Using a \$\mu\$ -Hall Detector](#) David Issadore, University of Pennsylvania

ORAL SESSIONS

PITTCON 2013

Session 420

Food Science: Pathogens and Pesticides - arranged by Edward Guthrie, Agilent Technologies

Monday AM, Room: 115C

Edward Guthrie, Agilent Technologies, Presiding

8:00 AM

(420-1)

[Early Electrochemical Detection of E.coli in Baby Spinach Leaves](#) Robert B. Congdon, Binghamton University, Omowunmi Sadik

8:20 AM

(420-2)

[Application of Raman Spectroscopy for the Identification of Bacteria in the Field of Food Science](#) Ali Assaf, University of Nantes, Ganesh Sockalingum, Gerald Thouand, Guy Louarn, Marie-José Durand, Philippe Daniel

8:40 AM

(420-3)

[A New Accurate Mass Screening Solution Incorporating a Scientific Information System for the Analysis of Pesticide Residues at Regulatory Limits in Food](#) Kenneth Rosnack, Waters Corporation, Antonietta Gledhill, Dimple Shah, Gareth Cleland, Jennifer Burgess, Lauren Mullin, Mike McCullagh, Sara Stead

9:00 AM

(420-4)

[Detection of Pathogens in Food Using a SERS-Based Assay](#) Atanu Sengupta, Real-Time Analyzers, Chetan Shende, Frank Inscore, Hermes Huang, Stuart Farquharson

9:35 AM

(420-5)

[Gas Chromatography-Mass Spectrometry with Hydrogen Carrier Gas and a Programmable Temperature Vaporization Inlet for Pesticide Analysis with Improved Throughput and Sensitivity](#) Neil Paz, New Mexico State University, Natali Parisi, Tanner Schaub

9:55 AM

(420-6)

[Eliminating False Negatives while Controlling False Positives in High Throughput Screening for Pesticides through Spectral Accuracy](#) Yongdong Wang, Cerno Bioscience, Leo Xu, Ming Gu

10:15 AM

(420-7)

[Manufactured Carbon Adsorbents for QuEChERS Cleanup](#) Conor Smith, United Science Corp

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10:35 AM

(420-8)

[Analysis of Pesticides by GC-Triple Quad Made Easy with Novel Software and New MS Ion Source Design](#) Massimo Santoro, Thermo Fisher Scientific, Hans-Joachim Huebschmann, Jason Cole

ORAL SESSIONS

Session 430

Homeland Security: Analysis of Drugs, Explosives and Chemical Warfare Agents - arranged by A Peter Snyder, US Army ECBC

Monday AM, Room: 116

A Peter Snyder, US Army ECBC, Presiding

8:00 AM

(430-1)

[Weeding Analytes Out of Marijuana: The Identification and Quantification of Pesticides in Cannabis Utilizing Comprehensive Gas Chromatography](#) Emily Ly, The Pennsylvania State University, Frank Dorman, Jack Cochran, Julie Kowalski

8:20 AM

(430-2)

[Characterization of Cathinone and Cannabinoid Analogs Using High Performance EI and CI TOFMS](#) David E. Alonso, LECO Corporation, Joe Binkley

8:40 AM

(430-3)

[Production of Seized Drug Analysis Standards through Inkjet Printing Technology](#) Jeanita S. Pritchett, National Institute of Standards and Technology, Jennifer Verkouteren, Karen Phinney

9:00 AM

(430-4)

[Rapid Controlled Substance Identification by X-Ray Diffraction](#) Ian T. Campbell, PANalytical, Brian Litteer, Detlef Beckers

9:55 AM

(430-6)

[Next Generation Surface Enhanced Raman Scattering \(SERS\) Substrates for Hazard Detection](#) Mikell E. Farrell, US ARL

10:15 AM

(430-7)

[B. Anthracis Spores, Y. Pestis Bacteria and C. Botulinum A Toxin Detection by Field Usable SERS Assay](#) Frank E. Inscore, Real-Time Analyzers, Atanu Sengupta, Chetan Shende, Hermes Huang, Stuart Farquharson

10:35 AM

(430-8)

[Programmed Solid Sample Thermal Desorption - Fast Gas Chromatography - Low Flow Ion Mobility Spectrometry as a Field Screening Detection](#) Saeed Hajjaligol, Isfahan Engineering Research Center, Amir Hossein Alinoori, Amir Torabpoor, Seyed Alireza Ghorashi

ORAL SESSIONS

Session 440

MALDI (Half Session) - arranged by Huamin Cai, Valco Instruments Co Inc.

Monday AM, Room: 118C

Huamin Cai, Valco Instruments Co Inc., Presiding

8:00 AM

(440-1)

[Matrix Assisted Ionization Vacuum: Sensitive Spontaneous Cold Ionization for Small and Large Molecules Directly from Solid Surfaces](#) Ellen Inutan, Wayne State University, Sarah Trimpin

8:20 AM

(440-2)

[Multimodal Imaging: Characterizing MALDI and SIMS Imaging Using a Lateral Resolution Standard \(Nanometer Ruler\)](#) Melissa K. Passarelli, University of Gothenburg, Amir Saeid Mohammadi, Andrew Ewing, Jun Wang, Masoumeh Dowlatshahipour

8:40 AM

(440-3)

[A Mass Spectrometric Imaging Metabolomics Methodology Applied to a Model of Myocardial Infarction](#) Robert F. Menger, University of Florida, Brad Wacker, David Ford, Raquel Hendershot, Richard Yost

9:00 AM

(440-4)

[Separation and Characterization of Peptides Mixtures by Matrix Assisted Ionization Vacuum \(MAIV\)-Ion Mobility Spectrometry \(IMS\)-Mass Spectrometry \(MS\)](#) Beixi Wang, Wayne State University, Ellen Inutan, Jing Li, Sarah Trimpin

ORAL SESSIONS

Session 450

Mass Spectrometry Analysis - arranged by Elizabeth Harris, Mannkind Corporation

Monday AM, Room: 118A

Elizabeth Harris, Mannkind Corporation, Presiding

8:00 AM

(450-1)

[Characterization \(and mischaracterization\) of Abiotic RNA Polymerization Reaction Products](#) Bradley Burcar, Rensselaer Polytechnic Institute, Elisa Novelli, Kristin Coari, Lauren Cassidy, Linda McGown

8:20 AM

(450-2)

[Probing Protein and Peptide Structure with Electrochemically Produced Radicals](#) Eric B. Monroe, University of Arizona, Michael Heien

8:40 AM

(450-3)

[Evaluation of an Ambient Desorption/Ionization Source Utilizing a Liquid Sampling-Atmospheric Pressure Glow Discharge for Mass Spectrometry](#) Benjamin T. Manard, Clemson University, Carolyn Burdette, R Kenneth Marcus

9:00 AM

(450-4)

[Advantages of a Novel Enclosed and Chip-Based Nano-Electrospray Ion Source in Mass Spectrometry: Chemical Background Reduction, Electronic Spray Monitoring and Online Nozzle Switching for Robust nLC-MS Applications](#) Daniel Eikel, Advion, Chelsea Weidman, Chris Camadella, Christine Wang, Jamey Jones, Nathan Corwin, Simon Prosser

9:35 AM

(450-5)

[DART-MS Collision Induced Dissociation \(CID\) for Structural Analysis of Synthetic Cannabinoids](#) Jason Shepard, University at Albany, SUNY, Ashton Lesiak, John Dane, Marek Domin, Rabi Musah, Robert Cody

9:55 AM

(450-6)

[Fundamentals and Applications of Ambient Desorption Ionization Mass Spectrometry in Bioanalysis and Lithium-Ion Battery Research](#) Carsten Engelhard, University of Muenster, Anastasia Albert, Britta Vortmann, Lothar Veith

10:15 AM

(450-7)

[Trace Metal Analysis for Toxic Elements Detected in Children's Plastic Toys](#) Patricia Atkins, SPEX CertiPrep, Huifang Lang

10:35 AM

(450-8)

[Toxic Gases and Fumigants in Containers: Measurements with a Portable GDA and Comparison to GC-MS Results](#) Andreas Walte, Airsense Analytics, Bert Ungethuem, Hans-Ulrich Kobialka, Knut Beese, Lygia Budnik, Nico Homann, Svea Fahrenholtz, Wolf Muenchmeyer

ORAL SESSIONS

Session 460

Molecular Spectroscopy Advances (Half Session) - arranged by Emil W. Ciurczak, Doramaxx Consulting

Monday AM, Room: 119B

Emil W. Ciurczak, Doramaxx Consulting, Presiding

8:00 AM

(460-1)

[Massively Parallel Trace Molecular Detection Using Ultra-Broadband Mid-Infrared Frequency Comb Laser Source](#) Konstantin L. Vodopyanov, Stanford University, Alireza Marandi, Magnus Haakestad, Nick Leindecker, Tobias Lamour

8:20 AM

(460-2)

[A Multiplexed Tunable Filter Spectrometer for Multi-Compound Gas and Liquid Analyses](#) Vidi Saptari, Precise

8:40 AM

(460-3)

[Qualities of External Cavity Quantum Cascade Lasers for Spectroscopy](#) Frederick Haibach, Block Engineering, Deutsch Erik

9:00 AM

(460-4)

[Good Practices in Spectral Databasing and Knowledge Management](#) Michael Boruta, Advanced Chemistry Development

ORAL SESSIONS

Session 470

Nanotechnology: Biotechnology - arranged by X Nancy Xu, Old Dominion University

Monday AM, Room: 120A

X Nancy Xu, Old Dominion University, Presiding

8:00 AM

PITTCON 2013

(470-1)

[Using DNA-Directed Grown Silver Nanoparticles to Kill Plant Bacteria](#) Ismal Ocsoy, University of Florida, Mathews Paret, Muserref Arslan Ocsoy, Weihong Tan

8:20 AM

(470-2)

[Silica Nanoparticle-Treated Macrophages Show Decreased Function in Response to Bacterial Challenges](#) Katherine Tyner, Food and Drug Administration, Simona Bancos

8:40 AM

(470-3)

[Multiplexed 3D Raman and SERS Imaging of Cells](#) Sarah L. McAughtrie, University of Strathclyde, Duncan Graham, Karen Faulds, Katherine Lau

9:00 AM

(470-4)

[Immobilization-Free Screening of Aptamers and Its Use for the Ultrasensitive Detection of Pandemic Viruses](#) ManBock Gu, Korea University, Jeewoong Park, Sujin Lee

9:35 AM

(470-5)

[Single Nanoparticle Spectroscopy for Quantitative Analysis of Nanotoxicity](#) X Nancy Xu, Old Dominion University, Kerry Lee, Lauren Browning, Pavan Cherukuri

9:55 AM

(470-6)

[Electrophysiology on an Injection Molded Polymer Chip](#) Simone Tanzi, Technical University of Denmark, Jonatan Kutchinsky, Marco Matteucci, Rafael Taboryski, Sandra Wilson

10:15 AM

(470-7)

[Enzymatically-Driven Self-Assembly of Aptamer-Functionalized, Fluorophore-Incorporated Mesoporous DNA Nanoflowers for Two-Photon Imaging and Targeted Drug Delivery](#) Guizhi Zhu, University of Florida, Weihong Tan

10:35 AM

(470-8)

[Making Nanomanipulation Useful and Easy](#) Bernardo Cordovez, Optofluidics, Robert Hart

ORAL SESSIONS

Session 480

PITTCON 2013

Pharmaceutical: Other Analytical Methods - arranged by Archana Kumar, Genentech Inc.

Monday AM, Room: 120C

Archana Kumar, Genentech Inc., Presiding

8:00 AM

(480-1)

[A Novel Approach to Greener and Healthier Medical Chemicals Purifications](#) Joseph Stefkovich, Xenosep Technologies, Al Kaziunas, Martin Fetner, Rolf Schlake

8:20 AM

(480-2)

[Satisfying the Analytical Needs of Scientists in the Most Efficient Way](#) Brian Everatt, Novartis Institutes for Biomedical Research, Simon Tullett

8:40 AM

(480-3)

[Colloidal Stability of Emulsions and Nanoparticles in Pharmaceuticals](#) Mathias Fleury, Formulacion, Gérard Meunier, Pascal Bru, Yoann Lefeuvre

9:00 AM

(480-4)

[Microwave-Assisted One-Step Rapid Synthesis of Glucose Modified Gold Nanoparticles to Improve Drug Delivery and Enhanced Potency of Pt-Based Anticancer Drug for Cancer Treatment](#) Kuldeep V. Joshi, Gujarat University, Bhoomika Joshi, Shobhana Menon

9:35 AM

(480-5)

[Preparative Study on Overloaded Chiral Separations with Collection in SFC](#) John Whelan, Waters Corporation, Ziqiang Wang

9:55 AM

(480-6)

[Amine-Phenyl Dual Gradient Stationary Phase for the Separation of Water and Fat Soluble Vitamins](#) Veeren Dewoolkar, Virginia Commonwealth University, Balamurali Kannan, Maryanne Collinson

10:15 AM

(480-7)

[Avoiding Bosutinib: A Case of What Could Have Been?](#) Ryan R. Sasaki, Advanced Chemistry Development, Graham McGibbon, Patrick Wheeler

10:35 AM

(480-8)

[Using Core-Shell UHPLC Columns for Improved Separation of Immunoglobulins and Other Large Intact Proteins](#) Michael D. McGinley, Phenomenex, James Rudge, Jeff Layne

ORAL SESSIONS

Session 490

Two Dimensional GC (GCxGC) (Half Session) - arranged by Huamin Cai, Valco Instruments Co Inc.

Monday AM, Room: 118C

Huamin Cai, Valco Instruments Co Inc., Presiding

9:35 AM

(490-1)

[Limits of Detection and Quantification for Comprehensive Multidimensional Separations Using Multivariate Detectors \(Simulated and Real Data\)](#) James J. Harynuk, University of Alberta, A Paulina de la Mata

9:55 AM

(490-2)

[GCxGC Separation of Fatty Acid Methyl-Esters: Using Giddings Dimensionality to Aid the Interpretation of Comprehensive Two-Dimensional Gas Chromatograms](#) Edward B. Ledford, Zoex Corporation, Ali Reza Fardin-Kia, Jeanne Rader, Pierluigi Delmonte, William Spear, Zhanpin Wu

10:15 AM

(490-3)

[Recent Developments in Thermodynamic Modeling of GCxGC Separations and Practical Applications](#) Teague M. McGinitie, University of Alberta, Heshmatollah Ebrahimi-Najafabadi, James Harynuk

10:35 AM

(490-4)

[A GCxGC Valve Modulator](#) Huamin Cai, Valco Instruments Co Inc., Martin Brisbin, Stanley Stearns

ORAL SESSIONS

Session 500

Vibrational Spectroscopy (Half Session) - arranged by Emil W. Ciurczak, Doramaxx Consulting

Monday AM, Room: 119B

Emil W. Ciurczak, Doramaxx Consulting, Presiding

9:35 AM

(500-1)

[The Use of Photoacoustic Multi-Gas Analysis in Air Quality Monitoring Applications by Utilizing the](#)

[Combination of a Tunable Laser Source and Filter Based NDIR Spectroscopy](#) Arto Branders, Gasera Ltd.,
Ismo Kauppinen, Juho Uotila, Sauli Sinisalo

9:55 AM

(500-2)

[Objective Optical Grain Storage Insect Fragment Detection and Estimation via Quantitative Near Infrared Chemical Imaging](#) David L. Wetzel, Kansas State University, Daniel Madgwick, Mark Boatwright, Tyler Nickoley

10:15 AM

(500-3)

[Vibrational Studies of Different Protein that Forms Amyloids Fibrils Confined in Polymeric Milieu](#) Manuel F. Rosario-Alomar, University of Puerto Rico, Mayaguez, Luis Millan-Barea

10:35 AM

(500-4)

[Estimating Oil Slick Thickness: A Spectroscopic Approach](#) Gregory F. Hewitt, Applied Research Associates, David Sweeten, John Haas, Lance Besaw, Ryan Langlois

POSTER SESSIONS

Session 510

Bioanalytical: Electrochemistry

Monday AM, Room: Exposition Floor, Aisles 1600-2100

(510-1P)

[Electrochemical Oxidation Efficiency of Tryptophan and Tyrosine in On-Line EC-ESI-MS](#) Donq W. Looi, University of Florida, Anna Brajter-Toth, Gerald Dorneval, Imran Iftikhar

(510-2P)

[Microarray Electrodes for Chemically Imaging Release from Cells](#) Johan Dunevall, Chalmers Tekniska Högskola, Andrew Ewing, Jun Wang, Lin Yuqing, Raphael Trouillon

(510-3P)

[In Vivo Electrochemical Measurements of Octopamine Release in Drosophila Melanogaster Larvae](#) Soodabeh Majdi, Chalmers University of Technology, Andrew Ewing, David E Krantz, Eva Carina Berglund

(510-4P)

[Monitoring DNA-Zipper Mediated Artificial Exocytosis Using a Quartz Crystal Microbalance with Dissipation and Amperometry](#) Hoda Mashadi Fathali, Chalmers University of Technology, Ann-Sofie Cans, Joakim Wigström, Michael E Kurczyk, Neda Najafinobar

(510-5P)

[Further Studies of Uptake of Metals By Hair via Melanin: Some Preliminary Results For L-Dopa and Analogue Molecules](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Kelly Casoni

(510-6P)

[Enhanced Potentiometric Nitrate Selectivity of Cobalt\(III\) Corrole-Based Polymer Membrane Electrodes](#) Si Yang, University of Michigan, Mark Meyerhoff

(510-7P)

[A SERS Optical Sensor Fabricated by Laser-Induced Deposition of Silver Nanoparticles for Bioidentification](#) Chunyu Liu, Jilin University, Gang Chen, Shuping Xu, Weiqing Xu

(510-8P)

[Magnetic Gold Nanoparticles in SERS-Based Sandwich Immunoassay for Antigen Detection by Well Oriented Antibodies](#) Almira Ramanaviciene, Vilnius University, Akif Bozkurt, Arunas Ramanavicius, Ismail Boyaci, Julija Baniukevic, Ugur Tamer

(510-9P)

[Kinetic and Thermodynamic Behavior of DNA Immobilized on Silica Studied by Resonantly Enhanced Second Harmonic Generation](#) Shafiul Azam, University of Alberta, Julianne Gibbs-Davis

(510-10P)

[Highly Sensitive Electrochemical Mass Sensor for Insulin Detection in Human Serum](#) Sadagopan Krishnan, Oklahoma State University, Vini Singh

(510-11P)

[Electrochemical Investigation of Interfaces Between Different Electrodes and Immobilized Human Liver Microsomes](#) Sadagopan Krishnan, Oklahoma State University, Charuksha Walgama, Rajasekhar Nerimetla

(510-12P)

[Electrochemical Characterization of Onion-Like Carbons \(OLCs\)](#) Doo Young Kim, University of Kentucky, Juchan Yang

POSTER SESSIONS

Session 520

Bioanalytical: New Methods

Monday AM, Room: Exposition Floor, Aisles 1600-2100

(520-1P)

[Automated-20/-800C Biobanking for Every Laboratory](#) Simon Tullett, TTP Labtech Ltd, James Craven, Wayne Bennett, Wendy Gaisford

(520-2P)

[Analysis of Virus Particles in Media by Dynamic Light Scattering](#) Henry Oviatt, Brookhaven Instruments Corporation

(520-3P)

[Development of Novel Hydrogels Responsive for Molecular Recognition](#) Yuichi Tominaga, Kyoto University, Ken Hosoya, Koji Otsuka, Takuya Kubo

(520-4P)

[Utilizing Polymerizable Lipid in Characterization of Ligand-Receptor Interactions by MALDI-MS, AFM and TIRF-M](#) Boying Liang, University of Arizona, Kristina Orosz, Scott Saavedra, Vicki Wysocki, Yue Ju

(520-5P)

[Nanoscale Investigation of Protein/Ligand Binding Using Tip-Enhanced Raman Spectroscopy](#) Hao Wang, University of Notre Dame, Zachary Schultz

(520-6P)

[Modified FRAP Methodology with Millisecond Time Resolution for the Investigation of Heterogeneous RNA Polymerase II Diffusion Dynamics](#) Michael A. Tycon, University of North Carolina at Chapel Hill, Christopher Fecko

POSTER SESSIONS

Session 530

Bioanalytical: Separations and Microfluidics

Monday AM, Room: 204ABC

(530-1P)

[Sequence-Based Separation of Single-Stranded DNA by Capillary Electrophoresis](#) Xueru Zhang, Rensselaer Polytechnic Institute, Linda McGown

(530-2P)

[Quality of Deltamethrin Impregnated Mosquito Nets in Lagos, Nigeria](#) Moshood O. Akinleye, University of Lagos, Herbert Coker, Mobolaji Komolafe

(530-3P)

[Rapid Analysis of Amino thiols by UHPLC with Boron Doped Diamond Electrochemical Detection](#) Bruce Bailey, Thermo Fisher Scientific, David Thomas, Ian Acworth, Marc Plante, Qi Zhang

(530-4P)

[Ion Exchange Chromatography Kit for Monoclonal Antibody Separations](#) Haiying Chen, Sepax Technologies, Inc., Katherine McLaughlin

(530-5P)

[Determination of Bisphenol A \(BPA\) Levels in Animal Cages Following Different Cleaning Regimens](#) Kimberly D. Chichester, St. John Fisher College, Andrianette Skrypek, Edward Freeman, Lindsay Sturnick

(530-6P)

[Combined Ion Exclusion Ion Exchange Chromatography](#) Neil D. Danielson, Miami University, Christine Kirkpatrick, Fotouh Mansour

(530-7P)

[Sequential Enzyme Colocalization within Cytoplasm Mimics](#) Bradley Davis, The Pennsylvania State University

(530-8P)

[RP-HPLC Method Development and Validation for Sitagliptin in Human Plasma](#) Anup A. Dhangé, No Affiliation Listed

(530-9P)

[Advanced Size Exclusion Chromatography: Benefits of Light Scattering Detection for Protein Aggregation Analysis](#) Phu T. Duong, Agilent Technologies, Inc., Andrew Coffey, James Martosella

(530-10P)

[Method Developments for Monoclonal Antibody Charge Variant Separation](#) Phu T. Duong, Agilent Technologies, Inc., Andrew Coffey, James Marosella

(530-11P)

[Carbohydrate Profiling of Therapeutic Glycoproteins by Anion Exchange Chromatography Coupled with Pulsed Amperometric Detection](#) Andrea R. Gray, University of Maryland Baltimore County, Govind Rao, Shaunak Uplekar, William LaCourse

(530-12P)

[Comparison of Analyzing Sulfur-Containing Amino Compounds in Acidic and Alkaline Conditions Using Ion Exchange Chromatography with Electrochemical Detection](#) Jinmo Huang, The College of New Jersey, Matthew Smith, Samantha Mascetti

(530-13P)

[Achieving Rapid and Highly Efficient Protein and Peptide Separations Using Superficially Porous Poroshell Columns](#) James Martosella, Agilent Technologies, Phu Duong

(530-14P)

[High Resolution Peptide Separation](#) Katherine McLaughlin, Sepax Technologies, Inc., Haiying Chen

(530-15P)

[1.7 \$\mu\$ m Antibodix and Proteomix Cation Ion-Exchange Chromatography Column](#) Sixi Wang, Sepax Technologies, Inc., Haiying Chen, Katherine McLaughlin, Ke Yang

(530-16P)

[Rapid Reversed-Phase High Performance Liquid Chromatographic Method for the Determination of L-dopa \(L-3,4-dihydroxyphenylalanine\) in Vicia Faba](#) Yuegang Zuo, University of Massachusetts, Dartmouth, Di Wu

(530-17P)

[Investigation of Adduct Formation between Photoactivated Cr\(III\) Complexes and DNA via Liquid Chromatography Mass Spectrometry \(LC-MS\) and Gel Electrophoresis](#) Andrew G. Kantor, Furman University, John Wheeler, Noel Kane-Maguire, Sandra Wheeler, Yasmín Alvarez-García

(530-18P)

[Application of the Fused-Core Penta-HILIC Column for High Performance Separations of Nucleobases, Nucleosides and Nucleotides](#) Barry Boyes, Advanced Materials Technology, Joseph DeStefano, William Johnson, William Miles

(530-19P)

[Selective Analysis of Polar Lipids in Small Mammals via Triple Quadrupole Mass Spectrometry](#) Erin Divito, Duquesne University, Michael Cascio

(530-20P)

[In Vivo Microdialysis Sampling and LC-MS Characterization of Biogenic Amines in the Pericardial Cavity of the Jonah Crab, Cancer Borealis](#) Jeffrey C. Jung, Santa Clara University, John Birmingham, Ryan Cheu, Steven Suljak

(530-21P)

[High Resolution Analysis of Monoclonal Antibody Heterogeneity by Size Exclusion Chromatography and Hydrophilic Interaction Chromatography](#) Yasutoshi Kawai, Tosoh Corporation, Hiroyuki Yamasaki, Shigeru Nakatani

(530-22P)

[The Inhibition Effect of Gold Nanoparticles on the Formation of Advanced Glycation End Products](#) Weixi Liu, University of Rhode Island, Champika Seneviratne, Joel Dain, Menashi Cohenford

(530-23P)

[UV Enhanced Glycation of Human Serum Albumin by D-Glucose](#) Weixi Liu, University of Rhode Island, Joel Dain, Menashi Cohenford, Sreekanth Suravajjala

(530-24P)

[Identification of Non-Enzymatic Glycation Sites of Methylglyoxal and Glyoxal on Human Immunoglobulin-G](#) Sreekanth Suravajjala, University of Rhode Island, Joel Dain, Liu Weixi, Menashi Cohenford, Praveen

Pampati

(530-25P)

[A Study to Correlate Mouth-Level Intake of Nicotine and Its Biomarker of Exposure](#) Jennye Ward, Centers for Disease Control and Prevention, Clifford Watson, David Hammond, Xizheng Yan, Yan Ding

(530-26P)

[Comparison of Sensitivity and Throughput at Different Flow Rates Using a Nano LC System with Microfluidic Flow Control and Extended Flow Rate Range](#) Xiang Zhu, Eksigent, part of AB SCIEX, Remco Van Soest

(530-27P)

[Effects of Cell-Cell Interaction on Neutrophil Chemotaxis within Microfluidic Chemoattractant Gradients](#) Xiaojie Wu, University of Minnesota, Donghyuk Kim

(530-28P)

[Single-Molecule Measurements of the Binding Between Small Molecules and DNA Aptamers](#) Philip M. Yangyuoru, Kent State University

(530-29P)

[Application of Amino Stationary Phases for the Analysis of Carbohydrates](#) Mark Woodruff, Fortis Technologies Ltd, Ken Butchart

(530-30P)

[UHPLC Analysis of Biomolecules](#) Mark Woodruff, Fortis Technologies Ltd, Ken Butchart

POSTER SESSIONS

Session 540

Fuels, Energy, and Petrochemical Analyses

Monday AM, Room: 204ABC

(540-1P)

[Phosphorus, Sulfur, and Chlorine Analysis of Biofuels by Wavelength Dispersive X-ray Fluorescence Spectrometry](#) Lee A. Fields, Rigaku Americas Corporation, Laura Oelofse

(540-2P)

[Determination of Methanol in Biodiesel by ASTM EN 14110 Using Automated Headspace Vial Samplers](#) Nathan Valentine, Teledyne Tekmar, Roger Bardsley, Tammy Rellar

(540-3P)

[Identification of Lignin Degradation Products and Sugars in Biomass Hydrolysates](#) Yohannes H. Rezenom, Texas A&M University, Biaxin Wang, David Russell, Jason Gill, Kun-Ching Cho, Kung-Hui Chu, Ryland Young

(540-4P)

[Measurement of Residual Starch and Protein in Distillers Dried Grains and Solubles \(DDGS\) Using a Discrete Analyzer](#) Libby A. Badgett, OI Analytical, Gary Engelhart, William Lipps

(540-5P)

[Determination of Anions in Distillers Dried Grains With Solubles Using Ion Chromatography](#) Cassandra Oates, Thermo Fisher Scientific, Brian De Borba, Jeffrey Rohrer

(540-6P)

[Electrochemistry of Fuels: A Perspective on the Analysis of Contaminants](#) Leonardo L. Okumura, UFV, Adelir Saczk, Marcelo de Oliveira

(540-7P)

[On-Line Determination of Mercury in Liquid Hydrocarbon Streams for Process Monitoring and Bespoke Laboratory Test Systems](#) C Anthony Rogers, P S Analytical, Matthew Dexter, Peter Stockwell, Warren Corns

(540-8P)

[Trace Nitrogen Applications in Catalytic Naphtha and Feed Stocks by Combustion and Chemiluminescence Analysis](#) Aaron A. Mendez, PAC, Lisa Houston

(540-9P)

[Analysis of Sulfur Containing Compounds in Petroleum Fuels and Distillates Using Deans Switching With an Improved High Temperature Flame Photometric Detector](#) Roger L. Firor, Agilent Technologies

(540-10P)

[Comprehensive Two-Dimensional Gas Chromatography Combined with Latest Developments in Time-of-Flight Mass Spectrometric Analysis for the Improved Speciation of Compound Classes in Petrochemical Analyses](#) Nick Bukowski, ALMSCO International, Bob Green, Kurt Thaxton, Nicola Watson, Steve Smith

(540-11P)

[Unraveling the Petroleome by Mass Spectrometry](#) Geoffrey C. Klein, Christopher Newport University, Horten Mitchell, Ward Strickland

(540-12P)

[Catalytic Combustion Ionization for Selective Detection of Methylene Functional Groups Provides Simplified Chromatographic Analyses of Constituents in Complex Petroleum, FAME, and Triglyceride Samples](#) Massimo Santoro, Thermo Fisher Scientific, Andrea Caruso, Fausto Pigozzo, Paolo Magni, Paul Patterson, Riccardo Facchetti

(540-13P)

[Real-Time Monitoring of Trace Gas Concentrations in Syngas](#) Jens Herbig, Ionimed Analytik, Armin Hansel, Gerald Sprachmann, Klaus Winkler, Rene Gutmann

(540-14P)

[Development of a NeSSI Microsensor, Based on Ultrasonic Doppler Echography, For Particle Size Measurement and Quantification](#) Ilham Mokbel, University Lyon1, Ahmed Hajjaji, Guillaume Granier, Jacques Jose

(540-15P)

[Electroanalytical Evaluation of Catalytic Activity of Manganese Complexes for CO₂ Reduction](#) Greg A. Felton, Oakland University, Badrinath Dhakal, Daniel Kurtz

(540-16P)

[Dibutyl Phosphate by Ion Chromatography \(IC\) at Savannah River Site](#) Boyd J. Wiedenman, SRNS / SRNL, Thomas White

(540-17P)

[Halides and Sulfur in Liquidfied Petroleum Gas \(LPG\) by Oxidative Pyrohydrolytic Combustion Followed by Ion Chromatography Conductivity Detection](#) Will Donaldson, PAC Ip

(540-18P)

[Measurement of Automobile Exhaust N₂O by Mid-IR Laser Spectroscopy](#) Montajir Rahman, HORIBA Instruments Inc., Horishi Nakamura, Kenji Hara, Mike Akard, Rick Rooney, Shigeru Nakatani

(540-19P)

[Portable Micro Gas Chromatography - Fast and Accurate Analysis of Biogas and Related Streams](#) Remko van Loon, Agilent Technologies, Duvekot Coen

(540-20P)

[Determination of Iron\(II\) Concentration By Potentiometric Titration of Chromatometry with TICl₂ Reduction Step Without Heating](#) Eduardo H. Simoes, Metrohm / Unicamp

(540-21P)

[Potentiometric Titration of Index of Acidity I.A. on Ethanol Fuel: Improvement Method For Classical Visual Titration](#) Eduardo H. Simoes, Metrohm / Unicamp

(540-22P)

[Recent Enhancements in Petrochemical Qualitative-to-Quantitative Workflow: Employing GCxGC-TOF-MS for Rapid Method Development and Automated Translation to GCxGC-FID Analysis](#) Nick Bukowski, ALMSCO International, Bob Green, Kurt Thaxton, Nicola Watson, Steve Smith

(540-23P)

[Evaluation of a Finger-Sized Atomic Emission Detection Device for the Detection of Oxygen-Containing Organic Compounds in Gas Chromatography](#) Tatsuro Nakagama, Nihon University, Kazunori Saitoh, Takeru Mikuni

(540-24P)

[Automated Determination of Dissolved Gases in Water](#) Anne Jurek, EST Analytical, Doug Meece, Justin Murphy, Lindsey Pyron

(540-26P)

[Chromatographic Methods for the Characterization of Fast Pyrolysis Liquids from Forest Biomass](#) Catherine Tessini, Unidad de Desarrollo Tecnológico, Alex Berg, Claudia Mardones, Dietrich von Baer, Niels Müller

(540-27P)

[New Fast Micro Analyzer Based on an On-Line Liquid Injection System](#) Ronan Cozic, SRA Instruments, Alain Delauzun, Axel Bart, Ilham Mokbel, Jacques Jose, Ramy Abou Naccoul, Vincent Malicet

(540-29P)

[Cavity Ring-Down Spectroscopy of Small Cyclic Combustion Radicals: Phenyl, Phenoxy, and Phenyl Peroxy](#) Keith Freel, Emory University, J Park, MC Lin, Michael Heaven, Michael Sullivan

(540-30P)

[Benefits of Using the Automated Flocculation Titrimeter as a Diagnostic Tool to Minimize Fouling and Improve Thermal Refinery Processes](#) Michaëlle Exhume, Koehler Instrument Company, Raj Shah

(540-31P)

[New Developments in Compact High Resolution NMR Technologies: Multi-Nuclear Applications for Laboratory, At-Line, On-Line and Process Control](#) Paul J. Giammatteo, Process NMR Associates, John Edwards, Tal Cohen

POSTER SESSIONS

Session 550

Liquid Chromatography: Columns

Monday AM, Room: Exposition Floor, Aisles 1600-2100

(550-1P)

[Measurement of Extra-Column Band Broadening Effects in Capillary UHPLC](#) James P. Grinias, University of North Carolina at Chapel Hill, James Jorgenson

(550-2P)

[Utilizing Modern UHPLC Columns for Optimal Method Development via a Quality-by-Design \(QbD\) Approach](#) Jason Link, Agilent Technologies, Anne Mack, Maureen Joseph, William Long

(550-3P)

[Separation Improvements with 2D LC](#) William J. Long, Agilent Technologies, Anne Mack, Jason Link, Maureen Joseph

(550-4P)

[Overcoming Barriers with UHPLC to Achieve Maximum Performance](#) Anne Mack, Agilent Technologies, Jason Link, Maureen Joseph, William Long

(550-5P)

[Chromatographic Characterization of Stationary Phases for Hydrophilic Interaction Liquid Chromatography](#) Luisa Pereira, Thermo Fisher Scientific, Anthony Edge, Monica Dolci

(550-6P)

[Improve the Chromatographic Performance of Your Assay Without Changing Method or HPLC Equipment](#) Luisa Pereira, Thermo Fisher Scientific, Anthony Edge, Stephen Luke

(550-7P)

[Mixed Mode HPLC Method Development and Validation for the Limit of Impurities in Adenine](#) Kornepati V. Ramakrishna, United States Pharmacopeia, Claire Chisolm, Gabriel Giancaspro, Huy Dinh, Karen Gilbert, Samir Wahab

(550-8P)

[Novel Hybrid Core-Shell Particles for HPLC with Silica-Core and Polymer-Shell Structure](#) Itaru Yazawa, Imtakt Corporation

(550-9P)

[Sample Filtration Impact on LC Column Life](#) Limian Zhao, Agilent Technologies

(550-10P)

[Linear Solvation Energy Relationship \(LSERs\) Characterization of the Normal Phase Retention Mechanism of a Hypercrosslinked Polystyrene \(HC-Tol\) Column](#) Di Wu, University of Alberta, Charles Lucy

(550-11P)

[Selectivity of Stationary Phases with Alkyl, Phenyl and Pentafluorophenyl Groups on Core Shell Particle](#) Norikazu Nagae, ChromaNik Technologies Inc., Scott Silver, Tomoyasu Tsukamoto

(550-12P)

[Tailor Column Chemistry for Challenging Separations](#) Xiaodong Liu, Thermo Fisher Scientific, Chris Pohl

(550-13P)

[Development of Novel Carbon Media for Separation Based on the Self-Assembly and Self-Polymerization Property of Octatetrayne](#) Hui Wang, The Ohio State University, Susan Olesik

(550-14P)

[Synthesis of Silica Beads with Controlled Range of Diameters and Pore Size for Packing Capillary Columns](#) Nilson A. Assuncao, Unifesp, Camila Silva, Caroline Cristine Pereira, Heron Dominguez Silva, Larissa Sandrini Assugeni

(550-15P)

[Improving Carbon Core-Containing Core-Shell Particles via Extensive Characterization of the Core Materials](#) Chuan-Hsi Hung, Brigham Young University, Andrew Dadson, Andrew Miles, Bhupinder Singh, David Jensen, Landon Wiest, Matthew Linford, Michael Vail, Robert Davis

(550-16P)

[Improving Nanodiamond-Containing Core-Shell Particles via Extensive Characterization of the Nanodiamonds](#) Bhupinder Singh, Brigham Young University, Andrew Dadson, Andrew Miles, Chuan-Hsi Hung, David Jensen, Landon Wiest, Matthew Linford, Michael Vail, Robert Davis

(550-17P)

[Exploring HPLC / UHPLC Chromatographic Selectivity with Low and High pH Eluents on a New Broad pH Range Stable Silica-Based Stationary Phase](#) Alan P. McKeown, Advanced Chromatography Technologies Ltd, Carl Zimmerman

POSTER SESSIONS

Session 560

Mass Spectrometry: High Throughput/General Interest/Bioanalytical

Monday AM, Room: Exposition Floor, Aisles 1600-2100

(560-1P)

[Mass Spectrometry Plate Reader](#) Shuwen Sun, University of Michigan, Robert Kennedy

(560-2P)

[Applications of Solvent Assisted Ionization \[i\] Inlet\[/i\]-Mass Spectrometry for Surface Analysis and High Throughput Multiplexing Using 96-well Microtiter Plates](#) Beixi Wang, Wayne State University, Sarah Trimpin

(560-3P)

[Voltage Polarity Switching for More Inclusive or Selective Ionization for Mass Spectrometry Using Obstructive Sonic Spray Ionization \(SSI\)](#) Nicholas Chubaty, University of the Sciences, Charles McEwen, Tongwen Wang

(560-4P)

[Comparison of Internal Energy and Ionization Efficiency of Solvent Assisted Inlet Ionization \(SAII\) with Electrospray Ionization \(ESI\)](#) Madeline A. Fenner, University of the Sciences, Charles McEwen

(560-5P)

[Analysis and Quantification of Inorganic Compounds Utilizing an Enhanced Proton-Transfer-Reaction Mass Spectrometry \(PTR-MS\) Instrument](#) Lukas Maerk, IONICON Analytik GmbH, Achim Edtbauer, Alfons Jordan, Christian Lindinger, Eugen Hartungen, Philipp Sulzer, Simone Juerschik, Tilmann Maerk

(560-6P)

[Intermediate Pressure Ionization: GC/MS and LC/MS on Atmospheric Pressure Ionization Mass Spectrometers](#) Vincent S. Pagnotti, University of the Sciences, Charles McEwen, Shubhashis Chakrabarty

(560-7P)

[Threshold Ionisation Techniques for Increased Mass Spectral Selectivity](#) Sean C. Pawlowski, Extrel CMS, Kevin Kuchta, Terry Whitmore

(560-8P)

[Creating a Better Workspace: Versatile Vacuum-Pump Enclosures That Reduce Pump Noise and Maintenance Time](#) Paul P. Tripp, Agilent Technologies

(560-9P)

[Automated Tuning of a Single Quadrupole MS System for User-Supplied Calibrants](#) Ben Trumbore, Advion, Nigel Sousou, Simon Prosser

(560-10P)

[Correcting for Ion Travel Time When Mass Calibrating a Single Quadrupole Mass Spectrometer](#) Ben Trumbore, Advion, Lawrence Klecha, Sha Wang, Simon Prosser

(560-11P)

[MALDI-FTMS Analysis of \[6.6\]-phenyl C61-butyric Acid Methyl Ester: Gas Phase Reactions and Sample Preparation Optimization](#) Charles L. Wilkins, University of Arkansas, Eric Berget, Evgenia Akhmetova

(560-12P)

[Spatially Resolved Microscope REMPI Laser Mass Spectrometry](#) Shawn Owens, University of California - Santa Barbara, Lisa Gulian, Marshall Ligare, Mattanjah de Vries

(560-13P)

[Identification and Quantification of Metallothionein Species in Red Blood Cells of Autistic Patients Using Speciated Isotope Dilution Mass Spectrometry](#) Hemasudha Chatragadda, Duquesne University, HM Skip Kingston, Matt Pamuku, Timothy Fahrenholz

(560-14P)

[Analysis of RNA Oligomers Using MALDI-TOF Mass Spectrometry](#) Kristin M. Coari, Rensselaer Polytechnic Institute, Bradley Burcar, Linda McGown

(560-15P)

[Affinity MALDI-MS at Aptamer Coated Surfaces for Protein Capture](#) Molly Kogan, Rensselaer Polytechnic Institute, Christina Albanese, Linda McGown, Tian Zhang

(560-16P)

[Electrospray Ionization High Performance Ion Mobility Spectrometry for Dissolution Testing](#) Carol Moraff, Excellims Corporation, Ching Wu, Clinton Krueger, Frederick Antosz

(560-17P)

[Direct Quantification of 18 Aldehydes Released from Schiff Base Protein Adducts in Human Serum by Headspace SPME/GC/HRMS](#) Grace A. Osborne-Hile, Centers for Disease Control and Prevention, Benjamin Blount, Lalith Silva

(560-18P)

[Labeling Primary Amine Groups in Peptides/Proteins Using N-Hydroxysuccinimidyl \(NHS\) Ester Modified Superparamagnetic Iron Oxide Nanoparticles](#) Ujwal S. Patil, University of New Orleans, Matthew Tarr, Yang Cai

(560-19P)

[Investigation of Alternating Current Electrospray Ionization for Proteomics](#) Scott A. Sarver, University of Notre Dame, Carlos Gartner, David Go, Norman Dovichi

(560-20P)

[Highly Versatile Calibration of Trace Gas Detectors Using a Liquid Calibration Unit \(LCU\)](#) Jens Herbig, Ionimed Analytik, Andreas Klinger, Armin Hansel, Klaus Winkler, Lukas Fischer, Rene Gutmann

(560-21P)

[Electrospray Inlet Ionization \(ESII\): A Combination of Electrospray Ionization \(ESI\) and Solvent Assisted Inlet Ionization \(SAII\)](#) Shubhashis Chakrabarty, University of the Sciences, Charles McEwen, Vincent Pagnotti

(560-22P)

[A High Resolution Quadrupole Solution to Low Molecular Weight Isotopologue Analysis](#) Sean C. Pawlowski, Extrel CMS, Kevin Kuchta, William Spencer

(560-23P)

[Reproducible Analysis of Sialylated Glycan by Matrix Assisted Laser Desorption Ionization Time-of-Flight Mass Spectrometry](#) Yangsun Kim, Hudson Surface Tech, Changwon Park, Heysun Maeng, Sunyoung Ahn, Yongha In

(560-24P)

[Studies on Ionization and Fragmentation Behaviors of Arylboronic Acids under ESI-MS Conditions](#) Lifang Wang, Georgia State University, Binghe Wang, Chaofeng Dai, Sarah Burroughs, Siming Wang

POSTER SESSIONS

Session 570

New Products at Pittcon 2013

Monday AM, Room: Exposition Floor, Aisles 1600-2100

(570-1P)

[Fast Analysis of Transformer Oil Gas](#) Yongqiang Li, INFICON

(570-2P)

[Fast and Accurate Analysis of Refinery Gas Using Multi Channel Micro Gas Chromatography](#) Remko van Loon, Agilent Technologies, Coen Duvekot

(570-3P)

[Application of High Retentive Porous Polymers in Miniaturized Systems for Analysis of Gases in Seconds](#) Jim Whitford, Restek Corporation, Bill Bromps, Chris van Tilburg, Jaap de Zeeuw

(570-4P)

[A New Device to Eliminate Pipetting](#) Joe Stefkovich, Applied Separations, Alfonso Liu, Rolf Schlake

(570-5P)

[Rapid Sample Preparation Protocols Using Microextraction by Packed Sorbent](#) Andrew Gooley, SGE Analytical Science, Emily Hilder, Ern Dawes, Esme Candish, Peter Dawes

(570-6P)

[Recent Advances in Sample Preparation for Accelerated Solvent Extraction](#) SM Rahmat Ullah, Thermo Fisher Scientific, Brett Murphy, Bruce Richter, Chris Pohl, David Knowles, Ekong Bassey, Eric Francis, Kannan Srinivasan

(570-7P)

[An Evaluation of Different Finishing Techniques for the Fabrication of Mid-Infrared Liquid Cell Optical Mirrors from Hastelloy B-3 Alloy](#) Joseph P. Lucania, Harrick Scientific Products, Ali Kocak

(570-8P)

[Utilizing Glassware Washers for Laboratory Energy Savings](#) Odette Nolan, Labconco Corporation

(570-9P)

[Evaluation of a Novel, Universal Detection, Non-Destructive, Helium Ionization Based GC Detector for the Analysis of Light Hydrocarbons, Permanent Gases and Their Impurities](#) Clifford M. Taylor, Shimadzu Scientific Instruments, Ryosuke Kamae

Monday PM, March 18, 2013

AWARDS

Session 580

SEAC - Charles N Reilley and Young Investigators Awards - arranged by Henry White, University of Utah

Monday PM, Room: 114

Henry White, University of Utah, Presiding

2:10 PM

(580-1)

[Electrochemical Measurements of Transmitters in Flies, at Cells, and From Transmitter Vesicles](#) Andrew G. Ewing, Chalmers University and University of Gothenburg

2:45 PM

(580-2)

[Advances in Fast-Scan Cyclic Voltammetry for Detection of Neurotransmitters](#) R Mark Wightman, University of North Carolina at Chapel Hill

3:20 PM

(580-3)

[A New Take on an Old Concept: Electrochemical Interface Studies by the Technique 'Formerly Known As' Emersion](#) Jeanne E. Pemberton, University of Arizona, Anoma Mudalige

4:00 PM

(580-4)

[Fluorescence-Enabled Electrochemistry and Single-Cell Imaging](#) Bo Zhang, University of Washington, Jonathan Cox, Joshua Guerrette, Stephen Percival

4:35 PM

(580-5)

[Analysis Through Electrochemistry of Single Particles](#) Allen J. Bard, University of Texas at Austin, Aliaksei Boika, Jun Hui Park

SYMPOSIA

Session 590

ACS ANYL w/AAPS APO - Bioanalytical Method Validation: Concepts, Expectations and Challenges in Small Molecule and Macromolecule - arranged by Chinmay Shukla, FDA

PITTCON 2013

Monday PM, Room: 201B

Chinmay Shukla, University of Kansas, Presiding

2:05 PM

(590-1)

[Concepts in Bioanalytical Method Validation](#) Craig Lunte, University of Kansas

2:40 PM

(590-2)

[Scientific Challenges in the Bioanalysis of Small Molecules](#) Mark J. Rose, Amgen, Christopher James, Sarah Wilson

3:15 PM

(590-3)

[Bioanalytical Method Validation: A Clinical Pharmacology Perspective on Small Molecules](#) Edward D. Bashaw, US Food and Drug Administration

3:50 PM

(590-4)

[Challenges in Macromolecule Bioanalysis – What Do We Measure With Ligand Binding Assays?](#) Binodh S. DeSilva, Bristol-Myers Squibb

4:25 PM

(590-5)

[Fit-for-Purpose Macromolecule Bioanalysis – Regulatory and Scientific Perspectives](#) Yow-Ming C. Wang, Food and Drug Administration

SYMPOSIA

Session 600

Biological Roles of Glycan Isomers Defined Through Chromatographic and Electrophoretic Techniques - arranged by Yehia Mechref, Texas Tech University

Monday PM, Room: 123

Yehia Mechref, Texas Tech University, Presiding

2:05 PM

(600-1)

[Microfluidic and Electrophoretic Glycan Analysis with Fluorescence and Mass Spectrometric Detection](#) Dimitri Pappas, Texas Tech University

2:40 PM

PITTCON 2013

(600-2)

[Use of Ion Mobility and Negative Ion Fragmentation for the Structural Determination of N-Linked Glycans](#) David J. Harvey, University of Oxford

3:15 PM

(600-3)

[Quantifying Individual N-linked Glycans in Complex Mixtures](#) Ron Orlando, CCRC/UGA, Barry Boyes, Shujuan Tao

3:50 PM

(600-4)

[LC/MS Analysis of Isomeric Glycosaminoglycan Saccharides](#) Joseph Zaia, Boston University

4:25 PM

(600-5)

[Using FAIMS and Tandem Mass Spectrometry to Analyze Isomeric Glycosaminoglycans](#) Jonathan Amster, University of Georgia, Muchena Kaillemia

SYMPOSIA

Session 610

Counterfeit Pharmaceuticals and Identification - arranged by Perry G. Wang, US FDA

Monday PM, Room: 124

Perry G. Wang, US FDA, Presiding

2:05 PM

(610-1)

[Fighting Counterfeit Pharmaceuticals](#) Albert Wertheimer, Temple University, Perry Wang

2:40 PM

(610-2)

[Tiered Technology Strategies for Testing Poor Quality Medicines](#) Facundo M. Fernandez, Georgia Institute of Technology, Chris Harris, David Jenkins, Joel Keelor, Manshui Zhou, Maria Eugenia Monge, Michael Payne, Patricia Tabernerero, Paul Newton, Prabha Dwivedi

3:15 PM

(610-3)

[Use of Stable Isotopes in Pharmaceutical Products for Anti-Counterfeiting Purposes](#) Linda Felton, University of New Mexico

3:50 PM

PITTCON 2013

(610-4)

[Analytical Techniques to Detect Counterfeit Pharmaceuticals](#) Fred I. Fricke, USFDA Retired, Mark Witkowski, RD Satzger

SYMPOSIA

Session 620

Miniature Mass Spectrometers: Reaching the Exponential of the Growth Curve - arranged by R Graham Cooks, Purdue University

Monday PM, Room: 201A

R Graham Cooks, Purdue University, Presiding

2:05 PM

(620-1)

[Internal Ionization](#) David Rafferty, 1st Detect Corporation

2:40 PM

(620-2)

[Mini Mass Spectrometers: External Ionization & Interfaces](#) R Graham Cooks, Purdue University, Zheng Ouyang

3:15 PM

(620-3)

[Converging Ion Traps for Miniaturized Mass Spectrometers](#) Daniel Austin, Brigham Young University

3:50 PM

(620-4)

[Deployable Remote Miniature Cylindrical Ion Trap Mass Spectrometer](#) Guido Verbeck, University of North Texas

4:25 PM

(620-5)

[A Portable VUV Photo-Ionization Digital Ion Trap Mass Spectrometer for VOC Inspection](#) Li Ding, Kunshan Hexin Mass Spectrometry Co Ltd, Zhen Zhou

SYMPOSIA

Session 630

New Reagents and New Technologies for Biological Imaging - Stephane Petoud, CNRS - arranged by Center for Molecular Biophysics

Monday PM, Room: 125

PITTCON 2013

Stephane Petoud, Carnegie Mellon University, Presiding

2:05 PM

(630-1)

[Genetically Targetable Tandem Fluorophores for Smart Sensing](#) Marcel Bruchez, Carnegie Mellon University

2:40 PM

(630-2)

[Nanoscale Coordination Polymers for Biomedical Imaging and Drug Delivery](#) Wenbin Lin, University of North Carolina at Chapel Hill

3:15 PM

(630-3)

[Plasmonic Enhancement of Light Scattering in Cellular and Molecular Imaging Reveals the Secrets of Cancer Cells in Life and in Death](#) Mostafa A. El-Sayed, Georgia Institute of Technology, Bin Kang, Lauren Austin, Megan Mackey

3:50 PM

(630-4)

[Coordination Chemistry of MR Imaging Probes](#) Thomas J. Meade, Northwestern University

4:25 PM

(630-5)

[Near-Infrared Emitting Lanthanide Compounds for Biologic Imaging in Cells and in Small Animals : Metal-Organic Frameworks and Dendrimer Complexes](#) Stephane Petoud, CNRS University, Alexandra Foucault, Hyounsoo Uh, Kristy Gogick, Nathaniel Rosi, Svtelana Eliseeva

SYMPOSIA

Session 640

Next Generation Approaches to Clinical and Chemical Sensing - arranged by Chad A. Mirkin, Northwestern University

Monday PM, Room: 118A

Chad A. Mirkin, Northwestern University, Presiding

2:05 PM

(640-1)

[Next-Generation SERS Nanoparticles for Medical Imaging and Diagnostics](#) Shuming Nie, Emory University, Ximei Qian

2:40 PM

(640-2)

[Live Cell Sorting Based on Genetic Content with NanoFlares](#) Chad A. Mirkin, Northwestern University

3:15 PM

(640-3)

[Rapid Detection of Viruses and Bacteria Directly From Clinical Specimens Using the Microarray-Based Sample-to-Result Verigene System](#) Nathan A. Ledebner, Medical College of Wisconsin

3:50 PM

(640-4)

[Nanoparticle-Based Artificial RNA Silencing Machinery for Antiviral Therapy](#) Charles Cao, University of Florida

4:25 PM

(640-5)

[Nanotechnology for Detection of microRNAs with Application to Prostate Cancer](#) Colby S. Thaxton, Northwestern University

SYMPOSIA

Session 650

Shootout in the (Elemental) MS Corral - arranged by Steven J. Ray, Indiana University

Monday PM, Room: 122B

Steven J. Ray, Indiana University, Presiding

2:05 PM

(650-1)

[ICP-Quadrupole Mass Spectrometry: Tried, True and Better than Ever](#) John W. Olesik, The Ohio State University

2:40 PM

(650-2)

[Sector-Field Mass Spectrometers — High Sensitivity and Low Interferences. What More Could You Want?](#) Frank Vanhaecke, Ghent University

3:15 PM

(650-3)

[TOFMS — The Only Way to Capture Transients from Challenging Samples?](#) James A. Holcombe, University of Texas at Austin

3:50 PM

(650-4)

[Without Ultra-High Resolution MS, Your Spectra Are All Wrong](#) David W. Koppenaal, Pacific Northwest

National Laboratory, Anthony Carado, Charles Barinaga, R Kenneth Marcus

4:25 PM

(650-5)

[All the Signal, All the Time, with Array-Detector Mass Spectrometry](#) Steven J. Ray, Indiana University, Alex Graham, Anthony Carado, Charles Barinaga, Christie Enke, David Koppenaar, Elise Dennis, Gary Hieftje, Jeremy Felton

SYMPOSIA

Session 660

Single Molecule Characterization with Nanofluidic Devices - arranged by Stephen C. Jacobson, Indiana University

Monday PM, Room: 122A

Stephen C. Jacobson, Indiana University, Presiding

2:05 PM

(660-1)

[Single Enzyme Spectroelectrochemistry in NanoOptoFluidic Devices](#) Paul W. Bohn, University of Notre Dame, Dane Grismer, Jing Zhao, Sean Branagan

2:40 PM

(660-2)

[Measuring Protein-Protein Interactions at Cell Junctions with Ion Conductance Microscopy](#) Lane A. Baker, Indiana University, Chiao-Chen Chen, Yi Zhou

3:15 PM

(660-3)

[Nanochannel Networks for Manipulating and Characterizing Single DNA Molecules](#) Laurent Menard, University of North Carolina at Chapel Hill, Chad Mair, J Michael Ramsey, Jean Pierre Alarie, Jinsheng Zhou, Michael Woodson

3:50 PM

(660-4)

[Size-Selective Trapping of Bioparticles Using Planar Nanofluidic Devices](#) Milton L. Lee, Brigham Young University, Aaron Hawkins, Adam Woolley, Daniel Maynes, Dennis Tolley, Jie Xuan, John Stout, Mark Hamblin, Suresh Kumar

4:25 PM

(660-5)

[In-Plane Nanofluidic Devices for Sensing and Assembly of Single Virus Capsids](#) Stephen C. Jacobson, Indiana University, Adam Zlotnick, Laurence Kohler, Lisa Selzer, Lye Siang Lee, Zachary Harms

PITTCON 2013

SYMPOSIA

Session 670

The Twenty-Fourth James L Waters Symposium: Chemical Imaging Spectroscopy - arranged by Charles W. Gardner, ChemImage Corporation

Monday PM, Room: 126A

Charles W. Gardner, ChemImage Corporation, Presiding

2:05 PM

(670-1)

[Chemical Imaging: Those Are Pretty Pictures But Who Gives A Darn!](#) Neil Lewis, Malvern Instruments

2:40 PM

(670-2)

[Birth to Young Adulthood of Molecular Chemical Image](#) Patrick J. Treado, ChemImage Corporation

3:30 PM

(670-3)

[The Development of Infrared Spectroscopic Imaging and Focalplane Array Detectors: Are FPAs Enabling Technology, Achilles' Heel, or Both?](#) Richard A. Crocombe, Thermo Fisher Scientific

4:05 PM

(670-4)

[Confocal Raman Microscopy: From Single Spectra Acquisition to Routine 3D Raman Imaging](#) Joachim A. Koenen, WITec GmbH

SYMPOSIA

Session 680

Vibrational Spectroscopy and Imaging for Point-of-Care Diagnoses: From the Benchtop to the Bedside - arranged by John F. Rabolt, University of Delaware

Monday PM, Room: 117

John F. Rabolt, University of Delaware, Presiding

2:05 PM

(680-1)

[Development of a Rapid Infrared Method to Evaluate the Onset of Disease](#) John F. Rabolt, University of Delaware

2:40 PM

(680-2)

[Tissue Histopathology - Spectroscopic Imaging Technology Development Towards Real-Time Decisions](#) Rohit Bhargava, University of Illinois at Urbana-Champaign, Andre Balla, Michael Walsh, Sarah Holton

3:15 PM

(680-3)

[Nano-Optical Detection of Influenza Virulence Factors](#) Richard A. Dluhy, University of Georgia

3:50 PM

(680-4)

[Raman, Infrared and NMR Spectroscopies on the Same Samples and the Etiology and Cure for Dry Eyes](#) Douglas Borchman, University of Louisville, Gary Foulks, Marta Yappert

4:25 PM

(680-5)

[The Development and Application of a Novel Hybrid Molecular Spectroscopic and Dynamic Light Scattering Technology for the Physicochemical Characterization of Protein-Based Pharmaceuticals](#) Neil Lewis, Malvern Instruments

SYMPOSIA

Session 690

Water Quality and Environmental Issues - arranged by Lauren Weinrich, American Water

Monday PM, Room: 118C

Lauren Weinrich, American Water, Presiding

2:05 PM

(690-1)

[Optical Monitoring of Disinfection By-Product Precursors with Fluorescence Excitation-Emission Mapping \(F-EEM\): Practical Application Issues for Drinking, Waste and Reuse Water Industry](#) Adam Gilmore, Horiba Instruments Inc.

2:40 PM

(690-2)

[Determination of Pharmaceuticals in Ground-and Surface-Water Samples by Direct-Aqueous Injection, High-Performance Liquid Chromatography/Tandem Mass Spectrometry](#) Edward T. Furlong, US Geological Survey, Christopher Kanagy, Mark Burkhardt, Mary Noriega

3:15 PM

(690-3)

[The Evolution of Analytical Methods for Compliance Monitoring](#) Andrew Eaton, Eurofins Eaton Analytical Inc

3:50 PM

(690-4)

[An Overview of Hexavalent Chromium Methods and Research](#) Alice Fulmer, Water Research Foundation

4:25 PM

(690-5)

[Challenges in Measuring and Monitoring for Effects of Shale Gas Produced Water on Drinking Water Treatment Plants](#) Jeanne M. VanBriesen, Carnegie Mellon University, Jessica Wilson, Yuxin Wang

WORKSHOP

Session 700

On-Line Monitoring for Nutrients and Chemical Contaminants - arranged by William C. Lipps, OI Analytical

Monday PM, Room: 126B

William C. Lipps, OI Analytical, Presiding

2:05 PM

(700-1)

[Current ASTM Efforts for the Development of a Practice to Cover On-Line Sensor](#) Allison Fick, ASTM, Len Morrissey

2:35 PM

(700-2)

[A Novel Integrated Solution to Nutrient On-Line Monitoring - The Next Generation in Water Quality Monitoring and Watershed Management Tools](#) William A. Telliard, Consultant, Cary Jackson, Roger Stewart

3:05 PM

(700-3)

[Field Demonstration of an Innovative Biofouling Control Technology for Micro-Channel Flow Cells](#) Carlton D. Hunt, Battelle, Brian Sikorski, Caleb Chitwood, Derek Michelin, Harry Nelson, Henry Pate, Michael Neal

3:50 PM

(700-4)

[Data Review and Analysis of Continuous On-Line Monitoring - A Case Study](#) Cary Jackson, Hach Company, Roger Stewart

4:20 PM

(700-5)

[On-Line Process Monitoring for Wastewater Treatment Optimization](#) Robert C. Smith, YSI

4:50 PM

(700-6)

[An On-Line Analyzer for the Measurement of Cyanide in Precious Metal Process Solutions](#) William C. Lipps, OI Analytical

ORGANIZED CONTRIBUTED SESSIONS

Session 720

Graphene for Biosensing Applications - arranged by Chenzhong Li, Florida International University

Monday PM, Room: 203B

Chenzhong Li, Florida International University, Presiding

2:00 PM

(720-1)

[Graphene Electrodes for Bio/Chemical Sensors](#) Ashok Mulchandani, University of California - Riverside

2:20 PM

(720-2)

[Hydrophilic Graphene for Enzyme Based Electrochemical Sensors](#) Xing-Hua Xia, Nanjing University

2:40 PM

(720-3)

[Photoluminescent Graphene Oxide Nanomaterial for Bioanalysis](#) Luis A. Colón, University at Buffalo, SUNY, Ivonne Ferrer, John Vinci, Nathan Guterry, Verónica Colón, Zuqin Xue

3:00 PM

(720-4)

[Luminescent Graphene Quantum Dots: Synthesis and Biosensing](#) Jun-Jie Zhu, Nanjing University, Juan Peng, Lingling Li

3:35 PM

(720-5)

[Facile Synthesis of Graphene Nanohybrids as Enhanced Materials for Electrochemical Biosensing](#) Shaomin Shuang, Shanxi University, Chuan Dong, Yujing Guo

3:55 PM

(720-6)

[Graphene Based Electrochemical Sensors for Biosensing Applications](#) Arzum Erdem, Ege University

4:35 PM

(720-8)

[Graphene Microstructures for Biosensing and Analysis](#) Harold Craighead, Cornell University

ORGANIZED CONTRIBUTED SESSIONS

Session 730

New Frontiers in Protein Quantitation: Enabling Technologies, Methods and Workflows - arranged by Mike Lee, Milestone Development

Monday PM, Room: 121C

Mike Lee, Milestone Development, Presiding

2:00 PM

(730-1)

[Enabling Rapid, Sensitive Peptide Quantitation Through Automation and Nano-LC-MS](#) Lucinda Cohen, Merck & Co., Inc., Bernard Choi, Weixun Wang

2:20 PM

(730-2)

[Expanding Applications of LC-MS-based Bioanalytical Methods to Quantify Proteins in Biological Fluids to Support Drug Discovery](#) Timothy Olah, Bristol-Myers Squibb Company

2:40 PM

(730-3)

[Label-Free Quantitation and Top-Down Biomarker Processing: Discovery and Verification](#) Steven M. Patrie, The University of Texas Southwestern Medical Center, Daniel Plymire, Erica Maresh, John Corbett, Jumei Zhang

3:00 PM

(730-4)

[Assessment of Two Immunodepletion Methods: Off-Target Effects and Variations in Immunodepletion Efficiency May Compound Plasma Proteomics](#) Anthony T. Yeung, Fox Chase Cancer Center, Alan Braverman, Bhavinkumar Patel, Carlos Barrero, Dian Chen, Kelly Jones, Phillip Kim, Salim Merali, Steven Kelsen

3:35 PM

(730-5)

[Ultra Fast, Automated, Online Protein Digestion for LCMS/MS Quantitative Analysis](#) Robert E. Buco, Shimadzu Corporation

3:55 PM

(730-6)

[Multiplexed Tandem Mass Spectrometry for Targeted Proteomics](#) Michael MacCoss, University of Washington, Brendan MacLean, Donald Marsh, Egertson Jarrett, Michael Bereman, Vagisha Sharma

4:15 PM

(730-7)

[Comparison of Traditional HPLC/MS/MS and Micro Flow LC/MS/MS for Large Molecule Bioanalysis](#) Casey Johnson, Alturas Analytics, Inc., Chad Christianson, Jennifer Zimmer, Shane Needham

4:35 PM

(730-8)

[High Performance, Ultra Low Flow Nanospray: Breaking the Barriers for Sensitivity and Throughput](#) Gary A. Valaskovic, New Objective Inc.

ORGANIZED CONTRIBUTED SESSIONS

Session 740

Specialty Gas - arranged by Tracey Jacksier, Air Liquide

Monday PM, Room: 121B

Tracey Jacksier, Air Liquide, Presiding

2:00 PM

(740-1)

[Classical versus Spectroscopic Techniques for the Measurement of Reactive Gases at Trace Levels](#) Annarita Baldan, VSL Dutch Metrology Institute, Stefan Persijn

2:20 PM

(740-2)

[Understanding the Sources of Kr and Xe Interferences in a High-Purity Argon ICP-MS](#) Anthony Schleisman, Air Liquide, Janet Graehling

2:40 PM

(740-3)

[Preparation and Validation of Green House Gas Primary Standards](#) Jerry Rhoderick, National Institute of Standards and Technology, Franklin Guenther, Gerald Mitchell, Jennifer Carney, Mike Kelley, Walter Miller

3:00 PM

(740-4)

[Analysis of Impurities and Anomalies in Dichlorosilane](#) Jesus Anguiano, ConSci, Bill Geiger

3:35 PM

(740-5)

[Trace Analysis of HF Impurities](#) Jorge Perez, CIC Photonics, Inc, David Shafer, Richard Meyer

3:55 PM

(740-6)

[Certification of a Southern Hemisphere and a Northern Hemisphere Air Standard Reference](#)

[Materials](#) Franklin Guenther, National Institute of Standards and Technology, Gerald Mitchell, Jennifer Carney, Jerry Rhoderick, Mike Kelley, Walter Miller

4:15 PM

(740-7)

[Measurement of Sub-ppm Level Atmospheric Impurities in Neon by Gas Chromatography with Discharge Ionization Detection](#) Jian Hou, Gow-Mac Instrument Company, Kenneth Fincke, Michael Ling

4:35 PM

(740-8)

[Calibration Spanning as a Means of Compensation for Spectral Mismatch](#) Barbara Marshik, MKS Instruments, Timothy Martin

ORAL SESSIONS

Session 750

Bioanalytical: Electrochemistry - arranged by Emelita D. Breyer, Breyer Foundation

Monday PM, Room: 115C

Emelita D. Breyer, Breyer Foundation, Presiding

2:00 PM

(750-1)

[Selective Oxidation of H₂S Using Dicyano-Ferriprotoporphyrin](#) Jason A. Bennett, Penn State Erie, The Behrend College, Andrea Chiodo, Karissa Sterling

2:20 PM

(750-2)

[Electrochemical Analysis of a Semiconductor/Protein Interface](#) Gabriel LeBlanc, Vanderbilt University, David Cliffl, Evan Gizzie, G Kane Jennings, Gongping Chen

2:40 PM

(750-3)

[Modeling Structural Transformations Within Bacterial Spores](#) Sergey V. Kazakov, Pace University, Nicholas Imperial

3:00 PM

(750-4)

[DNA and Redox Electrostatic Interaction](#) Minhaz Uddin Ahmed, University of Brunei Darussalam and INRS-EMT, Mohammadali Safavieh, Mohammed Zourob, Sharifun Nahar

3:35 PM

(750-5)

[Amperometric Detection of Estrogenic Phenolic Compounds at a Nickel Modified Glassy Carbon Electrode](#) Grace Muna, Indiana University South Bend, Holly Garner, Michael Partridge

3:55 PM

(750-6)

[Solution-Phase Electrochemiluminescence Assay for Ultrasensitive Analysis of HIV Receptor and Neutralizing Antibody](#) X Nancy Xu, Old Dominion University

4:15 PM

(750-7)

[Method to Monitor Exocytosis and Endocytosis in Cultured Cells](#) Joakim Wigström, Chalmers University of Technology, Ann-Sofie Cans, Neda Najafinobar

4:35 PM

(750-8)

[The Release Kinetics of Neurotransmitters is Hindered by the Microenvironment During Exocytosis: A Single Cell Study](#) Raphael Trouillon, University of Gothenburg, Andrew Ewing

ORAL SESSIONS

Session 760

Bioanalytical: Sensors - arranged by Allen Sharkins, The Pittsburgh Conference

Monday PM, Room: 116

Allen Sharkins, The Pittsburgh Conference, Presiding

2:00 PM

(760-1)

[Monitoring Enzymatic Degradation of Polyanion Substrates Using Pulsed Chronopotentiometric Polyion Sensitive Membrane Electrodes](#) Andrea K. Bell, University of Michigan, Joanna Zajda, Mark Meyerhoff

2:20 PM

(760-2)

[The Aggregation of Guanosine Monophosphate: A Molecular Dynamics Study](#) Cecily C. Wilbanks, Rensselaer Polytechnic Institute, Linda McGown, Shekhar Garde, Yingying Dong

2:40 PM

(760-3)

[Sensitive Analysis of 100 mg Wheat Endosperm from Experimental Cultivars Enables Breeders to Select Traits for Bread Quality Wheat from Early Generations](#) David L. Wetzel, Kansas State University, Allan Fritz, Mark Boatwright, Tyler Nickoley

3:00 PM

(760-4)

[Amperometric Detection of Exocytosis from an Artificial Secretory Cell](#) Michael E. Kurczy, Chalmers University of Technology, Ann-Sofie Cans, Fredrik Höök, Lisa Simonsson, Raphael Trouillon

3:35 PM

(760-5)

[A Robust and Sensitive Handheld Quantitative Detection Platform Based on Target Responsive Hydrogel and Personal Glucose Meter](#) Zhi Zhu, Xiamen University, Chaoyong Yang, Yan Ling, Yuan Zou

3:55 PM

(760-6)

[Imaging of Biomaterials Using a Hyperspectral Tunable Surface Plasmon Wavelength Filter](#) Nick Pallas, Cleveland State University, John Turner

4:15 PM

(760-7)

[Optimizing the Electrochemical Detection of 4-Hydroxyphenylacetic Acid at Carbon-Fiber Microelectrode](#) Mimi Shin, University of Kansas, Kayla Raider, Michael Johnson, Sam Kaplan

4:35 PM

(760-8)

[Quantitative Assessment of Nanoparticle-Induced Organ Dysfunction and Oxidative Stress in Embryonic Zebrafish](#) Rifat Emrah Ozel, Clarkson University, Kenneth Wallace, Silvana Andreescu

ORAL SESSIONS

Session 770

Bioanalytical: Tissues and Cells - arranged by William LaCourse, University of Maryland Baltimore County

Monday PM, Room: 119B

William LaCourse, University of Maryland Baltimore County, Presiding

2:00 PM

(770-1)

[Development of an On-Animal Separation Based Sensor with Amperometric Detection of Nitric Oxide Metabolites](#) David E. Scott, University of Kansas, Ryan Grigsby, Susan Lunte

2:20 PM

(770-2)

[Investigations of Ectopeptidase Activity in the Rat Hippocampus Using Electrokinetic Push-Pull Perfusion and Numerical Simulation](#) Yangguang Ou, University of Pittsburgh, Amy Rupert, Mats Sandberg, Stephen Weber

2:40 PM

(770-3)

[Electrochemical Determination of Adenosine Uptake Kinetics and Neuromodulation of Dopamine](#) Ashley E. Ross, University of Virginia, B Jill Venton

3:00 PM

(770-4)

[Mapping the Intestinal pH of C.elegans Using Ratiometric Extended Dynamic Range pH-Sensitive Nanosensors](#) Veeren M. Chauhan, University of Nottingham, Alan Brown, David Pritchard, Jonathan Aylott

3:35 PM

(770-5)

[Nanoscale Pipette Geometries and Their Application in Scanning Ion Conductance Microscopy \(SICM\)](#) Anna E. Weber, Indiana University, Celeste Morris, Chiao-Chen Chen, Lane Baker, Yi Zhou

3:55 PM

(770-6)

[Development of a Microfluidic Biosensor System for the Real-Time Assessment of Donor Kidney Viability](#) Sally Gowers, Imperial College London, Ara Darzi, George Hanna, George Royde, Karim Hamaoui, Martyn Boutelle, Michelle Rogers, Sylvia Ming Wan, Vassilios Papalois

4:15 PM

(770-7)

[Switchable Aptamer Micelle-Flares for Molecular Imaging in Living Cells](#) Cuichen Sam Wu, University of Florida, Da Han, Lu Peng, Mingxu You, Tao Chen, Weihong Tan

4:35 PM

(770-8)

[Measurement of Trans and Paracellular Conductances of Epithelial Cell Layers with Scanning Ion Conductance Microscopy \(SICM\)](#) Yi Zhou, Indiana University, Celeste Morris, Chiao-Chen Chen, Jianghui Hou, Lane Baker

ORAL SESSIONS

Session 780

Electrochemistry: Electrodes and Interfaces - arranged by Jon R. Kirchhoff, University of Toledo

Monday PM, Room: 120B

Jon R. Kirchhoff, University of Toledo, Presiding

2:00 PM

(780-1)

[Improved Methods for Integration and Optimization of Carbon Electrodes onto Electrochemical Paper Based Devices \(ePADs\)](#) Jaclyn A. Adkins, Colorado State University, Charles Henry, David Wazniak, Lauro Kubota,

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2:20 PM

(780-2)

[Photoelectrochemical Kinetics of Individual Semiconductor Nanoparticles](#) Mario A. Alpuche-Aviles, University of Nevada, Reno, Ashantha Fernando, Krishna Barakoti, Suman Parajuli

2:40 PM

(780-3)

[Micro/nanofabricated Electrodes with Controlled Electrode-to-Electrode Spacings for Innovative Electrochemistry](#) Gregory S. McCarty, North Carolina State University, Adam Dengler

3:00 PM

(780-4)

[Towards an Electrode Architecture Which is not Influenced by Stirring](#) Freeman Neville, NanoFlex

3:35 PM

(780-5)

[Redox Functionalized <10 nm Metal Oxide Nanoparticles as Materials for Charge Storage](#) Joseph J. Roberts, University of North Carolina at Chapel Hill, Royce Murray

3:55 PM

(780-6)

[Local Electric Charge Recognition by Nanopipette](#) Niya Sa, Indiana University

4:15 PM

(780-7)

[Alternative Epoxy Insulations for Carbon-Fiber Microelectrodes](#) Alexander G. Zestos, University of Virginia, B Jill Venton

4:35 PM

(780-8)

[Optimization of Polycrystalline Boron Doped Diamond Electrodes for Electro-Analytical Applications](#) Tim Mollart, Element Six Ltd, Eleni Bitziou, James Iacobini, Julie MacPherson, Laura Hutton, Lucy Tomlinson, Mark Newton, Nicola Palmer

ORAL SESSIONS

Session 790

Environmental Analysis of Organics - arranged by David Benanou, Veolia Environment Research and Innovation

Monday PM, Room: 120C

David Benanou, Veolia Environment Research and Innovation, Presiding

2:00 PM

(790-1)

[Rapid Phthalate Screening Techniques for Environmental and Consumer Product Samples](#) Bruce Richter, Thermo Fisher Scientific, Brett Murphy, David Knowles, Richard Carlson, Selvan Lingam

2:20 PM

(790-2)

[Emissions into Water and Condensed Phase from Pipes and PET or Other Polymer Bottles by Thermodesorption, SBSE and Pyrolysis GC-MS](#) David Benanou, Veolia Environment Research and Innovation

2:40 PM

(790-3)

[Use of Fluorinated PBDE's as Aides in the Identification of Native PBDE Congeners](#) Eric B. Dzialo, AccuStandard, Inc., Jack Hubball, Mike Bolgar

3:00 PM

(790-4)

[Assessment of Selected Polybrominated Diphenyl Ethers \(PBDEs\) and 2,2',3,3',4,4'- Hexabromobiphenyl \(BB-153\) in Different Environmental Matrices in Cape Town, South Africa](#) Olalekan S. Fatoki, Cape Peninsula University of Technology, Adebgenro Daso, James Odendaal

3:35 PM

(790-5)

[Influence of Nanoparticles on the Partition of Hydrophobic Pollutants in Aquatic Systems](#) Endalkachew Sahle-Demessie, US Environmental Protection Agency, Amy Zhao, Andrew Salamon

3:55 PM

(790-6)

[Comprehensive Analysis of Dioxin Samples Using High Resolution Time-of-Flight Mass Spectrometry](#) David E. Alonso, LECO Corporation, Joe Binkley, Peter Gorst-Allman

4:15 PM

(790-7)

[Using Enrichment Static Headspace Analysis for High Sensitivity Determination of Halogenated Contaminants in Water](#) Massimo Santoro, Thermo Fisher Scientific, Andrea Caruso, Fausto Pigozzo, Stefano Pelagatti

4:35 PM

(790-8)

[Hydrophobic Membrane Preconcentration Technique for the Colorimetric Detection of Halogenated](#)

[Compounds in Water](#) Evan K. Wujcik, The University of Akron, Benjamin Sauer, Bradford Vielhaber, Chelsea Monty, George Chase, Max Duckworth

ORAL SESSIONS

Session 800

Food Science: Pesticides and Contaminants - arranged by William J. Long, Agilent Technologies, Inc.

Monday PM, Room: 121A

William J. Long, Agilent Technologies, Inc., Presiding

2:00 PM

(800-1)

[Investigations Into Applications for Field Portable GC-MS in Food Safety](#) Charles S. Sadowski, Torion Technologies, Bing Liu, Douglas Later, Tai Truong

2:20 PM

(800-2)

[Determination of Arsenic in Rice by the Gutzeit Reaction with Digital Image Analysis](#) Julian Tyson, University of Massachusetts, Amherst

2:40 PM

(800-3)

[DI-SPME GCxGC in Food Metabolomics: Strategies to Avoid the Formation of Maillard Reaction Products as Artifacts During Thermal Desorption Process](#) Erica A. Souza Silva, University of Waterloo, Janusz Pawliszyn, Jennifer DeEll, Sanja Risticovic

3:00 PM

(800-4)

[Pesticides in My Beverage - Screening \(and Subsequent Quantification\) of Pesticides in Beverages Originating from Leaves, Grapes, Grasses, and the Hydrologic Cycle \(Tea, Wine, Milk, and Water\) Using Automated SPE](#) Bruce Richter, Thermo Fisher Scientific, David Knowles, Richard Carlson, Selvan Lingam

3:35 PM

(800-5)

[New GC/MS Techniques for the Analysis of Small Molecule Contaminants in Food](#) Philip L. Wylie, Agilent Technologies

3:55 PM

(800-6)

[Effective Implementation of QuEChERS for LCMS and GCMS Analysis of Pesticide Residues in Food Products](#) A Carl Sanchez, Phenomenex, Art Dixon, Monika Kansal

4:15 PM

(800-7)

[Coumarin Analysis in Tobacco and Smokeless Tobacco Products Using Isotope Dilution Liquid Chromatography Tandem Mass Spectrometry](#) Andrew Masters, Labstat International ULC, Jingcun Wu, William Rickert

4:35 PM

(800-8)

[Getting the Most Out of Your GC/MS/MS System](#) Chinkai Meng, Agilent Technologies, Chris Sandy, Philip Wylie

ORAL SESSIONS

Session 810

New Instrumentation/Software with Mass Spectrometry - arranged by Graham McGibbon, Advanced Chemistry Development

Monday PM, Room: 120A

Graham McGibbon, Advanced Chemistry Development, Presiding

2:00 PM

(810-1)

[Petroleomic Profiling via Ultra-High Resolution Time-of-Flight Mass Spectrometry](#) Kevin Siek, LECO Corporation, Clécio Klitzke, Jeffrey Patrick, Joe Binkley, Marcos Eberlin, Yuri Corilo

2:20 PM

(810-2)

[High Temperature TGA Interface Used to Perform Evolved Gas Analysis with Quadrupole Mass Spectrometer](#) Charles De Carlo, Extrel CMS, Eric Loose

2:40 PM

(810-3)

[A New Universal Mass Spectrometry Data Analysis Software Suite](#) Graham A. McGibbon, Advanced Chemistry Development, Alexey Aminov, Andrei Vazhentsev, Vitaly Lashin

3:00 PM

(810-4)

[MEMS Developed High Density -Cylindrical Ion Trap Array Mass Spectrometer](#) Tianpeng Wu, University of South Florida, Ashish Chaudhary, Friso HW Van Amerom, Jing Wang, R Timothy Short

3:35 PM

(810-5)

[ICP Elemental Analysis of Single Droplets by Means of a Sector-field Mass Spectrograph Equipped with an Integrating Array Detector](#) Jeremy A. Felton, Indiana University, Akitoshi Okino, Charles Barinaga, David

Koppenaal, Gary Hieftje, M Bonner Denton, Roger Sperline, Steven Ray, Yuki Kaburaki

3:55 PM

(810-6)

[Determination of Hexavalent Chromium in Soil Standard Reference Materials Using Speciated Isotope Dilution Mass Spectrometry with Mass Balance](#) Mesay M. Wolle, Duquesne University, Denise Herr, GM Mizanur Rahman, HM Skip Kingston, Jay Gandhi

4:15 PM

(810-7)

[Latest Vacuum Pump Considerations in Mass Spectrometry](#) Andrew D. Chew, Edwards Ltd

POSTER SESSIONS

Session 820

ACS ANYL Poster Session: General Topics in Analytical Chemistry

Monday PM, Room: 204ABC

(820-1P)

[Method Validation for Industrial Analysis Using the Accuracy Profile Technique](#) Angelique Guilloteau, Air Liquide, Martine Carre, Sophie Lombard, Tracey Jacksier, Valerie Bossoutrot

(820-2P)

[Using Capillary Transient Isotachopheresis and Fraction Collection for High-Throughput Molecular Screening](#) Kathryn Riley, Wake Forest University, Christa Colyer, Jason Gagliano, Jim Vaughn, Shingo Saito

(820-3P)

[Micelle-Enhanced Nanoplasmonic Colorimetry for DNA Detection](#) Fei Yan, North Carolina Central University, Charina Spurgeon, Yam Shrestha

(820-4P)

[Development and Validation of Spectrophotometric Methods For Determination of Ceftriaxone Sodium in Pharmaceutical Dosage Forms](#) Rajeshkumar H. Chaudhari, Municipal Arts and Science College, Vadilal Patel

(820-5P)

[Polyurethane Nanofiber Fabrication Through Electrospinning Process](#) Hyun-Jin Choi, Korea Institute of Industrial Technology, Myong-Hwa Lee, Sang Bum Kim

(820-6P)

[Analysis of Synthetic Cathinones \("Bath Salts"\) in Oral Fluid Using HS-SPME/GC-MS and In-Matrix Derivatization](#) David M. Correll, Trinity College, Janet Morrison

(820-7P)

[Label-Free and Cost-Effective Quantification of Degraded DNA by Nanoparticle on Filter Paper](#) Qian Liu, University of Virginia

(820-8P)

[Development of a Chip-Based Assay for Diagnosis of Malaria Infection](#) Leland Martin, Skidmore College, Katherine Puffer, Katrina Ellis, Kimberley Frederick

(820-9P)

[Development of LED-Induced Fluorescence Detection System Using a Compact Disk-Type Microfluidic Device and Its Application to ELISA](#) Hizuru Nakajima, Tokyo Metropolitan University, Akihide Hemmi, Hui Zeng, Katsumi Uchiyama, Kazuhiro Morioka

(820-10P)

[Development of Magnetic Bead Based Preconcentration for Water Analysis on Chip](#) Rafaella Pontes, Skidmore College, Kimberley Frederick

(820-11P)

[Thermal Properties of Selected Colombian Honeys](#) Guillermo Salamanca Grosso, Universidad del Tolima

(820-12P)

[Electrochemical Immunosensor Array for Ultrasensitive Detection of Two Cancer Biomarker Proteins in Serum](#) Bernard S. Munge, Salve Regina University, Brian Somba

(820-13P)

[Teaching Quantitative Analysis: Development of Case Studies Through the Analytical Sciences Digital Library \(ASDL\)](#) Anna G. Cavinato, Eastern Oregon University, Steven Petrovic, William Otto

(820-14P)

[Microchip Electrophoresis with Dual-Electrode Electrochemical Detection for Detection of Reactive Nitrogen Species](#) Diogenes M. Santos, Federal University of Alagoas, Anne Regel, Dulan Gunasekara, Fabiane Abreu, Jose Silva, Pann Pichetsurnthorn, Ryan Grigsby, Susan Lunte

(820-15P)

[Development and Evaluation of an Inductive Coupled Plasma-Optical Emission Spectroscopy \(ICP-OES\) Method for the Analysis of Major Alkaline Earth Metal Ions in Precipitation Samples of Canadian Air and Precipitation Monitoring Network \(CAPMoN\)](#) Kulbir S. Banwait, Environment Canada

POSTER SESSIONS

Session 830

Analysis of Metals in Environmental Matrices

Monday PM, Room: 204ABC

(830-1P)

[Determination of Mercury in the Muscle Tissue of New York State Gamefish](#) Kimberly D. Chichester, St. John Fisher College, Thomas Quinzi

(830-2P)

[Contribution of Metal Analysis in the Study of Solid Residues \(Sewage Sludge\) Potentially Hazardous to Environment](#) Marisa S. Crespi, São Paulo State University, Clóvis Ribeiro, Danilo Santos, Denise Daré, Lilian Torquato, Sonia Almeida

(830-3P)

[Heavy Metals Pollution in Agricultural Soil of Adogo in Ajaokuta Local Government Area of Kogi State, Nigeria](#) Omono C. Matthews-Amune, University of Abuja, Samuel Kakulu

(830-4P)

[Reduction of Hexavalent Chromium Using Naturally-Derived Flavonoids](#) Veronica Okello, University at Binghamton, SUNY, Omowunmi Sadik

(830-5P)

[Determination of Selected Heavy Metals in Trout From A Western Pennsylvania Lake](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Brett Elliott, Justin Deems, Nicholas Mendicino

(830-6P)

[Effect of Lead Exposure on Selected Biomarkers of Renal and Liver Functions of Auto Mechanics in Some Locations of Lagos Metropolis, Nigeria](#) Grace E. Ukpo, University of Lagos, Bolanle Hameed, Oluwatosin Akinmayowa, Titilope Akinola

(830-7P)

[Kinetic Extraction, Separation, Recovery and Trace Determination of Lanthanum\(III\) and Cerium\(IV\) with p-nitrocalixarenehydroxamicacid by Inductively Coupled Plasma Mass Spectrometry \(ICP-MS\)](#) Jigar J. Shah, Gujarat University

(830-8P)

[The Detection and Quantification of Trace Beryllium in Soil Using ICP-OES and ICP-MS](#) Erica Cahoon, High Purity Standards, Cheryl Hicks

(830-9P)

[Synthesis, Characterization and Application of Polysaccharide Supramolecular Composite Materials in the Adsorptive Removal of Organic and Inorganic Pollutants](#) Tamutsiwa M. Mututuvari, Marquette University, Chieu Tran

(830-10P)

[ICP-MS: Optimization, Validation](#) LeVi Nguyen, Cea Centre De Valdu, Daniele Cardona, Jean-Charles Hubinois, Vincent Lavoine

(830-11P)

[Online Separation and Analysis of Lanthanides in Environmental and Biological Matrices Using Resins Columns and ICP-MS](#) Kerri Pappan, University Multispectral Laboratories, Cris Lewis, James Barnes IV, Traci Kirkendall

(830-12P)

[Development of a Detection Method for Metal Ions Using Gold Nanoparticles on a Paper Microfluidic Platform](#) Kalani Parker, Creighton University

(830-13P)

[ICP-MS Technology - Solution for Environmental Challenges](#) Ewa M. Pruszkowski, PerkinElmer, Cynthia

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Bosnak, Stan Smith

POSTER SESSIONS

Session 840

Biomedical: Sensors, Probes, and Nanoparticles

Monday PM, Room: 204ABC

(840-1P)

[A Comparison of Two PCR Probe Technologies for the Detection of Clostridium Difficile Toxin A Gene](#) Jessica Chapman, Evogen, Megan Duggan, Torrey Parrish

(840-2P)

[A Multiplex Real-Time PCR Assay to Simultaneously Detect Clostridium Difficile tcdA, tcdB, and tcdC Toxin Genes and Determine Hypervirulence](#) Torrey Parrish, Evogen, Jessica Chapman, Megan Duggan

(840-3P)

[Use of Fluorescence Quench and Enhancement for Bilirubin-Serum Albumin Interaction Towards Probing Displacement of Bilirubin by Fatty Acid Analogues](#) Vishwa Trivedi, Bethune Cookman University

(840-4P)

[Wireless Communication for Potentiometric Sensors for Clinical Use](#) Chu Wang, Imperial College London, Martyn Boutelle

(840-5P)

[Application of Micromembrane Devices for Immunosensor Design](#) Almira Ramanaviciene, Vilnius University, Arunas Ramanavicius, Asta Makaraviciute, Darius Virzonis, Gailius Vanagas, Marius Mikolajunas

(840-6P)

[The Development of Microfluidic Based Biosensors for Multi-Analyte Detection in Medical Applications](#) Tonghathai Phairatana, Imperial College London, Martyn Boutelle

(840-7P)

[Preparation of Electrochemical and Optical-Active Labels for Breast Cancer Gene Detection](#) AbdelNasser Kawde, King Fahd University of Petroleum and Minerals

(840-8P)

[Development of Fully Automated Surface Plasmon Resonance Sensing System for Medical Diagnosis and Food Inspection](#) Kinichi Morita, No Affiliation Listed, Katsuaki Shimazu, Shinji Suzuki, Toshikazu Kawaguchi

(840-9P)

[Devices for the Quantification of Biological Buffer Capacity](#) Sahir I. Gandhi, Imperial College London, Danny O'Hare, Martyn Boutelle, Peter Knox

(840-10P)

[Nanoparticle Enhancements Using Coherent Anti-Stokes Raman Scattering](#) Karen A. Antonio, University of Notre Dame, Lawrence Itela, Zachary Schultz

(840-11P)

[Towards the Detection of Biomarkers with TERS and SPR on AFM Cantilevers](#) Rita Faid, Université de Montréal, Jean-Francois Masson

(840-12P)

[Detection of Chymotrypsin - Catalyzed Reaction Using Surface Plasmon Resonance and Surface-Enhanced Raman Scattering \(SPR-SERS\) Spectroscopy](#) Cuicui Fu, Jilin University, Shuping Xu, Weiqing Xu

(840-13P)

[Functional Magnetic Nanoparticles Based Electrochemical Biosensor for Detection Biomarker of Asthma](#) Cheng-Yu Lee, National Chiao Tung University, Tzu-Ting Chou, You-Zung Hsieh

(840-14P)

[Design, Fabrication and Testing of Immunochromatographic Test](#) AbdelNasser Kawde, King Fahd University of Petroleum and Minerals

(840-15P)

[Label-Free Fluorescence Assay for the Detection of T4 Polynucleotide Kinase Activity Coupled Exonuclease Reaction](#) Xu Wu, University of North Dakota, Jiao Chen, Julia Xiaojun Zhao, Shaina Strating

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(840-16P)

[Ultrasensitive Detection of 3′—5′ Exonuclease Enzymatic Activity Using Molecular Beacon](#) Xu Wu, University of North Dakota, Jiao Chen, Julia Xiaojun Zhao

(840-17P)

[Thermodynamic, Kinetic, and Structural Study of the Adsorption of Bovine Serum Albumin to the Surface of Gold Nanoparticles](#) Stefano Boulos, University of Illinois at Urbana-Champaign, Catherine Murphy, Lisa Holland, Tyler Davis

(840-18P)

[Competitive Immunoassay for Creatine Kinase MB: SPR-Based Assay Optimization](#) Gregory T. Kisiel, University of Memphis, Erno Lindner

POSTER SESSIONS

Session 850

Computer Modeling and Simulation

Monday PM, Room: 204ABC

(850-2P)

[Variation of Peak Tailing in Partition Chromatography](#) Joseph Maloy, Seton Hall University, Antonio Macaluso, Nicole Charles, Raffi Manjikian

(850-3P)

[Conformational Studies of the Molecular Clips Based on Glycoluril and Thio, Seleno and Telero Glycoluril: DFT Calculations](#) Saeideh Yahyaei, Islamic Azad University, Esmail Vessally

POSTER SESSIONS

Session 860

Homeland Security and Forensic Science

Monday PM, Room: Exposition Floor, Aisles 1600-2100

(860-1P)

[GC-MS, GC-TOF-MS and GC-IRD Methods for the Differentiation of Regioisomeric and Isobaric Designer Drugs of the Piperazine Class](#) Karim Abdel-Hay, Auburn University, Jack DeRuiter, Randall Clark

(860-2P)

[Non Destructive \(X-Ray\) Tooling for Counterfeit Pharmaceutical Identifications](#) Ian T. Campbell, PANalytical, Brian Litteer, Detlef Beckers, Violeta Uricanu

(860-3P)

[NMR Identification and Quantification of Synthetic Cannabinoids in Herbal Incenses](#) Ling Huang, Hofstra University, Jennifer Stockert, Matthew Kim, Mercurio Veltri, Michael Marino, Nanette Wachter-Jurcsak

(860-4P)

[Proton-Transfer-Reaction Mass Spectrometry: Increased Selectivity in Explosives and Designer Drugs Detection](#) Christian Lindinger, IONICON Analytik GmbH, Bishu Agarwal, Christopher Mayhew, Lukas Maerk, Philipp Sulzer, Simone Juerschik, Tilmann Maerk

(860-5P)

[Presumptive Color Test for Piperazine Designer Drugs](#) Tsungshueh Wu, University of Wisconsin, Platteville, Chelsea Johnson, Ethan Becker

(860-6P)

[Detection of Narcotic and Narcotic Metabolites by Hand Held Differential Mobility Spectrometry](#) Jessica A. Tufariello, Washington State University, Herbert Hill, Paul Rauch, William Siems

(860-7P)

[Application of HPLC Separation of Anionic, Cationic, and Non-Ionic Surfactants with Charged Aerosol Detection in Product Tampering Cases](#) Lisa A. Kaine, US Food and Drug Administration, Catherine Dasenbrock

(860-8P)

[Use of Electrochemical Sensor with Chemometric Tool for a Rapid Screening Test to Detect Cocaine in Urine Samples](#) William R. Araujo, Instituto de Quimica-USP, Maiara Salles, Thiago Paixão

(860-9P)

[Routine Analysis of THC and Metabolite \(Carboxy-THC\) in Whole Blood Samples Using an Automated SPE Workstation](#) Jeff Hackett, United Chemical Technologies, Inc., Albert Elian

(860-10P)

[Micro-Raman Mapping of Dissimilar Inks on Paper](#) Gary H. Naisbitt, Utah Valley University, Andrew Pham, Bruce Jacoby II

(860-11P)

[Energetic Material Detection Using a Handheld Differential Mobility Spectrometer \(DMS\)](#) Eric Wallis, Chemring Detection Systems, Jessica Brown, Paul Rauch, William Wu

(860-12P)

[Development of RGB Extraction Values Software and Chamber Case to Collect Information of Electronic Colorimetric Tongues](#) Gabriel N. Meloni, University of São Paulo, Araújo Willian, Eric Costa, Maiara Salles, Thiago Paixão

(860-13P)

[1064nm Excitation Raman for Identifying Highly Fluorescent Targets](#) Eric J. Lynch, Chemring Detection Systems, Eric Wallis, Matt Weakly, William Wu

(860-14P)

[Effect of Temperature and Flow Variation for a Short Multi Capillary Column - Multi Detector Array](#) Joern Frank, Hamburg University of Technology, Gerhard Matz, Henrdik Fischer

(860-15P)

[Data Analysis of a Short Multi-Capillary-Column Coupled Ion Mobility Spectrometer](#) Joern Frank, Hamburg University of Technology, Bert Ungethuem, Gerhard Matz, Henrdik Fischer

(860-16P)

[Thermal Desorption Technique for the Quantification of Fire Accelerant](#) Ilaria Ferrante, DANI Instruments, Daniele Recenti, Manuela Bergna

(860-17P)

[Detecting Toxic Industrial Chemicals Using a Handheld Differential Mobility Spectrometer \(DMS\)](#) Paul J. Rauch, Chemring Detection Systems, Jessica Brown, Robert McAtee, Todd Griffin

(860-18P)

[High-Definition GC/TOF-MS Analysis of Airborne Chemical Warfare Agents Using Thermal Desorption Preconcentration and a Bench-Top Time-of-Flight Mass Spectrometer Employing Chemometric Software for Data Analysis](#) Gareth M. Roberts, ALMSCO International, Gerhard Horner, Joachim Ringer

(860-19P)

[GC-FTIR Analysis of Chemical Warfare Nerve Agents](#) Jenni Briggs, PIKE Technologies, Jim Hancock

(860-20P)

[On-Site Determination of Chemical Warfare Agents by Handheld Raman Analyzer Xantus-2](#) Yasuo Seto, National Research Institute of Police Science (Japan), Fumihito Muta, Isaac Ohsawa, Masumi Tachikawa, Mieko Kanamori-Kataoka, Takeshi Ohmori, Taro Nogami, Tomohide Kondo

(860-21P)

[Modeling and Simulation of GC- Systems](#) Henrdik Fischer, Hamburg University of Technology, Ademola Binuyo, Gerhard Matz, Joern Frank

(860-22P)

[Lanthanide Taggants for Characterizing the Explosive Blast Radius of Homemade Explosive Mixtures](#) Traci Kirkendall, University Multispectral Laboratories, Cris Lewis, James Barnes IV, Joshua Baker, Matt Wheeler

(860-23P)

[Chemometric Analysis of VOC Profiles From Human Decomposition via GC-MS](#) David S. Cho, Oak Ridge Institute for Science and Education, Brian Eckenrode, Chris Tipple, Douglas Beussman, Sarah Milam

(860-24P)

[Novel Biotope Prototype for Human Decomposition Analysis](#) Deanna L. Snyder, Federal Bureau of Investigation, Brian Eckenrode, Chris Tipple, Lauryn DeGreeff, Martin Grime

(860-25P)

[Exploring Low and High pH Eluents for the LC-MS Analysis of Individual Mixtures of Opiates, Amphetamines and Antibiotics Using a New Silica-Based, Broad pH Range Stable C18 Stationary Phase](#) Alan P. McKeown, Advanced Chromatography Technologies Ltd, Carl Zimmerman

(860-26P)

[Drug Screening in Human Plasma Using Solid Phase Extraction and Direct Mass Spectrometry](#) Hiroyuki Inoue, National Research Institute of Police Science (Japan), Hiroaki Hashimoto, Kenji Kuwayama, Kenji Tsujikawa, Tatsuyuki Kanamori, Yukiko Nakazono, Yuko Iwata

(860-27P)

[Comparison of Extraction and Analysis Techniques for the Collection and Determination of the Volatile Organic Compounds \(VOCs\) from Dried Blood](#) Lauryn DeGreeff, Federal Bureau of Investigation/NRL, Brian Eckenrode, Chris Tipple, Martin Grime, Rex Stockham

(860-28P)

[SPME Collection of Semivolatile Surface Contaminant](#) Christopher A. Bailey, Torion Technologies, Edgar Lee, Gary Groenwold, Jeff Jones, Jill Scott

(860-29P)

[A Novel Electrochemical Picric Acid Sensor Based on Cu Electrode](#) Maiara Salles, Instituto de Química - USP, João Junqueira, Thiago Paixão, William Araujo

(860-30P)

[Validation of Infrared Spectroscopy for Non-Destructive Detection of Latent Fingerprints](#) Zhenyu Lu, University of South Carolina, Brianna Cassidy, Emory Straub, Michael Myrick, Stephen Morgan

(860-31P)

[New Developments in the Reduction and Elimination of Contaminated Human DNA from Forensic Assays](#) Joseph Stefkovich, Xenosep Technologies, Al Kaziunas, Rolf Schlake

(860-32P)

[Explosive Separation and Quantitation Using a Triple Quadrupole Mass Spectrometer](#) Courtney Seaman, University Multispectral Laboratories, Cris Lewis, James Barnes IV, Kerri Pappan

(860-33P)

[Detection of Explosives Using a Combination of Raman and IMS](#) Andreas Walte, Airsense Analytics, Bert Ungethüm, Hainer Wackerbarth, Wolf Muenchmeyer

(860-34P)

[Portable Gas Detector Array GDA-X for the Detection of Toxic Gases and Explosives](#) Andreas Walte, Airsense Analytics, Bert Ungethuen, Wolf Muenchmeyer

(860-35P)

[Humidity in an Ion Mobility Spectrometer: Its Importance and Its Measurement](#) Andreas Walte, Airsense Analytics, Bert Ungethuen, Christiane Sens, Wolf Muenchmeyer

(860-36P)

[The Influence of 1, 3 Dialkyl Substituted Imidazolium Ionic Liquids as Mobile Phase Additives on the Retention Behavior and Separation of Nitroaromatic Explosives and Related Compounds on RPLC](#) Tarab Ahmad, Western Illinois University, Ahlie Heagy, Bartlomiej Redlinski, Craig Utterback, Deonna Perkins, Smantha Smith, Stephanie Sharp, Tariq Z Ahmad

POSTER SESSIONS

Session 870

Liquid Chromatography: Fundamentals

Monday PM, Room: Exposition Floor, Aisles 1600-2100

(870-1P)

[New Cyclofructan Based Hydrophilic Interaction Liquid Chromatographic Stationary Phases](#) Zachary S. Breitbach, The University of Texas at Arlington, Daniel Armstrong

(870-2P)

[Measuring Void Volume in Normal-Phase Liquid Chromatography](#) Ping Jiang, University of Alberta, Charles Lucy

(870-3P)

[Unique Chemically Modified Carbohydrate Based Chiral Stationary Phases to Improve Chiral Separations](#) Matthew Przybyciel, ES Industries

(870-4P)

[Mobile Phase Recycling with HPLC](#) Michael J. Samide, Butler University, Jessica Giaquinto

(870-5P)

[Comparison of Multi-functionalized Analyte Retention Between Hydrocarbonaceous and Fluorinated HPLC Stationary Phases as a Function of Mobile Phase and Temperature](#) Caitlin Galvin, Ursinus College, Eric Williamsen

(870-6P)

[Characterization of Multi-Component Adjuvants by HPLC with Charged Aerosol Detection](#) David Thomas, Thermo Fisher Scientific, Bruce Bailey, Ian Acworth, Marc Plante, Qi Zhang

(870-7P)

[Recent Developments in Solvent Applications with Ion Chromatography](#) Kannan Srinivasan, Thermo Fisher Scientific, Chris Pohl, Maria Rey, Rong Lin, Sheetal Bhardwaj

(870-8P)

[Ensuring Data Quality and Facilitating Rapid System Troubleshooting Using a Suitability Standard](#) Mia Summers, Waters Corporation, Kenneth Berthelette

(870-9P)

[Reduced Solvent Consumption and Labor, and Improved Laboratory Safety, when Performing Rapid HPLC Method Optimization of Buffer pH and Molarity in Reversed Phase Method Development](#) Michael Woodman, Agilent Technologies, Lori Sandford

(870-10P)

[Adsorption Isotherm of Tryptophan Using Reversed Phase Liquid Chromatography and 1-butyl- 2, 3-Dimethylimidazolium Tetrafluoroborate Ionic Liquid as a Mobile Phase Additive](#) Tarab Ahmad, Western Illinois University, Azhar Alhijji, Bartlomiej Redlinski, Kishore Kumar Aluguvelli, Tariq Z Ahmad

POSTER SESSIONS

Session 880

Pharmaceutical: Other Analytical Methods

Monday PM, Room: Exposition Floor, Aisles 1600-2100

(880-1P)

[Dissolution Method Development and Testing in QBD Drug Product Development](#) Lulu Dai, Genentech, Kelly Zhang, Larry Wigman

(880-2P)

[A Quality by Design Approach for Particle Size Analysis of an Active Pharmaceutical Ingredient](#) Julie T. Adamson, Millennium Pharmaceuticals, Inc., John Bak

(880-3P)

[Bolaamphiphiles as Pseudostationary Phases in Micellar Electrokinetic Chromatography for Chiral Separation](#) Cevdet Akbay, Fayetteville State University, Alexis Jackson, Asad Rizvi, Danielle Lanier, Harmin Herrera, Joi Clay, Kenya McFadyen

(880-4P)

[Using XRF Spectrometry for Elemental Impurity Analysis in Pharmaceuticals](#) Ian T. Campbell, PANalytical, Detlef Beckers, Marco van der Haar, Youhong Xiao

(880-5P)

[Structure and Property Relationships of Amino Acid and Peptides-Based Chiral Ionic Liquids](#) Irene Kimaru, St. John Fisher College, Faiza Filfil, Lydia Morris, Nicole Savage

(880-6P)

[Are You Ready for the New USP Test Procedures? A Look at Microwave Sample Prep for USP 232/233](#) Arshad Kokardekar, Milestone Inc.

(880-8P)

[In Vivo Measurement of the Active Alkaloid Content in Brugmansia Arborea](#) Marcel Florin Musteata, Albany College of Pharmacy and Health Sciences, Arielle Pitcher, Hannah Fudin

(880-9P)

[Selecting the Food Matrix with the Highest Masking Power for Delivering Recommendations for Children Intake](#) John Shea, Alpha MOS, Carol Schneider, Fatma Ayouni, Herve Lechat, Jean-Christophe Mifsud, Valerie Vabre

(880-10P)

[Electric Fish Bioassay for Brainstem Pharmacological Studies](#) James Sidie, Ursinus College, Eric Williamsen

(880-11P)

[Enhancing the Laboratory Automation Process - Aequus for Automated Monitoring of Fluid Levels of Analytical Instruments](#) Simon Tullett, TTP Labtech Ltd, Wendy Gaisford

(880-12P)

[Total Organic Carbon Analysis for Purified Water and Water for Injection](#) Nathan Valentine, Teledyne Tekmar, Holly Graves, Tammy Rellar

(880-13P)

[Development of Short and Efficient Methodology for n-heterocyclization of Diols Using Iridium Complex and Its Application for Synthesis of Nicotine Alkaloids](#) Tushar D. Apsunde, University of New Orleans

(880-14P)

[Synthesis and Antimicrobial Activity of Azetidin-2-one Containing Benzoyl Pyrazoline Derivatives](#) Shailesh H. Shah, Patel JDKD Science College

POSTER SESSIONS

Session 890

Polymers and Plastics Characterization

Monday PM, Room: 204ABC

(890-1P)

[Development and Evaluation of Tolnaftate Solid Dispersion Incorporated into Gel for Topical Delivery](#) Fnu Ajazuddin, Rungta College of Pharmaceutical Science and Research, Naina Bhojar

(890-2P)

[Derivative Spectral Analysis of UV- Degradation in Epoxy Polymers](#) A Kaan Kalkan, Oklahoma State University, Raman Singh, Salah Hamim, Sriharsha Karumuri

(890-3P)

[Applicability of Rigid Hybrid-Based Packing Materials for Size-Based Separations of Synthetic Polymers](#) Bonnie Alden, Waters Corporation, Edouard Bouvier, Jessica Wilson, Kevin Wyndham, Mia Summers, Michael Savaria, Nicole Lawrence, Pamela Iraneta, Tom Walter

(890-4P)

[Comparison of Extraction Techniques for Leachables Extractables](#) Baiba Cabovska, Waters Corporation, Andrew Aubin, Michael Jones

(890-5P)

[Automated Extraction of Phthalates in Consumer Products for Analysis by GC-MS](#) Edward A. Pfannkoch, GERSTEL, Inc., Fredrick Foster, Jacqueline Whitecavage, John Stuff

(890-6P)

[Analytical Pyrolysis of Textiles to Determine Fiber Content](#) Thomas Wampler, CDS Analytical, LLC, Gary Deger, Karen Jansson, Stephen Wesson

(890-7P)

[Odor Quality Control of Polyethylene Pellets Using an Electronic Nose](#) John Shea, Alpha MOS, Carol Schneider, Fatma Ayouni, Herve Lechat, Jean-Christophe Mifsud, Valerie Vabre

(890-8P)

[Rapid Non-Destructive Identification of Magnetic Tape Degradation Products Using Infrared Spectroscopy and DART Mass Spectrometry with Multivariate Statistics](#) Brianna Cassidy, University of South Carolina, Eric Breitung, Juan Rodriguez, Samantha Skelton, Stephen Morgan, Zhenyu Lu

(890-9P)

[Forensic Application of Polarized Confocal Raman Microspectroscopy to the Discrimination of poly \(ethylene terephthalate\) Single Fibers](#) Shinichi Suzuki, National Research Institute of Police Science (Japan), Seiya Watanabe

(890-10P)

[Synthesis and Characterization of Biodegradable Polylactic Acid Polymers for Controlled Drug Release](#) Monise Casanova, UFG, Denilson Rabelo

(890-11P)

[Quantitative Analysis of Antitumor Drug Released from the Synthesized Network Structure for Poly B-aminoester Carried Drug](#) Fahima M. Helaly, National Research Centre (NRC)

(890-12P)

PITTCON 2013

[Characterization of Epoxies with DMA and TG-MS](#) Kevin P. Menard, PerkinElmer, David Norman

(890-13P)

[TGA-FT-IR, TGA-FT-IR-GC-MS; TGA-GC-MS: The Most Complete Portfolio for Evolved Gas Analyzer from TGA](#) Serena Santacesaria, SRA Instruments

(890-14P)

[Experimental Study of Relationship Between Interfacial Instabilities and Mechanical Strength of Three-Layer \(PP/HDPE/PP\) Symmetric Polymer Melts](#) Mohammad Ranjbaran, Shahid Rajaee University

(890-15P)

[Characterization of Biomass Derived Rigid Polyurethane Foam by Pyrolysis GC/MS and Thermogravimetric Analysis](#) Courtney Taylor, Shimadzu Scientific

(890-16P)

[The Test Method Development of PCA Contents in the Processing Oil and Tire Tread](#) Jin Hyeok Kim, Kumho Tire Co., Chun Taek Cho, Il Taek Jung, Taekwon Jung, Young Jin Kim, Youngsoo Soon

(890-17P)

[Systematic Analysis of Leachables and Extractables in Liquid Handling Components](#) Kyle Harris, Porex Corporation, Gary Li, Gary Mao

Tuesday AM, March 19, 2013

AWARDS

Session 900

Pittsburgh Analytical Chemistry Award - arranged by Jane Chan, Bechtel Bettis, Inc.

Tuesday AM, Room: 114

Jane Chan, Bechtel Bettis, Inc., Presiding

8:10 AM

(900-1)

[High Sensitivity Analysis Using Single Molecule Arrays](#) David R. Walt, Tufts University

8:45 AM

PITTCON 2013

(900-2)

[Micro-and Nanoparticles of Porous Silicon as In-Vivo Diagnostic and Therapeutic Agents](#) Michael J. Sailor, University of California - San Diego

9:20 AM

(900-3)

[Singlet-Oxygen Responsive Conjugated Materials](#) Samuel W. Thomas, Tufts University

10:30 AM

(900-5)

[Engineering Single-Cell Bioanalytics for Strain Optimization in Biomanufacturing](#) J Christopher Love, Massachusetts Institute of Technology

AWARDS

Session 910

The Coblenz Society/ABB - Bomem-Michelson Award - arranged by Warren Vidrine, Vidrine Consulting

Tuesday AM, Room: 126B

Warren Vidrine, University of Virginia, Presiding

8:10 AM

(910-1)

[Broadband Rotational Spectroscopy for Chemical Kinetics, Molecular Structure, and Analytical Chemistry](#) Brooks H. Pate, University of Virginia

8:45 AM

(910-2)

[From Spectroscopy to Sensors](#) Frank C. De Lucia, Ohio State University

9:20 AM

(910-3)

[Product Analysis Using Chirped Pulse THz Spectroscopy](#) David F. Plusquellic, National Institute of Standards and Technology, Francis Lovas, Julia Scherschligt, Kevin Douglass

9:55 AM

(910-4)

[Techniques for Automated Analysis of Complex Spectra](#) Steven Shipman, New College of Florida

10:30 AM

(910-5)

[Submillimeter Wave Spectrometry for In-Situ Planetary Science](#) Brian J. Drouin, Jet Propulsion Laboratory

SYMPOSIA

Session 920

ACS ANYL - Ion Mobility Spectrometry in Pharmaceutical Analysis - arranged by Alexandre A. Shvartsburg, PNNL

Tuesday AM, Room: 201A

Alexandre A. Shvartsburg, Amgen, Presiding

8:05 AM

(920-1)

[Applications of Ion Mobility, Mass Spectrometry and Quantum Mechanics in Drug Discovery](#) Iain D. Campuzano, Amgen, Paul Schnier

8:40 AM

(920-2)

[Applications for Ion Mobility Spectrometry \(IMS\) in the Pharmaceutical Industry](#) Frederick J. Antosz, Excellims Corporation, Carol Moraff, Ching Wu, Clinton Krueger, Shelly Li

9:15 AM

(920-3)

[Applications of Microscale FAIMS Combined with Mass Spectrometry in Pharmaceutical Analysis](#) Colin S. Creaser, Loughborough University

9:50 AM

(920-4)

[Advances in FAIMS Technology and Its Bioanalytical Applications](#) Alexandre A. Shvartsburg, PNNL, Gordon Anderson, Richard Smith

10:25 AM

(920-5)

[Increased Sensitivity for Targeted and Untargeted Identification of Biomarkers in Complex Biological Extracts Using LC-FAIMS-MS](#) Pierre Thibault, Universite de Montreal/IRIC, Eric Bonneil, Olivier Caron-Lizotte

SYMPOSIA

Session 930

ACS ANYL SCSC - Nanoparticles in Separation Science - arranged by Susan Olesik, The Ohio State University

Tuesday AM, Room: 123

Susan Olesik, University of Tasmania, Presiding

PITTCON 2013

8:05 AM

(930-1)

[Diamond Based Phases for Chromatography, from Micro to Nano: Production, Characterization and Application](#) Brett Paull, University of Tasmania, Anton Peristyy, Dimitar Mitev, Emer Duffy, Pavel Nesterenko

8:40 AM

(930-2)

[Carbon-Based Nanomaterials as Separation Media](#) Luis A. Colón, University at Buffalo, SUNY, Ivonne Ferrer, John Vinci, Lisandra Santiago-Capeles, Zuqin Xue

9:15 AM

(930-3)

[Multifunctional Nanomaterials for Biomolecule Separations and Enzyme Facilitated Sequencing](#) Lisa A. Holland, West Virginia University, Anthony Moncrief, Brandon Durney, Tyler Davis

9:50 AM

(930-4)

[Gold Nanoparticles: A Universal Intermediate Ligand for the Preparation of Porous Polymer Monolithic Columns with Varying Pore Surface Functionalities](#) Frantisek Svec, Lawrence Berkeley National Laboratory

10:25 AM

(930-5)

[Characterization of Ordered Carbon Nanoparticle Stationary Phases](#) Susan Olesik, The Ohio State University, Cherie Owens

SYMPOSIA

Session 940

Advances in Blood Glucose Monitoring - arranged by Mark Schoenfisch, University of North Carolina at Chapel Hill

Tuesday AM, Room: 117

Mark Schoenfisch, University of North Carolina at Chapel Hill, Presiding

8:05 AM

(940-1)

[Nitric Oxide-Releasing Glucose Biosensors via Polyurethane Electrospun Fibers](#) Mark Schoenfisch, University of North Carolina at Chapel Hill, Ahyeon Koh, Scott Nichols, Yuan Lu

8:40 AM

(940-2)

[Advances in Noninvasive Glucose Sensing with Near Infrared Spectroscopy](#) Mark A. Arnold, University of

PITTCON 2013

Iowa

9:15 AM

(940-3)

[Blood Glucose Monitoring in Diabetes: History and Unique Challenges](#) David Gough, University of California - San Diego, Joseph Lucisano, J-T Lin, Parisa Kaveh, Tim Routh

9:50 AM

(940-4)

[In Vivo and In Vitro Glucose Sensing in Complex Biological Environments by Surface-Enhanced Raman Spectroscopy](#) Richard P. Van Duyne, Northwestern University

10:25 AM

(940-5)

[Miniature Electrochemical Glucose Sensors for Real-Time Intravascular and Periodic Non-Invasive Tear Glucose Measurements](#) Mark E. Meyerhoff, University of Michigan, Alexander Wolf, Anant Balijepalli, Bo Peng, Bruce Cohan, Gary Jensen, Qinyi Yan, Robert Bartlett, Terry Major

SYMPOSIA

Session 950

Bioanalytical Tools for the Selection and Molecular Analysis of Rare Cells - arranged by Steven A. Soper, University of North Carolina

Tuesday AM, Room: 124

Steven A. Soper, University of North Carolina, Presiding

8:05 AM

(950-1)

[Isolation and Analysis of Individual Circulating Tumor Cells](#) Daniel T. Chiu, University of Washington

8:40 AM

(950-2)

[A Microfluidic CTC Sorting Strategy Using Self-Assembled Magnetic Particles](#) Jean-Louis Viovy, Curie Institute, A Ie Nel, B Coudert, C Lemang, F Farace, FC Bidard, J Autebert, J Weber, JY Pierga, K Perez-Toralla, L Malaquin, P Vielh, S Descroix

9:15 AM

(950-3)

[Expanding the Definition of Traditional CTCs: Cells Associated With Cancer in the Blood of Patients with Solid Tumors](#) Jeffrey Chalmers, The Ohio State University

9:50 AM

PITTCON 2013

(950-4)

[NanoVelcro-Embedded Microchips for Detection and Isolation of Circulating Tumor Cells](#) Hsian-Rong Tseng, University of California - Los Angeles

10:25 AM

(950-5)

[Microfluidics for the Efficient Selection, Enumeration and Molecular Profiling of Circulating Tumor Cells \(CTCs\)](#) Steven A. Soper, University of North Carolina at Chapel Hill

SYMPOSIA

Session 960

Functional Nucleic Acid Probes for Bioanalysis and Biomedicine - arranged by Chaoyong Yang, Xiamen University

Tuesday AM, Room: 125

Chaoyong Yang, Xiamen University, Presiding

8:05 AM

(960-1)

[Oligomeric Fluorophores and Sensors Assembled on a DNA Scaffold](#) Eric Kool, Stanford University

8:40 AM

(960-2)

[Building Dream Functional Molecules with DNA Bases](#) Weihong Tan, University of Florida

9:15 AM

(960-3)

[Reagent Innovations for Sensitive, Clean, and Highly Multiplexed Analysis of DNA](#) Steven Benner, Foundation for Applied Molecular Evolution

9:50 AM

(960-4)

[Progress in Molecular Sensors, Computing, and Robotics](#) Milan Stojanovic, Columbia University

10:25 AM

(960-5)

[Massively Parallel Droplet PCR Approach to Aptamer Evolution at the Single-Molecule Level](#) Chaoyong Yang, Xiamen University

SYMPOSIA

Session 970

PITTCON 2013

JAIMA - The State-of-the-Art Technologies from Japan: Analytical Instruments with / for Nano- Physics Technology I - arranged by Koichiro Matsuda, Japan Analytical Instrument Manufacturers' Association (JAIMA)

Tuesday AM, Room: 122B

Koichiro Matsuda, Osaka University, Presiding

8:05 AM

(970-1)

[Innovative Nano-Biodevices for DNA and Related Molecules: STM and Gating Nanopore](#) Tomoji Kawai, Osaka University

8:40 AM

(970-2)

[Avant-Garde Femtosecond Laser Processing: From New Phenomena to Innovative Devices](#) Yasuhiko Shimotsuma, Kyoto University, Kazuyuki Hirao, Kazuyuki Hirao, Kiyotaka Miura, Kiyotaka Miura, Masaaki Sakakura, Masaaki Sakakura

9:15 AM

(970-3)

[Micro- and Nano-Fluidic Devices for Medical and Life Science Applications](#) Manabu Tokeshi, Hokkaido University

9:50 AM

(970-4)

[Characterization of Micro/Nano Liquid Interfaces](#) Akihide Hibara, The University of Tokyo

10:25 AM

(970-5)

[Towards the Safety and Comfortable Research Environment in University-Nano-Materials: The Last Potential Hazards in Science](#) Hitoshi Yamamoto, Osaka University

SYMPOSIA

Session 980

Novel Approaches to Ambient Desorption/Ionization Mass Spectrometry - arranged by Jacob T. Shelley, Purdue University

Tuesday AM, Room: 122A

Jacob T. Shelley, Purdue University, Presiding

8:05 AM

(980-1)

PITTCON 2013

[Size, m/z, and Position: Ion Mobility Spectrometry and Imaging MS of Ambient Ions](#) Facundo M. Fernandez, Georgia Institute of Technology, Chaminda Gamage, Joel Keelor, Prabha Dwivedi, Rachel Bennett

8:40 AM

(980-2)

[Any Sample Everywhere - Laser-Ablation-Based Remote or Ambient Mass Spectrometry for Elemental Analysis](#) Detlef Günther, ETH Zurich

9:15 AM

(980-3)

[Transmission Mode Desorption Electrospray Ionization: New Applications](#) Jennifer Brodbelt, University of Texas at Austin, John O'Brien

9:50 AM

(980-4)

[Deconstructing DESI in Time and Space to Empower Direct Analysis](#) Andre R. Venter, Western Michigan University

10:25 AM

(980-5)

[Overcoming the Quantification and Identification Barriers in Plasma-Based Ambient Mass Spectrometry](#) Jacob T. Shelley, Purdue University, Carsten Engelhard, Joshua Wiley, R Graham Cooks

SYMPOSIA

Session 990

Portable Miniaturized Analytical System for Biochemical Analysis - arranged by Susan M. Lunte, University of Kansas

Tuesday AM, Room: 118C

Susan M. Lunte, University of Kansas, Presiding

8:05 AM

(990-1)

[Miniature Ion Trap Mass Spectrometry System with Paper Spray for Biomedical Analysis](#) Zheng Ouyang, Purdue University, Linfan Li, R Graham Cooks, Tsung-Chi Chen, Yue Ren

8:40 AM

(990-2)

[Planetary In Situ Capillary Electrophoresis System \(PISCES\)](#) Peter Willis, Caltech/JPL, Amanda Stockton, E Jiao, E Lynch, EC Jensen, Fernanda Mora, Morgan Cable, NE Bramall, RA Mathies

9:15 AM

PITTCON 2013

(990-3)

[Nucleic-Acid-Based Detection of Bacterial Infections Using a Fully-Disposable Paper-Based Microfluidic Technology](#) Paul Yager, University of Washington, Barry Lutz, Elaine Fu

9:50 AM

(990-4)

[Toner-Based Microfluidic Devices for Clinical Assays with Colorimetric Detection](#) Wendell Coltro, Federal University of Goia, Fabrício Ribeiro de Souza, Karoliny Oliveira, Paula Medrado e Silva

10:25 AM

(990-5)

[Portable Analysis Systems Based on Electrochemical Detection](#) Susan M. Lunte, University of Kansas

SYMPOSIA

Session 1000

Recent Advances in Ion Chromatographic Analyses of Pharmaceuticals and Biopharmaceuticals - arranged by Shreekant V. Karmarkar, Baxter Healthcare

Tuesday AM, Room: 202B

Shreekant V. Karmarkar, Baxter Healthcare, Presiding

8:05 AM

(1000-1)

[Recent Stationary Phase and Detection Developments in Ion Chromatography](#) Chris Pohl, Thermo Fisher Scientific

8:40 AM

(1000-2)

[Application of Ion Chromatography in Fermentation/Cell Culture Quality Control](#) Lokesh Bhattacharyya, FDA/CBER

9:15 AM

(1000-3)

[Ion Chromatographic Determination of Impurities in Pharmaceuticals](#) Shreekant Karmarkar, Baxter Healthcare

9:50 AM

(1000-4)

[Ion Chromatography Assay Methods for Impurities, Degradation Products, and Counterions in Drug Substances and Drug Products](#) Jeffrey S. Rohrer, Thermo Fisher Scientific

10:25 AM

(1000-5)

[Application of Ion Chromatography in Vaccine Characterization](#) Alfred V. Del Grosso, FDA - CBER

SYMPOSIA

Session 1010

Recent Developments and Applications of Mass Spectrometry in Analytical Characterization of Biotherapeutics - arranged by Guodong Chen, Bristol-Myers Squibb

Tuesday AM, Room: 201B

Guodong Chen, Bristol-Myers Squibb, Presiding

8:40 AM

(1010-2)

[Applications of Mass Spectrometry in Higher Order Structure Characterization of Biotherapeutics](#) Guodong Chen, Bristol-Myers Squibb

9:15 AM

(1010-3)

[Structural Proteomics for Protein Conformational Analysis](#) Lisa M. Jones, Indiana University-Purdue University, Hao Zhang, James Carroll, Justin Sperry, Michael Gross, Sandeep Kumar, Weidong Cui

9:50 AM

(1010-4)

[Application of Electron Transfer Dissociation – Mass Spectrometry in Structural Characterization of Biotherapeutics](#) Jingjie Mo, Bristol-Myers Squibb

10:25 AM

(1010-5)

[Characterization of Therapeutic Antibody Conjugates by Mass Spectrometry](#) Justin B. Sperry, Pfizer, James Carroll, Jason Rouse

SYMPOSIA

Session 1020

SEAC - Pivotal Ideas in Electroanalysis - arranged by Joseph T. Maloy, Seton Hall University

Tuesday AM, Room: 118A

Joseph T. Maloy, University of Cincinnati, Presiding

8:05 AM

(1020-1)

[Key Developments in Electroanalytical Chemistry: Spectroelectrochemistry of Redox Proteins and](#)

[Electrochemical Immunoassay](#) William R. Heineman, University of Cincinnati

8:40 AM

(1020-2)

[Modern Whole Blood Analyzers for Critical Care Measurements: The Key Advances in Electrochemical Sensor Technology that Enabled Instrument Development](#) Mark E. Meyerhoff, University of Michigan

9:15 AM

(1020-3)

[Electroanalytical Techniques for Toxin Biosensing](#) Shelley Minter, University of Utah

9:50 AM

(1020-4)

[From Modified Electrodes to Microelectronics: Core Concepts in Electroanalysis](#) Richard L. McCreery, University of Alberta

10:25 AM

(1020-5)

[Standing on the Shoulders of Engineers](#) Peter T. Kissinger, Purdue University

WORKSHOP

Session 1030

Training in Food Analytical Techniques Using LC-MS, HPLC, Spectroscopic and Molecular Instrumentation - arranged by R Kevin Pegg, Florida State College at Jacksonville

Tuesday AM, Room: 126A

R Kevin Pegg, Florida State College at Jacksonville, Presiding

8:05 AM

(1030-1)

[Student Training at the Institute for Food Safety](#) Christian Bush, Florida State College at Jacksonville

8:35 AM

(1030-2)

[Advances in Food Safety: Using Spectroscopic Techniques and Nanotechnology](#) Sulatha Dwarakanath, Austin Community College

9:05 AM

(1030-3)

[Effective Lab Practices for Teaching HPLC Techniques](#) Linnea Fletcher, Austin Community College

PITTCON 2013

9:50 AM

(1030-4)

[Training for Advanced Technician Education in LC and Genetic Methods](#) R Kevin Pegg, Florida State College at Jacksonville, Allison Jennings, Meagan Jarrell

10:20 AM

(1030-5)

[Recent Developments in the Use of Handheld NIR in Field and Manufacturing Applications](#) Daniel R. Klevisha, Thermo Fisher Scientific

ORGANIZED CONTRIBUTED SESSIONS

Session 1040

A Decade of QuEChERS, I - arranged by Steven Lehotay, USDA Agricultural Research Service

Tuesday AM, Room: 121C

Steven Lehotay, USDA Agricultural Research Service, Presiding

8:00 AM

(1040-1)

[An Overview of QuEChERS](#) Steven Lehotay, USDA Agricultural Research Service

8:20 AM

(1040-2)

[QuEChERS for Veterinary Drug Residue Analysis](#) Brian Kinsella, United Chemical Technologies, Inc.

8:40 AM

(1040-3)

[High Quality Analysis of Pesticides in Medical Cannabis Using QuEChERS Extraction, Cartridge SPE Cleanup, and GCxGC-TOFMS](#) Jack Cochran, Restek Corporation, Amanda Rigdon, Frank Dorman, Jason Thomas, Julie Kowalski, Michelle Misselwitz, Sharon Lupo

9:00 AM

(1040-4)

[Applications of QuEChERS to Environmental Contaminants](#) Michael Ye, Supelco/Sigma-Aldrich, Olga Shimelis

9:35 AM

(1040-5)

[Unique Applications of QuEChERS](#) Mike Chang, Agilent Technologies

9:55 AM

PITTCON 2013

(1040-6)

[How QuEChERS Eased My Work As An Applications Chemist](#) Andre Schreiber, AB SCIEX

10:15 AM

(1040-7)

[QuEChERS Sample Preparation for Food and Forensic Applications in Animal Tissues and Biological Fluids](#) Michael S. Young, Waters Corporation, Jeremy Shia, Kim Tran

10:35 AM

(1040-8)

[Automation of QuEChERS Cleanup Before GC or HPLC Using a Robotic Autosampler](#) Edward A. Pfannkoch, GERSTEL, Inc.

ORGANIZED CONTRIBUTED SESSIONS

Session 1050

ACS ANYL - General Topics in Analytical Chemistry - arranged by Stephen Scypinski, Bristol Myers Squibb

Tuesday AM, Room: 202A

Stephen Scypinski, Rutgers University, Presiding

8:00 AM

(1050-1)

[Infrared Spectral Analysis of Oak, Pine and Huckleberry Leaf Litter Samples](#) Georgia Arbuckle-Keil, Rutgers University, John Dighton, Kristin Lammers

8:20 AM

(1050-2)

[Surface Chemistry and Morphology: Neglected Parameters in the Characterization of CMP Slurries](#) David Fairhurst, XiGo Nanotools Inc, Patrick O'Hagan

8:40 AM

(1050-3)

[Determination of Carbohydrates Using a New Integrated Capillary High-Performance Ion Chromatography System with Electrochemical Detection](#) Cheng Jun, Thermo Fisher Scientific, Chris Pohl, Petr Jandik, Yan Liu

9:00 AM

(1050-4)

[Calibration-Free Micro-Fabricated Electrochemical Sensor for Heavy Metal Determination](#) Mohamed M. Marei, University of Louisville, Richard Baldwin, Robert Keynton, Thomas Roussel

9:35 AM

PITTCON 2013

(1050-5)

[Spatial Analysis, Pollution, and Health Risk Assessment of Heavy Metal in Urban Soils of Karachi City \(Pakistan\)](#) Zahida Karim, University of Karachi

9:55 AM

(1050-6)

[Gradient Elution On-Chip Chromatography](#) Makoto Tsunoda, University of Tokyo

10:15 AM

(1050-7)

[Redox-Mediated Dynamic Reorganizations of Ionic Liquid/Electrode Interface](#) Xiangqun Zeng, Oakland University, Chunhui Xiao, Rehman Abdul, Zhe Wang

10:35 AM

(1050-8)

[Speciation Analysis of Iron Using Molecular Speciated Isotope Dilution Mass Spectroscopy](#) Mesay M. Wolle, Duquesne University, HM Skip Kingston, Matt Pamuku, Timothy Fahrenholz

ORGANIZED CONTRIBUTED SESSIONS

Session 1060

Forensic Science for Chemical and Biological Threats - arranged by Jon Wahl, Pacific Northwest National Laboratory

Tuesday AM, Room: 113C

Jon Wahl, Pacific Northwest National Laboratory, Presiding

8:00 AM

(1060-1)

[Non-Genomic Approaches to Microbial Forensics](#) Karen L. Wahl, Pacific Northwest National Laboratory, Angela Melville, Brian Clowers, Christina Sorensen, David Wunschel, Heather Colburn, Heather Engelmann, Helen Kreuzer, Kathryn Antolick, Kristin Victry

8:20 AM

(1060-2)

[Isolation of Trace Chemical Impurities for High Value Forensic Techniques](#) Jon Wahl, Pacific Northwest National Laboratory, Charles Doll, David Wunschel, Heather Colburn, Helen Kreuzer, Karen Wahl, Laura Cree, Moran Jim, Scott Harvey

8:40 AM

(1060-3)

[The State-of-the-DART for Forensic Analysis](#) Robert B. Cody, JEOL USA, Inc.

PITTCON 2013

9:00 AM

(1060-4)

[Forensic Profiling of Ricin Extracts by LC-MS and Multivariate Data Analysis](#) Sten-Ake Fredriksson, FOI, Swedish Defence Research Agency

9:35 AM

(1060-5)

[Chemometrics for Impurity Profiling with GC × GC-TOFMS Data](#) Jamin C. Hoggard, University of Washington, Carlos Fraga, Jon Wahl, Robert Synovec

9:55 AM

(1060-6)

[Forensic Attribution of a Terrorist Attack on the Food Supply: Sampling, Extraction, and Identification of Chemical Warfare Agents and Their Chemical Attribution Signatures](#) Audrey M. Williams, Lawrence Livermore National Laboratory, Alexander Vu

10:15 AM

(1060-7)

[Gas Detector Array with IMS and Optional Gas Chromatographic Separation for First Response](#) Andreas Walte, Airsense Analytics, Bert Ungethuen, Gerhard Matz, Henrdik Fischer, Joern Frank, Wolf Muenchmeyer

ORAL SESSIONS

Session 1070

Bioanalytical: CE and HPLC - arranged by Carl Sanchez, Phenomenex

Tuesday AM, Room: 115A

Carl Sanchez, Phenomenex, Presiding

8:00 AM

(1070-1)

[Detection of Autologous Blood Doping Through Capillary Electrophoresis](#) Jack Chuan Yu Fang, San Diego State University, Christopher Harrison

8:20 AM

(1070-2)

[Assessment of Endocrine Disruption with Capillary Electrophoresis: Analysis of Circulating Steroids and Aptamer Affinity Binding](#) Vincent T. Nyakubaya, West Virginia University, Jennifer Stueckle, Lisa Holland, Srilakshmi Yedlapalli

8:40 AM

(1070-3)

[Detection of Nitroxyl-Derived Glutathione Sulfinamide in Cells by Capillary Zone Electrophoresis with Laser-Induced Fluorescence Detection](#) Gail Willette, University of Arizona, Craig Aspinwall, Elyssia Gallagher, Katrina Miranda

9:00 AM

(1070-4)

[Factors Affecting Selectivity in Ion Exchange Chromatography of Protein Drugs](#) Robert E. Birdsall, Purdue University, Charu Yerneni, Mary Wirth, Xiang Cao

9:35 AM

(1070-5)

[Overview of Method Development for Analyzing Monoclonal Antibodies](#) Phu T. Duong, Agilent Technologies, Inc.

9:55 AM

(1070-6)

[Modification of Allyl Silica Hybrid Monoliths with Nanodiamonds for Liquid Chromatography](#) Lisandra Santiago-Capeles, University at Buffalo, SUNY, John Vinci, Luis Colón, Zuqin Xue

10:15 AM

(1070-7)

[Practical Considerations for Online Microdialysis-Capillary HPLC Monitoring of Neurotransmitters with One Minute Temporal Resolution](#) Jing Zhang, University of Pittsburgh, Adrian Michael, Andrea Jaquins-Gerstl, Kathryn Nesbitt, Stephen Weber

10:35 AM

(1070-8)

[Development of an UPLC SEC Method for the Determination of the Chrompurity Profile of Human Plasma IVIG Product](#) Tong Zhang, Biotest Pharmaceuticals Co., Eileen Choi

ORAL SESSIONS

Session 1080

Bioanalytical: Surfaces and Materials - arranged by Wenwan Zhong, University of California

Tuesday AM, Room: 115C

Wenwan Zhong, University of California, Presiding

8:00 AM

(1080-1)

[Investigation of Hydrophobic Modifiers to Improve Bilayer Stability for Ion Channel-Based Sensors](#) Leonard K. Bright, University of Arizona, Craig Aspinwall, Lin Ma

8:20 AM

PITTCON 2013

(1080-2)

[Competing Reactions in Monolayers: Formation of Amide Linkages via Succinimidyl Ester Chemistry](#) China Lim, University of Utah, Marc Porter, Ron Wampler, Yixin Ying

8:40 AM

(1080-3)

[Surface Plasmon Resonance Biosensors Based on Ionic Liquid Self-assembled Monolayer](#) Mathieu Ratel, Universite de Montreal, Jean-Francois Masson

9:00 AM

(1080-4)

[Estimating the Response Time of an Ion Channel Biosensor by Reconstitution of Kir6.2 into an Artificial Lipid Bilayer](#) Mark T. Agasid, University of Arizona, Benjamin Heitz, Craig Aspinwall, Scott Saavedra, Troy Comi

9:35 AM

(1080-5)

[Rapid and Sensitive Detection of Metal Ions by Nanopore Analysis](#) Xiyun Guan, Illinois Institute of Technology, Guihua Wang, Liang Wang, Shuo Zhou, Yujing Han

9:55 AM

(1080-6)

[Conformation of Fibrinogen Adsorbed to Polymer Surfaces Through the Use of Surface Sensitive Techniques](#) Sarah M. Lantvit, Colorado State University, Melissa Reynolds

10:15 AM

(1080-7)

[Infrared and Raman Microspectral Imaging of Human Cells and Tissues for Medical Diagnostics](#) Max Diem, Northeastern University

10:35 AM

(1080-8)

[Imaging SDS Permeation in Skin by Infrared Microspectroscopy](#) Guangru Mao, Johnson & Johnson Consumer Products Companies, Inc, Carol Flach, Richard Mendelsohn, Russel Walters

ORAL SESSIONS

Session 1090

Biomedical: Sensors - arranged by Hui Wang, The Ohio State University

Tuesday AM, Room: 116

Hui Wang, The Ohio State University, Presiding

8:00 AM

(1090-1)

[Wash-Less and Highly Sensitive Electrochemical Biosensor for Prostate Cancer Antigen Monitoring](#) Chiheb Esseghaier, INRS-EMT, Ghadeer Suifan, Mohammed Zourob

8:20 AM

(1090-2)

[Optode-Based Mapping of pH Across Multicellular Model Tissue](#) Frank Vantassell, Case Western Reserve University, Maria Peshkova, Miklos Gratzl, Punkaj Ahuja

8:40 AM

(1090-3)

[Development of Novel Biosensor Using Solid Phase Peptide Synthesis on Microchip](#) Rahul Bhardwaj, Japan Advanced Institute of Science and Technology, Ukita Yoshiaki, Yuzuru Takamura

9:00 AM

(1090-4)

[Electrochemical Sensor Systems for Detection of Volatile Aldehydes and Inflammation Markers in Breath](#) Juliane Obermeier, University Hospital of Rostock, Jochen Schubert, Kerstin Wex, Wolfram Miekisch

9:35 AM

(1090-5)

[Microelectrode Arrays for In Vitro Studies of Endothelial Cell Oxygen Consumption in Angiogenesis](#) Tempest Van Schaik, Imperial College London, Danny O'Hare

9:55 AM

(1090-6)

[Real-Time Electrochemical Monitoring of LAMP for Escherichia coli Bacteria Detection Using Flexible Substrate and Osmium Redox](#) Mohammadali Safavieh, Inrs-Emt, Minhaz Uddin Ahmed, Mohammed Zourob

10:15 AM

(1090-7)

[Boronic Acid Modified Nucleic Acids for Expanded Applications](#) Chaofeng Dai, Georgia State University, Binghe Wang, Bowen Ke, Hanjing Peng, Lifang Wang, Nanting Ni, Weixuan Chen, Xiaochuan Yang, Yunfeng Cheng

10:35 AM

(1090-8)

[Multidimensional Pain Biosensors](#) Omowunmi A. Sadik, SUNY-Binghamton

ORAL SESSIONS

Session 1100

Environmental Analysis with GC-MS - arranged by Ibolya Molnar-Perl, L Eotvos University

Tuesday AM, Room: 119B

Ibolya Molnar-Perl, L Eotvos University, Presiding

8:00 AM

(1100-1)

[Discovery-Based Analyses of Wastewater Samples for Characterization of Drug Usage](#) Adrienne Brockman, The Pennsylvania State University, Frank Dorman, Jack Cochran, Michelle Misselwitz

8:20 AM

(1100-2)

[Automated Method for the Analysis of 24 Hazardous VOCs in Machine-Generated Mainstream Cigarette Smoke by SPME GC/MS](#) Daniel Y. Pazo, Centers for Disease Control and Prevention, Benjamin Blount, Clifford Watson, David Chambers, Fallon Moliere, Maureen Sampson

8:40 AM

(1100-3)

[Determination of Natural and Synthetic Steroids in Danube River by Gas Chromatography Tandem Mass Spectrometry as Their Trimethylsilyl \(Oxime\) Ether/Ester Derivatives](#) Ibolya Molnár-Perl, L Eötvös University, Anikó Vasánits-Zsigrai, Borbála Molnár, Gyula Záray, Nóra András

9:00 AM

(1100-4)

[GC-ICPMS Potential for Hg Speciation in the Environment](#) Joaodimir Castro Georgi, CNRS-IPREM, Emmanuel Tessier, Jean Dumont, Ken Neubauer, Olivier Donard

9:35 AM

(1100-5)

[High Throughput Environmental Forensic Investigation for Identifying Sources of Polycyclic Aromatic Hydrocarbons](#) Melinda T. Pham, The Pennsylvania State University, Frank Dorman, Jessica Netzer

9:55 AM

(1100-6)

[Measurement of Volatile Organic Compounds in Urine Using Point of Collection Isotope Dilution Internal Standardization](#) Fallon Moliere, Centers for Disease Control and Prevention, Benjamin Blount, David Chambers, Maureen Sampson

10:15 AM

(1100-7)

[Benefits of Dynamic Headspace in P&T Mode for VOCs and SVOC at Trace Levels in Environmental Matrices](#) Ilaria Ferrante, DANI Instruments, Manuela Bergna, Roberta Lariccia

PITTCON 2013

10:35 AM

(1100-8)

[GCxGC-TOFMS Analysis of Mixed-Halogen Planar Analytes: Native Compounds Generated During Combustion and Their Metabolites](#) Kari L. Organtini, The Pennsylvania State University, Frank Dorman

ORAL SESSIONS

Session 1110

Fluorescence/Luminescence Materials Analysis (Half Session) - arranged by Colin Medley, Genentech

Tuesday AM, Room: 120B

Colin Medley, Genentech, Presiding

8:00 AM

(1110-1)

[Characteristics of Highly Luminescent Carbon Dots with Different Capping Reagents](#) Zuqin Xue, University at Buffalo, SUNY, Ivonne Ferrer, John Vinci, Luis Colón

8:20 AM

(1110-2)

[Abnormal Molecular Diffusion in Confined Environment Studied with Stimulated Emission Depletion Microscopy](#) Gufeng Wang, North Carolina State University, Bhanu Neupane, Fang Chen

8:40 AM

(1110-3)

[Luminescence Screening of Residues of Enrofloxacin and Ciprofloxacin in Swine Liver After Dispersive Liquid-Liquid Microextraction](#) Guoying Chen, USDA Agricultural Research Service, Qionggiong Li

9:00 AM

(1110-4)

[Characterization of Polysaccharide and Polysaccharide Conjugates Using Size-Exclusion Chromatograph with UV-MALS \(QELS\)-RI Detection](#) Qian Wang, Pfizer, Laura Bass, Nathan Lacher

ORAL SESSIONS

Session 1120

GCMS: Homeland Security/Food Science - arranged by Bill Barber, Agilent Technologies

Tuesday AM, Room: 120A

Bill Barber, Agilent Technologies, Presiding

8:00 AM

(1120-1)

[Detection of the Molecular Composition of Coffee Roasting Pyrolysis Gases by Thermal Analysis of Individual Coffee Beans Coupled to Evolved Gas Analysis \(TG-EGA\) by Photo Ionization TOF Mass Spectrometry](#) Ralf Zimmermann, University of Rostock, Andreas Walte, Ehlert Sevn, Georg Matuschek, Michael Fischer, Mohammad Saraji, Romy Hertz, Sebastian Wohlfahrt, Thorsten Striebel

8:20 AM

(1120-2)

[Field Portable Analysis of Air Samples Using GC-MS and Micro Volume Needle Traps](#) Nathan L. Porter, Torion Technologies, Anthony Rands, Christopher Bailey, Douglas Later, Edgar Lee, Joseph Oliphant

8:40 AM

(1120-3)

[The Analytical Investigation of Synthetic Street Drugs](#) Amanda Leffler, The Pennsylvania State University, Frank Dorman, Philip Smith

9:00 AM

(1120-4)

[Separation of Fatty Acid Methyl Esters by Comprehensive GC-Online Hydrogenation x GC](#) Pierluigi Delmonte, US Food and Drug Administration, Ali Reza Fardin-Kia, Edward Ledford, Jeanne Rader, Zhanpin Wu

9:35 AM

(1120-5)

[High Throughput DI-SPME-GC-TOFMS Method Employing a New Matrix Compatible Fiber for Determination of Triazole Fungicides in Fruits](#) Erica A. Souza Silva, University of Waterloo, Janusz Pawliszyn

9:55 AM

(1120-6)

[Comparison of Conventional and Microwave-Assisted Acid/Base Hydrolysis of Serum Standard Reference Materials for the Measurement of Fatty Acids](#) Bruce A. Benner, National Institute of Standards and Technology, Michele Schantz

10:15 AM

(1120-7)

[Forensic Investigation of Herbal Incense Street Samples Using GC-MS and LC-MS/MS](#) Sharyn E. Miller, The Pennsylvania State University, Dan Sykes, Julie McIntosh

10:35 AM

(1120-8)

[Characterization of Oils and Fats by ¹H NMR and GC/MS Fingerprinting: Classification, Prediction, and Detection of Adulteration](#) Sam Li, National University of Singapore

ORAL SESSIONS

Session 1130

Nanotechnology: Fluorescence/Luminescence (Half Session) - arranged by Colin Medley, Genentech

Tuesday AM, Room: 120B

Colin Medley, Genentech, Presiding

9:35 AM

(1130-1)

[Lighting Nanostructures with Reversible Motion: A Mimic of Natural Motor](#) Mingxu You, University of Florida, Fujian Huang, Weihong Tan

9:55 AM

(1130-2)

[Conductivity Measurements Combined with Fluorescence Microscopy to Study Transport Properties in In-Plane Nanofluidic Channels](#) Daniel Haywood, Indiana University, Adam Zlotnick, Stephen Jacobson, Zachary Harms

10:15 AM

(1130-3)

[Spectroscopic and Chromatographic Characterization of Magic-Sized Cadmium Chalcogenide Nanocrystals with Enhanced Band-Edge versus Trapped-State Photoluminescence](#) Jared S. Baker, Elmira College, Caitlin Eno

10:35 AM

(1130-4)

[Stabilization of ssRNA on Graphene Oxide Surface: An Effective Way to Design Highly Robust RNA Probes for Bioanalysis](#) Liang Cui, Xiamen University, Chaoyong Yang, Zhi Zhu, Zirong Chen

ORAL SESSIONS

Session 1140

Neurochemistry - arranged by Alice K. Chen, The Pittsburgh Conference

Tuesday AM, Room: 120C

Alice K. Chen, The Pittsburgh Conference, Presiding

8:00 AM

(1140-1)

[Noradrenergic Regulation of Oxygen Dynamics in the Ventral Bed Nucleus of the Stria Terminalis](#) Elizabeth S. Bucher, University of North Carolina at Chapel Hill, Anna Belle, Laura Kim, R Mark Wightman

8:20 AM

(1140-2)

[An In Vivo Chemical Comparison of Different Antidepressant Doses in the Mouse Brain with Fast Scan Cyclic](#)

[Voltammetry](#) Kevin M. Wood, Wayne State University, Kristin Gallik, Parastoo Hashemi

8:40 AM

(1140-3)

[Monitoring the Effects of Levodopa Treatment on Dopamine Dynamics Using Fast-Scan Cyclic Voltammetry at Carbon-Fiber Microelectrodes](#) Lingjiao Qi, North Carolina State University, Leslie Sombers, Marina Spanos

9:00 AM

(1140-4)

[Histamine-Induced Oxygen Changes in the Nucleus Accumbens](#) Susan Carroll, University of North Carolina at Chapel Hill, Anna Belle, Elizabeth Bucher, R Mark Wightman

9:35 AM

(1140-5)

[Using Electrochemistry to Monitor Addiction: FSCV of Norepinephrine in the Bed Nucleus of the Stria Terminalis](#) Megan E. Fox, University of North Carolina at Chapel Hill, Paul Walsh, R Mark Wightman, Zoe McElligott

9:55 AM

(1140-6)

[Characterizing Spontaneous Transient Adenosine Release in the Rat Brain](#) Michael Nguyen, University of Virginia, Ashley Ross, B Jill Venton

10:15 AM

(1140-7)

[Mass Spectrometry Based Neuroimaging at Subcellular Length Scales](#) Jorg Hanrieder, Chalmers University of Technology, Andrew Ewing, Asa Persson, Georg Kuhn, Melissa Passarelli

10:35 AM

(1140-8)

[Protecting Dopamine Terminals Surrounding Microdialysis Probes Implanted in the Striatum](#) Kathryn M. Nesbitt, University of Pittsburgh, Adrian Michael, Andrea Jaquins-Gerstl

ORAL SESSIONS

Session 1150

Pharmaceutical: Chromatography Methods - arranged by David Myers, Eli Lilly and Company

Tuesday AM, Room: 121A

David Myers, Eli Lilly and Company, Presiding

8:00 AM

(1150-1)

[Enantioresolution of Several Amino Alcohol Drugs Containing Multiple Stereogenic Centers Using Immobilized Polysaccharide-Based HPLC Chiral Stationary Phases](#) Mohamed Hefnawy, King Saud University

8:20 AM

(1150-2)

[Advantages of Using Monodisperse Particles in HPLC Columns](#) Richard A. Henry, Sigma-Aldrich/Supelco, Betz William, Carmen Santasania, David Bell, Gaurang Parmar, Paul Ross, Wayne Way, William Campbell

8:40 AM

(1150-3)

[Development and Implementation of an Informatics Solution to Enable Analytical Quality By Design \(AQbD\) LC Methods Development](#) James E. Morgado, Pfizer Inc, Worldwide Research and Development, David Fortin, Gang Xue, George Reid, Jeffrey Harwood, Jian Wang, Michael O'Shea

9:00 AM

(1150-4)

[Assaying Gentamicin Sulfate by HPLC-Charged Aerosol Detection with an Ion-Pairing Reagent Gradient](#) Deanna Hurum, Thermo Fisher Scientific, Jeffrey Rohrer, Jinyuan (Leo) Wang, Runlin (Gary) Li

9:35 AM

(1150-5)

[Mixed-Mode Chromatography for Pharmaceutical Analysis](#) Xiaodong Liu, Thermo Fisher Scientific, Chris Pohl

9:55 AM

(1150-6)

[High Speed Separations with Microflow-UHPLC](#) Khaled Mriziq, Eksigent, part of AB SCIEX, Remco Van Soest, Steve Hobbs, Tina Settineri

10:15 AM

(1150-7)

[Resin Bonded Cyclofructans \(CFs\) as New Stationary Phases for HILIC and Chiral Separations in HPLC](#) Haixiao Qiu, The University of Texas at Arlington, Daniel Armstrong

10:35 AM

(1150-8)

[Guidelines for Transferring Routine HPLC Methods to New 5µm Core-Type Particles](#) Richard A. Henry, Sigma-Aldrich/Supelco, Carmen Santasania, David Bell, Gaurang Parmar, Hugh Cramer, Paul Ross, Wayne Way

ORAL SESSIONS

Session 1160

Raman SERS and Imaging - arranged by Mustafa Culha, Yeditepe University

Tuesday AM, Room: 121B

Mustafa Culha, Yeditepe University, Presiding

8:00 AM

(1160-1)

[Implementing Directional SERS: Alignment in MIP-Coated Substrates](#) Behrang Moazzez, Memorial University, Erika Merschrod

8:20 AM

(1160-2)

[Evaluation of SERS Substrates and Enhancement Factors Used to Characterize Them](#) Hermes C. Huang, Real-Time Analyzers, Atanu Sengupta, Chetan Shende, Frank Inscore, Stuart Farquharson

8:40 AM

(1160-3)

[SPIPA \(Surface Plasmon Imaged Phased Array\): An Ultra Narrow Bandpass Filter for Spectroscopy and Spectral Imaging](#) Ajaykumar Zalavadia, Cleveland State University, John Turner

9:00 AM

(1160-4)

[Multiplexed and Sensitive Molecular Diagnostics Using SERRS](#) Karen Faulds, University of Strathclyde, Duncan Graham, Jennifer Dougan, Kirsten Gracie, Kristy McKeating, Mhairi Harper

9:35 AM

(1160-5)

[Monitoring Biofilm Formation and Microorganisms Under Environmental Stress Using Surface-Enhanced Raman Scattering](#) Mustafa Culha, Yeditepe University, Ertug Avci, Esen Efeoglu

9:55 AM

(1160-6)

[Integrated Brillouin and Raman Spectroscopy](#) Jonathan R. Damsel, Cleveland State University, John Turner

10:15 AM

(1160-7)

[High Spatial Resolution Confocal Raman Imaging](#) Richard A. Larsen, Jasco, Inc., Daisuke Dogomi, John Carriker, Ken-ichi Akao, Kouhei Tamura, Masaaki Yumoto, Toshiyuki Nagoshi

10:35 AM

(1160-8)

[Functionalized Nanoparticles and SERS for use in Biological Research](#) Duncan Graham, University of Strathclyde, Anna Robson, Derek Craig, Jonathan Simpson, Karen Faulds, Sarah McAughtrie

POSTER SESSIONS

Session 1170

Analysis of Peptides, Proteins, and DNA

Tuesday AM, Room: 204ABC

(1170-1P)

[Measurement of Akt Activity in Single Pancreatic Cancer Cells](#) Angela Proctor, University of North Carolina at Chapel Hill, David Lawrence, Jen Jen Yeh, Nancy Allbritton, Qunzhao Wang, Silvia Herrera

(1170-2P)

[Protective Effect of Dietary Ginger Extract Alone or in Combination with Rosiglitazone and Glimepiride on Hepatotoxicity and Oxidative Stress in Streptozotocin-Induced Diabetes in Rats](#) Samy A. Abdel Azim, Cairo University

(1170-3P)

[FTIR and Raman Studies of Reverse Amyloid Protein Fibrils in Confined Milieu](#) Luis R. Millan-Barea, University of Puerto Rico, Mayagüez, Manuel Rosario-Alomar

(1170-4P)

[Validation of Automated Workstation for Real-Time PCR Setup Using cDNA from Two Genes of Trout Fish](#) Sikander Gill, Aurora Instruments Ltd., Dong Liang, Marco Garate, Rajwant Gill

(1170-5P)

[Novel Wide-Pore Superficially Porous Particles for Biomacromolecular Separations](#) Stephanie A. Schuster, Advanced Materials Technology, Barry Boyes, Brian Wagner, Joseph Kirkland

POSTER SESSIONS

Session 1180

Bioanalytical: Spectroscopy and Mass Spectrometry

Tuesday AM, Room: 204ABC

(1180-1P)

[Development of Isothermal Amplifier for Multiplex Real-Time Monitoring of Nucleic Acids](#) Kyung-Won Ro,

SCINCO R&D Center, Byoung-Do Jeong, In-sung Kang, Moon-Ho Jung, Seol-Jung Kim, Sun-Young Park

(1180-2P)

[Aqueous Phase Separation as a Method for Multienzyme Compartmentalization](#) William M. Aumiller, The Pennsylvania State University, Christine Keating

(1180-3P)

[Fluorogenic Quantum Dots-Gold Nanoparticle Assembly for Beta Secretase Inhibitor Screening in Live Cells](#) Youngseon Choi, Institut Pasteur Korea

(1180-4P)

[Utilizing the Power of Fluorescence-Based Assays](#) Jason Dallwig, Life Technologies, Elizabeth Sampedro, Kathy Free

(1180-5P)

[High Purity Fluorophores as Fluorescence Intensity Standards for Quantifying the Number of Bound Antibodies per Cell](#) Paul C. DeRose, National Institute of Standards and Technology, Adolfas Gaigalas, Lili Wang

(1180-6P)

[Surface Plasmon Coupled Emission on Cell Research](#) Qian Liu, Xiamen University, Shuo Cao, Weipeng Cai, Xiaoqing Liu, Yao-Qun Li, Yu-Hua Weng

(1180-7P)

[Isochinoline Alkaloids: Promising Luminescent DNA Probes](#) Petr Taborsky, Masaryk University, Michal Rajecky

(1180-8P)

[Protective Encapsulation of Hydrolase Enzymes Substrates](#) Joanna Zajda, Warsaw University of Technology, Agata Michalska, Elbieta Malinowska

(1180-9P)

[Analysis of FT-IR Microspectroscopic Signatures from Normal and Malignant Human Lung Tissues](#) Menashi A. Cohenford, Marshall University, Audrey Smith, Colton Koontz, Gary Stewart, Muhammad Chaudhry, Saroj

Sigdel

(1180-10P)

[Utilizing Laserspray Ionization on an Orbitrap Exactive to Perform Imaging Mass Spectrometry at Ultra High Resolution](#) Andrew F. Harron, University of the Sciences, Charles McEwen, Khoa Hoang

(1180-11P)

[Identification of New Oxidation Products of Dopamine in On-line Electrochemistry Electrospray Ionization Mass Spectrometry \(EC-ESI-MS\)](#) Imran Iftikhar, University of Florida, Anna Brajter-Toth

(1180-12P)

[Rapid Forensic Applications Using A Direct Analysis Source – Atmospheric Solid Analysis Probe](#) Eshwar Jagerdeo, FBI Laboratory, Jay Clark, Jeffrey Leibowitz

(1180-13P)

[Lab-on-Chip: Density Gradient of Nanostructured Glass Surfaces with Gold Nanoparticles for Mass Spectrometry Imaging Single Cell Analysis](#) Amir Saeid Mohammadi, Chalmers University of Technology, Anders Lundgren, Andrew Ewing, Hans Ewing, Mattias Berglin, Melissa Passarelli, Peter Sjövall

(1180-14P)

[Compelling Evidence for Low Charge State Signatures Protein Conformation from H/D Exchange - Electrospray Ionization and Electron Capture Dissociation Mass Spectrometry](#) Teerapat Rojsajakul, West Virginia University, Fred King

(1180-15P)

[Identification and Structure Analysis of Polar Lipids from Thermophilic GWE1 Bacteria Found in Sterilization Ovens](#) Siddharth Shah, Temple University

(1180-16P)

[Characterization of Glycosylation Sites for Monoclonal Antibodies by LC-MS/MS Peptide Mapping](#) Na Yang, Abbott Laboratories, Carol Ramsay, Cheng Zhao, Jeffrey Fishpaugh

(1180-17P)

[Amylase, Catalyse, and Glutathione S-transferase Activities of Vetiver in Response to Metal-Induced](#)

[Stress](#) Funzani A. Melato, Tshwane University of Technology, Ntebogeng Mokgalaka, Robert McCrindle, Thierry Regnier

(1180-18P)

[Visible Reflectance Spectroscopy of Human Skin: The Use of CIE L*a*b* Color Analysis for In Vivo Ethnic Skin Characterization](#) Jillian Dlugos, Glenelg High School, Chris Lynch

(1180-19P)

[Shell-In-Shell Capsules via Porous Calcium Carbonate Templating - A Novel Tool for Bio-Imaging](#) Santoshkumar Biradar, Norfolk State University, Govindarajan Ramesh

(1180-20P)

[Facile and Recyclable Synthesis of Polysaccharide Composite Materials and Their Application for the Removal of Toxins](#) Simon Duri, Marquette University, Ambra Delneri, Chieu Tran, Mladen Franko

(1180-21P)

[Rapid Quantitation of Micro-Volume Protein Samples](#) John Kinyanjui, Shimadzu Scientific Instruments, Andrew Shaff, Chester Talbott, Jeff Head

(1180-22P)

[AOTF Raman Chemical Imaging of Poly-L-lactide Bioimplants](#) Venkata N K Rao Bobba, Cleveland State University, John Turner

(1180-23P)

[Lipid Imaging via Broadband Coherent Anti-Stokes Raman Scattering \(CARS\) Microscopy](#) Lawrence O. Itela, University of Notre Dame, Karen Antonio, Zachary Schultz

(1180-24P)

[Conformational and Structural Studies of n-Propylamine from Temperature Dependent Raman and Far Infrared Spectra of Xenon Solutions and Ab Initio Calculations](#) Ikhlas D. Darkhalil, University of Missouri - Kansas City, James Durig

(1180-25P)

[Bacterial Growth Media and Raman Spectroscopy – Reducing Fluorescence Interference Using Graphene](#)

[Oxide](#) Jessica Randall, University Multispectral Laboratories, Cris Lewis, James Barnes IV, Matt Lyman

(1180-26P)

[Elemental Mapping Biological Tissues by Means of LA-ICP-MS](#) Tomas Vaculovic, Masaryk University, Adam Vojtech, Jan Strnadel, Lenka Vyslouzilova, Pavlina Sobrova, Rene Kizek, Viktor Kanicky, Vratislav Horak

POSTER SESSIONS

Session 1190

Clinical Chemistry and Toxicology

Tuesday AM, Room: 204ABC

(1190-1P)

[Vitamin D Metabolites Analysis by Disposable Pipette Extraction \(DPX\) and Liquid Chromatography-Tandem Mass Spectrometry](#) Yujing Wen, University of South Carolina, Bill Brewer, Stephen Morgan

(1190-2P)

[LC/MS Analysis of Hydrophilic Compounds \(Statin\) in Biological Fluid by a Polymer Based Reversed-Phase Column](#) Junji Sasuga, Shodex/Showa Denko K.K., Kanna Ito, Takashi Kotsuka

(1190-3P)

[Quantitative Analysis of Total, Reduced, and Oxidized Glutathione in Saliva Samples Obtained From A Distant Source by Direct Isotope Dilution Mass Spectrometry \(D-SIDMS\) Under EPA Method 6800](#) Timothy Fahrenholz, Applied Isotope Technologies, Inc., Duygu Tamer, Hemasudha Chatragadda, HM Skip Kingston, Matt Pamuku

(1190-4P)

[Quantitative Detection of Plasma Proteins for Medical Diagnostics Using Magnetic Nanoparticle Enhanced Localized Surface Plasmon Resonance Biochip](#) Liang Tang, University of Texas at San Antonio, Justin Casas

(1190-5P)

[Mechanism of Irradiation Enhanced Free Radicals Generation and Cytotoxicity of ZnO Nanoparticles](#) Qingbo Yang, Missouri University of Science and Technology, Sungho Park, Tien-Sung Lin, Yinfa Ma

(1190-6P)

[Comparison of Various Enzymatic, Photometric and HPLC Methods for the Determination of Diagnostic Biomarkers, Creatinine and Uric Acid, in Human Fluids](#) Yuegang Zuo, University of Massachusetts, Dartmouth

(1190-7P)

[Metabolomic Analysis of the Effects of Arsenic in Non-Alcoholic Fatty Liver Disease](#) Xue Shi, University of Louisville, Craig McClain, Gavin Arteel, Walter Watson, Xiang Zhang, Xiaoli Wei, Xinmin Yin

(1190-8P)

[Metal Determination in Cosmetics by ICP – Comparative Study Between Borate and Peroxide Fusions](#) Janice Pitre, Corporation Scientifique Claisse, John Anzelmo

(1190-9P)

[Analysis of Barbiturates and 11-nor-9-Carboxy-Delta9-THC Using Automated Disposable Pipette Extraction and LC/MS/MS](#) Edward A. Pfannkoch, GERSTEL, Inc., Fredrick Foster, John Stuff, Oscar Cabrices, William Brewer

(1190-10P)

[Rapid Determination of Abused Drugs in Human Urines by Ultra High Performance Liquid Chromatography Coupled with Triple Quadruple Mass Spectrometry](#) Lin Cai-Yong, Shimadzu Co., Ltd, Huang Tao-Hong

(1190-11P)

[Application of Inductively Couple Plasma Dynamic Reaction Cell Mass Spectrometry \(ICP-DRC-MS\) to Multi-Elemental Analysis \(Cd, Hg, Pb, Se, and Mn\) of Whole Human Blood](#) Kristen L. Wallon, CDC/ORISE, C Derrick Quarles, Deanna Jones, Denise Tevis, Jeffrey Jarrett, Kathleen Caldwell, Melanie Franklin, Neva Mullinix, Robert Jones

(1190-12P)

[Design and Implementation of Two Novel Chromatographic Stationary Phases for Improved Blood Alcohol Concentration Analysis](#) Jessica Westland, The Pennsylvania State University, Frank Dorman, Gary Stidsen, Jarl Snider, Richard Morehead

(1190-13P)

[Biochemical, Histopathological and DNA Damage Studies to Assess Acute Oral Toxicity of Combination of Triazophos and Butylatedhydroxyanisole \(BHA\) in Rats Tissue](#) M Mohineesh, All India Institute of Medical Sciences (Aiims), Anupuma Raina, Jaya Raj, Tirath Dogra

(1190-14P)

[Combination of the Organochlorine Endosulfan and the Pyrethroid Cypermethrin-Induced Oxidative Stress, Histological Alterations and Apoptosis in Rats Tissue](#) Jaya Raj, All India Institute Of Medical Sciences (Aiims), Anupuma Raina, M Mohineesh, Tirath Dogra

(1190-15P)

[Investigation of Bio-SPME Technology for the Enrichment of Illicit Phenethylamine and Cathinone Compounds from Biological Samples](#) Craig R. Aurand, Sigma-Aldrich/Supelco, Leonard Sidisky, Robert Shirey, Young Chen

(1190-16P)

[Detection of Illicit Drugs in Impaired Driver Saliva](#) Chetan S. Shende, Real-Time Analyzers, Atanu Sengupta, Frank Inscore, Hermes Huang, Stuart Farquharson

(1190-17P)

[Rapid and Sensitive Screening of Cocaine Metabolites in Equine Plasma Using Hydrophilic-Interaction Liquid Chromatography for On-Line Extraction Coupled to Tandem Mass Spectrometry](#) Sophia Brathwaite, Pennsylvania Toxicology and Research Laboratory, Carisa Dixon Tate, Cornelius Uboh, Herman Benjamin, Joe DiBussolo, Larry Soma

(1190-18P)

[Discovery-Based Analyses of Various Pharmaceuticals in Drinking Water](#) Jordan Stubleski, The Pennsylvania State University, Frank Dorman

(1190-19P)

[Determination of Cyanide in Urine by Ion-Chromatography with Suppressed Conductivity Detection](#) Orhan Destanoglu, Istanbul Technical University, Gülçin G Yılmaz, Melike G Crçr

(1190-20P)

[High Resolution Separation of Nucleosides in UHPLC](#) Mark Woodruff, Fortis Technologies Ltd, Ken Butchart

POSTER SESSIONS

Session 1200

Environmental Analysis: Semivolatiles and Volatiles

Tuesday AM, Room: Exposition Floor, Aisles 1600-2100

(1200-1P)

[The Use of High Temperature Dynamic Headspace / Purge & Trap for the Determination of Semi-Volatile Compounds \(SVOCs\) in Different Environmental Matrices](#) Ilaria Ferrante, DANI Instruments, Manuela Bergna, Roberta Lariccia

(1200-2P)

[Determination of Semi-Volatile Polar Organic Species in PM2.5 in Edmonton, Canada by On-Line Direct Derivatization Coupled to a Thermal Desorption GC-MS](#) Luyi Ding, Environment Canada, Daniel Wang, Fu Ke

(1200-3P)

[High Throughput Microwave Assisted Solvent Extraction of Semi-Volatile Organic Compounds Using US EPA Method 3546](#) Jason D. Keith, CEM Corporation, Daniel Iversen, Ivana Mrvalj, Michael Karney

(1200-4P)

[US EPA 8270D Semi-Volatile Analysis on a Specifically Designed and Tested GC Column](#) Kenneth G. Lynam, Agilent Technologies, Inc., Gary Lee

(1200-5P)

[Evaluation of Novel 6% Cyanopropylphenyl 94% Dimethylpolysiloxane Nano Stationary Phase GC Column for Analysis of Volatile Organic Compounds Using GC and GC-MS](#) Krishnat Naikwadi, J & K Scientific Inc., Allen Britten, Anand Palanivelu, Kelsey AuCoin

(1200-6P)

[Using Alternative Carrier Gases for US EPA VOC Drinking Water Methods](#) Nathan Valentine, Teledyne Tekmar, Holly Graves, Tom Hartlein

(1200-7P)

[Enhanced Preconcentrator for the Analysis of Vapor Phase Volatile Organic Compounds](#) Thomas X. Robinson, Entech Instruments, Inc., Daniel Cardin

(1200-8P)

[EPA Method 524.3 & Proposed Method 524.4 Using a High Temperature Arylene Cyanopropylphenyl](#)

[Stationary Phase](#) Christopher Rattray, Restek Corporation, Chris English, Jack Cochran, Michelle Misselwitz

(1200-9P)

[Analysis of Low Level Volatile Organic Compounds in Air](#) Anne Jurek, EST Analytical, Doug Meece, Justin Murphy, Lindsey Pyron

(1200-10P)

[USEPA Methods 8260 and 8270 on a Single GCMS without Changing Columns](#) Richard R. Whitney, Shimadzu Scientific Instruments, Clifford Taylor, Laura Chambers, Nicole Lock, Zhuangzhi "Max" Wang

(1200-11P)

[Optimization of Volatile Petroleum Hydrocarbon Analysis by Automated Headspace Using Method Development Tools](#) Nathan Valentine, Teledyne Tekmar, Roger Bardsley, Tammy Rellar

(1200-12P)

[Anthropic Signatures in the Urban Particulate of the City of Puebla, México](#) Amado E. Navarro, Technological University of Izúcar de Matamoros

POSTER SESSIONS

Session 1210

GCMS: Applications and Instrumentation

Tuesday AM, Room: Exposition Floor, Aisles 1600-2100

(1210-1P)

[The Development of GC-MS Methodology with Nano Stationary Phase \(NSP\) Columns for the Analyses of Volatile and Semi-volatile Organic Compounds](#) Allen Britten, Cape Breton University, Kelsey AuCoin, Krishnat Naikwadi

(1210-2P)

[The Development of GC-MS and GC-ECD Method for the Analyses of Pesticides in Soil and Water Using NSP GC Column Technology](#) Allen Britten, Cape Breton University, Kelsey AuCoin, Krishnat Naikwadi

(1210-3P)

[A GCxGC-TOFMS Analysis for the Determination of Disinfection By-Products in Swimming Pool and Potable](#)

[Water](#) John Heim, LECO Corporation, Jeffrey Patrick, Joe Binkley

(1210-4P)

[Method Development and Evaluation of NSP-5 Columns for Fast Trace Analysis of PAH in Petroleum Samples by GC and GC/MS](#) Krishnat Naikwadi, J & K Scientific Inc., Allen Britten, Thomas Ferrier

(1210-5P)

[The Effect of the Autosampler Vials Glass Surface on GC-MS Analysis of Pyrethroid Pesticides at ppb Levels](#) Luisa Pereira, Thermo Fisher Scientific, Anila Khan, Brian King

(1210-6P)

[Isotope Abundance Analysis for Largely Improved Sample Identification by GC-MS](#) Tal Alon, Tel Aviv University, Aviv Amirav

(1210-7P)

[Development of a Method for the Quick Assessment of Commercial SPME Fibers](#) German A. Gómez-Ríos, University of Waterloo, Erasmus Cudjoe, Erica Souza Silva, Janusz Pawliszyn, Nathaly Reyes-Garcés

(1210-8P)

[Injection Port Performance - Getting the Best Out of Your System](#) Andrew Gooley, SGE Analytical Science, Kannan Ragunathan, Kayte Parlevliet, Peter Dawes, Roy Hibbert

(1210-9P)

[Bench Top GC-MS with Concentrator for On-Site Analysis](#) Ronan Cozic, SRA Instruments, Alain Delauzun, Axel Bart, Luigi Cobelli, Xavier Cardot

(1210-10P)

[Conversion of GC/MS Methods From Helium To Hydrogen Carrier Gas](#) Bruce D. Quimby, Agilent Technologies

(1210-11P)

[Introducing Novel Advanced Data Processing Software for Mass Spectrometry Using Spectral Deconvolution and Chemometric Data Analysis](#) Gareth M. Roberts, ALMSCO International, Gerhard Horner

(1210-12P)

[Evaluation of Hydrogen as a Carrier Gas for Gas Chromatography/Mass Spectrometry](#) Clifford M. Taylor, Shimadzu Scientific Instruments, Laura Chambers, Richard Whitney, Zhuangzhi "Max" Wang

(1210-13P)

[Multi-Dimensional Gas Chromatography/Mass Spectrometry/ Olfactometry Analysis of Headspace Generated From Green Coffee Beans](#) Roger J. Bleiler, Microanalytics - A MOCON Company, Don Wright, Kuhrt Fred

(1210-14P)

[A Multi-Residue Analysis of Pesticides in Tea Using GC-MS/MS Combined with QuEChERS Pretreatment](#) Sun Qian, Shimadzu Co., Ltd, Huang Tao-Hong

(1210-15P)

[Full Evaporation Dynamic Headspace \(FEDHS\) and Selectable 1D/2D GC-Olfactometry/MS with Preparative Fraction Collection for Analysis of Trace Amounts of Odor Compounds in Brewed Green Tea](#) Kikuo Sasamoto, Gerstel KK, Nobuo Ochiai

(1210-16P)

[Determination of Polychlorobiphenyls in Aquatic Products Using On-Line Gel Permeation Chromatography-Gas Chromatography/Mass Spectrometry](#) Liu Xiao-Hua, Shimadzu Co., Ltd, Huang Tao-Hong

(1210-17P)

[New Opportunities in Clinical GC-MS and GCxGC-MS with a Compact and High Performing Time of Flight MS](#) Daniela Cavagnino, DANI Instruments, Antonella Siviero, Ilaria Ferrante

(1210-18P)

[A CDC Biomonitoring Method for Measurement of Mercury Species in Blood](#) Elliott B. Wood, ORISE/CDC, Carl Verndon, Cynthia Ward, Kathleen Caldwell, Mark Fresquez, Robert Jones, Yuliya Sommer

(1210-21P)

[GCxGC-TOFMS Analysis of Mouse Plasma Extracts to Determine Metabolite Profiles from a Traumatic Brain Injury Study](#) John Heim, LECO Corporation, Elizabeth Humston-Fulmer, Joe Binkley

(1210-22P)

[Separation and Chemometric Analysis of FAMES in Biodiesel Fuels](#) Amber M. Hupp, College of the Holy Cross, Dorisanne Ragon, Jack O'Connor, Julian Goding

(1210-23P)

[Novel Large Volume SPME Elements for Improved Sensitivity in Aroma Measurements in Wine](#) Thomas X. Robinson, Entech Instruments, Inc., Daniel Cardin

(1210-24P)

[Determination of Hydrolysis Products of Nerve Gases and Mustard-Type Blister Agents in Aqueous Samples by Selectable One-Dimensional or Two-Dimensional Gas Chromatography-Mass Spectrometry](#) Yasuo Seto, National Research Institute of Police Science (Japan), Hirooka Kanda, Isaac Ohsawa, Kikuo Sasamoto, Masumi Tachikawa, Mieko Kanamori-Kataoka, Nobuo Ochiai, Takeshi Ohmori, Tomohide Kondo

(1210-25P)

[Analysis of Permanent Gases and Light Hydrocarbons by Multi-Dimensional Gas Chromatography Coupled with a Quadrupole Mass Spectrometer](#) Clifford M. Taylor, Shimadzu Scientific Instruments, Laura Chambers, Nicole Lock, Richard Whitney, Zhuangzhi "Max" Wang

(1210-26P)

[Analysis of the Essential Oil from the Aerial Parts of Hilleria Latifolia, A Phytomedicine for Breast Cancer, By GC-MS](#) Modupe Ogunlesi, University of Lagos, Edith Ofor, Funmi Odukoya, Wesley Okiei

(1210-27P)

[Determination of the Constituents of the Essential Oil From The Calyx of Bombax Buonopozense by GC-MS](#) Modupe Ogunlesi, University of Lagos, Funmi Odukoya, Wesley Okiei

(1210-28P)

[Identification of the Constituents in the Essential Oil in the Stem Bark of Annona Senegalensis, A Potential Medicinal Plant for the Management of Cancer by GC-MS](#) Modupe Ogunlesi, University of Lagos, Dominic Nwasike, Edith Ofor, Wesley Okiei

(1210-29P)

[Analysis of the Essential Oil from the Leaves of Deinbollia Pinnata by Combined Gas Chromatography/Mass Spectrometry](#) Edith Ofor, University of Lagos, Modupe Ogunlesi, Wesley Okiei

(1210-30P)

[GC-MS Analysis of the Constituents in the Essential Oil From the Aerial Parts of *Pyrenacantha Staudii*. A Phytomedicine Employed in the Management of Cancer](#) Wesley Okiei, University of Lagos, Dominic Nwasike, Edith Ofor, Modupe Ogunlesi

(1210-31P)

[Coupling of Thermogravimetry to a New Time of Flight Mass-Spectrometer with a Photoionization Source](#) Andreas Walte, Airsense Analytics, Bert Ungethuem, Matthias Bente von Frowein, Mohamad Saraji-Bozorgzad, Ralf Zimmermann, Sven Ehlert, Wolf Muenchmeyer

(1210-32P)

[Statistical Analysis of GC×GC-TOFMS Metabolomics Data to Investigate Traumatic Brain Injury](#) Elizabeth Humston-Fulmer, LECO Corporation, Joe Binkley, John Heim

POSTER SESSIONS

Session 1220

Liquid Chromatography: Method Development

Tuesday AM, Room: Exposition Floor, Aisles 1600-2100

(1220-1P)

[Systematic Screening of pH and Ionic Strength as Method Development Tools for Reversed-Phase Separations](#) Aparna Chavali, Waters Corporation, Patricia McConville, Thomas Wheat

(1220-2P)

[Development and Validation of an HPLC Assay Method for Succinic Acid](#) Claire Chisolm, United States Pharmacopeia, Samir Wahab, Shane Tan, Susan Moini, Terry Sumpter

(1220-3P)

[Development and Validation of HPTLC Method For Simultaneous Estimation of Sitagliptin Phosphate and Metformin Hydrochloride in Fixed Tablet Dosage Form](#) Seema Dhole, JL Chaturvedi College of Pharmacy, Nikhil Amnerkar, Pramod Khedekar

(1220-4P)

[HPLC Method Development and Validation for Methyl Salicylate Assay](#) Susan Moini, United States

Pharmacopeia

(1220-5P)

[Development of Superficially Porous Silica with Novel Poly-Functional C18 Bonding Technique for Reversed-Phase HPLC](#) Norikazu Nagae, ChromaNik Technologies Inc., Scott Silver, Tomoyasu Tsukamoto

(1220-6P)

[Development of a Validated Stability- Indicating HPLC Method for Clomipramine Hydrochloride](#) Jinesh B. Nagavi, Rakmhsu, Sunil Dhaneshwar

(1220-7P)

[Dispersive Liquid Liquid Microextraction/High Pressure Liquid Chromatography Charged Aerosol Detector \(DLLME/HPLC-CAD\) Method Development the Determination of Selected Pharmaceutical Active Compounds in Waste Water](#) Mathew M. Nindi, University of South Africa, Samuel Tshabalala, Simiso Dube

(1220-8P)

[A Global Method for the Quantitation and Characterization of Lipids by High Performance Liquid Chromatography and Corona Charged Aerosol Detection](#) Marc Plante, Thermo Fisher Scientific, Bruce Bailey, David Thomas, Ian Acworth, Qi Zhang

(1220-9P)

[Chromatography Workstream: Advancement in Process Chemistry in Support of Early Phase Active Pharmaceutical Ingredient Manufacture](#) KeAndra Robinson, Pfizer Global Research & Development, Angel Diaz, David Pattavina, Duc Vuong

(1220-10P)

[HPLC Method Development for Degradation Products and Impurities for Multi-Active Solid Dosage Drug Products Using Chaotropic Anions](#) Hugh Ta, McNeil Consumer Healthcare (Johnson & Johnson), Gail Reed, Jignesh Darji, Lindsay Keintz, Mark Williams

(1220-11P)

[Determination of Sulfonated p-Toluidine, 1,4-Dihydroxyanthraquinone, Subsidiary Colors, and Other Impurities in D&C Green No. 5 Using Reversed-Phase Ultra-Performance Liquid Chromatography](#) Huei Hsuan W. Yang, Food and Drug Administration

Tuesday PM, March 19, 2013

PITTCON 2013

AWARDS

Session 1230

Pittsburgh Spectroscopy Award - arranged by Singh Manocha, The Pittsburgh Conference

Tuesday PM, Room: 114

Singh Manocha, The Pittsburgh Conference, Presiding

2:10 PM

(1230-1)

[Vibrational Optical Activity: A Mature New Field of Vibrational Spectroscopy](#) Laurence A. Nafie, Syracuse University

2:45 PM

(1230-2)

[UV Raman Studies of Protein and Peptide Structure and Folding Studies](#) Sanford A. Asher, University of Pittsburgh

3:20 PM

(1230-3)

[Ultrafast Vibrational Energy Relaxation and Fluctuation Dynamics in Water, Salt Solutions and Model Lipid Systems](#) Lawrence D. Ziegler, Boston University

3:55 PM

(1230-4)

[Structure and Morphology in Triaxial Electrospun Fibers](#) Bruce Chase, University of Delaware, John Rabolt, Wenwen Liu

4:30 PM

(1230-5)

[Automatic Baseline Subtraction of Bipolar Spectra Using Minima Identification and Discrimination via Adaptive Least-Squares Thresholding](#) Peter R. Griffiths, University of Idaho, Andrew Weakley, D Aston

AWARDS

Session 1240

RSC - Robert Boyle Prize for Analytical Science - arranged by May Copsey, Royal Society of Chemistry

Tuesday PM, Room: 126B

May Copsey, University of Notre Dame, Presiding

2:10 PM

(1240-1)

[Capillary Electrophoresis for High Throughput Proteomics](#) Norman Dovichi, University of Notre Dame, Guijie Zhu, Liangliang Sun, Richard Keithley

2:45 PM

(1240-2)

[Ultrasensitive DNA-Protein Binding Assays](#) X Chris Le, University of Alberta, Brittany Dever, Chuan Wang, Feng Li, Hongquan Zhang, Xing-Fang Li

3:20 PM

(1240-3)

[Isoelectric Focusing Directly Interfaced with Mass Spectrometry](#) David D. Chen, University of British Columbia, Alexis Lee, Shuai Zhao

3:55 PM

(1240-4)

[Defining Organelle Surface Compositions Through Isoelectric Focusing of Individual Organelles](#) Edgar Arriaga, University of Minnesota, Ayoung Noh, Benjamin Fossen, Gregory Golken

4:30 PM

(1240-5)

[Surface Molecular Fluctuations at Single Atom Nanowires Prepared by Self-Limiting Electrochemical Processes](#) Paul W. Bohn, University of Notre Dame, Tai-Wei Hwang

SYMPOSIA

Session 1250

Advanced Mass Spectrometry for Food Safety and Cosmetics - arranged by Perry G. Wang, US FDA

Tuesday PM, Room: 201A

Perry G. Wang, US FDA, Presiding

2:05 PM

(1250-1)

[High Throughput Analysis for Cosmetic Ingredients by Hyphenated Instrumentation](#) Perry G. Wang, US FDA, Alex Krynitsky, Wanlong Zhou

2:40 PM

(1250-2)

[Strategies for Building Broad Multi-Residue Screens by LC/GC-Mass Spectrometry](#) Kelly Dorweiler, Medallion Labs/General Mills Inc., Laura Marshak, Vishwas Ghatge

3:15 PM

(1250-3)

[Screening and Analytical Technology of Exogenous Additives in Food Stuffs](#) Xiaogang Chu, Chinese Academy of Inspection and Quarantine, Feng Feng, Ling Yun, Sun Li, Yong Wei, Zhao Yansheng

3:50 PM

(1250-4)

[Using Mass Spectrometry and Bioinformatics to Assess the Safety of Products with Hydrolyzed Gluten](#) Terry Koerner, Health Canada

4:25 PM

(1250-5)

[Mass Spectrometry Based Metabolomics for Analysis of Micronutrient Interactions](#) Xiang Zhang, University of Louisville

SYMPOSIA

Session 1260

Best Practice of Ultra-High-Pressure LC (UHPLC) in Pharmaceutical Analysis - arranged by Michael W. Dong, Genentech

Tuesday PM, Room: 201B

Michael W. Dong, Genentech, Presiding

2:05 PM

(1260-1)

[UHPLC in Pharmaceutical Analysis: Perspectives, Practices and Potential Issues](#) Michael W. Dong, Genentech

2:40 PM

(1260-2)

[Theoretical Promise of Ultra-High Pressure Liquid Chromatography](#) Naijun Wu, Celgene Corporation, Alwyn Forbes, Songling Yu, Xiaolu Liao

3:15 PM

(1260-3)

[High-Speed and High Resolution Separation in Pharmaceutical Analysis](#) Davy Guillarme, University of Geneva, Alexandre Grand Guillaume Perrenoud, Jean-Luc Veuthey, Szabolcs Fekete

3:50 PM

(1260-4)

[Innovations of UHPLC Systems: New Advances and Performance Trade-Offs](#) Michael Frank, Agilent Technologies

4:25 PM

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(1260-5)

[Future Trends in UHPLC](#) James W. Jorgenson, University of North Carolina at Chapel Hill

SYMPOSIA

Session 1270

Frequency Comb Based Spectroscopy - arranged by Martin E. Fermann, IMRA America Inc.

Tuesday PM, Room: 123

Martin E. Fermann, IMRA America Inc., Presiding

2:05 PM

(1270-1)

[Cavity-Enhanced Direct Frequency Comb Spectroscopy - Trace Detection and Beyond](#) Adam J. Fleisher, University of Colorado, JILA/NIST, Jun Ye

2:40 PM

(1270-2)

[IR Frequency Comb Based Molecular Spectroscopy](#) Pablo Cancio Pastor, Instituto Nazionale di Ottica (INO-CNR) and LENS

3:15 PM

(1270-3)

[Towards Optical Frequency Comb Based High Resolution Mid-Infrared Spectroscopy](#) Miao Zhu, Agilent Technologies

3:50 PM

(1270-4)

[Precision Molecular Spectroscopy with Comb Referenced OCLs](#) Andrew A. Mills, IMRA America, Inc.

4:25 PM

(1270-5)

[Dual Comb Range-Resolved Spectroscopy: Towards Atmospheric Sensing](#) Jerome Genest, Université Laval, Jean-Daniel Deschenes, Julien Roy, Simon Levasseur, Simon Potvin, Simon Roy, Sylvain Boudreau

SYMPOSIA

Session 1280

JAIMA - The State-of-the-Art Technologies from Japan: Analytical Instruments with / for Nano- Physics Technology II - arranged by Koichiro Matsuda, Japan Analytical Instrument Manufacturers' Association (JAIMA)

Tuesday PM, Room: 122B

PITTCON 2013

Koichiro Matsuda, Hitachi High Technologies, Presiding

2:05 PM

(1280-1)

[Latest SEM Ion/Electron Beam Technologies for Nano-Physics Applications](#) Jamil J. Clarke, Hitachi High Technologies

2:40 PM

(1280-2)

[Aberration Corrected Electron Microscopy: Structure Determination and Chemistry on the Atomic Scale](#) Thomas C. Isabell, JEOL USA, Inc.

3:15 PM

(1280-3)

[Spectroscopic Characterization of Nanoparticles for Potential Drug Discovery](#) Chester M. Talbott, Shimadzu Scientific Instruments

3:50 PM

(1280-4)

[Contributions of Raman Microscopy to the Characterization of Physical Processes in Nanomaterials](#) Fran Adar, HORIBA Scientific

4:25 PM

(1280-5)

[A New X-Ray Scattering Method for Determining Shape of Nanoscale Devices](#) Kazuhiko Omote, Rigaku Corporation

SYMPOSIA

Session 1290

Microfluidics for Detection of Circulating Tumor Cells - arranged by Hugh Fan, University of Florida

Tuesday PM, Room: 124

Hugh Fan, University of Florida, Presiding

2:05 PM

(1290-1)

[Novel Methods of Circulating Tumor Cell Capture and Analysis](#) Ram Datar, University of Miami, Richard Cote

2:40 PM

(1290-2)

[Integrating Aptamers with Microfluidics for Isolating Cancer Cells from Whole Blood](#) Hugh Fan, University of

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Florida

3:15 PM

(1290-3)

[Functional Characterization of Circulating Tumor Cells Captured With GEDI Microdevices](#) Brian J. Kirby, Cornell University

3:50 PM

(1290-4)

[Microfluidics Based Detection and Separation of Circulating Tumor Cells and Single MicroRNA Analysis of CTC by Nanopore-Nanopillar Devices](#) Yoshinobu Baba, Nagoya University

4:25 PM

(1290-5)

[Enrichment of Viable Circulating Tumor Cells in Bio-Functional Microchannels](#) Yitshak Zohar, University of Arizona

SYMPOSIA

Session 1300

Near-Infrared: What It Is, Should, and Will Do in Pharmaceutical Analyses - arranged by Emil W. Ciurczak, Doramaxx Consulting

Tuesday PM, Room: 125

Emil W. Ciurczak, Doramaxx Consulting, Presiding

2:05 PM

(1300-1)

[Small Spectral Engines Provide Big Application Opportunities](#) John P. Coates, Coates Consulting LLC

2:40 PM

(1300-2)

[NIR: Shining Light On Process Understanding and Control](#) Martin Warman, Vertex Pharmaceuticals, Inc

3:15 PM

(1300-3)

[The General Formula for All Multivariate Calibration Methods and Its Practical Uses](#) Ralf Marbach, VTT

3:50 PM

(1300-4)

[NIR and Its Impact on Achieving Vision 20/20](#) Gary E. Ritchie, InfraTrac

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4:25 PM

(1300-5)

[Implementation of Process FTIR Technology in Manufacturing Plants for Enzymatic Reaction Monitoring](#) Zhihao Lin, Merck & Co., Inc.

SYMPOSIA

Session 1310

New Analytical Techniques for Monitoring ATP and Adenosine - arranged by B Jill Venton, University of Virginia

Tuesday PM, Room: 122A

B Jill Venton, University of Virginia, Presiding

2:05 PM

(1310-1)

[Sensors for Monitoring ATP Release from Glial Cells](#) Ryan J. White, University of Maryland Baltimore County, Mary McKenna, Melissa Dávila Morris, Michele Diamond, Rotimi Olojo

2:40 PM

(1310-2)

[Detection of Adenosine Triphosphate with A Surface-Enhanced Raman Scattering Sensor](#) Nianqiang Wu, West Virginia University, Ming Li

3:15 PM

(1310-3)

[Measuring ATP in Biological Matrices: Lessons Learned and Free Advice from a Lab with 10 Years of Experience](#) Dana Spence, Michigan State University

3:50 PM

(1310-4)

[New Insights from Real Time ATP and Adenosine Measurements in Physiological Systems](#) Nicholas Dale, University of Warwick

4:25 PM

(1310-5)

[Fast-Scan Cyclic Voltammetry for Understanding Spontaneous, Transient Adenosine Release](#) B Jill Venton, University of Virginia, Ashley Ross, Michael Ngyuen

SYMPOSIA

Session 1320

New and Emerging Analytical Technologies in Forensic Science - arranged by Ruth Smith, Michigan State

PITTCON 2013

University

Tuesday PM, Room: 118C

Ruth Smith, Michigan State University, Presiding

2:05 PM

(1320-1)

[Progress in Laboratory and Field-Based Instrument Strategies That Integrate Canine Capabilities for Forensic Applications](#) Brian Eckenrode, Federal Bureau of Investigation

2:40 PM

(1320-2)

[Novel 1064nm Dispersive Raman Spectrometer and Raman Microscope for Forensic Analysis](#) Lin L. Chandler, BaySpec, Inc., Eric Bergles, William Yang

3:15 PM

(1320-3)

[Five Years of DART-TOF Forensic Applications](#) Robert R. Steiner, Virginia Dept of Forensic Science

3:50 PM

(1320-4)

[High Throughput Analytical Separations of Drugs of Abuse and Their Metabolites by Differential Mobility Spectrometry - Mass Spectrometry \(DMS-MS\)](#) Adam B. Hall, Boston University School of Medicine, Erkinjon Nazarov, Paul Vouros, Stephen Coy

4:25 PM

(1320-5)

[Applications of Multivariate Statistics in Forensic Science](#) John W. McIlroy, Michigan State University, Ruth Smith, Victoria McGuffin

SYMPOSIA

Session 1330

Quantitative Analysis of Biomarkers in Drug Discovery and Development: Advances and Challenges - arranged by Guodong Chen, Bristol-Myers Squibb

Tuesday PM, Room: 121C

Guodong Chen, Bristol-Myers Squibb, Presiding

2:05 PM

(1330-1)

[Biomarkers 101: The Science Behind All The Glamour](#) Steven P. Piccoli, Bristol-Myers Squibb

PITTCON 2013

2:40 PM

(1330-2)

[Multiplexed Clinical Biomarker Analysis](#) Paul Rhyne, Tandem Labs

3:15 PM

(1330-3)

[Quantification of Protein Biomarkers and Targets by Immunoaffinity LC-MS/MS](#) Erick Kindt, Pfizer, Hendrik Neubert

3:50 PM

(1330-4)

[A Selective SPE/LC/MS/MS Assay for Simultaneous Quantitation of Multiple Amyloid Beta Peptides in Cerebrospinal Fluid](#) Erin E. Chambers, Waters Corporation, Kenneth Fountain, Mary Lame

4:25 PM

(1330-5)

[Mass Spectrometry and Molecular Biomarkers in Cardio-Metabolic Disease](#) Jose Castro-Perez, Merck & Co., Inc., David McLaren, Douglas Johns, Karen Gagen, Michele Cleary, Nana Kofi Karikari, Nathan Hatcher, Sheng-Ping Wang, Stephen Previs, Thomas Roddy, Vinit Shad, Vivienne Mendoza

SYMPOSIA

Session 1340

Sensors and Assays with Uncommon Capabilities - arranged by Stephen G. Weber, University of Pittsburgh

Tuesday PM, Room: 121B

Stephen G. Weber, University of Pittsburgh, Presiding

2:05 PM

(1340-1)

[Epidermal Electronics and Sensors](#) John Rogers, University of Illinois

2:40 PM

(1340-2)

[Inexpensive, Sensitive, Low Power, Distributed Gas Sensors](#) Timothy M. Swager, Massachusetts Institute of Technology

3:15 PM

(1340-3)

[Simultaneous Separation, Processing, and Detection of Biomolecules in Silicon-Based Optical Nanostructures](#) Michael J. Sailor, University of California - San Diego

PITTCON 2013

3:50 PM

(1340-4)

[Development, Validation and Scale-Up of Bioactive Paper Sensors for Pathogens and Toxins](#) John D. Brennan, McMaster University

4:25 PM

(1340-5)

[Microflow Cytometers Adapted for Chip-Out-of-the-Lab Operation](#) Frances S. Ligler, Naval Research Laboratory, Annette Ong, Carl Villarruel, Howell Peter, Jasenka Verbarg, Jeffrey Erickson, Joel Golden, Lisa Shriver-Lake, William Plath

ORGANIZED CONTRIBUTED SESSIONS

Session 1350

A Decade of QuEChERS, II - arranged by Steven Lehotay, USDA Agricultural Research Service

Tuesday PM, Room: 202A

Steven Lehotay, USDA Agricultural Research Service, Presiding

2:00 PM

(1350-1)

[Improvements in Laboratory Efficiencies Gained by Implementation of QuEChERS](#) Katerina Mastovska, Covance Laboratories, Inc.

2:20 PM

(1350-2)

[My Experiences with QuEChERS at the EPA Analytical Chemistry Laboratory](#) Lynda Podhorniak, Environmental Protection Agency

2:40 PM

(1350-3)

[Novel Carbon Materials for QuEChERS and Solid Phase Extraction](#) Jonathan Thompson, United Science, Conor Smith, Douglas Fryer, Dwight Stoll

3:00 PM

(1350-4)

[The Impact of QuEChERS in Florida and Other Official State Regulatory Laboratories](#) Amy N. Brown, Florida Department of Agriculture

3:35 PM

(1350-5)

[Utility of QuEChERS at the FDA Laboratories](#) Jon W. Wong, US Food and Drug Administration

3:55 PM

(1350-6)

[Some "Catching On" in QuEChERS Sample Preparation Technologies](#) Guotao Lu, Bonna-Agela Technologies, Inc., Jianbo Liu, Qunjie Wang, Wan Wang

ORGANIZED CONTRIBUTED SESSIONS

Session 1360

SEAC - Highlighting Young Investigators - arranged by Stephen Maldonado, University of Michigan

Tuesday PM, Room: 118A

Stephen Maldonado, University of Kansas, Presiding

2:00 PM

(1360-1)

[Measurement of Dopamine Release and Uptake in Rats Treated with Chemotherapeutic Agents](#) Michael A. Johnson, University of Kansas, Gregory Osterhaus, Jenny Fulks, Kayla Raider, Sam Kaplan, Susi Eckelman

2:20 PM

(1360-2)

[The Voltammetric Detection and Characterization of Met-Enkephalin in Brain Tissue](#) Leslie A. Sombers, North Carolina State University, Andreas Schmidt, Gregory McCarty, James Roberts

2:40 PM

(1360-3)

[Folding-based Electrochemical Biosensors](#) Rebecca Y. Lai, University of Nebraska

3:00 PM

(1360-4)

[Interfacing Biosensors with Biology](#) Ryan J. White, University of Maryland Baltimore County, Kuan Chun Huang, Lauren Shoukroun, Melissa Dávila Morris, Rotimi Olojo, Samuillah Wagan, Zoe Spafford

3:35 PM

(1360-5)

[Using Raman Microprobe Analysis to Study Semiconductor Electrodeposition and Surface Chemistry in Real Time](#) Stephen Maldonado, University of Michigan

3:55 PM

(1360-6)

[Electrochemical Characterization of Sn as an Alternative Anode Material in Li-Ion Batteries](#) Anne Co, The Ohio State University

PITTCON 2013

4:15 PM

(1360-7)

[Surface-Enhanced Light Absorption and Photoelectrochemical Performance of \$\alpha\$ -Fe₂O₃ Thin-Film Electrodes and Electromagnetic Enhancement Mechanism](#) Shanlin Pan, The University of Alabama

4:35 PM

(1360-8)

[Wiring Soluble Nanoparticles for Controlled Electron Transfer Kinetics](#) David E. Clifffel, Vanderbilt University

ORAL SESSIONS

Session 1370

Advances in Energy Research: Biofuels Analysis and Biomaterials (Half Session) - arranged by J David Hwang, ICM International

Tuesday PM, Room: 115C

J David Hwang, ICM International, Presiding

2:00 PM

(1370-1)

[Methods for Determining Sugars and Hydroxymethyl Furfural in Biomass](#) Lipika Basumallick, Thermo Fisher Scientific, Deanna Hurum, Jeffrey Rohrer

2:20 PM

(1370-2)

[Characterization of 1-ethyl-3-methylimidazolium alkylbenzenesulfonate \(EMIM ABS\) Ionic Liquids](#) Hiranmayee Kandala, South Dakota State University, Douglas Raynie

2:40 PM

(1370-3)

[Entrapment of Photoactive Proteins in Conductive Thin Film Polymer Networks](#) Evan A. Gizzie, Vanderbilt University

3:00 PM

(1370-4)

[Design of the Enzymatic Bioanode Based on the Graphite/Graphene](#) Selma Mutlu, Hacettepe University, Alper Hanci, Ufuk Sacak

ORAL SESSIONS

Session 1380

Analysis Related to Shale Gas Drilling (Half Session) - arranged by J David Hwang, ICM International

PITTCON 2013

Tuesday PM, Room: 115C

J David Hwang, ICM International, Presiding

3:35 PM

(1380-1)

[Environmental Forensic Investigations of Hydraulic Fracturing Fluids Using GCxGC-TOFMS](#) Frank Dorman, The Pennsylvania State University, Jessica Westland, Nathaniel Girer

3:55 PM

(1380-2)

[Pre-Drilling Water Testing in the Marcellus and Utica Shale Regions in Southeastern Ohio](#) Christina S. Gilpin, Select-O-Sep, LLC, Roger Gilpin

4:15 PM

(1380-3)

[Measurement of Barium in Drinking and Fresh Water by Ion Chromatography as an Alternative to Approved EPA Atomic Spectroscopy Approaches](#) Roger K. Gilpin, Wright State University, Christina Gilpin

4:35 PM

(1380-4)

[In Situ Laser Induced Breakdown Spectroscopic \(LIBS\) Analysis of Wellbore Cement Degradation and Interactions with Injected CO₂ and Brine](#) Dustin McIntyre, US DOE NETL, Barbara Kutchko, Brian Strazisar, Christian Goueguel, Jagdish Singh, Jinesh Jain

ORAL SESSIONS

Session 1390

Atomic Spectroscopy - arranged by Vassili Karanassios, University of Waterloo

Tuesday PM, Room: 116

Vassili Karanassios, University of Waterloo, Presiding

2:00 PM

(1390-1)

[Method for Monitoring Total Chromium and Nickel in Urine Using an Inductively Coupled Plasma-Universal Cell Technology-Mass Spectrometer \(ICP-UCT-MS\) in Kinetic Energy Discrimination \(KED\) Mode](#) C Derrick Quarles, Centers for Disease Control and Prevention, Deanna Jones, Jeffrey Jarrett, Kathleen Caldwell, Robert Jones

2:20 PM

(1390-2)

[Optimized ICP-OES Analysis of DMSO Matrices – A Simple, Efficient Approach for USP Compliant Analyses of Heavy Metals](#) Matthew Cassap, Thermo Fisher Scientific, Fergus Keenan, Kristian Hoffman, Marine Beauvir

PITTCON 2013

2:40 PM

(1390-3)

[Arsenic Speciation in Rice Using Ion Chromatography: A Comparison Study between Hydride Generation Atomic Fluorescence Spectrometry \(HG-AFS\) and Inductively Couple Plasma Mass Spectrometry \(ICP-MS\)](#) Bin Chen, P S Analytical, Jen-How Huang, Warren Corns

3:00 PM

(1390-4)

[Sample Introduction as the Means of Improving the Detection Limits of ICP-AES](#) Vassili Karanassios, University of Waterloo, Bryant Lai

3:35 PM

(1390-5)

[Optimization of Operating Parameters of a Liquid Sampling-Atmospheric Pressure Glow Discharge \(LS-APGD\) Ionization Source for Mass Spectrometry](#) Lynn X. Zhang, Clemson University, R Kenneth Marcus

3:55 PM

(1390-6)

[Characterization of Dried Blood Spots by Wavelength Dispersive X-Ray Fluorescence \(WDXRF\) and High Resolution Inductively Coupled Plasma – Mass Spectrometry \(SF-ICP-MS\)](#) Frank X. Weber, RTI International, Al Martin, Andrea McWilliams, Keith Levine

4:15 PM

(1390-7)

[Taking Part of the Lab to the Sample and Using an ICP-AES System in the Lab](#) Vassili Karanassios, University of Waterloo

4:35 PM

(1390-8)

[Internal Quality Control \(QC\) Scheme Applied for the Determination of Uranium in Drinking Water Performed by ICP-MS](#) Sawomir Garbos, National Institute of Public Health - National Institute of Hygiene, Dorota Swiecicka

ORAL SESSIONS

Session 1400

Bioanalytical: Mass Spectrometry - arranged by Tyler Davis, West Virginia University

Tuesday PM, Room: 119B

Tyler Davis, West Virginia University, Presiding

2:00 PM

(1400-1)

[Determination of Bisphenol A and Other Alkylphenols in Freshwater Shrimp *Macrobrachium Rosenbergii* and American Lobster *Homarus Americanus* Tissue Samples](#) Yuegang Zuo, University of Massachusetts, Dartmouth, Zhuo Zhu

2:20 PM

(1400-2)

[Enzymatic Separation and Quantification of Sarcosine From Alanine Using Liquid Chromatography- Tandem Mass Spectrometry](#) Casey Burton, Missouri University of Science and Technology, Sanjeewa Gamagedara, Yinfa Ma

2:40 PM

(1400-3)

[Optimization of Affinity Protein Capture Using a MALDI MS Platform](#) Christina M. Albanese, Rensselaer Polytechnic Institute, Linda McGown, Molly Kogan, Tian Zhang

3:35 PM

(1400-5)

[Laser Desorption Postionization Mass Spectrometry Imaging of Mixed Prokaryote-Eukaryote Biofilms](#) Chhavi Bhardwaj, University of Illinois at Chicago, Luke Hanley, Musa Ahmed, Ross Carlson, Suet Liu, Theresa Hofstetter

3:55 PM

(1400-6)

[Interrogating the Effect of a miRNA Cluster on the Colon Cancer Transcriptome and Proteome](#) Amanda B. Hummon, University of Notre Dame, Kerry Bauer

4:15 PM

(1400-7)

[Analysis of Gangliosides in Mouse Brain Tissue Using Matrix Assisted Ionization Vacuum \(MAIV\) Ion Mobility Spectrometry \(IMS\) Mass Spectrometry \(MS\)](#) Steven Lingenfelter, Wayne State University, James Wager-Miller, Ken Mackie, Sarah Trimpin

4:35 PM

(1400-8)

[CE-MS and MS Imaging of the Fly Brain for Drug Addiction Studies](#) Nhu Phan, University of Gothenburg, Andrew Ewing, John Fletcher, Jorg Hanrieder, Melissa Passarelli, Peter Sjövall

ORAL SESSIONS

Session 1410

Electroanalytical Chemistry Applied To Neurochemical Problems - arranged by Dean Tzeng, The Pittsburgh Conference

Tuesday PM, Room: 120A

Dean Tzeng, The Pittsburgh Conference, Presiding

2:00 PM

(1410-1)

[Individually Addressable Thin Film Ultra-Microelectrodes Arrays for the Study of Neurotransmitter Exocytosis](#) Jun Wang, Gothenburg University, Andrew Ewing, Maria Svensson, Raphael Trouillon, Yuqing Lin

2:20 PM

(1410-2)

[Microfabricated Microelectrode Sensor for Measuring Slowly Varying Dopamine Concentrations](#) Adam Dengler, North Carolina State University, Gregory McCarty, R Mark Wightman, Susan Carroll

2:40 PM

(1410-3)

[Exploiting Carbon Nanotubes for Real-Time Detection of Neurotransmitters](#) Christopher B. Jacobs, University of Virginia, B Jill Venton

3:00 PM

(1410-4)

[In Vivo Detection of Non-Electroactive Species with Fast-Scan Cyclic Voltammetry on Carbon-Fiber Microelectrodes](#) Anna M. Belle, University of North Carolina at Chapel Hill, Preethi Gowrishankar, R Mark Wightman

3:35 PM

(1410-5)

[Quantitative Comparison of Drug Administration by Iontophoresis and Perfusion In Vitro](#) Doug C. Kirkpatrick, University of North Carolina at Chapel Hill, Anna Belle, R Mark Wightman, Zoe McElligott

3:55 PM

(1410-6)

[Scanning Electrochemical Microscopy-Atomic Force Microscopy Probes from Pyrolyzed Parylene C to Monitor Diffusion of Dopamine through Single Pores](#) Kirstin Morton, Indiana University, Anna Weber, Lane Baker, Maksymilian Derylo

4:15 PM

(1410-7)

[Design and Characterization of Microfabricated Electrodes for Neurochemical Measurements](#) Lindsay Walton, University of North Carolina at Chapel Hill, Adam Dengler, Gregory McCarty, Martin Edwards, R Mark Wightman

4:35 PM

(1410-8)

[Detecting Potassium Transients in the Injured Brain Using Digital Microdialysis](#) Chi Leng Leong, Imperial College London, Andrew de Mello, Anthony Strong, Delphine Feuerstein, Martyn Boutelle, Michelle Rogers, Robert Learney, Rudolf Graf, Toby Jeffcote, Xize Niu

ORAL SESSIONS

Session 1420

Electrochemistry: Bioanalytical and Neurochemical Applications - arranged by Keith J. Stevenson, University of Texas at Austin

Tuesday PM, Room: 120B

Keith J. Stevenson, University of Texas at Austin, Presiding

2:00 PM

(1420-1)

[Delayed Timing Fast Scan Cyclic Voltammetry for the Measurement of Basal Concentrations of Dopamine](#) Christopher W. Atcherley, University of Arizona, Michael Heien, Parastoo Hashemi

2:20 PM

(1420-2)

[A Label-Free Approach for Characterizing Lipid Domains in Black Lipid Membranes](#) Maria F. Mendoza, University of Arizona, Benjamin Heitz, Craig Aspinwall, Mark Agasid, Scott Saavedra

2:40 PM

(1420-3)

[Analysis of Tissue Ischemia During Free-Flap Surgery Using a Biosensor-Based On-Line Microdialysis System](#) Michelle L. Rogers, Imperial College London, Chi Leng Leong, Martyn Boutelle, Peter Brennan, Sally Gowers, Thomas Aldridge, Tim Mellor

3:00 PM

(1420-4)

[Vertically Aligned Carbon Nanotubes as an Electrode Material for Biosensors](#) Jenny M. Bergman, University of Gothenburg, Andrew Ewing, Gulnara Safina, Johan Dunevall, Jun Wang, Wolfgang Harreither

3:35 PM

(1420-5)

[Electrochemical Characterization of Flavin Adenine Dinucleotide and Glucose Oxidase on Carbon Nanotube and Nitrogen-Doped Carbon Nanotube Electrodes](#) Keith J. Stevenson, University of Texas at Austin, Jacob Goran

3:55 PM

(1420-6)

[Optimizing Optical Stimulation of Neurotransmitter Release in *Drosophila*](#) Ning Xiao, University of Virginia, B Jill Venton

PITTCON 2013

4:15 PM

(1420-7)

[Measuring Transmitter Release from Large Groups of Neuronal Cells in Cheap Polymer Chip Systems](#) Simon T. Larsen, Technical University of Denmark, Marco Matteucci, Rafael Taboryski

4:35 PM

(1420-8)

[Synthesis of Polyanilane Copolymers on Carbon Electrode for a Biosensor Application](#) Selma Mutlu, Hacettepe University, Hurkan Catalkaya, Ufuk Sacak

ORAL SESSIONS

Session 1430

GCMS: Applications - arranged by Eugene Barry, University of Massachusetts Lowell

Tuesday PM, Room: 120C

Eugene Barry, University of Massachusetts Lowell, Presiding

2:00 PM

(1430-1)

[Overcoming the Hurdles of Implementing Hydrogen Carrier Gas in Volatile Organic Analysis](#) Brian Hom, Agilent Technologies, Inc., Fred Feyerherm, Harry Prest

2:20 PM

(1430-2)

[Optimizing Laboratory Throughput and Reducing Costs for EPA Semi-Volatile Methods Using Innovative Injection and Mass Spectrometry Technologies](#) Lee Marotta, PerkinElmer

2:40 PM

(1430-3)

[Sample Identification by GC-MS and How to Improve It](#) Aviv Amirav, Tel Aviv University, Fialkov Alexander, Tal Alon

3:00 PM

(1430-4)

[Progress in Achieving Flow Path Inertness in Gas Phase Analyses](#) Kenneth G. Lynam, Agilent Technologies, Inc., Gary Lee

3:35 PM

(1430-5)

[Evolution of a Compact High Speed Time of Flight Mass Spectrometer for Enhanced GCMS Sensitivity](#) Daniela Cavagnino, DANI Instruments, Antonella Siviero

PITTCON 2013

3:55 PM

(1430-6)

[Use of Computer Aided Engineering Software to Develop Novel Metal Capillary Column Ferrule](#) Lindy Miller, Agilent Technologies, Ponna Pa

4:15 PM

(1430-7)

[Migration of USEPA Method 8270 from Helium Carrier Gas to Hydrogen Carrier Gas](#) Paul V. Macek, Shimadzu Scientific Instruments, Inc., Cindy Burkhardt

4:35 PM

(1430-8)

[MS Instrument Detection Limits: Replacing Random Signal-to-Noise Ratio with a Statistically Valid Metric](#) Terry Sheehan, Agilent Technologies, Elizabeth Almasi, Takeshi Serino

ORAL SESSIONS

Session 1440

GCMS: Fuel, Energy, Petrochemical, Polymers and Plastics - arranged by Anand R. Mudambi, US Environmental Protection Agency

Tuesday PM, Room: 121A

Anand R. Mudambi, US Environmental Protection Agency, Presiding

2:00 PM

(1440-1)

[Petroleum Biomarker Analysis Using Atmospheric Pressure GC/MS/MS](#) Douglas M. Stevens, Waters Corporation, Adam Ladak, Chang Hsu, Keith Hall, Peter Hancock, Steven Lai

2:20 PM

(1440-2)

[Semi-Quantitative Determination of Volatile Oligomers of Halogenated Compressor Oil in a Manufacturing Process Using SPME and a Personal Portable GC-MS](#) Tiffany C. Brande, Torion Technologies Inc, Charles Sadowski, Dan Vassilaros, Douglas Later, Jean Baldwin, Tai Truong

2:40 PM

(1440-3)

[Optimizing Precision and Accuracy: The Quantitative Analysis of Additives in Polymeric Materials](#) Robert Freeman, Frontier Laboratories, Aki Hosaka, Dave Randle, Ichi Watanabe

3:00 PM

(1440-4)

[Design Aspects of a Multi-Mode, Tandem Micro-Reactor GC/MS System for Catalyst Testing](#) Dave Randle, Frontier Labs USA, Chu Watanabe, Koichi Ito, Terry Ramus

3:35 PM

(1440-5)

[Analysis of Hydrocarbon Based Oil Derived from Hydrothermal Treatment of Algae Biomass by Comprehensive Two-Dimensional Gas Chromatography \(GCxGC\) with Flame Ionization and Mass Spectrometric Detection](#) Patrick G. Hatcher, Old Dominion University, Cory Fix, Joe Binkley, Michael Lewan, Wassim Obeid

3:55 PM

(1440-6)

[New Capabilities and Applications with a Tandem Micro-Reactor GC/MS System for Catalysis Research](#) Terry Ramus, Frontier Labs USA, Chu Watanabe, Dave Randle, Koichi Ito, R Meijboon

ORAL SESSIONS

Session 1450

High-Throughput Chemical Analysis (Half Session) - arranged by Garry J. Lynch, Bechtel Bettis Laboratory

Tuesday PM, Room: 117

Garry J. Lynch, Bechtel Bettis Laboratory, Presiding

2:00 PM

(1450-1)

[Towards A High Throughput Method for Rapidly Sizing Protein Drugs in Formulations](#) Nadine K. Njoya, Purdue University, Mary Wirth, Robert Birdsall

2:20 PM

(1450-2)

[Practical Fast GC: Speed Up Analysis A Factor 2 Using the Same Instrumentation with Minimal Changes in the Method](#) Jaap de Zeeuw, Restek Corporation, Gary Stidsen, Jim Whitford

2:40 PM

(1450-3)

[Appropriate Implementation and New Applications for the Quantification of 56 VOCs in Blood and Other Matrices by SPME GC/MS](#) Maureen M. Sampson, Centers for Disease Control and Prevention, Benjamin Blount, David Chambers, Fallon Moliere

3:00 PM

(1450-4)

[Development and Application of the Flowing Atmospheric Pressure Afterglow \(FAPA\) Source for Ambient Mass Spectrometry](#) Kevin P. Pfeuffer, Indiana University, Brian Laughlin, Gary Hieftje, Joe Kennedy, Steven Ray

ORAL SESSIONS

Session 1460

Metabolomics - arranged by Jeffrey S. Patrick, Leco

Tuesday PM, Room: 202B

Jeffrey S. Patrick, Leco, Presiding

2:00 PM

(1460-1)

[In Vivo Solid Phase Microextraction – First Step to Rapid Diagnostic Tool for Determination of Biomarkers in Surgery Unit](#) Barbara Bojko, University of Waterloo, Erasmus Cudjoe, Janusz Pawliszyn, Krzysztof Gorynski

2:40 PM

(1460-3)

[Metabolic MCC/IMS-Profiles of Human Breath: Pharmaco-Kinetic and Pharmaco-Dynamic Monitoring](#) Joerg Ingo Baumbach, KIST Europe, Heiko Buchinger, Rouven Hellbrueck, Sascha Kreuer, Sasidhar Maddula, Thomas Volk

3:00 PM

(1460-4)

[Metabolomic Fingerprinting with LC-MS Reveals Molecular Differences in Stem Cell Pluripotency](#) Jorg Hanrieder, Chalmers University of Technology, Andrew Ewing, Georg Kuhn, Melissa Passarelli, Nina Erkenstam

3:35 PM

(1460-5)

[Comparative Metabolomic Analysis in HepatoCarcinoma](#) Jeffrey Patrick, LECO Corporation, Joe Binkley, Kevin Siek, Li Zhang

3:55 PM

(1460-6)

[Clinical Measurements with an Optical Multisensor Array in Point-of-Care Settings](#) Punkaj Ahuja, Case Western Reserve University, Brian Hemphill, Jeffrey Ustin, Miklos Gratzl

4:15 PM

(1460-7)

[Metabolomics of Skeletal Muscle and Other Organs: Analytical Challenges and Real-World Applications](#) Charles R. Evans, University of Michigan, Charles Burant, Katherine Overmyer, Nathan Qi

ORAL SESSIONS

Session 1470

Portable Instruments (Half Session) - arranged by Garry J. Lynch, Bechtel Bettis Laboratory

Tuesday PM, Room: 117

Garry J. Lynch, Bechtel Bettis Laboratory, Presiding

3:35 PM

(1470-1)

[A Military Grade Hand-Held Raman Analyzer](#) Stuart Farquharson, Real-Time Analyzers, Carl Brouillette, Wayne Smith

3:55 PM

(1470-2)

[Fast Portable Purge and Trap Analysis](#) Allison L. Thompson, Dugway Proving Ground, David Blanchard, Eric Garff

4:15 PM

(1470-3)

[Detection of Hidden Persons and Illegal Substances by an Array of Quantum Cascade Lasers and Cantilever Enhanced Photoacoustic Spectroscopy](#) Juho Uotila, Gasera Ltd., Gregory Maisons, Ismo Kauppinen, Jussi Raittila, Sauli Sinisalo

4:35 PM

(1470-4)

[Portable Dual-Channel Gas Analyzer for Continuous Monitoring of Carbon Dioxide in Gas Streams](#) Sayed A. Marzouk, UAE University, Mohamed Al Azab, Mohamed Al-Marzouqi, Muna Bufaroosha

POSTER SESSIONS

Session 1480

Analysis of PAH's and Persistent Organics

Tuesday PM, Room: Exposition Floor, Aisles 1600-2100

(1480-1P)

[Novel Extraction and Analysis of 18 EPA PAHs from Mussel Tissue: Baseline Resolution of All PAHs in 6 Minutes with No Post Extraction Clean-up](#) Bruce Richter, Thermo Fisher Scientific, Brett Murphy, D McLaughlin, David Knowles, MW Martin, Richard Carlson, Tamara Marchincin, WF Nichols

(1480-2P)

[Overcoming Band Broadening of High Boiling Polynuclear Aromatic Hydrocarbons in GC-MS Waste Sample Analysis](#) Jessie Butler, Thermo Fisher Scientific, Alexander Semyonov, Massimo Santoro, Pat O'Brien

(1480-3P)

[Direct Determination of Polycyclic Aromatic Hydrocarbons in Water Samples Using BEA Zeolites and Laser-Excited Time-Resolved Spol'skii Spectroscopy](#) Walter B. Wilson, University of Central Florida, Andreia Costa, Andres Campiglia, Huiyong Wang, Jose Dias, Silvia Dias

(1480-4P)

[Poly-Aromatic Hydrocarbons Analysis by Time of Flight LC-MS](#) Sue Dantonio, Agilent

(1480-6P)

[Analysis for Trace Organic Contaminant: Organochlorine Pesticides and Polycyclic Aromatic Hydrocarbons Residues in Water Samples of Lagos Lagoon, Nigeria](#) Adeyemi D. Kehinde, University of Lagos, Anyakora Chimezie

(1480-7P)

[Ultra High Performance Separation of PAHs, Harnessing the Technological Advances of a Novel UHPLC System](#) Njies Pedjie, PerkinElmer, JL DiCesare, Wilhad Reuter

(1480-8P)

[Evaluation of Nano Stationary Phase GC Columns for Fast GC-ECD Analyses of PCB](#) Krishnat Naikwadi, J & K Scientific Inc., Allen Britten, Kelsey AuCoin, Thomas Ferrier

(1480-9P)

[Determination of Polychlorinated Dibenzo-p-dioxins and Furans \(PCDD/Fs\) in Environmental Samples and Incinerator Ash Using High Sensitivity GC-MS/MS](#) Massimo Santoro, Thermo Fisher Scientific, C Hunter, D Gardner, Inge De Dobbeleer, J Fardon, Silcock Paul

(1480-10P)

[Execution of 9 US EPA Methods Using a Single GC Column Pair](#) Kenneth G. Lynam, Agilent Technologies, Inc., Gary Lee

(1480-11P)

[Determination of Phthalate Migration from Children's Toys into Artificial Saliva Using QuEChERS Extraction and GC/MS Analysis](#) Xiaoyan Wang, United Chemical Technologies, Inc., Brian Kinsella, Michael Telepchak, Thomas August

(1480-12P)

[Aroclors in Blood Serum by Triple Quadrupole GC/MS/MS](#) Laura Chambers, Shimadzu Scientific Instruments, Clifford Taylor, Nicole Lock, Richard Whitney, Zhuangzhi "Max" Wang

(1480-13P)

[Determination of Endocrine Disrupting Chemicals in Ground Water in Monroe County, New York](#) Kimberly D. Chichester, St. John Fisher College, Amber Coss, Irene Kimaru

(1480-14P)

[Approaching the Ultimate Limits of Detection for Endocrine Disrupters in Wastewater Effluent Using GC-NCI-MS/MS](#) Melissa Churley, Agilent Technologies, Anthony Macherone, Marc Mills, Ruth Marfil-Vega

(1480-15P)

[Determination of Trace Amount of Bisphenol A in Paper Currencies and Receipts by Solid Phase Extraction and High Performance Liquid Chromatography](#) Yuegang Zuo, University of Massachusetts, Dartmouth, Tian Shi

(1480-16P)

[Advances in Automating Solid Phase Extraction for UCMR3: Hormones and 1, 4-Dioxane](#) Michael Ebitson, Horizon Technology Inc., David Gallagher

(1480-17P)

[Determination of Selected Persistent Organic Polluting Pesticides in Water Using Automated SPE and GC/ECD](#) Michael Ebitson, Horizon Technology Inc., David Gallagher

(1480-18P)

[Comparison of Enantiomeric Separation of Chiral Agrocidides on New Cyclofructan Derivatized Stationary Phases and on Commercial Cyclobond Series HPLC Columns](#) Edra Dodbiba, University of Texas at Arlington, Daniel Armstrong, Tharanga Payagala

POSTER SESSIONS

Session 1490

Art and Archaeology

Tuesday PM, Room: 204ABC

(1490-1P)

[Classification of an Undetermined Archaeological Feature in a Western Pennsylvania Cemetery Via Spectrophotometric Determination of Arsenic and Phosphorus in the Surrounding Soil](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Ryan Jakubek

(1490-2P)

[PXRF Differentiation of Ancient Obsidian Projectile Points from Northern Chile](#) Corinne C. Deibel, Earlham College, Emily Stovel, Jiqiao Shi, Justin Broach, Michael Deibel, William Whitehead

(1490-3P)

[Spectroscopic Analysis of Quantum Dots as Fluorophores in Artistic Media](#) Elisa T. Novelli, Rensselaer Polytechnic Institute, Bradley Burcar, Lauren Cassidy, Linda McGown

(1490-4P)

[An Approach to Teaching an Upper-Level Chemistry of Art Course](#) Jennifer R. Coym, University of South Alabama

(1490-5P)

[Exploring the Limits of Bronze Artifact Analysis Using Cu Isotopes: Applications in "Biblical" Coin Numismatics](#) Nathan W. Bower, Colorado College, Austin Keller, Craig Lundstrom, David Hendin, Zachary White

POSTER SESSIONS

Session 1500

Data Analysis and Manipulation

Tuesday PM, Room: 204ABC

(1500-1P)

[A Computational Platform for Comprehensive Two-Dimensional Gas Chromatography – Time-of-Flight Mass Spectrometry-Based Metabolomics Profiling](#) Xiaoli Wei, University of Louisville, Craig McClain, Imhoi Koo, Seongho Kim, Xiang Zhang, Xue Shi

(1500-2P)

[Evaluation of Metabolite Variation by a Pooled Sample Approach Between Normal Control and Traumatic Brain Injury Mice Using GCxGC-TOFMS with Data Analysis Using a Software Driven Reference Feature](#) John Heim, LECO Corporation, Elizabeth Humston-Fulmer, Joe Binkley

(1500-3P)

[An Application of Analysis of Mixtures and Partial Least Squares to the Determination of Formation Constants of Selected Iron\(III\)-Polyphenol Chelates: Preliminary Results](#) Mark T. Stauffer, University of Pittsburgh at Greensburg

(1500-4P)

[Bioinformatics Analysis and Molecular Investigation of Polymorphic Markers Located in FMR1 Gene Region in the Iranian Population](#) Mahsa Shirani, University of Isfahan

POSTER SESSIONS

Session 1510

Food and Related Products

Tuesday PM, Room: 204ABC

(1510-1P)

[Rapid Determination of Gibberellin in Fruits by Triple Quadrupole Mass Spectrometer](#) Li Yue-Qi, Shimadzu Co., Ltd, Huang Tao-Hong

(1510-2P)

[Chemometric Profiling of Whiskey Using GC/MS](#) Takeshi Serino, Agilent Technologies, Brian Hom, Sadao Nakamura

(1510-3P)

[Near-Real-Time Sampling Technology Applied to Odor and Fragrance Profiling](#) Steve Davies, Markes International, Kurt Thaxton, Lara Kelly, Vanessa Frost-Barnes

(1510-4P)

[Quantification of Isoflavones in Soybeans Using Micellar Electrokinetic Chromatography](#) Cevdet Akbay, Fayetteville State University, Abdelmajid Kassem, Harmin Herrera, Kaodi Umerah

(1510-5P)

[A Standard Addition, UV Spectrophotometric Method for Determination of Caffeine in Energy Drinks](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Lisa Stevens

(1510-6P)

[The Structure and Chemical Composition of Plant Tissues Revealed by High Resolution Attenuated Total Internal Reflectance Imaging](#) Chris Lynch, PerkinElmer, Ben Perston, Frederick Warren, Paul Royall, Peter Butterworth, Peter Ellis

(1510-7P)

[Home and Personal Care Products Fragrances Characterization by Static and Dynamic Headspace Extraction and Fast GC-TOFMS](#) Daniela Cavagnino, DANI Instruments, Alessandra Mantegazza, Antonella Siviero

(1510-8P)

[Comparison of Graphitized Carbon Black and a Novel Sorbent in Dispersive-SPE Cleanup of Spinach Extract](#) Xiaoyan Wang, United Chemical Technologies, Inc., Brian Kinsella, Michael Telepchak, Wayne King

(1510-9P)

[Assessing Cocoa Beans Quality with an Electronic Nose](#) John Shea, Alpha MOS, Carol Schneider, Fatma Ayouni, Herve Lechat, Jean-Christophe Mifsud, Valerie Vabre

(1510-10P)

[Analysis of Carbohydrates Using Ultra Performance Convergence Chromatography](#) Christopher J. Hudalla, Waters Corporation, Kenneth Fountain

(1510-11P)

[Using XRF for Food \(Infant Cereal\) Analysis](#) Ian T. Campbell, PANalytical, Dragana Radenovic, Marco van der Haar

(1510-12P)

[Quantification of Fat Soluble Vitamins in Infant Formula and Standard Reference Material 1849a](#) Kenneth Rosnack, Waters Corporation, Antonietta Gledhill, Evelyn Goh, Joe Romano, Tarang Nema

(1510-13P)

[On-Line Solid-Phase Extraction of Caffeine in Roasted Coffee Beans](#) Maria P. Cañizares-Macias, Universidad

Nacional Autonoma de Mexico, Maria Vargas-Salinas

(1510-14P)

[Nitrogen/Protein Determination in Soy Products by Flash Combustion Using Large Sample Weight in Alternative to Kjeldahl Method](#) Guido Giuzzi, Thermo Fisher Scientific, Liliana Krotz

(1510-15P)

[A Simple and Rapid Method for Analysis of Multiple Natural Polyphenols in Beverages by LC-MS-MS](#) Yelena Sapozhnikova, USDA/ARS

(1510-16P)

[Determination of Choline in Infant Formula, Adult Nutritionals, Egg Powder, and Soy Flour by Ion Chromatography](#) Cassandra Oates, Thermo Fisher Scientific, Brian De Borja, Jeffrey Rohrer, Lillian Chen

(1510-17P)

[Determination Multi-Elements of Health Care Products by ICP-AES](#) Ma Xiao-Ling, Shimadzu Co., Ltd, Huang Tao-Hong

(1510-18P)

[Physicochemical, Thermal and Rheological Behavior of Selected Colombian Fruit Puree](#) Guillermo Salamanca Grosso, Universidad del Tolima, T Osorio

(1510-19P)

[Determination of Multi-Elements of Animal Feed by ICP-AES](#) Yang Gui-Xiang, Shimadzu Co., Ltd, Huang Tao-Hong

(1510-20P)

[Analysis of Sunscreens in Cosmetic Products By HPLC](#) Carolina Lucia Mendoza Forero, No Affiliation Listed

(1510-21P)

[Analysis of Antioxidants in Foods and Dietary Supplements Using HPLC with Post-Column Derivatization](#) Wendy Rasmussen, Pickering Laboratories, Inc., Maria Ofitserova

(1510-22P)

[Robust HPLC Methods for the Analysis of Alpha Acids in Beers](#) Njies Pedjie, PerkinElmer, Wilhad Reuter

(1510-23P)

[Automated Determination of Total Fat, Saturated Fat, Monounsaturated Fat and Trans Fat Content in Food Samples](#) John R. Stuff, GERSTEL, Inc., Jacqueline Whitecavage

(1510-24P)

[Classification of Olive Oils Through the Use of High Resolution GC/MS](#) Jennifer N. Gushue, Agilent Technologies, Sofia Aronova, Stephan Baumann

(1510-25P)

[Solid Phase Micro Extraction of Flavor Compounds in Beer](#) Anne Jurek, EST Analytical, Doug Meece, Justin Murphy, Lindsey Pyron

(1510-26P)

[Fructose/Glucose Ratio on Inulin from Agave: An Approach for the Determination of the Degree of Polymerization](#) Lucia Hernandez Garciadiego, Facultad de Quimica UNAM, Humberto Gomez-Ruiz, Lucero Castañeda Ponce, Mariana Soto Aceves

(1510-27P)

[Evaluation of Herb and Fruit Juice Adulteration and Authenticity by Coulometric Array Detection and Pattern Recognition Analysis](#) Qi Zhang, Thermo Fisher Scientific, Bruce Bailey, David Thomas, Ian Acworth, Marc Plante

(1510-28P)

[An Application Method to Evaluate the Oxidation Stability of Edible Oils at Different Working Temperatures Under Accelerated Conditions](#) Stefania Corti, Velp Scientifica

(1510-29P)

[Vitamin Fortified Sports Drinks: Automated Sample Processing of Water Soluble Vitamin Additives](#) Tom Dobbs, J2 Scientific, Jeff Wiseman, Jennifer Salmons, Jessica Netzer

(1510-30P)

[What's in Your Beer? GC/MS Static Head Space with a Highly Inert 624 Capillary GC Column](#) Kenneth G. Lynam, Agilent Technologies, Inc., Gary Lee

(1510-31P)

[Analysis of Nonbeverage Products Using Liquid Chromatography](#) Vanessa R. Kinton, Alcohol & Tobacco Tax & Trade Bureau, Angela Jefferson, Janet Scalese

(1510-32P)

[Reverse Engineering of a Spice Blend by Means of a Flash Gas Chromatography E-Nose](#) John Shea, Alpha MOS, Carol Schneider, Fatma Ayouni, Herve Lechat, Jean-Christophe Mifsud, Valerie Vabre

(1510-33P)

[Amperometric Detection of Histamine with a Pyrroloquinoline-Quinone Modified Electrode](#) Joshua A. Young, University of Toledo, Jon Kirchhoff, Xiayu Jiang

(1510-34P)

[Selective Thermionic Surface Ionization Detection of Oxygenated Compounds in Food Products, Fuel, and Environmental Samples](#) Massimo Santoro, Thermo Fisher Scientific, Andrea Caruso, Paolo Magni, Paul Patterson, Riccardo Facchetti

(1510-35P)

[Aroma Volatile Compounds in Encenillo Colombian Honey](#) Guillermo Salamanca Grosso, Universidad del Tolima

(1510-36P)

[Analysis of Volatile Compounds by Using Direct Thermal Desorption GCxGC- TOF/MS and Determination of Antioxidant Capacity During Different Maturity Stages of Rose Hips](#) Dilek Ozyurt, Istanbul Technical University, Ally Lewis, Birsen Demirata, Jacqui Hamilton, Mustafa Ozel

(1510-37P)

[Regional Discrimination of Single Malt Scotch Whiskies based on Elemental and Molecular Composition Using ICP-MS and GC-MS](#) James H. Barnes IV, University Multispectral Laboratories, Courtney Seaman, Cris Lewis, Jessica Randall, Kerri Pappan, Traci Kirkendall

(1510-38P)

[Separation and Characterization of Alkaloids in Goldenseal \(*Hydrastis Canadensis*\) by Ultra-Performance Liquid Chromatography Coupled with Electrospray Ionization, Quadrupole Time of Flight Mass Spectrometry \(UPLC/Q-TOF-MS-MS\)](#) Phuong Mai Le, National Research Council Canada, Anthony Windust, Margaret McCooye

(1510-39P)

[Analysis of Mineral Oils in Recycled Paperboard Food Packaging](#) Jesus Ramirez, Sun Chemical

(1510-41P)

[Nanoparticle-Based Paper Sensors for Antioxidant Quantification and Activity Analysis](#) Erica Sharpe, Clarkson University, Ryan Bradley, Silvana Andreescu

(1510-42P)

[Simultaneous Separation of Fat-Soluble Vitamins by Reversed-Phase HPLC Using a Cholesteryl Group Bonded Stationary Phase](#) Toshi Ono, Nacalai USA, Inc., Kazuhiro Kimata, Tsunehisa Hirose

POSTER SESSIONS

Session 1520

Microfluidics/Lab-on-a-Chip: Techniques/Technology

Tuesday PM, Room: Exposition Floor, Aisles 1600-2100

(1520-1P)

[Dried Blood Spot Analysis Using Degassed Poly\(Dimethylsiloxane\) Microfluidic Systems](#) Rachel M. Feeny, Colorado State University, Charles Henry, John Wydallis, Meghan Mensack, Tamsiri Songjaroen

(1520-2P)

[Development of a Rotatable Cartridge-Type Reservoir for High-Performance Microvalve System on a Centrifugal Microfluidic Device](#) Takayuki Kawai, National Institute of Adv. Ind. Sci. Tec., Hidenori Nagai, Nahoko Naruishi, Yasukazu Yoshida, Yoshihide Tanaka, Yoshihisa Hagihara

(1520-3P)

[Microfluidic Devices for Genomic DNA Extraction From a Single Cell Using Biomimetic Silica Coating on Cell Surface](#) Hibino Ayato, Nagoya University, Baba Yoshinobu, Kaji Noritada, Okamoto Yukihiro, Tokeshi Manabu

(1520-4P)

[Nanopatterning of Polymer Replication Tools](#) Jiri Cech, DTU Nanotech, Guggi Kofod, Henrik Pranov, Maria Matschuk, Rafael Taboryski, Swathi Murthy, Yee Cheong Lam

(1520-5P)

[Isolation of Pancreatic Circulating Tumor Cells Using an Antibody-Modified Microfluidic Device](#) Weian Sheng, University of Florida, Hugh Fan

(1520-6P)

[High-Throughput Microfluidic Purification of Gene Delivery Multifunctional Envelope-Type Nanodevices](#) Shigenaka Daisuke, Nagoya University, Akita Hidetaka, Baba Yoshinobu, Harashima Hideyoshi, Kaji Noritada, Tokeshi Manabu, Ukawa Masami

(1520-7P)

[A Microfluidic Tool for In Vitro Pharmacokinetic Studies](#) Sarah Y. Lockwood, Michigan State University, Dana Spence

(1520-8P)

[Enabling Imaging of Liquid Surfaces by a Microfluidic Interface](#) Xiao-Ying Yu, Pacific Northwest National Laboratory, James Cowin, Li Yang, Zihua Zhu

(1520-9P)

[An Image Processing Technique Applied to Volumetric Measurements on Centrifugal Microfluidic Platforms](#) Alexei Kazarine, McGill University, Eric Salin

(1520-10P)

[A Design for Modular Centrifugal Microfluidic Components](#) Adam P. Bouchard, McGill University, Eric Salin

POSTER SESSIONS

Session 1530

Neurochemical Separations

Tuesday PM, Room: Exposition Floor, Aisles 1600-2100

(1530-1P)

[Neurochemistry of Drosophila Melanogaster: Analysis of Neurotransmitters in Freeze-Dried Fly Brains with Micellar Electrokinetic Capillary Chromatography](#) Kubra Ucar, Chalmers University of Technology, Andrew Ewing, Eva Carina Berglund

(1530-2P)

[Advances in Neurochemical Profiling of Brain Tissue Samples Using HPLC with a Novel Four Channel Electrochemical Array Detector](#) Bruce Bailey, Thermo Fisher Scientific, David Thomas, Ian Acworth, Marc Plante, Qi Zhang

(1530-3P)

[Fast UHPLC Methods for Analysis of Amino Acids](#) Qi Zhang, Thermo Fisher Scientific, Bruce Bailey, David Thomas, Ian Acworth, Marc Plante

(1530-4P)

[Orphan Nuclear Receptors in Drug Discovery for Parkinson's Disease](#) Mohamad Jodeiri, No Affiliation Listed

(1530-5P)

[The Patchwork of Dopamine Domains in the Rat Nucleus Accumbens Core](#) Zhan Shu, University of Pittsburgh, Adrian Michael

(1530-6P)

[Further Evidence of Restricted Dopamine Diffusion in the Dorsal Striatum](#) I M. Taylor, University of Pittsburgh, Adrian Michael

(1530-7P)

[Quantifying Iontophoresis](#) Martin A. Edwards, University of North Carolina at Chapel Hill, Anna Belle, R Mark Wightman, Stephen Feldberg

POSTER SESSIONS

Session 1540

Pharmaceutical: Chromatography Methods

Tuesday PM, Room: Exposition Floor, Aisles 1600-2100

(1540-1P)

[Validated Stability Indicating HPLC-DAD Method for the Determination of Pentoxyverine Citrate - Application to Degradation Kinetics and Assay of Syrup Dosage Form](#) Tarek S. Belal, University of Alexandria - Egypt, Dina Gawad

(1540-2P)

[RP-HPLC Method Development and Validation for the Simultaneous Determination of Paracetamol, Tramadol and Domperidone in Solid Dosage Form](#) Arunadevi S. Birajdar, KT Patil College of Pharmacy, Subramaina Mayyanathan

(1540-3P)

[Three Novel Size Exclusion Chromatography Columns Designed for the Separation of Monoclonal Antibody Monomer from its Impurities](#) Atis Chakrabarti, Tosoh Bioscience

(1540-4P)

[Development of New Chiral Stationary Phases Based on 9H-Fluoren-2-yl Functionalized Cyclofructan 6 and 7 for High Performance Liquid Chromatography](#) Milan K. Dissanayake, The University of Texas at Arlington, Daniel Armstrong, Nilusha Padivitage, Zachary Breitbach

(1540-5P)

[Rapid Scouting of Analytical Condition for Chiral Separation](#) Miho Kawashima, Shimadzu Co

(1540-6P)

[High Selective Separation of Pharmaceuticals and Personal Care Products \(PPCPs\) by the Molecularly Imprinted Polymer Adsorbents](#) Takuya Kubo, Kyoto University, Ken Hosoya, Koji Otsuka

(1540-7P)

[Development and Validation of RP-HPLC Method for Simultaneous Estimation of Cinnarizine and Dimenhydrinate in Combination](#) Pareshkumar U. Patel, SK Patel College

(1540-8P)

[A Robust UHPLC Method for the Analysis of Commonly Used Sunscreen Compounds for Compliance with New FDA Regulations](#) Njies Pedjie, PerkinElmer, Wilhad Reuter

(1540-9P)

[Quantitation of Pluronics by High Performance Liquid Chromatography and Corona Charged Aerosol Detection](#) Marc Plante, Thermo Fisher Scientific, Bruce Bailey, David Thomas, Ian Acworth, Qi Zhang

(1540-10P)

[Efficient Method Development for Polar Compounds Analysis on Hybrid Silica Based Particle Column](#) Takashi Sato, YMC Co., Ltd., Ernest Sobkow, Naohiro Kuriyama, Noriko Shoji

(1540-11P)

[Ultra-Fast Impurity Analysis Using a New High Sensitivity UHPLC Detector](#) Masatoshi Takahashi, Shimadzu Corporation, William Hedgepeth

(1540-12P)

[Characterization of a New Wide Pore C4 Phase Silica Gel Reversed Phase Column Designed for Protein Separation](#) Atis Chakrabarti, Tosoh Bioscience

(1540-13P)

[A New Generation of Evaporative Light-Scattering Detectors for Liquid Chromatography: Universality, High Performance and Robustness in Pharmaceutical Analysis - An Application Review in HPLC and U-HPLC](#) Eric Verette, SEDERE

(1540-14P)

[HPLC Method For Simultaneous Estimation of Nabumetone and Paracetamol in Combined Dosage Form](#) Pruthviraj K. Chaudhary, Ganpat University

(1540-15P)

[Isolation of Ulceroprotective Cucubitanes Type Triterpenoids from Cucumis Melo Seeds](#) Gurpreet Singh Bal, Punjab Technical University

(1540-16P)

[Characterization of a Receptor Using Plate-Based Assay and Frontal Affinity Chromatography](#) Sylvestre K. Dossou, National Institutes of Health, Artur Wnorowski, Irving Wainer, Ruin Moaddel

(1540-17P)

[Isolation of Pharmaceutical Degradants Using Supercritical Fluid Chromatography \(SFC\)](#) Paul Lefebvre,

America Discovery Services, Jeffery Kiplinger, John Tipping, Rego Mickey

(1540-18P)

[Determination of Vasoactive Ion Content of Herbs Used in Hemorrhoid Treatment](#) Selim Kilic, Gulhane Military Medical School, Ahmet Korkmaz, Bilal Bakir, Husamettin Gul, Mahir Gulec, Recai Ogur

(1540-19P)

[Development and Validation of RP-HPLC Method for Simultaneous Estimation of Tolperisone and Paracetamol in Combination](#) Pruthviraj K. Chaudhary, Ganpat University

(1540-20P)

[Analytical Method Remediation for a Commercial Product using Ultra-High Performance Liquid Chromatography \(UHPLC\)](#) Partha S. Mukherjee, Endo Pharmaceuticals, Avadhesh Sharma, PN Bala Subramanian, Vipul Solanki

(1540-21P)

[Using Core Shell Columns for Improved Separation of Pharmaceutical Compounds by SFC](#) Toshiyuki Ono, Nacalai USA, Christine Aurigemma, Nicole Aurigemma, Norikazu Nagae, William Farrell

(1540-22P)

[The Influence of 1-Butyl -3-Methyl Imidazolium Terafluoroborate Ionic Liquid on the Separation and Retention Behavior of Amitriptyline and Nortriptyline on Reversed Phase Liquid Chromatography](#) Tarab Ahmad, Western Illinois University, Azhar Alhijji, Bartlomiej Redlinski, Sahar Salam, Tariq Z Ahmad

(1540-23P)

[GC Method for Quantitation of Diisopropylamine Counter Ion in Pharmaceutical Drug Substance Starting Material](#) Kasey L. Young, Bristol-Myers Squibb, John Castoro, Urmila Patel, Xin Bu

(1540-24P)

[Applications of Chiral Stationary Phases in Pharmaceutical Industry for Enantioseparations of Carboxylic Acids](#) Chen Ding, Abbott Laboratories, Clifford Mitchell, Nancy Benz, Ping Sun, Quanying Zhang

(1540-25P)

[Retention Behavior of Caffeine Metabolites on an Amide Stationary Phase in RPLC and HILIC Modes](#) Yong

Guo, Fairleigh Dickinson University

(1540-26P)

[Preparation and Purification of ¹³C Isotopically Labelled Trans 18:1, Conjugated 18:2 and 18:3 Derivatives Through Biosynthesis and Chemical Conversion of 18 Carbon Unsaturated Fatty Acids](#) Yi Cui, National Research Council Canada, Anthony Windust, Cathie Fraser, Ching-jang Huang

(1540-27P)

[An Investigation into the Use of Near Infrared \(NIR\) Transmission Spectroscopy and Aquaphotomics to Study the Effects of Common Salts on Water Structure](#) Aoife A. Gowen, UCD, Kobe University, Colm O' Donnell, Toumiana Tsenkova, Yutaro Tsuchisaka

POSTER SESSIONS

Session 1550

Separations and Detection for Drug Discovery

Tuesday PM, Room: Exposition Floor, Aisles 1600-2100

(1550-1P)

[Purification of Small Molecule Analog Libraries Facilitated by Calculated Analog Lipophilicity \(logP\) Values](#) Xin Chen, OSI - Astellas Pharma, Lifu Ma, Mark Mulvihill

(1550-2P)

[Innovated Semi-Preparative Column Durability with Highly Compressed Packing Technology](#) Takashi Sato, YMC Co., Ltd., Ernest Sobkow, Naohiro Kuriyama, Noriko Shoji

(1550-3P)

[Design, Synthesis and Antimicrobial Activity of Fluorine Based 1, 3, 4-Oxadiazoles](#) Kalpesh S. Parikh, Sheth MN Science College, Patan

(1550-4P)

[Development and Validation of a LIMS Interface for a Semi-Automated Dried Sample Punch Instrument](#) Heidi Mangus, Bristol-Myers Squibb, Anne Aubry, Huidong Gu, Mark Arnold, Qin Ji

Wednesday AM, March 20, 2013

AWARD

Session 1560

ACS Division of Analytical Chemistry Award for Young Investigators in Separation Science - arranged by Brian Bidlingmeyer, Agilent Technologies, Inc.

Wednesday AM, Room: 114

Brian Bidlingmeyer, Agilent Technologies, Inc., Presiding

8:10 AM

(1560-1)

[Fundamental Investigations in Electrospray Ionization: From Noncovalent Interactions to Matrix Effects in Complex Systems](#) Kevin A. Schug, The University of Texas at Arlington

8:45 AM

(1560-2)

[Peak Coalescence in Orbitrap Mass Spectrometers: The Importance of Chromatography in Non-targeted Analysis](#) Timothy R. Croley, Food and Drug Administration, Ann Knolhoff

9:20 AM

(1560-3)

[A Paper Microfluidic Assay for Determination of Pharmaceutical Counterfeiting](#) Vincent T. Remcho, Oregon State University, Myra Koesdjojo, Yuan Yuan Wu

9:55 AM

(1560-4)

[Molecular Distinction of Plasmid DNA Isoforms and Topoisomers by Chemoaffinity Ligands](#) Michael Lämmerhofer, University of Tuebingen, Elisabeth Haller, Marek Mahut, Wolfgang Lindner

10:30 AM

(1560-5)

[Cavity Enhanced Absorption Measurements and Their Future in Liquid Chromatography](#) Purnendu K. Dasgupta, University of Texas at Arlington, Ruchika Bhawal

SYMPOSIA

Session 1570

ACS ANYL - Mass Spectrometry of Proteins in the Pharmaceutical and Biophysical Sciences - arranged by David D. Weis, University of Kansas

Wednesday AM, Room: 201A

David D. Weis, Biogen Idec, Presiding

8:05 AM

(1570-1)

[Applications of Hydrogen/Deuterium Exchange Mass Spectrometry \(H/DX-MS\) for Developing Protein Biopharmaceuticals](#) Damian Houde, Biogen Idec

8:40 AM

(1570-2)

[Fast Photochemical Oxidation of Proteins \(FPOP\) Characterizes Protein Folding](#) Michael L. Gross, Washington University in St Louis, Brian Gau, Don Rempel, Hao Zhang, Jiawei Chen, Ying Zhang

9:15 AM

(1570-3)

[Protein Interaction Reporter Technology: Measurements on Protein Interaction Topologies in Live Cells](#) James E. Bruce, University of Washington

9:50 AM

(1570-4)

[Discovering Protein Linear Interaction Motifs with Proteome-Scale H/D Exchange Mass Spectrometry](#) David D. Weis, University of Kansas

SYMPOSIA

Session 1580

Brazilian Analytical Chemistry: Focus on Trace Analysis - arranged by Pedro V. Oliveira, University of Sao Paulo

Wednesday AM, Room: 118C

Pedro V. Oliveira, University of Sao Paulo, Presiding

8:05 AM

(1580-1)

[Trace Element Determination Using High-Resolution Continuum Source Atomic Absorption Spectrometry and Inductively Coupled Plasma Mass Spectrometry: New Findings and Perspectives](#) Daniel L. Borges, Universidade Federal de Santa Catarina (UFSC)

8:40 AM

(1580-2)

[Trace Analysis in Food Chemistry](#) Fernando V. Silva, Nestle Quality Assurance Center

9:15 AM

(1580-3)

[Extraction Induced by Emulsion Breaking: A Novel Approach for Trace Metals Determination in Oil Samples](#) Ricardo J. Cassella, Universidade Federal Fluminense

9:50 AM

PITTCON 2013

(1580-4)

[Solid Sampling Graphite Furnace Atomic Absorption Spectrometry: New Applications and Challenges](#) Pedro V. Oliveira, University of São Paulo

10:25 AM

(1580-5)

[Analytical Approaches Using Luminescence for the Trace and Ultra-Trace Determination of Substances of Clinical and Biological Interest: The LEEA-PUC-Rio Effort](#) Ricardo Q. Aucelio, Pontifical Catholic University

SYMPOSIA

Session 1590

Dynamic Monitoring of Neurochemicals – A Journey Throughout the Body - arranged by Bhavik A. Patel, University of Brighton

Wednesday AM, Room: 123

Bhavik A. Patel, University of Brighton, Presiding

8:05 AM

(1590-1)

[Amperometric Monitoring of Mast Cells to Unravel the Inflammatory Environment in Sickle Cell Disease](#) Benjamin M. Manning, University of Minnesota, Christy Haynes, Kalpna Gupta

8:40 AM

(1590-2)

[Electrochemical Probing of Neurogenic Control Mechanisms of Vascular Tone in Hypertension](#) Greg M. Swain, Michigan State University

9:15 AM

(1590-3)

[Microfluidic Tools for Monitoring Secreted Signaling Molecules](#) Robert T. Kennedy, University of Michigan

9:50 AM

(1590-4)

[Dynamic Monitoring of Human Tissue Transplantation Using Electroanalytic Biosensors](#) Martyn G. Boutelle, Imperial College London, Chi Leng Leong, Michelle Rogers, Peter Brennan, Sally Gowers, Thomas Aldridge

10:25 AM

(1590-5)

[Understanding the Link Between Neurochemical Signaling and Intestinal Motility](#) Bhavik A. Patel, University of Brighton

SYMPOSIA

Session 1600

Emerging Diagnostic Technologies for Resource-Limited Countries - arranged by Richard A. Durst, Cornell University

Wednesday AM, Room: 124

Richard A. Durst, Cornell University, Presiding

8:05 AM

(1600-1)

[Commercializing New Diagnostic Tests in Low- and Middle-Income Countries](#) William Rodriguez, Daktari Diagnostics

8:40 AM

(1600-2)

[From the Laboratory Towards the Patient: Nucleic Acid Amplification-Based Diagnostics at the Point of Care](#) David S. Boyle, PATH

9:15 AM

(1600-3)

[Enhanced Protein-Based Assays for Detection of Influenza Using Disposable Paper-Based Microfluidic Devices](#) Paul Yager, University of Washington, Barry Lutz, Fu Elain

9:50 AM

(1600-4)

[Nanofiber-Based Biosensors for Integrated Sample Preparation](#) Antje J. Baeumner, Cornell University

10:25 AM

(1600-5)

[Low-Cost Diagnostics for the Developing World](#) George M. Whitesides, Harvard University

SYMPOSIA

Session 1610

Hyphenated Microfluidic Techniques - arranged by Dimitri Pappas, Texas Tech University

Wednesday AM, Room: 125

Dimitri Pappas, Texas Tech University, Presiding

8:05 AM

(1610-1)

[Ultra High Dynamic Range Fluorescence Detection - From Single Molecules to Millimolar Concentrations](#) Norman Dovichi, University of Notre Dame, Oluwatosin Dada, Ryan Flaherty

PITTCON 2013

8:40 AM

(1610-2)

[Detection of Individual DNA Hybridization Events Using a Microelectrochemical Device](#) Richard M. Crooks, The University of Texas at Austin, Timothy Alligrant

9:15 AM

(1610-3)

[Hybrid Microfluidic/Electrochemical Systems for Measuring Spatiotemporal Chemical Gradients](#) Charles S. Henry, Colorado State University, David Dandy, Stuart Tobet

9:50 AM

(1610-4)

[CHIP- and Nano-LC-MS of Permethyated Glycans and Isotopically Permethyated Glycans Derived from Biological Samples](#) Yehia Mechref, Texas Tech University, Ahmed Hussein, Janie Desantos-Garcia, Shiyue Zhou, Yunli Hu

10:25 AM

(1610-5)

[Protein and Peptide Analysis Using Integrated Multifunctional Microfluidic Devices](#) J Michael Ramsey, University of North Carolina at Chapel Hill, Nicholas Batz, Scott Mellors, Will Black

SYMPOSIA

Session 1620

Ion Mobility Spectrometry: The Analytical Method of Choice for Security, Public Safety, and National Defense - arranged by Herbert H. Hill, Washington State University

Wednesday AM, Room: 122B

Herbert H. Hill, Washington State University, Presiding

8:05 AM

(1620-1)

[IMS, The Primary Analyzer in Hyphenated Analytical Systems](#) Gary A. Eiceman, New Mexico State University

8:40 AM

(1620-2)

[Evaluation of False Positive Responses by Mass Spectrometry and Ion Mobility Spectrometry for the Detection of Trace Explosive in Complex Samples.](#) Herbert H. Hill, Washington State University, Christina Crawford

9:15 AM

(1620-3)

[An Emerging Role for IMS in Emergency Medicine](#) Paul Thomas, Loughborough University

9:50 AM

(1620-4)

[The Use of IMS in Security Applications](#) Pierre Pilon, Canada Border Services Agency, Maggie Tam, Marie-Josée Binette

10:25 AM

(1620-5)

[Ion Mobility Spectrometry in Chemical Defense – Force Protection, Contamination Avoidance, First Responders, Threat Definition](#) C S. Harden, SAIC at US Army ECBC, Brian Ince, Gretchen Blethen, Robert Schafer, Vincent McHugh

SYMPOSIA

Session 1630

New Developments in Food Analysis - arranged by Janusz Pawliszyn, University of Waterloo

Wednesday AM, Room: 122A

Janusz Pawliszyn, University of Waterloo, Presiding

8:05 AM

(1630-1)

[Determination of Haloquinones in Water](#) Xing-Fang Li, University of Alberta

8:40 AM

(1630-2)

[Impact of a Decade of QuEChERS on Food Analysis](#) Steven Lehotay, USDA Agricultural Research Service

9:15 AM

(1630-3)

[Multi-Dimensional Chromatography Techniques in Food Analysis: State of the Art](#) Luigi Mondello, University of Messina

9:50 AM

(1630-4)

[Direct Analysis of Foods by Ambient Ionization Mass Spectrometry](#) R Graham Cooks, Purdue University, JJ Jiu, Joshua Wiley, Pu Wei, Rodinei Augusti, Zhang Zhiping, Zheng Ouyang

10:25 AM

(1630-5)

[New Developments in SPME Facilitating High Throughput Laboratory and On-Site Food](#)

PITTCON 2013

[Determinations](#) Janusz Pawliszyn, University of Waterloo

SYMPOSIA

Session 1640

Proteins in Artworks: Identification, Modification and Localization - arranged by Julie Arslanoglu, The Metropolitan Museum of Art

Wednesday AM, Room: 121C

Julie Arslanoglu, The Metropolitan Museum of Art, Presiding

8:05 AM

(1640-1)

[Identification and Localization of Organic Materials in Cultural Heritage Samples Using Multiple Synchrotron Beams for High Resolution, Widefield FTIR Imaging](#) Carol J. Hirschmugl, University of Wisconsin, Milwaukee

8:40 AM

(1640-2)

[Immunological Based Techniques for Identification and Localization of Proteins in Art Works](#) Julie Arslanoglu, The Metropolitan Museum of Art, Hae Young Lee, John Loike

9:15 AM

(1640-3)

[Characterizing Proteins in Cultural Heritage with Peptide Mass Fingerprinting](#) Daniel Kirby, Harvard University Art Museums

9:50 AM

(1640-4)

[Proteins in Artworks: Identification, Determination of Their Biological Origins and Study of Modifications Induced by Neighbor Components and Ageing Using Proteomics](#) Caroline Tokarski, USR CNRS 3290 MSAP, Christian Rolando, Nicolas Garnier, Sophie Dallongeville

10:25 AM

(1640-5)

[Localization of Artists' Materials Using Laser Desorption Ionization and Matrix-assisted Laser Desorption Ionization MS Imaging](#) Emily V. O'Neill, University of Florida, Julie Arslanoglu, Richard Yost

SYMPOSIA

Session 1650

SAS - Vibrational Spectroscopy of Biological Systems: From Fundamental Studies to Clinical Practice - arranged by Bruce Chase, University of Delaware

Wednesday AM, Room: 119B

PITTCON 2013

Bruce Chase, University of Delaware, Presiding

8:05 AM

(1650-1)

[Electrospun Fibers for Bio-Scaffolds: Vibrational Spectroscopy Meets Biology](#) Bruce Chase, University of Delaware, John Rabolt

8:40 AM

(1650-2)

[Infrared and Raman Microspectral Imaging of Human Cells and Tissues for Medical Diagnostics](#) Max Diem, Northeastern University

9:15 AM

(1650-3)

[Raman Investigations of Nanoscale Biology](#) Zachary D. Schultz, University of Notre Dame

9:50 AM

(1650-4)

[Theory and Simulation to Establish the Foundation of Vibrational Spectroscopic Imaging for Cancer Pathology](#) Rohit Bhargava, University of Illinois at Urbana-Champaign, Kevin Yeh, Matthew Schulmerich, Paul Carney, Rohith Reddy, Thomas van Dijk

10:25 AM

(1650-5)

[Biomedical Research at the National Institutes of Health: A Vibrational Spectroscopist's Perspective](#) Ira W. Levin, Retired

SYMPOSIA

Session 1660

Structure and Dynamics of Intrinsically Disordered Proteins - arranged by Vladimir N. Uversky, University of South Florida

Wednesday AM, Room: 121B

Vladimir N. Uversky, University of South Florida, Presiding

8:05 AM

(1660-1)

[Analysis of Structural Transitions in IDPs Using Site-Directed Spin-Labeling EPR Spectroscopy](#) Sonia Longhi, CNRS and Aix-Marseille University, Benjamin Morin, Bruno Guigliarelli, Jean-Marie Bourhis, Johnny Habchi, Leo Nesme, Marlene Martinho, Valerie Belle, Zeina El Habre

8:40 AM

PITTCON 2013

(1660-2)

[Fluorescence Resonance Energy Transfer of Immobilized Single Protein Molecules for the Measurement of Conformational Dynamics and Ligand Binding](#) Mark Bowen, Stony Brook University, Ucheor Choi

9:15 AM

(1660-3)

[Intrinsically Disordered Proteins as Potential Drug Targets](#) Steven J. Metallo, Georgetown University

9:50 AM

(1660-4)

[Molecular Mechanisms of Protein Misfolding and Aggregation](#) Yuri L. Lyubchenko, University of Nebraska Medical Center

10:25 AM

(1660-5)

[Bioinformatics of Intrinsically Disordered Proteins](#) Vladimir N. Uversky, University of South Florida

WORKSHOPS

Session 1670

Bringing Research into the Analytical Teaching Lab: A Win-Win for All Involved - arranged by Kimberly A. Frederick, Skidmore College

Wednesday AM, Room: 126B

Kimberly A. Frederick, Skidmore College, Presiding

8:05 AM

(1670-1)

[NSF's Interest in Bridging Between Research and Teaching Labs](#) Joseph J. Grabowski, National Science Foundation

8:30 AM

(1670-2)

[From the Teaching Lab to the Research Lab and Back Again: Linking Instructional Labs Across Disciplines and Levels Through Research](#) Michelle M. Bushey, Trinity University

8:55 AM

(1670-3)

[Testing Novel Extraction Material in a Teaching Laboratory Context](#) Justin Shearer, Rose-Hulman Institute of Technology

9:35 AM

PITTCON 2013

(1670-4)

[Microscale Measurements for the Masses: Classical Research Laboratories and Shared Experience](#) Lisa A. Holland, West Virginia University, Anthony Moncrief, Denise Gipson

10:00 AM

(1670-5)

[Using Research on Maya Murals to Teach FTIR and Chemometrics in an Instrumental Analysis Course](#) Kimberley A. Frederick, Skidmore College

WORKSHOPS

Session 1680

Emerging Environmental Contaminants: Methodologies and Practices for Meeting New Performance Requirements - arranged by Kory Kelly, Phenomenex

Wednesday AM, Room: 202A

Kory Kelly, Phenomenex, Presiding

8:05 AM

(1680-1)

[Emerging Measurement and Monitoring Opportunities for the US EPA](#) Lara P. Phelps, US EPA

8:35 AM

(1680-2)

[Obtaining Reliable Low Level Data](#) Richard Burrows, TestAmerica

9:05 AM

(1680-3)

[Recent Advances in Solid Phase Extraction for the Determination of a Full Range of Organic Compounds from High Particulate Aqueous Samples](#) Robert Johnson, Horizon Technology, Inc.

9:50 AM

(1680-4)

[Reaching Out for New Analytical Approaches](#) David C. Kennedy, Phenomenex

10:20 AM

(1680-5)

[Use of Double and Single Blind Studies for Internal Quality Assessment in Environmental Testing Laboratories](#) Ty Garber, Phenova Certified Reference Materials

ORGANIZED CONTRIBUTED SESSIONS

Session 1700

Ionophore-Based Chemical Sensors, I - arranged by Philippe Buhlmann, University of Minnesota

Wednesday AM, Room: 121A

Philippe Buhlmann, University of Minnesota, Presiding

8:00 AM

(1700-1)

[Creation and Application of Functional Imaging Probes Based on Dyes and Ionophores](#) Koji Suzuki, Keio University, Daniel Citterio, Keitaro Umezawa, Naoko Iwasawa

8:20 AM

(1700-2)

[A New Ion-to-Electron Transducer for Solid-State Polymeric Ion Sensors Based on Ferrocene Tagged Polyvinyl Chloride](#) Roland De Marco, Faculty of Science, Eric Bakker, Manzar Sohail, Marcin Pawlak

8:40 AM

(1700-3)

[Electrochemical Control of the Standard Potential of Solid-Contact ISEs Based on Conducting Polymers as Ion-to-Electron Transducer](#) Johan Bobacka, Abo Akademi University, Ulriika Vanamo

9:00 AM

(1700-4)

[Effective Nanocomposite Solid Contacts for All-Solid-State Ion-Selective Electrodes](#) Li Niu, Changchun Institute of Applied Chemistry

9:35 AM

(1700-5)

[Carbon Nanotube-Based Potentiometric Aptasensors for Protein Determination](#) Jordi Riu, Universitat Rovira i Virgili, F Xavier Rius, Pascal Blondeau

9:55 AM

(1700-6)

[Toward Feedback-Controlled Anesthesia: Automated Flow Analytical System for Monitoring Propofol \(2,6-diisopropylphenol\) in Serum](#) Erno Lindner, The University of Memphis, Edward Chaum, Felynnia Rainey, Fernando Garay, Francine Kivlehan

10:15 AM

(1700-7)

[Beyond "Conventional" Electrochemical Sensing with Functionalized Solid-State Nanopores](#) Róbert E. Gyurcsányi, Budapest University of Technology and Economics, Alexandra Brajnovits, Diána Bakk, Jágerszki Gyula, Péter Fürjes, Péter Terejászki

10:35 AM

(1700-8)

[Graphene vs. Conducting Polymers as Sensing and Transducer Layers in Ion-Selective Sensors](#) Agata Michalska, University of Warsaw, Ewa Jaworska, Józef Mieczkowski, Krzysztof Maksymiuk, Wiktor Lewandowski

ORGANIZED CONTRIBUTED SESSIONS

Session 1710

The Analysis of Challenging Samples Using Ion Analysis Techniques - arranged by Brett Paull, University of Pasmania

Wednesday AM, Room: 117

Brett Paull, University of Pasmania, Presiding

8:00 AM

(1710-1)

[Analysis of Trace Ions in Challenging Samples by Ion Chromatography](#) Kannan Srinivasan, Thermo Fisher Scientific, Chris Pohl, Sheetal Bhardwaj

8:20 AM

(1710-2)

[Analysis of Trace Ions in Complex Samples Using Multidimensional Capillary Ion Chromatography](#) Phillip Zakaria, University of Tasmania, Gregory Dicoski, Paul Haddad

8:40 AM

(1710-3)

[Enhanced Detection of Trace Ionic Analytes in Complicated Water Matrixes](#) Rong Lin, Thermo Fisher Scientific, Chris Pohl, Sheetal Bhardwaj

9:00 AM

(1710-4)

[Drug Verification Using Trifluoroacetic Acid Hydrolysis with High pH Anion Exchange Chromatography - Pulsed Amperometric Detection in Challenging Matrices](#) David S. Jackson, US FDA

9:35 AM

(1710-5)

[Analysis of Complex and High Salinity Samples for Trace Metals Using Monolithic Chelation Ion Chromatography](#) Brett Paull, University of Tasmania, Aine Moyna, Damian Connolly, Nesterenko Ekaterina, Nicola McGillicuddy, Pavel Nesterenko, Phil Jones

9:55 AM

(1710-6)

[Column Overload Effects in the Analysis of Complex Samples by Ion Chromatography](#) Charles A. Lucy,

PITTCON 2013

University of Alberta, Jordan Anderson, M Wahab, Mohamed Abdelrady, Ya Zhang

10:15 AM

(1710-7)

[Analysis and Exposure Risk of Chromium \(VI\) in Consumer Products and the Environment](#) Virginia L. Burkel, NSF International, Daren Schaler, Nathan Buchanan

10:35 AM

(1710-8)

[Ion Chromatographic Retention Behavior of a Sugar Polyphosphate](#) Charles P. Shelor, University of Texas at Arlington, Akinde Kadjo, Hongzhu Liao, Purnendu Dasgupta

ORAL SESSIONS

Session 1720

Art Conservation and Analysis (Half Session) - arranged by Tom Tague, BrukerOptics, Inc.

Wednesday AM, Room: 115A

Tom Tague, BrukerOptics, Inc., Presiding

8:00 AM

(1720-1)

[An Oddy Test Alternative for Paper-Based Collections](#) Eric Breitung, Library of Congress, Marcie Wiggins

8:40 AM

(1720-3)

[Advances in Atomic Layer Deposited Coatings for the Corrosion Prevention of Silver Artifacts](#) Eric Breitung, University of Maryland, Amy Marquardt, Gary Rubloff, Glenn Gates, Ray Phaneuf, Terry Drayman-Weisser

9:00 AM

(1720-4)

[A New Truly Easy-to-Use Dedicated Infrared Microscope](#) Thomas J. Tague, Bruker Optics, Boese Matthias, Fred Morris

ORAL SESSIONS

Session 1730

Bioanalytical Application with LC-MS - arranged by Eduard Rogatsky, Albert Einstein College of Medicine

Wednesday AM, Room: 115C

Eduard Rogatsky, Albert Einstein College of Medicine, Presiding

8:00 AM

PITTCON 2013

(1730-1)

[Investigation of Selected Biomarkers in Urine Samples for Early Detection of Kidney Cancer Using Ultrafast Liquid Chromatography - Tandem Mass Spectrometry](#) Henok D. Abshiro, Missouri University of Science and Technology, Sanjeewa Gamagedara, Yinfa Ma

8:20 AM

(1730-2)

[Rapid Capillary Liquid Chromatography-Multistage Mass Spectrometry for Trace Level Neuropeptide Analysis](#) Ying Zhou, University of Michigan, Robert Kennedy

9:00 AM

(1730-4)

[Novel Vitamin D Metabolites Assay Based on Supported Liquid Extraction, Fused Core Based Fast Chromatography and Tandem Mass Spectrometry](#) Eduard Rogatsky, Albert Einstein College of Medicine

9:35 AM

(1730-5)

[Prospects for Slip Flow in UHPLC](#) Benjamin J. Rogers, Purdue University, Mary Wirth

9:55 AM

(1730-6)

[Reproducible, Non-Touch nanoLiter and microLiter Dispensing of Blood, Sweat and Tears and/or Cells, Serum, Glues and LC Effluents with 100% Sample Introduction Efficiency into/near Mass Spectrometers or Other Targets of Opportunity](#) Drew Sauter, nanoLiter LLC

10:15 AM

(1730-7)

[Comparison of Methods of Analysis for Soy Isoflavone Determinations: Direct Comparison Between LC-PB/EIMS Method and NIST Method](#) Carolyn Q. Burdette, Clemson University, Lynn Zhang, R Kenneth Marcus

10:35 AM

(1730-8)

[Analysis of Active Components in Chinese Medicines by CE-ESI-MS](#) Zilin Chen, Wuhan University

ORAL SESSIONS

Session 1740

Bioanalytical: Microfluidics - arranged by Philip C. Gach, University of North Carolina at Chapel Hill

Wednesday AM, Room: 116

Philip C. Gach, University of North Carolina at Chapel Hill, Presiding

8:00 AM

(1740-1)

[The Microfluidic Toolbox – Merging Lab-on-a-Chip Technologies with Lab Automation](#) Claudia Gärtner, Microfluidic ChipShop GmbH, Richard Klemm

8:20 AM

(1740-2)

[Micromolded Arrays for the Selection and Separation of Primary Cells Based on a Cell-Destructive Assay](#) Nicholas C. Dobes, University of North Carolina at Chapel Hill, Christopher Sims, Nancy Allbritton

8:40 AM

(1740-3)

[Capture of Rare Cells from Whole Blood](#) Samuel Forry, National Institute of Standards and Technology, Chanda Arya, Jason Kralj, Matt Munson, Thomas Forbes

9:00 AM

(1740-4)

[Combination of Array and Lab-on-a-Chip Technology: Immobilization of Biological Active Molecules on Polymer Surfaces for Bio-Analytical Detection](#) Nadine Hlawatsch, Microfluidic ChipShop GmbH, Claudia Gaertner, Marco Krumbholz, Martin Mueller, Thomas Hansen-Hagge

9:35 AM

(1740-5)

[Multi-Parameter Cell Affinity Chromatography: Separation and Analysis in a Single Microfluidic Channel](#) Yan Gao, Texas Tech University, Dimitri Pappas, Peng Li

9:55 AM

(1740-6)

[High-Throughput Integrated Microfluidic Cartridge for Isolation Enumeration and Phenotyping of Circulating Tumor Cells \(CTCs\)](#) Joyce W. Kamande, Louisiana State University, Hong Wang, Mateusz Hupert, Steven Soper

10:15 AM

(1740-7)

[A Microfluidic Electrophoresis Chip with Integrated Fiber Optic Detection for Clinical Evaluation of Transplantable Cells](#) Cynthia M. Cipolla, University of Michigan, Francis Esmonde-White, Robert Kennedy

10:35 AM

(1740-8)

[Capture and Isolation of CTCs Directly from Whole Blood with Micropallet Arrays](#) Philip C. Gach, University of North Carolina at Chapel Hill, Christopher Sims, Jen Jen Yeh, Nancy Allbritton, Rebecca Werlau

ORAL SESSIONS

PITTCON 2013

Session 1750

Biospectroscopy (Half Session) - arranged by Katherine Bakeev, B&W Tek, Inc.

Wednesday AM, Room: 118A

Katherine Bakeev, B&W Tek, Inc., Presiding

8:00 AM

(1750-1)

[Creation of a Chemical Imaging Algorithm and Validation with Amino Acid Copolymers](#) Alexandra Lawson, The Ohio State University, Justin Harris, Noel Paul, Olla Nayal

8:20 AM

(1750-2)

[Biosensing in Crude Cell Lysate with Peptide Monolayers on SPR Sensors](#) Alexandra Aubé, University of Montreal, Jean-Francois Masson, Julien Breault-Turcot

8:40 AM

(1750-3)

[Structural Analysis on Interaction of Idarubicin with Nucleic Acids](#) Sonika Charak, National Physical Laboratory, Ranjana Mehrotra

9:00 AM

(1750-4)

[Specific and Sensitive Detection of Micro-RNAs by SERS Combined with Separation Techniques](#) Kayeong Shin, Hanyang University, Hoeil Chung, Kwang Soo Kim

ORAL SESSIONS

Session 1760

Improvements in Sensors and Process Analyses for Energy Applications - John Baltrus, US Department of Energy - arranged by NETL

Wednesday AM, Room: 120A

John Baltrus, INFICON, Presiding

8:00 AM

(1760-1)

[Fast Analysis of Extended Natural Gas](#) Debbie Hutt, INFICON

8:20 AM

(1760-2)

[An Embedded Sensor Approach for Monitoring the Desulfurization Process of Industrial Reformates on](#)

[Doped Supported Zinc Oxide Adsorbents Using Fiber Optic Based Diffuse Reflectance Spectroscopy](#) Achintya Sujan, Auburn University, Bruce Tatarchuk

8:40 AM

(1760-3)

[Rapid Raman Sensor for Gas Analysis](#) Steven D. Woodruff, National Energy Technology Laboratory, Benjamin Chorpening, Jessica Mullen, Michael Buric

9:00 AM

(1760-4)

[Analytical Performance and In Situ Infrared Spectroelectrochemical Study of an Ionic Liquid Based Electrochemical Methane Sensor](#) Zhe Wang, Oakland University, Gary Backer, Xiangqun Zeng

9:35 AM

(1760-5)

[Using Microfluidic Wafer Technology for Tuning the Gas Chromatographic Separations of Trace Level Oxygenates to Enable Alternative Carrier Usage](#) Andrew Tipler, PerkinElmer, John Irion, Mamdouh Farag

9:55 AM

(1760-6)

[Fast and Reliable Continuous Analysis of Natural Gas, with a Full MEMS Based Micro-GC](#) Filippo Baravelli, POLLUTION S.r.l., Antonella Poggi, Carlo Bruno, Enrico Cozzani, Fulvio Mancarella, Gian Carlo Cardinali, Ivan Elmi, Maddalena Belluce, Marco Messina, Mario Galli, Matteo Monticelli, Stefano Galli, Stefano Zampolli

10:15 AM

(1760-7)

[Karl Fischer Moves Out of the Laboratory](#) George Robertson, GR Scientific Ltd

10:35 AM

(1760-8)

[Monitoring Biodiesel Production: From Lab to Plant](#) Stuart Farquharson, Real-Time Analyzers, Wayne Smith

ORAL SESSIONS

Session 1770

LC-MS Analysis - arranged by Keandra R. Robinson, Pfizer Global Research & Development

Wednesday AM, Room: 120B

Keandra R. Robinson, Pfizer Global Research & Development, Presiding

8:00 AM

(1770-1)

[The Analysis of Antidepressants in Aqueous Samples Using Liquid Chromatography-Tandem Mass Spectrometry](#) Kenton J. Chodara, The Pennsylvania State University, Dan Sykes, Melissa Gettle

8:20 AM

(1770-2)

[Assessment of Vanadium Toxicity in a Mouse Model via IPRP-UPLC- ICP-SFMS](#) Nikola Kilibarda, University of North Carolina at Durham, Fei Yan, Keith Levine, Scott Afton

8:40 AM

(1770-3)

[LC-ESI-QTOF/MS Impurity Profiling of Bemotrizinol](#) Qian Wei, Ashland, Inc.

9:00 AM

(1770-4)

[A New LC-MS-Friendly Version of the Hydrophobic Subtraction Model for Characterizing Column Selectivity](#) Allison M. Haaning, University of Minnesota, Jonathan Schellenberg, Paul Boswell, Peter Carr

9:35 AM

(1770-5)

[Improved ID Efficiency of Polymer Additives Using 2D LCMS](#) Thomas A. Russell, Shimadzu

9:55 AM

(1770-6)

[Measuring HPLC Gradient and Flow Rate Profiles Using Mass Spectrometry](#) Megan H. Magee, University of Minnesota, Paul Boswell

10:15 AM

(1770-7)

[Analysis of Fatty Alcohol Derivatives with Comprehensive Two-Dimensional Liquid Chromatography Coupled with Mass Spectrometry](#) Victoria Elsner, University of Duisburg-Essen, Oliver Schmitz

10:35 AM

(1770-8)

[ISPTM: An Iterative Search Algorithm for Systematic Identification of Post-Translational Modifications from Complex Proteome Mixtures](#) Shi-Jian Ding, University of Nebraska Medical Center, Xin Huang

ORAL SESSIONS

Session: 1780

Nanotechnology: Sensors - arranged by Colin Medley, Genentech

Wednesday Morning , Room: 120C

Colin Medley, US Naval Research Laboratory, Presiding

8:00 AM

(1780-1)

[Chemical Sensing with Silicon Nanowires in a Vertical Array with a Porous Electrode](#) Christopher R. Field, US Naval Research Laboratory, Cy Tamanaha, Daniel Ratchford, Junghoon Yeom, Pehr Pehrsson, Susan Rose-Pehrsson

8:20 AM

(1780-2)

[Cancer Cell Targeting and Intracellular Trafficking Pathways of Surface Engineered Hydrogel Nanocarriers for Targeted Drug Delivery](#) Leshern Karamchand, University of Michigan, Aniruddha Ray, Gwangseong Kim, Martin Philbert, Raoul Kopelman, Ruba Jiddou, Shouyan Wang, Yong-Eun Koo Lee

8:40 AM

(1780-3)

[A DNA Conjugated Magnetic Nanoparticle Assay for Assessing Genotoxicity](#) Colin Medley, Genentech, Joshua Smith, Larry Wigman, Nik Chetwyn

9:00 AM

(1780-4)

[Electrochemical Detection of Cancer Biomarkers: miRNA and GSTP1 Hypermethylation](#) Mehmet E. Ozsoz, Izmir Katip Celebi University, Dilsat Ozkan Ariksoysal, Seda Nur Topokaya, Tugba Kilic

9:35 AM

(1780-5)

[Planar Nanogap Electrical Detector for Single Molecule Sensing and Biopolymer Sequencing](#) Franklin I. Uba, University of North Carolina at Chapel Hill, Collin McKinney, Jiahao Wu, Steven Soper, Yoon-Kyoung Cho

9:55 AM

(1780-6)

[A Novel Reflectance-Based Colorimetric Aptasensor for Detection of Oxytetracycline](#) Ho Bin Seo, Korea University, Hongseok Noh, Ji-eun Lee, ManBock Gu, Young Seop Kwon

10:15 AM

(1780-7)

[Multimodal Imaging in Nano-Sciences](#) Joachim A. Koenen, WITec GmbH, Harald Fischer, Ute Schmidt

10:35 AM

(1780-8)

[A Novel Approach Based on Ultrasensitive Calix\[4\]arene Functionalized Boronic Acid Gold Nanoprobe for the Detection of Glucose in Blood Serum](#) Alok Pandya, Gujarat University, Pinkesh Sutariya, Shobhana

Menon

ORAL SESSIONS

Session 1790

Nuclear Magnetic Resonance (Half Session) - arranged by Joshua E. Smith, Wright Patterson Air Force Base

Wednesday AM, Room: 115A

Joshua E. Smith, Wright Patterson Air Force Base, Presiding

9:35 AM

(1790-1)

[Ligand Spectroscopy to Determine "At-A-Glance" Differences in Binding Between Two 46-kDa Proteins Using Solution NMR](#) Yael S. Balazs, Technion, Asher Schmidt, Elina Lisitsin, Yuval Shoham

9:55 AM

(1790-2)

[Chiral Selectivity of Guanosine Monophosphate Assemblies Defined by Nuclear Magnetic Resonance](#) Akshar P. Gupta, Rensselaer Polytechnic Institute, James Kempf, Linda McGown, William Taylor, Yingying Dong

10:15 AM

(1790-3)

[Exploration of Aptamer-Gold Nanoparticle Interaction through Colorimetric and NMR Analysis](#) Joshua E. Smith, Wright Patterson Air Force Base, Jorge Chávez, Nancy Kelley-Loughnane, Peter Mirau, Rajesh Naik

10:35 AM

(1790-4)

[Separation and Identification of Degradation Products in Eprinomectin Formulation Using LC, FT-MS, H/D Exchange, and NMR Studies](#) Atul K. Awasthi, University of Auckland, New Zealand

ORAL SESSIONS

Session 1800

Pharmaceutical: Spectroscopy Methods (Half Session) - arranged by Katherine Bakeev, B&W Tek, Inc.

Wednesday AM, Room: 118A

Katherine Bakeev, B&W Tek, Inc., Presiding

9:35 AM

(1800-1)

[Screening "The Good, The Bad and The Ugly" Pharmaceutical Counterfeits Using Portable Spectrometer](#) Ravi Kalyanaraman, Bristol-Myers Squibb

9:55 AM

(1800-2)

[Applying Process Analytical Technology \(PAT\) Tools to Early Active Pharmaceutical Ingredient \(API\) Development](#) Shelly X. Li, Pfizer, Michael Coutant

10:15 AM

(1800-3)

[Development of New Chemistries for High Performance Gel Filtration Media to Overcome Existing Method Limitations](#) Michael D. McGinley, Phenomenex, Ismael Rustamov, Ying Wang

10:35 AM

(1800-4)

[Micro Flow LC/MS/MS Applications in Drug Metabolites and Environmental Analysis](#) Khaled Mriziq, Eksigent, part of AB SCIEX, Anthony Romanelli, Remco Van Soest, Steve Hobbs, Tina Settineri

ORAL SESSIONS

Session 1810

Separation Sciences: Applications to Bioanalysis, Food, Drug and Nanotechnology - arranged by Edward Guthrie, Agilent Technologies

Wednesday AM, Room: 201B

Edward Guthrie, Agilent Technologies, Presiding

8:00 AM

(1810-1)

[Thermodynamics of Analyte Interaction on Lauryl Acrylate Porous Polymer Monoliths Used in Capillary Electrochromatography](#) Si Ying Li, Trinity University, Charlisa Daniels, Kelly Hewes, Michelle Bushey, Nicholas Kuklinski

8:20 AM

(1810-2)

[Selective Extraction of Phenolic Compounds in Complex Matrices](#) Carlo Crescenzi, Salerno University, Annalisa Piccinelli, Imma Pagano, Luca Rastrelli, Maria Euterpio

8:40 AM

(1810-3)

[A New Capillary GC Column for Highly Efficient Separation of Polycyclic Aromatic Hydrocarbons Including the EFSA PAH4](#) Jack Cochran, Restek Corporation, Amanda Rigdon, Roy Lautamo, Shawn Reese

9:00 AM

(1810-4)

[Injection Port Flushing Device for the Improvement of Comprehensive Two-Dimensional Gas Chromatography Separations](#) Matthew K. Edwards, University of Waterloo, Tadeusz Gorecki

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9:35 AM

(1810-5)

[High-Pressure Ion Chromatography Systems with Electrolytic Eluent Generation and Their Applications](#) Yan Liu, Thermo Fisher Scientific, Chris Pohl, Zhongqing Lu

9:55 AM

(1810-6)

[Separation and Analysis of Nanoparticles and Hybrid Particle Structures](#) Mary Beth Williams, The Pennsylvania State University

10:15 AM

(1810-7)

[Controlled Derivatization of PDMS for Use in Electrochromatographic Separations](#) Dylan Mitchell, San Diego State University, Christopher Harrison

10:35 AM

(1810-8)

[Ideal Knox Behavior in a Lauryl Acrylate Porous Polymer Monolithic Stationary Phase](#) Douglas T. Nolan, Trinity University, Brady Iba, Charlisa Daniels, Jessica Lam, Jing Liu, Michelle Bushey, Nicholas Kuklinski, Trisha Patel, Xuanli Deng

POSTER SESSIONS

Session 1820

Environmental Analysis of Water

Wednesday AM, Room: Exposition Floor, Aisles 1600-2100

(1820-1P)

[Highly Sensitive Detection of Hexavalent Chromium Utilizing a Sol-Gel/Single-Walled Carbon Nanotube Modified Electrode](#) Sam Rosolina, University of Tennessee, James Chambers, Ruizhuo Ouyang, Stefanie Bragg, Ziling Xue

(1820-2P)

[Monitoring of Uranium Concentrations in Drinking Water Sampled by RDT Method from the Area of Lower Silesia Province \(Poland\) Performed by ICP-MS](#) Dorota Swiecicka, National Institute of Public Health - National Institute of Hygiene, Sawomir Garbos

(1820-3P)

[The Impact of Olusosun Dumpsite on Groundwater Quality of Ojota Environs](#) Alice I. Babatunde, University

of Lagos, Taiwo Oyelola

(1820-4P)

[Solid Phase Extraction of Lead and Cadmium on Hydrotalcite/Graphite](#) Hiroaki Minamisawa, Nihon University, Hiromichi Asamoto, Kazunori Saitoh, Mayumi Minamisawa, Tatsuro Nakagama

(1820-5P)

[Development of Portable Electrochemical-Based Sensors for the Analytical Determination of Heavy Metals in Drinking Waters](#) AbdelNasser Kawde, King Fahd University of Petroleum and Minerals

(1820-6P)

[Preconcentration and Determination of Traces of Heavy Metals with Polymer Chelating Sorbents in the Analysis of Natural and Waste Water](#) Abdunnaser M. Etoriki, Tripoli University, Mohamed Abuein

(1820-7P)

[The Effect of TOC on the Movement of Toxic Metals Within a Black Water River Basin](#) Joe Emily, South Carolina State University, Anjellica Miller, Chris Payton, Joettie Clinton

(1820-8P)

[Mercury Speciation in Water Samples by Selective Pre-Concentration and Liquid Chromatography Cold Vapor – AFS](#) Christophe-Cornelius Brombach, University of Aberdeen, Bin Chen, Eva Krupp, Joerg Feldmann, Peter Stockwell, Warren Corns

(1820-9P)

[Comparison of EG-Silicone-SBSE and Derivatization-PDMS-SBSE for the Analysis of Phenolic Compounds in Water](#) Yunyun Nie, Gerstel GmbH & Co. KG, Albinus Thomas, Andreas Hoffmann, Edward Pfannkoch

(1820-10P)

[Applications of Sample pH and Conductivity Measurements in an IC Autosampler for Environmental Water Analysis](#) Terri T. Christison, Thermo Fisher Scientific, Linda Lopez

(1820-11P)

[Study of Fungal Cultures For Their Ability to Decolorize Textile Dyes and Their Use in Industrial Effluent Treatment](#) Jatin H. Parikh, MG Science Institute, Mrugesh Shukla, Vijaya Nadagouda

(1820-12P)

[Multiwall-Carbon Nanotubes Immobilized Hollow-Fiber Membrane Protected Liquid Phase Microextraction for the Determination of Paclitaxel in Water and Fruit Juice Samples by HPLC-UV](#) Vinoth Kumar Ponnusamy, National Chung Hsing University, Jen-Fon Jen

(1820-13P)

[Pre-Concentration and Quantitative Determination of Venlafaxine HCl Present in Water](#) Prakash B. Samnani, The Maharaja Sayajrao University of Baroda, Santhosh Koppala

(1820-14P)

[Pass Oil and Grease Proficiency Tests with Flying Colors Using Solid Phase Extraction](#) Joseph Stefkovich, Xenosep Technologies, Patricia Vincent

(1820-15P)

[Development of Highly Stable Solid Phase Reagent Strips for the Detection of High Range Total and Calcium Hardness](#) Balaji Tatineni, Industrial Test Systems, Ivars Jaunakais, Yasmine Shoemaker

(1820-16P)

[Determination of Sulfonamides in Surface Water Using Ultra High Performance Liquid Chromatography-Tandem Mass Spectrometry](#) Dong Heng-Tao, Shimadzu Co., Ltd, Huang Tao-Hong

(1820-17P)

[Interactions of Iron\(II\) and Iron\(III\) Ions with Chelators For These Two Species: Reduction of Fe\(III\) by Fe\(II\) Chelators, and Oxidation of Fe\(II\) by Chelators for Fe\(III\)?](#) Mark T. Stauffer, University of Pittsburgh at Greensburg

(1820-18P)

[Adsorption Study of Metal Ions on Electrochemically Synthesized Poly-\(ortho-phenylenediamine\)](#) Abdunnaser M. Etoriki, Tripoli University, Mahmoud El Rais

(1820-19P)

[Determination of Petroleum Oils and Animal and Vegetable Oils in Water by Fourier Transform Infrared Spectrophotometer](#) Wang Juan-Juan, Shimadzu Co., Ltd, Huang Tao-Hong

(1820-20P)

[Nanoparticle Transformations in Simulated Natural Water: Characterizing Nanoparticle Agglomeration and Adsorption of Molecular Species](#) Ian L. Gunsolus, University of Minnesota, Christy Haynes, Cole Christenson, Melissa Maurer-Jones

(1820-21P)

[Analysis of Xenobiotics in Runoff Waters Collected from Airport](#) Anna Sulej, Gdansk University of Technology, Jacek Namienik, Zaneta Polkowska

(1820-22P)

[Detection of Heavy Metals in Water Using Dye Nano-Complexants and a Polymeric Matrix](#) Valery Bulatov, Technion-Israel Institute of Technology, Bella Dolgin, Hodayah Abuhatzira Hadar, Israel Schechter

(1820-23P)

[Fluorescent Detection of Lead \(II\) Ions Using Catechin Synthesized Gold Nanoparticles](#) Yang-Wei Lin, National Changhua University of Education, Chung-Yu Chen, Yan-Shiuan Wu

(1820-24P)

[Determination of Mixed Water-Alcohol Vapors by a Dual Optical Sensor Approach](#) Jonathan Fong, University of Tennessee, Ziling Xue

(1820-25P)

[Important Environmental and Climate Influence: CO₂ in Seawater](#) Frank Honold, Xylem - WTW GmbH, Jürgen Peters

(1820-26P)

[Automated In-line Digestion and Analysis of Total Phosphorous \(TP\) and Total Nitrogen \(TN\) in Environmental Water Samples](#) William C. Lipps, OI Analytical, Gary Engelhart, Libby Badgett

(1820-27P)

[Analysis of Sulfate by Conductivity Indicated Titration](#) Tore Fossum, Mettler Toledo, Inc., Brian Hultgren

(1820-28P)

[An Analytical Method for the Determination of Total Petroleum Hydrocarbons in Water Samples by Gas Chromatography-Flame Ionization Detection](#) Vasilios Samaras, TE Laboratories, Breda Moore, Mark Bowkett

(1820-29P)

[Electrochemical Treatment of Wastewater Containing Antibiotic Tetracycline](#) Saima Gul, Institute of Chemistry of Sao Carlos, Sajjad Hussain

(1820-30P)

[Fenton Treatment of Wastewater Containing Sulfa Drugs and Influence of Various Experimental Parameters](#) Sajjad Hussain, Institute of Chemistry of Sao Carlos, Saima Gul

(1820-31P)

[Emerging Contaminants in the Nexapa River](#) Amado E. Navarro, Technological University of Izúcar de Matamoros, Jorge Herrera

(1820-32P)

[Comparative Assessment of Visible/Near-Infrared and Mid-Infrared Reflectance Techniques for the Rapid Analysis of Soil Texture](#) Ashraf A. Ismail, McGill University, David Pinchuk, Hongye He, Jacqueline Sedman, Joann Whalen, Nandkishor Dhawale, Sandy Rintoul, Saqer Herzallah, Shiv Prasher, Viacheslav Adamchuk

POSTER SESSIONS

Session 1830

Fluorescence/Luminescence: Bio and Nano

Wednesday AM, Room: 204ABC

(1830-1P)

[The Development of a Rapid Spectroscopic Technique to Study the Enzymatic Activity of Alkanesulfonate Monooxygenase Using Near Infrared Dyes](#) Garfield Beckford, Georgia State University, Gabor Patonay, Maged Henary

(1830-2P)

[Synthesis and Characterization of Silica Nanoparticles Encapsulating Novel Cyanine Dyes with Large Stokes Shifts](#) Gala M. Chapman, Georgia State University, Gabor Patonay, Maged Henary

(1830-3P)

[Highly Sensitive and Continuous Determination of Extracellular Glucose Concentration in Mammalian Tissue Using Copper Ion Catalysis Fluorescence System](#) Chen-Yu Chen, National Tsing Hua University, I-Hsiang Hsu, Yuh-Chang Sun

(1830-4P)

[Characterization of an Instrumental Set-up for Low-Temperature Fluorescence Spectroscopy with Fiber Optic Probes](#) Anthony F. Moore, University of Central Florida, Andres Campiglia

(1830-5P)

[Determination of Iron\(III\) Formed as Turnbull's Blue by Chemiluminescence Method](#) Matashige Oyabu, Kanazawa Institute of Technology, Keisuke Kanbayashi, Masahiro Yamagishi

(1830-6P)

[A Fluorescence Spectroscopic Study for the Sensing of Free Copper Using Ratiometric Fluorescent Ion Indicators](#) Deanna M. Silva, University of New Hampshire, Alex Papantones, Erik Berda, John Csoros, Justin Massing, Roy Planalp, Shawn Burdette, William Seitz

(1830-7P)

[Detection of Protein Kinase Activity Based on Magnesium-Precipitation-Induced Fluorescence Intensity Change](#) Xu Xiahong, Zhejiang University, Hu Qinqin, Li Yanbin, Li Zhanmin, Xu Lizhou

(1830-8P)

[A Wide Dynamic Range Ratiometric Optical pH Sensor](#) Yuki Hiruta, Keio University, Daniel Citterio, Koji Suzuki, Naoto Yoshizawa

POSTER SESSIONS

Session 1840

Food: Instrumentation, Quality Assurance and Contaminants

Wednesday AM, Room: 204ABC

(1840-1P)

[A New Generation of Evaporative Light-Scattering Detectors for Liquid Chromatography: Universality, Reliability and Cost-Effectiveness in Food Analysis - An Application Review in HPLC and U-HPLC](#) Eric Verette, SEDERE

(1840-2P)

[Comparative Data Processing for Targeted and Unknown Screening for Food Contaminants Using High Resolution and Accurate Mass LC-MS/MS](#) Andre Schreiber, AB SCIEX

(1840-3P)

[Use of Voltammetric Disposable Sensor with Pattern Recognition Method for the Monitoring of Milk Adulteration with Melamine](#) Lígia Bueno, University of São Paulo, Thiago Paixão

(1840-4P)

[Fast, High-Efficiency Separations on a 4 µm Ion Exchange Phase Using a High-Pressure Ion Chromatography System](#) Barbara Shao, Thermo Fisher Scientific, Fei Pang, Linda Lopez, Terri Christison

(1840-5P)

[Pesticide Analysis: An Automated Solution to QuEChERS Extractions](#) Nathan Valentine, Teledyne Tekmar, Tom Hartlein, Tyler Trent

(1840-6P)

[Microbial Quality Control of Beer](#) Shyam Verma, Sigma-Aldrich, Ivo Siegrist, Jennifer Claus, Olga Shimelis

(1840-7P)

[Characterizing the Sensory Differences of Processed Cheese with E-Sensing Instruments](#) John Shea, Alpha MOS, Carol Schneider, Fatma Ayouni, Herve Lechat, Jean-Christophe Mifsud, Valerie Vabre

(1840-8P)

[Detection of Underivatised Glyposate and Similar Polar Pesticides in Food of Plant Origin by LC-MS/MS](#) Andre Schreiber, AB SCIEX, Stephen Lock

(1840-9P)

[Automated Solid Phase Extraction \(SPE\)-LC/MS/MS Method for the Determination of Acrylamide in Brewed Coffee Samples](#) Edward A. Pfannkoch, GERSTEL, Inc., Edward Pfannkoch, Fredrick Foster, John Stuff

(1840-10P)

[Quantitative Analysis of Egg Allergens Using Ion Mobility Data Independent Mass Spectrometry](#) Kenneth Rosnack, Waters Corporation, Antonietta Gledhill, Guillaume Bechade, Kelly McMahon, Lee Gethings, Nathalie Gillard, Valery Dumont

(1840-11P)

[Incorporating Analytical Techniques as a Pre-Screening Tool for the Food Industry](#) James P. Eickhoff, Anton Paar USA

(1840-12P)

[Identification of Pesticide Residues in Food Samples Using LC-MS/MS and Non-Targeted Data Processing Strategies](#) Andre Schreiber, AB SCIEX

(1840-13P)

[Determination of Solvent Residues in Curcumin Powder by HS-GC-FID](#) Vivek R. Dhole, Thermo Fisher Scientific, Inderjit Kaur, Sitharaman Balasubramanian

(1840-14P)

[Raman Spectroscopy Coupled with Chemometric Methods for Rapid Detection of Fat Adulteration in Dairy Products](#) Tugba Bulat, Hacettepe University, Ali Topcu, Ismail Boyaci, Nur Yazgan

(1840-15P)

[New Analytical Tools for the Determination of Persistent Organic Pollutants \(POPs\) in Fatty Food and Beverage Matrices Using QuEChERS Extraction/Cleanup and Gas Chromatography \(GC\) Analysis](#) Katherine K. Stenerson, Sigma-Aldrich/Supelco, Emily Barrey, Leonard Sidisky, Michael Ye

(1840-16P)

[Analysis of Pesticides in Infant Foods Using a New Triple-Quadrupole GCMS System](#) Richard R. Whitney, Shimadzu Scientific Instruments, Clifford Taylor, Laura Chambers, Nicole Lock, Zhuangzhi "Max" Wang

(1840-17P)

[Analysis of Clenbuterol in Pig Plasma by Functional Membrane-HPLC-Tandem Mass Spectrometry](#) Wan Wang, Bonna-Agela, Jingran Zhang

(1840-18P)

[Comprehensive Monitoring of Unknown Chlorinated Species and 3-Monochloropropane-1,2-Diol Esters in Cooking Oil by Liquid Chromatography / Ultra-High Resolution Time-of-Flight Mass Spectrometry](#) Kevin Siek, LECO Corporation, Jeffrey Patrick, Joe Binkley

(1840-19P)

[Characterization of Used Cooking Oils by High Performance Liquid Chromatography and Corona Charged Aerosol Detection](#) Marc Plante, Thermo Fisher Scientific, Bruce Bailey, David Thomas, Ian Acworth, Qi Zhang

(1840-20P)

[Analysis of Coffee Flavors by Purge and Trap Sampling](#) Anne Jurek, EST Analytical, Doug Meece, Justin Murphy, Lindsey Pyron

(1840-21P)

[Structure and Structural Transitions in Starch Characterized by Heated Attenuated Total Internal Reflectance Fourier Transform Infrared Spectroscopy](#) Chris Lynch, PerkinElmer, Ben Perston, Frederick Warren, Paul Royall, Peter Butterworth, Peter Ellis

(1840-22P)

[LC/MS/MS-Based Metabolomics for Authenticity Assessment of Fruit Juices](#) Andre Schreiber, AB SCIEX

(1840-23P)

[The Determination of Benzopyrene in Sesame Oil By Solid Phase Extraction with Carbon Material](#) Ruyi Wang, Bonna-Agela

(1840-24P)

[A Testing Program to Independently Evaluate an Enclosure's Containment of a Nanoscale Aerosol](#) Jenny Sprung, Labconco Corporation

(1840-25P)

[Exploring the Benefits of Automated Unattended Sample Derivatization Prior to Gas Chromatography Analysis](#) Massimo Santoro, Thermo Fisher Scientific, Andrea Caruso, Fausto Pigozzo, Riccardo Facchetti

(1840-26P)

[Automating GPC, SPE and Concentration on a Single Platform](#) Jessica Netzer, J2 Scientific, Jeff Wiseman, Jennifer Salmons, Tom Dobbs

(1840-27P)

[Karl Fischer Moisture Analysis of Solid Foods Using a Ball Bearing Homogenizer to Stir and to Break Up Samples](#) Tore Fossum, Mettler Toledo, Inc.

(1840-28P)

[Preparation of Electrochemical Sensor by Plasma Polymerization Technique for Phenolic Compounds](#) Beyhan Gunaydin Dasan, Hacettepe University, Mehmet Mutlu

POSTER SESSIONS

Session 1850

Materials Science(s)

Wednesday AM, Room: Exposition Floor, Aisles 1600-2100

(1850-1P)

[Performance and Gas-Flow Effects of an Active 2-Volume Sampling Chamber Using a 213 nm Laser Ablation System for Inductively Coupled Plasma-Mass Spectrometry](#) Dhinesh Asogan, CETAC Technologies

(1850-2P)

[Molecular Structure and Spectroscopy of Divalent First Row Transition Metals, Mn-Zn with Salicylaldiminate Ligands](#) Agnes Mrutu, University of Missouri, Andrew Lane, Charles Barnes, Justin Walensky

(1850-3P)

[Reduction of Matrix-Induced Oxide Interferences on Rare Earth Elements and Platinum Using a Desolvating Nebulizer System with Quadrupole Inductively Coupled Plasma Mass Spectrometry](#) Fred G. Smith, CETAC Technologies

(1850-4P)

[Trace Sulfur Determination for Material Characterization \(Polymers, Film, Carbon Fibers, Metals, Catalysts\) by Elemental Analysis](#) Guido Giuzzi, Thermo Fisher Scientific, Liliana Krotz

(1850-5P)

[Quartz Crystal Microbalance Analysis of DNA-Templated Calcium Phosphate Mineralization](#) Aren E. Gerdon, Emmanuel College, Alexander Petty, Hillary Butts, Jamie Anderson, Sunaro Ngourn

(1850-6P)

[My Sample is Not a Liquid in a Cuvette. Now What Do I Do? The Integrating Sphere](#) Jeffery Taylor, PerkinElmer, Chris Lynch

(1850-7P)

[Thin Films of Polyaniline Deposited by a Modified Vapor Deposition Technique for Optical Coatings and Sensing Applications](#) Devon A. Boyne, University of Delaware, Karl Booksh

(1850-8P)

[Evaluating Stability and Structural Changes of Clay Nanoparticle and CNF Composites Exposed to Environmental Conditions](#) Endalkachew Sahle-Demessie, US Environmental Protection Agency, Amy Zhao, Andrew Salamon, Nicholas Gagliardi

(1850-9P)

[Estimation of Slag in Ferrochrome](#) Robert Kozicki, Andrew S McCreath & Son, Inc., Eric Graham, George Wrightson

(1850-10P)

[Gold Nanoparticles Supported on Vanadium Oxide for CO Oxidation Catalysis](#) Matt Casey, Vanderbilt University, Chris Fussman, David Cliffler, Jed Ziegler, Richard Haglund

(1850-11P)

[Understanding Porcelain Ceramics Firing Using Simultaneous Thermal Analysis](#) Richard B. Cassel, PerkinElmer, Charles Earnest, Jennifer McCurdy, Kevin Menard

(1850-12P)

[Quantitative Precipitation Analysis Using the Electrolysis Extraction--Full Pattern Fitting Algorithm Method for Duplex Stainless Steel](#) Lede Miao, Baoshan Iron and Steel Co., Ltd, Yi Zhang

(1850-13P)

[Amino-Functionalized Silsesquioxanes and Their Derivatives as Filters for Heavy Metals and CO₂](#) Ali Riaz,

UNICAMP, Claudio Airoidi, Jose De Alancar Semoni

(1850-14P)

[Improving Laser Diffraction Particle Size Analysis Through Automatic Refractive Index Selection](#) Jeffrey Bodycomb, HORIBA Scientific, Amy Hou, Hirosuke Sugawara, Ian Treviranus, Kiwan Park, Mark Bumiller, Shigemi Tochino, Yoshiaki Togawa

(1850-15P)

[Controlled Synthesis of Zeolites at Low Temperature From Mixed Samples of Fly Ash and Kaolinite](#) Claudia Belviso, IMAA-CNR, Francesco Cavalcante, Pietro Ragone, Saverio Fiore

(1850-16P)

[Development of a Novel and Facile Method for Synthesizing Hollow Silica Nanoparticles](#) Jiao Chen, University of North Dakota, Joshua Pierce, Julia Xiaojun Zhao, Nenny Fahrudin, Xu Wu

(1850-17P)

[An Efficient Approach for Making SiO₂@Au Nanoparticles with Tunable Shell Thickness and Morphology](#) Jianbo Zeng, Miami University, Charles Kafui Dotse, Shouzhong Zou

(1850-18P)

[Surface Modification of Hemostatic Silicon Nanofibers to Provide Anti-Microbial Functionality](#) Fei Tian, University of North Dakota, Aaron Hanson, Hugh Daniels, Julia Xiaojun Zhao, Kali Shephard, Min Wu, Xu Wu

(1850-19P)

[Infusion of Metals Particles into Composite Polymers Using Supercritical CO₂](#) Madhu Anand, Halide Group, Al Kaziunas, Beth Campion, Peter Hobbs

(1850-20P)

[Synthesis, Characterization and Liquid Crystalline Properties of Some Schiff Base and Cinnamate Central Linkages Involving 1,3,5-Trisubstituted Pyrazolone Ring System](#) Bharat T. Thaker, Veer Narmad South Gujarat University, Dipali Solanki

(1850-21P)

[A Novel Integrated FT-IR Direct Coupling for a Simultaneous Thermal Analyzer \(STA-FT-IR\)](#) Ekkehard Post,

NETZSCH Geraetebau GmbH, Dave Shepard, Ilir Beta

(1850-22P)

[Sapphire Fiber Self-Referencing Raman Probe](#) Nicholas Djeu, MicroMaterials

(1850-23P)

[Improvement of Surface Plasmons Field Enhanced Raman Scattering by Periodical Configuration](#) Yuejiao Gu, State Key Laboratory of Supramolecular Structure and Materials, Haibo Li, Shuping Xu, Weiqing Xu, Yu Liu

(1850-24P)

[Comparing and Contrasting Containment Results of Two Methodologies for Nanoparticulate Safety Enclosures](#) Odette Nolan, Labconco Corporation

POSTER SESSIONS

Session 1860

Microfluidics/Lab-on-a-Chip: Bioanalytical

Wednesday AM, Room: 204ABC

(1860-1P)

[Microfluidic Lab-on-Chip for Electrochemical Quantification of Neurotransmitter Content in Synaptic Vesicles](#) Jelena Lovric, Chalmers University of Technology, Ainla Alar, Andrew Ewing, Lisa Mellander, Raphael Trouillon

(1860-2P)

[Development of Immobilized Nano-TiO₂ Photocatalytic Vapor Generation Chip-based Hyphenated Analytical System for Determination of Trace Elements in Living Rat](#) Cheng-Hsing Lin, National Tsing Hua University, Yuh-Chang Sun

(1860-3P)

[Chemical Cytometry of Peptidase Activity in Acute Myeloid Leukemia Cells](#) Michelle L. Kovarik, University of North Carolina at Chapel Hill, Nancy Allbritton, Paul Armistead, Pavak Shah

(1860-4P)

[Isoelectric Fractionation Using Digital Microfluidics](#) Kihwan Choi, University of Toronto, Aaron Wheeler, Tito

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Simoes

(1860-5P)

[Western Blotting Using Microchips](#) Shi Jin, University of Michigan, Gwendolyn Anderson, Robert Kennedy

(1860-6P)

[On-Chip Fluorescent Tagging and Ultra-Trace Analysis of Primary Fatty Amines Using Droplet-Based Microfluidics](#) Andrew P. Davic, Duquesne University, Michael Cascio

(1860-7P)

[Microfluidics Free Quantitative Droplet PCR Assays Enabled by Engineered Superporous Hydrogel Particles](#) Tanyu Wang, University of Kansas, Mimi Shin, Yong Zeng

(1860-8P)

[On-Chip Microfluidics Using Natural and Redox-Magneto-hydrodynamics \(MHD\) Convection](#) Vishal Sahore, University of Arkansas, Fayetteville, Adam Kreidermacher, Ingrid Fritsch

POSTER SESSION

Session 1870

SEAC Posters: Electroanalysis

Wednesday AM, Room: 204ABC

(1870-1P)

[Complications in Observing Electrochemical Processes Involving Serotonin in Different Biological Matrices](#) Aidan Fagan-Murphy, University of Brighton, Bhavik Patel, Fiona Watt, Kelly Morgan

(1870-2P)

[Gold Nanoparticles for Potentiometric Sensors](#) Emilia Wonica, University of Warsaw, Agata Michalska, Józef Mieczkowski, Krzysztof Maksymiuk, Micha Wójcik

(1870-3P)

[Graphene vs. Multiwalled Carbon Nanotubes for Potentiometric Applications](#) Ewa Jaworska, University of Warsaw, Agata Michalska, Józef Mieczkowski, Krzysztof Maksymiuk, Wiktor Lewandowski

(1870-4P)

[The Effect of Chemotherapy Treatment on Dopamine Release and Uptake in Wistar Rats](#) Sam Kaplan, University of Kansas, Gregory Osterhaus, Max Newby, Michael Johnson, Ryan Limbocker

(1870-5P)

[Detection of PFOA/S with Ion-Selective Electrodes](#) Chunze Lai, United Science, Jonathan Thompson, Li Chen, Philippe Buhlmann

(1870-6P)

[Assessment of Ion Dissolution from Ag Nanoparticles Using an Ionophore-doped Fluorous Phase Silver Ion-Selective Electrode for Toxicity Studies in Shewanella Oneidensis](#) Seyedeh Moloud Mousavi, University of Minnesota, Christy Haynes, Melissa Maurer-Jones, Philippe Buhlmann

(1870-7P)

[Functionalized Magnetic Gold Microshells for Biosensing Applications](#) Jeon Chang Su, Seoul National University, Chung Taek Dong, Hwang Inseong

(1870-8P)

[Advancing Fast-Scan Cyclic Voltammetry to the Detection of Neuropeptides and Their Direct Effects on the Dopaminergic System](#) Andreas Schmidt, North Carolina State University, Gregory McCarty, James Roberts, Leslie Sombers

(1870-9P)

[Carbon Nanomaterial-Based Electrochemical Sensors in Microfluidic Total Analysis Systems for Extraterrestrial Analysis](#) Glen D. O'Neil, Tufts University, Andrew Aubrey, Michael Lee, Nikos Chaniotakis, Samuel Kounaves

(1870-10P)

[Development of Fluorous Polymers as Self-Supported Plasticizer-Free Ion-Selective Electrode Membranes](#) Jesse L. Carey, University of Minnesota, Elizabeth Lugert, Philippe Buhlmann

(1870-11P)

[Development of Biofouling-Resistant Fluorous Phase Ion-Selective Electrodes](#) Adam J. Dittmer, University of Minnesota, Philippe Buhlmann

(1870-12P)

[Metal Based Drugs in Bioanalytical Chemistry](#) Aysegul Golcu, Kahramanmaras Sutcu Imam University

(1870-13P)

[Synthesis of Sulpiride Metal Complex, Spectral, Electrochemical and DNA-Binding Studies](#) Derya Tarnç, Kahramanmaras Sutcu Imam University, Aysegul Golcu, Mustafa Cesme

(1870-14P)

[Solid Contact Ion-Selective Electrodes \(ISEs\) Based on Redox Couples and Carbon Materials](#) Xu Zou, University of Minnesota, Brandon Taitt, Jia Cheong, Philippe Buhlmann

Wednesday PM, March 20, 2013

THE WALLACE H COULTER KEYNOTE LECTURE

Session 1880

The Wallace H Coulter Keynote Lecture

Wednesday PM, Room: Ballroom B, Level 300

5:00 PM

(1880-1)

[How The Higgs Boson Saved Us From A Cold, Dark, Lifeless Universe](#) R Michael Barnett, Lawrence Berkeley National Laboratory

RALPH N ADAMS AWARD

Session 1890

Ralph N Adams Award - arranged by James W. Jorgenson, University of North Carolina

Wednesday PM, Room: 126A

James W. Jorgenson, University of North Carolina, Presiding

2:10 PM

(1890-1)

[Microfluidic Technology for the Elucidation of Biochemical Information](#) J Michael Ramsey, University of North Carolina at Chapel Hill

2:45 PM

(1890-2)

[Dynamic Particle Arrays Using Optical Trapping](#) David R. Walt, Tufts University

3:20 PM

(1890-3)

[Getting Quantitative with Iontophoresis](#) R Mark Wightman, University of North Carolina at Chapel Hill, Anna Belle, Martin Edwards

3:55 PM

(1890-4)

[New Technologies for the Genome Age](#) Lloyd Smith, University of Wisconsin, Madison

4:30 PM

(1890-5)

[High Resolution Peptide Separations by Capillary UHPLC](#) James W. Jorgenson, University of North Carolina at Chapel Hill, Edward Franklin, Jordan Stobaugh, Kaitlin Fague

AWARD

Session 1900

The Coblenz Society - Williams-Wright Award - arranged by Shawn Mehrens, Pfizer

Wednesday PM, Room: 114

Shawn Mehrens, Coates Consulting LLC, Presiding

2:10 PM

(1900-1)

[The Miniaturization of Optical Spectroscopy: How Small and at What Cost?](#) John P. Coates, Coates Consulting LLC

2:45 PM

(1900-2)

[Providing Answers in the Field: Advances in Handheld Spectrometers](#) Richard A. Crocombe, Thermo Fisher Scientific

3:20 PM

(1900-3)

[New Directions in Extreme Miniaturization of Mid-Infrared Instruments](#) Petros Kotidis, Block Engineering

3:55 PM

(1900-4)

[The Evolution of Miniaturized Spectrometers and Spectral Sensors](#) Jason M. Eichenholz, Open Photonics Inc.

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4:30 PM

(1900-5)

[Handheld Vibrational Spectrometers: Novel Instrumentation and Applications](#) Heinz W. Siesler, University of Duisburg-Essen

SYMPOSIA

Session 1910

ACS ANYL - Bioanalytical Chemistry - arranged by Advances in Analysis of Living Systems - Michael A. Johnson, University of Kansas

Wednesday PM, Room: 125

Michael A. Johnson, University of North Carolina at Chapel Hill, Presiding

2:05 PM

(1910-1)

[Signaling in Single Cancer Cells](#) Nancy Allbritton, University of North Carolina at Chapel Hill

2:40 PM

(1910-2)

[Polystyrene-Based Microfluidic Devices for Integrating Cell Immobilization with Analysis](#) R Scott Martin, Saint Louis University

3:15 PM

(1910-3)

[Quantitative Measurement of Dopamine Release and Caged Compound Photoactivation in Living Tissues](#) Michael A. Johnson, University of Kansas, Gregory Osterhaus, Kayla Raider, Kenneth Stensrud, Richard Givens, Sam Kaplan

3:50 PM

(1910-4)

[Multimodal Analysis of Brain Metabolism Using Microfluidic Based Biosensors](#) Martyn G. Boutelle, Imperial College London, Chi Leng Leong, Delphine Feuerstein, Michelle Rogers, Rudolf Graf

4:25 PM

(1910-5)

[Can Microfluidic Technologies Become the Gold Standard Tool for In Vitro Pharmacokinetic Profiling?](#) Dana Spence, Michigan State University

SYMPOSIA

Session 1920

ACS ANYL - Translating Microfluidics into the Analytical Curriculum: Making Innovation Practical - arranged

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by Lisa A. Holland, West Virginia University

Wednesday PM, Room: 124

Lisa A. Holland, Brigham Young University, Presiding

2:05 PM

(1920-1)

[A Microchip Capillary Electrophoresis Experiment for the Instrumental Analysis Laboratory](#) Adam T. Woolley, Brigham Young University, Pamela Nge, Weichun Yang

2:40 PM

(1920-2)

[Small Scale for a Large Audience: Outreach Projects on Microfabrication and Microfluidics](#) Michelle L. Kovarik, University of North Carolina at Chapel Hill

3:15 PM

(1920-3)

[Paper Microfluidics: An Experiment for Undergraduate Analytical Laboratories](#) Erin M. Gross, Creighton University, Connor Neuville, Kalani Parker, Michelle Clevenger

3:50 PM

(1920-4)

[Microfluidics in the K-12 Classroom](#) Lisa A. Holland, West Virginia University, Anthony Moncrief, Xingwei Wu

4:25 PM

(1920-5)

[Microfluidic Experiments for a Sophomore Level Chemistry Lab](#) B Jill Venton, University of Virginia, Jenny Lounsbury, Poojan Pyakurel

SYMPOSIA

Session 1930

Analytical Chemists Easing World Poverty - arranged by Diane Parry, The Procter & Gamble Co.

Wednesday PM, Room: 201A

Diane Parry, The Procter & Gamble Co., Presiding

2:05 PM

(1930-1)

[Sustainable Medicines for Africa](#) Stephen R. Byrn, Purdue University

2:40 PM

(1930-2)

[Global Strategies for Increased Access to Medicines and Economic Development in Sub-Saharan Africa](#) Joseph M. Fortunak, Howard University, Adrian Williams, Christopher King, Joseph Williams, Tiffany Ellison

3:15 PM

(1930-3)

[Establishing Sustainable Pharmaceutical Quality Assessment Capacity in Resource Constrained Settings](#) Thomas Layloff, Supply Chain Management System, David Jenkins, Eliagiringa Kaale, Michael Hope

3:50 PM

(1930-4)

[NanoPower Africa: Understanding Nanostructure for Indigenously Manufactured PV's in Sub-Saharan Africa](#) Gregory Beaucage, University of Cincinnati, Cheddi Kiravu, David Britton, Evariste Minani, Girma Gonfa, Gregory Smith, James Molenga, Jan Ilavsky, Margit Harting, Schadrack Nsengiyumva

4:25 PM

(1930-5)

[Analytical Chemistry in Eastern Africa](#) Anthony N. Gachanja, Jomo Kenyatta University of Agriculture and Technology

SYMPOSIA

Session 1940

Applications of Two-Dimensional High Performance Liquid Chromatography - arranged by Dwight R. Stoll, Gustavus Adolphus College

Wednesday PM, Room: 123

Dwight R. Stoll, Gustavus Adolphus College, Presiding

2:05 PM

(1940-1)

[An Experimental and Theoretical Comparison of One-Dimensional and Comprehensive Two-Dimensional Liquid Chromatography in Terms of Peak Capacity and Overall Analysis Time](#) Peter W. Carr, University of Minnesota, Lawrence Potts

2:40 PM

(1940-2)

[Recent Advances and Applications in Multidimensional Liquid Chromatography](#) Hernan Cortes, HJ Cortes Consulting, LLC and University of Tasmania

3:15 PM

(1940-3)

[On-Line Multi-Dimensional Liquid Chromatography for Pharmaceutical Analysis](#) Kelly Zhang, Genentech

3:50 PM

(1940-4)

[Ultra-High-Performance LC×LC of High-Molecular-Weight Samples](#) Peter J. Schoenmakers, University of Amsterdam

4:25 PM

(1940-5)

[A Developing Perspective on the Roles of Heartcutting and Selective or Fully Comprehensive Two-Dimensional Liquid Chromatography – Simulations and Example Applications](#) Dwight R. Stoll, Gustavus Adolphus College, David Harmes, Elliot Larson, Eric Talus, Joe Davis

SYMPOSIA

Session 1950

Detecting the Cytokine Network: Towards Understanding Chemical Communication in the Immune System - arranged by Julie Stenken, University of Arkansas

Wednesday PM, Room: 122A

Julie Stenken, University of Arkansas, Presiding

2:05 PM

(1950-1)

[Cytokines Recovered During Microdialysis Sampling: Do They Represent Damage or Disease?](#) Julie Stenken, University of Arkansas, Cynthia Sides, Geetika Bajpai, Geoff Keeler, Randy Espinal, Thaddeus Vasicek

2:40 PM

(1950-2)

[Temporal Monitoring of Cytokine Secretion Using Rapid and Multiplexed Silicon Photonic Immunoassays](#) Ryan C. Bailey, University of Illinois at Urbana-Champaign, Matthew Luchansky

3:15 PM

(1950-3)

[Cytokine Detection Using Abiotic Platforms](#) Frank V. Bright, University at Buffalo, SUNY

3:50 PM

(1950-4)

[Miniature Aptamer-Based Biosensors for Local Analysis of Cell Function](#) Alexander Revzin, University of California - Davis

4:25 PM

(1950-5)

[Resolving Dynamic Functional Responses and Cell-Cell Interactions by Integrated Single-Cell Analysis](#) J Christopher Love, Massachusetts Institute of Technology

SYMPOSIA

Session 1960

Forensic Analysis in the Lab and Crime Scene - arranged by Igor K. Lednev, University at Albany, SUNY
Wednesday PM, Room: 122B

Igor K. Lednev, University at Albany, SUNY, Presiding

2:05 PM

(1960-1)

[Advances in the Sampling and Identification of Illicit Substances and Persons in the Field and in the Lab](#) Kenneth G. Furton, Florida International University

2:40 PM

(1960-2)

[Novel Techniques for Traditional Evidence](#) Jeffrey Dake, US Army Criminal Investigation Laboratory

3:15 PM

(1960-3)

[Forensic Applications of LA-ICP-MS and LIBS](#) Jose Almirall, Florida International University

3:50 PM

(1960-4)

[Highly Sensitive Filter Paper Substrate for SERS Field Detection of Trace of Threat Chemicals](#) Samuel P. Hernandez-Rivera, University of Puerto Rico, Mayaguez, Pedro Fierro-Mercado

4:25 PM

(1960-5)

[Raman Spectroscopy and Advanced Statistics for Forensic Studies](#) Vitali Sikirzhytski, University at Albany, SUNY, Aliaksandra Sikirzhytskaya, Greg McLaughlin, Igor Lednev, Justin Bueno

SYMPOSIA

Session 1970

SAS - Elemental Analysis at the Nano Scale - arranged by Paul B. Farnsworth, Brigham Young University
Wednesday PM, Room: 201B

Paul B. Farnsworth, Brigham Young University, Presiding

2:05 PM

PITTCON 2013

(1970-1)

[Signal Processing Considerations for Single Particle Analysis by ICP-MS](#) Paul B. Farnsworth, Brigham Young University, Alisa Edmund, Dennis Tolley

2:40 PM

(1970-2)

[ICP-MS for Nano- and Micro- Particle Analysis](#) John W. Olesik, The Ohio State University

3:15 PM

(1970-3)

[X-ray Fluorescence at the Nanoscale](#) George J. Havrilla, Los Alamos National Laboratory

3:50 PM

(1970-4)

[Studies on Particle or Droplet Plasma Interaction](#) Detlef Günther, ETH Zurich, Martin Tanner, Olga Borovinskaya, Sabrina Gschwind

4:25 PM

(1970-5)

[Nanometer Scale Laser Plasma Spectrochemistry](#) Vassilia Zorba, Lawrence Berkeley National Laboratory, Richard Russo

SYMPOSIA

Session 1980

Sensors for Food Quality and Safety: From the Lab to Unobtrusive Applications - arranged by Radislav A. Potyrailo, GE Global Research

Wednesday PM, Room: 119B

Radislav A. Potyrailo, GE Global Research, Presiding

2:05 PM

(1980-1)

[Enhanced Detection of Paralytic Shellfish Toxins Through Improved Antibodies, Advanced Laboratory Biosensors, and Shipboard Rapid Tests](#) Betsy J. Yakes, US Food and Drug Administration, Stacey DeGrasse, Stephen Conrad

2:40 PM

(1980-2)

[The Photonic Nose: A Simple and Versatile Tool for Sensing](#) Leonardo D. Bonifacio, Opalux Inc., André Arsenault, Geoffrey Ozin

3:15 PM

PITTCON 2013

(1980-3)

[Edible Food Sensors](#) Fiorenzo G. Omenetto, Tufts University

3:50 PM

(1980-4)

[Biointerfaced Graphene for Bacteria Detection](#) Michael C. McAlpine, Princeton University

4:25 PM

(1980-5)

[Multivariable Wireless Sensors for Accurate Determination of Food Quality and Freshness](#) Radislav A. Potyrailo, GE Global Research, Cheryl Surman, Frank Mondello, Nandini Nagraj, William Morris, Zhexiong Tang

SYMPOSIA

Session 1990

Structure Elucidation in Native Mass Spectrometry - arranged by Evan R. Williams, University of California-Berkeley

Wednesday PM, Room: 118C

Evan R. Williams, University of California-Berkeley, Presiding

2:05 PM

(1990-1)

[Hydrogen Exchange and Oxidative Labeling Mass Spectrometry for Studying Protein Folding and Function](#) Lars Konermann, Western University

2:40 PM

(1990-2)

[Native Spray Mass Spectrometry Characterizes Protein Assemblies, Membrane Proteins, and H/D Exchange at the Amino-Acid Level](#) Michael L. Gross, Washington University in St Louis, Hao Zhang, Michael Marty, R Blankenship, Steve Sligar, Weidong Cui, Yining Wang

3:15 PM

(1990-3)

[Collision Induced Unfolding for Measuring Protein Stability and Protein-Ligand Screening](#) Brandon Ruotolo, University of Michigan, Han Lijie, Jessica Rabuck, Shuai Niu, Suk-Joon Hyung

3:50 PM

(1990-4)

[Evolution of Protein Structure: From Solution to the Gas Phase](#) David E. Clemmer, Indiana University

4:25 PM

(1990-5)

[Supercharging and Charge Detection in Native Mass Spectrometry](#) Evan R. Williams, University of California - Berkeley

WORKSHOPS

Session 2000

CACA - How To Be Successful in the Corporate World as Chinese-American Scientists - arranged by Michael Ye, Chinese American Chromatography Association - Supelco/Sigma-Aldrich

Wednesday PM, Room: 202A

Michael Ye, University of Louisville, Presiding

2:05 PM

(2000-1)

[Working in Small Biotech Company. A Personal Experience](#) Xiang Zhang, University of Louisville

2:35 PM

(2000-2)

[Resolving Problems with High Performance Time of Flight Mass Spectrometry - Application to Metabolomics, Fuel, and Food](#) Jeffrey Patrick, LECO Corporation, Joe Binkley

3:05 PM

(2000-3)

[Working as a R&D Scientist in a Global Company](#) Xiaodong Liu, Thermo Fisher Scientific

3:50 PM

(2000-4)

[Open Mind and Follow the Trend](#) Chuping Luo, Waters Corporation

4:20 PM

(2000-5)

[Enjoy and Be Happy at Work](#) Michael Ye, Supelco/Sigma-Aldrich

WORKSHOPS

Session 2010

New Advances in the Analysis of Oligonucleotide Therapeutics - arranged by Michael D. McGinley, Phenomenex

Wednesday PM, Room: 126B

Michael D. McGinley, Phenomenex, Presiding

PITTCON 2013

2:05 PM

(2010-1)

[Methodologies for Analytical Control of Oligonucleotide Syntheses at Various Scales](#) Jiong Yang, Merck Research Labs, Bing Mao, Fanyu Meng, Mirlinda Biba

2:35 PM

(2010-2)

[Solving the ADME Sample Preparation Bottleneck in Oligonucleotide Clinical Development](#) Michael D. McGinley, Phenomenex

3:05 PM

(2010-3)

[Advancing the Development of RNA Therapeutics with Innovative MS Based Assays](#) Mark Cancilla, Merck & Co., Inc.

ORGANIZED CONTRIBUTED SESSIONS

Session 2020

Ionophore-Based Chemical Sensors, II - arranged by Philippe Buhlmann, University of Minnesota

Wednesday PM, Room: 121A

Philippe Buhlmann, University of Minnesota, Presiding

2:00 PM

(2020-1)

[Sequential Chronopotentiometric/Potentiometric Detection with Permselective Membrane Electrodes for In Situ Ion Speciation Analysis](#) Gaston A. Crespo, University of Geneva, Eric Bakker, Majid Ghahraman Afshar

2:20 PM

(2020-2)

[Hydrogen Bond-Based Molecular Recognition in Fluorous Media](#) Stephen G. Weber, University of Pittsburgh, Candace McGowan, Hong Zhang, Sijia Wang

2:40 PM

(2020-3)

[Micro-Electrochemical Sensing and Confocal Microscopy Show Very Different Delivery of Classical and Nanocarrier-Bound Drug Molecules in the Conventional "Inside-Out" Tissue Model Relative to a Novel "Inside-In" Model](#) Miklos Gratzl, Case Western Reserve University

3:00 PM

(2020-4)

[Ion Selective Capsules for Recognition and Delivery](#) Elizabeth A. Hall, University of Cambridge, Jamie

PITTCON 2013

Walters, Nadia Tsao, Shah Abbas

3:35 PM

(2020-5)

[Upconverting Fluorescent Optodes for the Direct Measurements of Blood Electrolytes](#) Yu Qin, Nanjing University

3:55 PM

(2020-6)

[Anion-Selective Electrodes Based on a Metalloporphyrin and Neutral Additives](#) Philippe Buhlmann, University of Minnesota, Li Chen

4:15 PM

(2020-7)

[Measurement of Exhaled Nasal Breath Nitric Oxide Levels Using Oxy-Hemoglobin Reagent with Nitrate Ion-Selective Electrode Detection](#) Natalie R. Crist, Albion College, Alessandro Colletta, Jessi Brownstein, Joanna Zajda, Mark Meyerhoff

4:35 PM

(2020-8)

[Selective and Sensitive Molecule Recognition of Nucleotides by Small Aromatic Fluorescent Molecules](#) Norio Teramae, Tohoku University

ORGANIZED CONTRIBUTED SESSIONS

Session 2030

PAI-NET - Next-Generation Bioanalytical Tools and Methods for Life Science Research - arranged by Manabu Tokeshi, The Japan Society for Analytical Chemistry (JSAC)

Wednesday PM, Room: 117

Manabu Tokeshi, The University of Tokyo, Presiding

2:00 PM

(2030-1)

[High Sensitive and Rapid Immunoassay Based on 3D Nanostructured Interface](#) Madoka Takai, The University of Tokyo

2:20 PM

(2030-2)

[Microfluidic Valve Arrays for Two-Dimensional Protein Separation](#) Hugh Fan, University of Florida

2:40 PM

(2030-3)

[Rapid and Highly Sensitive Detection of Malaria-Infected Erythrocytes](#) Yatsushiro Shouki, National Institute of Advanced Industrial Science (Japan), Kataoka Masatoshi, Yamamura Shohei

3:00 PM

(2030-4)

[fL-aL Analytical Technologies by Nanofluidics](#) Mawatari Kazuma, The University of Tokyo

3:35 PM

(2030-5)

[Peptide Array Based Analysis of Food Allergy](#) Mina Okochi, Nagoya University, Hiroyuki Honda, Noriyasu Okazaki

3:55 PM

(2030-6)

[DNA Methylation Detection of a Single DNA Using Microfluidic Devices](#) Manabu Tokeshi, Hokkaido University

4:15 PM

(2030-7)

[Single Methylation Analysis in DNA by Electrochemiluminescence and Surface Plasmon Resonance](#) Ryoji Kurita, National Institute of Advanced Industrial Science (Japan)

4:35 PM

(2030-8)

[Control of Protein Behaviors in Living Cells Using Protein Encapsulated Nanoparticle](#) Masaru Kato, University of Tokyo

ORAL SESSIONS

Session 2040

Bioanalytical: Microfluidics and CE - arranged by Leslie A. Sombers, North Carolina State University

Wednesday PM, Room: 202B

Leslie A. Sombers, North Carolina State University, Presiding

2:00 PM

(2040-1)

[DNA Sequencing Using All Polymer Disposable Chips](#) Peter F. Ostergaard, Technical University of Denmark, Anders Kristensen, Marco Matteucci, Rafael Taboryski, Rodolphe Marie, Walter Reisner

2:20 PM

(2040-2)

[Automated Microfluidic Devices for Cell Synchronization and Single Cell Analysis](#) Seth Madren, Indiana

PITTCON 2013

University, David Kysela, Michelle Hoffman, Pamela Brown, Stephen Jacobson, Yves Brun

2:40 PM

(2040-3)

[Development of a Truly Disposable Lab-on-a Disc for Colorimetric Protein Quantification](#) Yiwen Ouyang, University of Virginia, James Landers, Jingyi Li

3:00 PM

(2040-4)

[Capillary Electrophoresis to Characterize Enzyme Performance: Microscale Methods for Nanoliters of Enzyme](#) Anthony J. Moncrief, West Virginia University, Lisa Holland

3:35 PM

(2040-5)

[EpCAM Aptamer Based for CTCs Enrichment and Detection](#) Yanling Song, Xiamen University, Chaoyong Yang, Weiting Zhang, Yuan An, Zhi Zhu

3:55 PM

(2040-6)

[Development of a High Throughput Capillary Electrophoresis Based Protein-Protein Interaction Assay for Hsp70 and Its Co-Chaperones](#) Jing Nie, University of Michigan, Jason Gestwicki, Jennifer Rauch, Robert Kennedy

4:15 PM

(2040-7)

[Identification of Cancer Biomarkers in Serum by N-Glycan Analysis with Microfluidic Devices](#) Christa Snyder, Indiana University, Indranil Mitra, Milos Novotny, Stephen Jacobson, William Alley

ORAL SESSIONS

Session 2050

Capillary Electrophoresis: Bioanalytical Applications (Half Session) - arranged by Denise Wilkins, Bechtel Bettis, Inc.

Wednesday PM, Room: 115A

Denise Wilkins, Bechtel Bettis, Inc., Presiding

2:00 PM

(2050-1)

[Investigating the Interaction of Photoactive Cr\(III\) Complexes with DNA Using Real-Time PCR and Capillary Gel Electrophoresis](#) Taylor F. Harris, Furman University, John Wheeler, Noel Kane-Maguire, Sandra Wheeler, Yasmín Alvarez-García

2:20 PM

(2050-2)

[Separation and Detection of Carcinine and Histamine by Capillary Electrophoresis Coupled to Fast Scan Cyclic Voltammetry](#) Madelaine Denno, University of Virginia, B Jill Venton, Huaifang Fang

2:40 PM

(2050-3)

[Measurement of Amino Acids on Solid Support for Sample Collection and Handling](#) Vitaly Avilov, University of Illinois at Chicago, Scott Shippy

3:00 PM

(2050-4)

[Arsenic Analysis by Carrier-Mediated Counter-Transport Single Drop Microextraction In-Line Coupled with Capillary Electrophoresis](#) Doo Soo Chung, Seoul National University, In Hye Sung, Jihye Kim, Khley Cheng, Kihwan Choi

ORAL SESSIONS

Session 2060

Environmental: Gas Chromatography (Half Session) - arranged by Denise Wilkins, Bechtel Bettis, Inc.

Wednesday PM, Room: 115A

Denise Wilkins, Bechtel Bettis, Inc., Presiding

3:35 PM

(2060-1)

[In-Field Trace Analyses Using a Portable Gas Chromatograph-Toroidal Ion Trap Mass Spectrometer \(GC-TMS\)](#) Tai V. Truong, Torion Technologies, Charles Sadowski, Douglas Later, Edgar Lee, Milton Lee

3:55 PM

(2060-2)

[GC – TOFMS Analysis of Incurred Pesticides Found in Food Commodities](#) Ashley Gates, The Pennsylvania State University, Chris Solloway, Elizabeth Humston-Fulmer, Frank Dorman, Jessica Westland, Joe Binkley

4:15 PM

(2060-3)

[Selectivity Advantage of Innovative Nano Stationary Phase GC Columns for Fast GC of Environmental Samples](#) Krishnat Naikwadi, J & K Scientific Inc., Allen Britten, Kelsey AuCoin

4:35 PM

(2060-4)

[Fast GC-MS Analysis of Semi-Volatile Organic Compounds: Migrating from Helium to Hydrogen as a Carrier Gas in EPA Method 8270](#) Alexander N. Semyonov, Thermo Fisher Scientific, Jessie Butler, Massimo Santoro, Pat O'Brien

ORAL SESSIONS

Session 2070

Fluorescence/Luminescence Bio and Nano Applications - arranged by Emily A. Smith, Iowa State University

Wednesday PM, Room: 115C

Emily A. Smith, Iowa State University, Presiding

2:00 PM

(2070-1)

[Far-Field, Sub-Diffraction Fluorescence Lifetime Imaging](#) Emily A. Smith, Iowa State University, Jacob Petrich, Michael Lesoine, Sayatan Bose

2:20 PM

(2070-2)

[Engineering a Cell-Surface DNA Circuit for Targeted and Amplified Photodynamic Cancer Therapy](#) Da Han, University of Florida, Weihong Tan

2:40 PM

(2070-3)

[A Label-Free Aptasensor for Thrombin Based on Electrochemiluminescent Luminol Functionalized Gold Nanointerface](#) Hua Cui, University of Science and Technology

3:00 PM

(2070-4)

[Dual Signal Amplification for Bioassays Using Ion Release of Nanolabels and Ion-Activated Enzyme Kinetics](#) Zhu Xiaoshan, University of Nevada, Reno

3:35 PM

(2070-5)

[Metal Core-Multiple Silica Shell Fluorescent Nanocomposites for Highly Sensitive Immunoassays](#) Daniel Citterio, Keio University, Ami Ozawa, Koji Suzuki, Yukiko Mizuno, Yuta Katayama

3:55 PM

(2070-6)

[Dequenching Fluorescence in Surface Plasmon-Coupled Emission through a Gap between Nano-Particle and Nano-Film](#) Shuo H. Cao, Xiamen University, Qian Liu, Weipeng Cai, Xiaoqing Liu, Yaoqun Li, Yuhua Weng

4:15 PM

(2070-7)

[Fluorescence Enhancement of Silicon Nanowires](#) Shaina L. Strating, University of North Dakota, Fei Tian, Xiaojun Zhao

4:35 PM

(2070-8)

[Bright NIR Fluorescent Silica Nanoparticles for Bioanalytical Applications](#) Gabor Patonay, Georgia State University, Andy Levitz, Eric Owens, Gala Chapman, Maged Henary

ORAL SESSIONS

Session 2080

Homeland Security: Improved Methods and Techniques of Analysis - arranged by Lara P. Phelps, US Environmental Protection Agency

Wednesday PM, Room: 116

Lara P. Phelps, US Environmental Protection Agency, Presiding

2:00 PM

(2080-1)

[Vapor Pressure Measurement Technique for Ultra Low Volatility Materials](#) Amanda L. Jenkins, ASK Inc., Eric Bruni, Leonard Buettner, Michael Ellzy

2:20 PM

(2080-2)

[Accurate Mass Fragment Library for Rapid Screening for Pesticides Using Ambient Pressure Desorption Ionization with High-Resolution Mass Spectrometry](#) Sara Robison, Food and Drug Administration, Lora Lin

2:40 PM

(2080-3)

[Vapor Performance Testing of Filter Materials and Filter Canisters](#) Mark Hanning-Lee, Jacobs Dugway Team, Brian Johnson, Darren Jolley, Joseph Giese, Laurence Adair

3:00 PM

(2080-4)

[The Quest for Ultimate Performance Forensic GC-MS](#) Aviv Amirav, Tel Aviv University, Alexander Fialkov, Tal Alon

3:35 PM

(2080-5)

[Breeze Tunnel Testing Of Collective Protection Tent Systems](#) Mark Hanning-Lee, Jacobs Dugway Team, Joseph Giese, Laurence Adair

3:55 PM

(2080-6)

[Developing a Green Technique for Food Safety Application Using SFC/MS and QuEChERS Technologies](#) Yibai Chen, USDA, Steven Lehotay

4:15 PM

(2080-7)

[Utilizing GCxGC – TOFMS to Improve the Data Quality for the Analysis of Fire Debris](#) Jessica Westland, The Pennsylvania State University, Frank Dorman, Kari Organtini

4:35 PM

(2080-8)

[Microfluidic Sample Cell for Terahertz Spectroscopy](#) Jerome P. Ferrance, J2F Engineering, Aaron Moyer, Boris Gelmont, Igor Sizov, Tatiana Globus, Tatyana Khromova

ORAL SESSIONS

Session 2090

LC-MS: Method Developments - arranged by Thomas E. Wheat, Waters Corporation

Wednesday PM, Room: 120A

Thomas E. Wheat, Waters Corporation, Presiding

2:00 PM

(2090-1)

[Information Rich Detection and Automated Mobile Phase Adjustment for Chromatographic Method Development](#) Thomas E. Wheat, Waters Corporation, Patricia McConville

2:20 PM

(2090-2)

[Analysis of Harmful and Potentially Harmful Chemical Components in Tobacco and Smokeless Tobacco Products and Tobacco Smoke Samples by Isotope Dilution LC-MS/MS](#) Jingcun Wu, Labstat International ULC, Andrew Masters, William Rickert

2:40 PM

(2090-3)

[Study of Reversed-Phase Protein Pre-Fractionation Frequency Coupled with Peptide Separations at Elevated Pressure for Multidimensional Proteomics Analyses](#) Kaitlin M. Fague, University of North Carolina at Chapel Hill, Edward Franklin, James Jorgenson, Jordan Stobaugh

3:00 PM

(2090-4)

[Normal Phase Liquid Chromatography Coupled to Continuous Flow – Extractive Desorption Electrospray Ionization – Mass Spectrometry for the Analysis of Chiral Compounds](#) Li Li, University of Texas at Arlington, Kevin Schug

PITTCON 2013

3:35 PM

(2090-5)

[Evaluation of Phospholipid Induced Suppression Effects in LC/MS/MS Analysis Using Phospholipid Removal Methods](#) Stuart Kushon, Phenomenex, A Carl Sanchez, Art Dixon, Emmet Welch, Erica Safan, Michael McGinley, Shahana Huq

3:55 PM

(2090-6)

[Silica Based Ionic Liquids for 96-Blade System for Extraction of Polar Compounds from Complex Matrixes](#) Fatemeh Mousavi, University of Waterloo, Janusz Pawliszyn

4:15 PM

(2090-7)

[Trace Analysis of Mycotoxins in Food Matrices by Solid Phase Extraction - Liquid Chromatography Tandem Mass Spectrometry](#) Buu N. Tran, Wadsworth Center, Amanda Hasenbalg, Kenneth Aldous, Richard Okoniewski

ORAL SESSIONS

Session 2100

Microfluidics/Lab-on-a-Chip: Applications - arranged by Joshua E. Smith, Wright Patterson Air Force Base

Wednesday PM, Room: 120B

Joshua E. Smith, Wright Patterson Air Force Base, Presiding

2:00 PM

(2100-1)

[Performing Continuous Protein Assays in Picoliter Volumes with On-Chip Droplet Incubation](#) Kennon S. Deal, Auburn University, Cheryl DeJournette, Christopher Easley, Joonyul Kim, Louis Jackson

2:20 PM

(2100-2)

[Replicating Analysis of Undiluted Hemolymph From a Single Fruit Fly](#) Michael F. DeLaMarre, University of Illinois at Chicago, Scott Shippy

2:40 PM

(2100-3)

[Efficient Separations of Biomolecules in Microfluidics with Nanogels](#) Tyler Davis, West Virginia University, Lisa Holland

3:00 PM

(2100-4)

[Single Cell Analysis and Single Cell ELISA on Microfluidic Platforms](#) Petra S. Dittrich, ETH Zurich

3:35 PM

(2100-5)

[Targeted Lysis of Adhered Cells in a Microfluidic Device to Study In Vitro Thrombus Formation](#) Bethany Gross, Michigan State University, Dana Spence

3:55 PM

(2100-6)

[Microchip Electrophoresis with Electrochemical Detection for the Investigation of the Transport and Metabolism of L-DOPA](#) Rachel A. Saylor, University of Kansas, Erin Reid, Susan Lunte

4:15 PM

(2100-7)

[Simple and Sensitive Multiplexed Pathogen Detection on Paper-Based Microfluidic Devices](#) Xiujun J. Li, University of Texas at El Paso, Alejandra Valadez, Huan Hu

4:35 PM

(2100-8)

[Detection and Identification of Reactive Nitrogen Species Using Microchip Electrophoresis with Electrochemical Detection](#) Dulan B. Gunasekara, University of Kansas, Christopher Culbertson, Diogenes dos Santos, Pann Pichetsurnthorn, Ryan Grigsby, Susan Lunte

ORAL SESSIONS

Session 2110

Nanotechnology (Half Session) - arranged by Omowunmi A. Sadik, State University of New York at Binghamton

Wednesday PM, Room: 120C

Omowunmi A. Sadik, State University of New York at Binghamton, Presiding

2:00 PM

(2110-1)

[Isolation of Cycloartane Glycosides by Spiral Countercurrent Chromatography](#) Martha Knight, CC Biotech LLC, George Rottinghaus, Corey Brownstein, William Folk

2:20 PM

(2110-2)

[Recent Advances in Suppressor Technology for Small Particle Ion Chromatography](#) Rong Lin, Thermo Fisher Scientific, Asavari Kale, Chris Pohl, Kannan Srinivasan, Sheetal Bhardwaj

2:40 PM

(2110-3)

[Recent Advances in Suppressor Technology for Ion Chromatography](#) Kannan Srinivasan, Thermo Fisher Scientific, Asavari Kale, Chris Pohl, Rong Lin, Sheetal Bhardwaj

3:00 PM

(2110-4)

[Nanodiamond Primary Particles as a Stationary Phase for Liquid Chromatography](#) John C. Vinci, University at Buffalo, SUNY, Amber Moore, Luis Colón, Zuqin Xue

ORAL SESSIONS

Session 2120

Nanotechnology: Synthesis (Half Session) - arranged by Omowunmi A. Sadik, State University of New York at Binghamton

Wednesday PM, Room: 120C

Omowunmi A. Sadik, State University of New York at Binghamton, Presiding

3:35 PM

(2120-1)

[Synthesis and Characterization of Hollow Silica Tadpole-Like Nanomaterials](#) Jiao Chen, University of North Dakota, Julia Xiaojun Zhao, Nenny Fahrudin, Xu Wu

3:55 PM

(2120-2)

[Molecularly Imprinted Polymeric NanoGUMBOS](#) Suzana Hamdan, Louisiana State University, David Spivak, Douglas Gin, Isiah Warner, Jason LeJeune, Leonard Moore, Susmita Das

4:15 PM

(2120-3)

[Cyclic Voltammetry of Hg \(II\) Generated 4,4'-Dimercaptobiphenyl Multilayers](#) Tina L. Brower, Howard University, James Briana

4:35 PM

(2120-4)

[Manipulation of the Morphology of Silica Nanowires Using a Novel One-Pot Synthesis](#) Jiao Chen, University of North Dakota, Julia Xiaojun Zhao, Nenny Fahrudin, Xu Wu

ORAL SESSIONS

Session 2130

Polymer Studies by Mass Spectrometry - arranged by Cecil Dybowski, University of Delaware

Wednesday PM, Room: 118A

Cecil Dybowski, University of Delaware, Presiding

2:00 PM

(2130-1)

[The Use of Pyrolysis-GC/MS to Examine Fluoropolymers](#) Karen Jansson, CDS Analytical, LLC, Ben Peters, Gary Deger, Stephen Wesson, Thomas Wampler

2:20 PM

(2130-2)

[Metal Speciation Analysis of Toys by GC or HPLC Hyphenation to ICPMS](#) Joaudimir Castro Georgi, CNRS-IPREM, Emmanuel Tessier, Fabienne Seby, Ken Neubauer, Olivier Donard

2:40 PM

(2130-3)

[Pyrolysis Product Analysis of an Acrylonitrile-Butadiene-Styrene \(ABS\) Blend by TG-GC-MS](#) Ekkehard Post, NETZSCH Geraetebau GmbH, Dave Shepard, Ilir Beta

3:00 PM

(2130-4)

[Alternatives to Helium Carrier Gas for Analytical Pyrolysis GC/MS](#) Terry Ramus, Frontier Labs USA, Chu Watanabe, Dave Randle, Scott Hein

3:35 PM

(2130-5)

[Fixed Gas Analysis in the Pyrolysis of Natural and Synthetic Polymers](#) Thomas Wampler, CDS Analytical, LLC, Gary Deger, Karen Jansson, Stephen Wesson

3:55 PM

(2130-6)

[Spectroscopic Evaluation of Nitrosation Processes in Polymer Systems](#) Jessica M. Joslin, Colorado State University, Ashli Simone, Melissa Reynolds

4:15 PM

(2130-7)

[Thermal Characterization of Polymeric Materials: Comparing the Information Obtained Using Evolved Gas Analysis - MS and Thermal Gravimetric Analysis - MS](#) Robert Freeman, Frontier Laboratories, Aki Hosaka, Chu Watanabe, Dave Randle, Ichi Watanabe

4:35 PM

(2130-8)

[Two-Dimensional Chromatography Applied to Polymer Blends: A New Ally for the Product Developer](#) Stephan Moyses, Sabic

ORAL SESSIONS

Session 2140

Voltammetric and Other Electroanalytical Techniques - arranged by Parastoo Hashemi, Wayne State University

Wednesday PM, Room: 121B

Parastoo Hashemi, Wayne State University, Presiding

2:00 PM

(2140-1)

[A Novel Method for Online, Sub-second Analysis of Metals in Biology and the Environment: Fast Scan Deposition Stripping Voltammetry at Carbon Fiber Microelectrodes](#) Parastoo Hashemi, Wayne State University, Kevin Wood, Pavithra Pathirathna, Yuanyuan Yang

2:20 PM

(2140-2)

[Development of a Multi-Chamber Multi-Analyte Microphysiometer for Real-Time Monitoring of Cellular Metabolism](#) Jennifer R. McKenzie, Vanderbilt University, David Cliffler, John Wikswo

2:40 PM

(2140-3)

[Dengue Virus Detection Using Impedance Measured Across Nanoporous Alumina Membrane](#) Sam Li, National University of Singapore

3:00 PM

(2140-4)

[Potentiometric Determination of pH Values of Low Ionic Strength Solutions with the Glass Combination Electrode Equipped with Ionic Liquid Salt Bridge](#) Yamanouchi Hisashi, HORIBA, Ltd., Kazuhiko Fujiwara, Manabu Shibata, Nobuaki Ogawa, Takashi Kakiuchi

3:35 PM

(2140-5)

[Fast Scan Deposition Stripping Voltammetry at Carbon Fiber Microelectrodes: A Novel, Mercury Free Method for Sub-second In Situ Copper Analysis](#) Pavithra Pathirathna, Wayne State University, Parastoo Hashemi, Yuanyuan Yang

3:55 PM

(2140-6)

[Monitoring of Dissolved Silicon in Si₃N₄ Etching Solution](#) Eugene Shalyt, ECI Technology, Chuannan Bai, Guang Liang, Julia Tyutina, Peter Bratin

4:15 PM

(2140-7)

[Detection of Pb by Fast-Scan Deposition Stripping Voltammetry at Carbon-Fiber Microelectrodes](#) Yuanyuan Yang, Wayne State University, Audrey Sulkanen, Parastoo Hashemi, Pavithra Pathirathna

4:35 PM

(2140-8)

[Electrochemical Redox Properties of Iron\(I\) and Re\(I\) Carbonyls with Unactivated Olefins: A Practical Tool for Analysis and Synthesis](#) Daesung Chong, Ball State University

POSTER SESSIONS

Session 2150

Chemometrics

Wednesday PM, Room: 204ABC

(2150-1P)

[Investigation of Soft Independent Modeling of Class Analogy for the Classification of Ignitable Liquids in Simulated Fire Debris](#) Andrew DeJarnette, Michigan State University, Ruth Smith, Victoria McGuffin

(2150-2P)

[Modeling of Four-Order Chromatographic-Fluorescence Arrays for the Quantitation of Fluoroquinolones in Environmental Samples](#) Hector Goicoechea, UNL, María Culzoni, Mirta Alcaraz

(2150-3P)

[Obtaining Net Analyte Signal Preprocessing Simultaneously with Calibration Using Tikhonov Regularization](#) John Kalivas, Idaho State University, Erik Andries

(2150-4P)

[Quantification of Butter Adulteration With Margarine Using Raman Spectroscopy](#) Reyhan S. Uysal, Hacettepe University, Hüseyin Geni, Ismail Boyaci, Ugur Tamer

(2150-5P)

[A Novel Method to Improve Classification Accuracy in Hyperspectral Image Analysis](#) Leanna N. Ergin, Cleveland State University, John Turner

POSTER SESSIONS

Session 2160

Environmental Analysis for Fuel Contaminants

Wednesday PM, Room: 204ABC

(2160-1P)

[Hydraulic Fracturing – Monitoring Environmental Impacts and Worker Exposure](#) Nicola M. Watson, Markes International, Kurt Thaxton, Lara Kelly, Meraney McCann, Vanessa Frost-Barnes

(2160-2P)

[The Determination of Selected Analytes in Samples From Locations Near Marcellus Shale Drilling Sites: Preliminary Results](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Alexandra Cottom, Emily Chunderlik, Venice Grant, Zachary Weisner

(2160-3P)

[Gasoline Range Organic Detection and Screening Using Static Headspace](#) Anne Jurek, EST Analytical, Doug Meece, Justin Murphy, Lindsey Pyron

(2160-5P)

[Oil Emission Monitoring in Cabin Air with a Portable Gas Sensor Array](#) Andreas Walte, Airsense Analytics, Bert Ungethuem, Wolf Muenchmeyer

POSTER SESSIONS

Session 2170

Environmental: General Interest

Wednesday PM, Room: Exposition Floor, Aisles 1600-2100

(2170-1P)

[Analysis of Clopyralid in Local Compost Piles](#) Kimberly D. Chichester, St. John Fisher College, Benjamin Haywood, Irene Kimaru

(2170-2P)

[Pyrolysis GC/MS Used to Study Natural Organic Matter in Composts, Soils, and Sediments](#) Karen Jansson, CDS Analytical, LLC, Ben Peters, Gary Deger, Stephen Wesson, Thomas Wampler

(2170-3P)

[Long-Term Monitoring of Ultra-Low Major Ion Species at Greenland Environmental Observatory Summit \(GEOSummit\)](#) Liying Zhao, University of California - Merced

(2170-4P)

[Observation of Acid Rain in Sapporo, Northern Japan, during 2006-2012 and Its Application to the Environmental Education](#) Masahiko Kan, Hokkaido University

(2170-5P)

[Prediction of Temporal Chemical Profiles of Rhus Pendulina Ecotypes Grown on Acid Mine Drainage Using Near Infrared Spectroscopy](#) Ntebogeng S. Mokgalaka, Tshwane University of Technology, Sandra Combrinck, Thierry Regnier

(2170-6P)

[Development of Biodegradable Electrochemical Sensors Using Nanostructured poly\(amic\) Acid Membranes](#) Peter Kosgei, University at Binghamton, SUNY, Omowunmi Sadik

(2170-7P)

[Quantitative and Qualitative Extraction and Determination of Cyanide in Soils and Sediments](#) William C. Lipps, OI Analytical, Gary Engelhart, Libby Badgett

(2170-8P)

[Spark Induced Breakdown Spectroscopy for Rapid Analysis of Mercury in Soils](#) Pavan Kumar Srungaram, Mississippi State University, Fang Yu Yueh, Jagdish Singh, Krishna Ayyalasomayajula

(2170-9P)

[Biodegradation of Polyalthia Longifolia Litter for Production of Value Added Product](#) Harshang V. Pandya, MG Science Institute, Hyacinth Highland, Mrugesh Shukla, Prakruti Kapadia, Vijaya Nadagouda

(2170-10P)

[Comparison of the Selectivity of Ionic Liquid Stationary Phases for the Analysis of PAHs](#) Leonard M. Sidisky, Sigma-Aldrich/Supelco, Daniel Shollenberger, Greg Baney, Gustavo Serrano, James Desorcie, Katherine Stenerson

(2170-11P)

[Diffusive Monitoring – A Cost-Effective and Quantitative Approach to Environmental Monitoring](#) Nicola M. Watson, Markes International, Kurt Thaxton, Lara Kelly, Meraney McCann, Vanessa Frost-Barnes

(2170-12P)

[A Benchtop Laboratory Heat Exchanger](#) Gerald Williams, Cannon Design

(2170-13P)

[New Miniaturized Thermal Desorber for Micro Gas Chromatography](#) Ronan Cozic, SRA Instruments, Alain Delaunz, Axel Bart, Christophe Pijolat, Franck James, Philippe Breuil

(2170-14P)

[Real Time Monitoring of VOCs and Inorganic Compounds by Ion – Molecule Reaction Mass Spectrometry: Technology and Applications](#) Werner Federer, V&F Analyse- und Messtechnik GmbH, Christian Leidlmair, Johannes Villinger, Siegfried Praun

(2170-15P)

[Metrological Traceability for HCl Analyses](#) Janneke Van Wijk, VSL

(2170-16P)

[Palmtop D-Battery EPMA Made by Glue](#) Susumu Imashuku, Kyoto University, Jun Kawai

(2170-17P)

[Monitoring Phytoplankton Community Structure via Imaging Multivariate Optical Computing](#) Joseph Swanstrom, University of South Carolina, Michael Myrick, Shawna Tazik, Tammi Richardson, Timothy Shaw

(2170-18P)

[Evolved Gas Analysis \(EGA\) by GCMS to Evaluate Pollutants Created During Forging](#) Jeff Parish, Shimadzu Scientific Instruments, Inc.

(2170-19P)

[Halide-Induced Cooperative Acid-Base Behavior of the Silica/Water Interface Studied by Second Harmonic Generation Spectroscopy](#) Shafiu Azam, University of Alberta, Akemi Darlington, Champika Weeraman, Julianne Gibbs-Davis

PITTCON 2013

POSTER SESSIONS

Session 2180

High-Throughput Chemical Analysis

Wednesday PM, Room: 204ABC

(2180-1P)

[Deactivation of Metal Capillary Columns: Moving From Trace Sulfur Applications to Stable and Inert High Temperature GC Solutions](#) Jaap de Zeeuw, Restek Corporation

(2180-2P)

[Chromatographic Effects of Varying Particle Size and Size Distributions of Superficially Porous Particles](#) Joseph DeStefano, Advanced Materials Technology, Robert Bichlmeir, Stephanie Schuster, William Johnson

(2180-3P)

[Open Probe Fast GC-MS with Supersonic Molecular Beams – Easy, Ultra Fast and Informative Analysis](#) Aviv Amirav, Tel Aviv University, Alexander Fialkov, Alexander Gordin, Mati Morag, Tal Alon

(2180-4P)

[Advantages of a Fast LC Analysis with UHPLC/HPLC Compatible Hybrid Particle Column](#) Takashi Sato, YMC Co., Ltd., Ernest Sobkow, Naohiro Kuriyama, Noriko Shoji

(2180-5P)

[Solving One of Chromatography's Biggest Dilemma – Proper Sealing of Chromatography Autosampler Vials](#) Dave Edwards, Thermo Fisher Scientific, Detlev Lennartz, Loy Shick

POSTER SESSIONS

Session 2190

LC-MS: Bioanalytical, Environmental, Drug Discovery, Pharmaceutical, Food Science and Homeland Security

Wednesday PM, Room: Exposition Floor, Aisles 1600-2100

(2190-1P)

[Enzymatic Assay of D-Proline with LC-MS/MS Detection](#) Cassandra D. McCullum, Jackson State University, Liu Yiming, Tchounwou Paul

(2190-2P)

[An Automated Approach to Increase Sensitivity in LC/MS Multidimensional Methods](#) Dan Root, Waters Corporation, Aparna Chavali, Patricia McConville, Thomas Wheat

(2190-3P)

[Development of Low Extractables Syringe Filters For Liquid Chromatography/Mass Spectrometry Applications](#) Larry Scheer, Pall Corporation

(2190-4P)

[Determination of Bisphenol A, Oxybenzone and Triclosan in Human Breast Milk by Online Column-Liquid Chromatography-Tandem Mass Spectrometry](#) Robert L. Jansing, New York State Department of Health, Buu Tran, Kendra Adams, Shijun Lu

(2190-5P)

[Method Comparison Between HPLC-UV and LC-MS on Biomarker Profile of Prostanoids and Sex Hormones](#) Guoxiu Wei, Temple University, Susan Jansen-Varnum

(2190-6P)

[Robustness of Method for Separating and Quantifying Seven Arsenic Species in Human Urine by HPLC-ICP-DRC-MS](#) Jennifer Ysseldyke, CDC/ORISE, Carl Verdon, Cynthia Ward, Kathleen Caldwell, Nolan Hilliard, Robert Jones

(2190-7P)

[Development of EPA Method 537 Using UHPLC](#) Karen A. Randazzo, Suffolk County Water Authority Laboratory, Amanda Comando, Christine Lasher, Kevin Durk, Thomas Schneider

(2190-8P)

[Development of EPA Method 539 Using UHPLC](#) Karen A. Randazzo, Suffolk County Water Authority Laboratory, Amanda Comando, Christine Lasher, Kevin Durk, Thomas Schneider

(2190-9P)

[Screening and Quantitation of Targeted and Non-Targeted Environmental Pollutants in Water Samples](#) Andre Schreiber, AB SCIEX, Yun Yun Zou

(2190-10P)

[Ion Chromatography Determination of Inorganic Anions and Cations Coupled with the Advion Compact Mass Spectrometer \(CMS\)](#) Nigel Sousou, Advion, Jack Henion, Jamey Jones, Lee Collier, Simon Prosser

(2190-11P)

[Identification and Synthesis of a Degradation Product in a Multi-Active Solid Dosage Drug Product](#) Gail Reed, McNeil Consumer Healthcare (Johnson & Johnson), Hugh Ta, Steve Martellucci

(2190-12P)

[Identification of a Novel Phenylephrine Degradant Using Stable Isotope Labeling Technique \(SILT\)](#) Keith Rippel, Pfizer, David Giamalva, Doug Durham, Jonathan Humphrey, Marlee Glasscock

(2190-13P)

[Combining Mass and UV Online Detection in Flash Chromatography](#) Lawrence Klecha, Advion, Ben Trumbore, Nigel Sousou

(2190-14P)

[Determination of Selectivity of PfTrxR Ligands Towards PfTrxR, PfGR, Human TrxR, Human GR Using Mass Spectrometry and in Silico Molecular Modeling](#) Ranjith K. Munigunti, Auburn University, Acevedo Orlando, Angela Calderon, Symon Gathiaka

(2190-15P)

[Investigation of Urinary Pteridine Levels as Potential Biomarkers for Early Cancer Detection Using Liquid Chromatography Tandem Mass Spectrometry](#) Henok D. Abshiro, Missouri University of Science and Technology, Sanjeewa Gamagedara, Yinfa Ma

(2190-16P)

[Increased Throughput and Purity of Combinatorial Libraries Utilizing A Targeted Gradient Profile Based on Preliminary Analytical Screening](#) Todd Anderson, Shimadu Scientific Instruments, Thomas Russell

(2190-17P)

[HPLC Capillaries – An Important Contributor to Improve Chromatographic Results](#) Marc Fuehrer, Agilent Technologies

(2190-18P)

[Microextraction and Analysis of Direct and Reactive Dye Formulations From Cotton Fibers Using Ultra-Performance Liquid Chromatography and Mass Spectrometry](#) Scott J. Hoy, University of South Carolina, Jennifer Stoner, Molly Burnip, Stephen Morgan, Tracy McKinnon, Wendy Bell

(2190-19P)

[Optimization of LCMS Analysis of Pesticide Residues in Food Products When Using QuEChERS Technique](#) A Carl Sanchez, Phenomenex, Art Dixon, Monika Kansal

(2190-20P)

[Improving Laboratory Productivity by Preventing UHPLC and LC/MS System Downtime](#) Anne Mack, Agilent Technologies, Jason Link, Maureen Joseph, William Long

(2190-21P)

[Comprehensive Confirmatory Analysis of Multiple Improvised Explosives](#) Kelley L. Peters, Florida International University

(2190-22P)

[LC/MS Analysis of Hydrophilic Compounds by a Polymer-Based Amino HILIC Column](#) Junji Sasuga, Shodex/Showa Denko K.K., Kanna Ito, Takashi Kotsuka

(2190-23P)

[Influence of the Solvent Quality on UHPLC/UV/MS Results](#) Shyam Verma, Sigma-Aldrich, David Bell, Rudolf Kohling

(2190-24P)

[Analysis of Heterocyclic Aromatic Amines in Tobacco and Tobacco Smoke by Isotope Dilution Liquid Chromatography Tandem Mass Spectrometry](#) Jingcun Wu, Labstat International ULC, Andrew Masters, Mingliang Bao, William Rickert

(2190-25P)

[Trace Analysis of Acetamide by in Pharmaceutical Samples by HPLC-MS](#) John P. Guzowski, Biogen Idec, Pierre Boulas, William Kiesman, Yiqing Lin

(2190-26P)

[HPLC Studies on the Fate of Drugs in the Body](#) Huba I. Kalasz, Semmelweis University, Kornelia Tekes

(2190-27P)

[Reversed Phase Liquid Chromatography of Stabilized Enzymes Using An Ionic Liquid - Polyethylene Glycol Mobile Phase Modifier Combination](#) Neil D. Danielson, Miami University, Ling Zhou

(2190-28P)

[Considerations in the HPLC Analysis of Biomolecules](#) Mark Woodruff, Fortis Technologies Ltd, Ken Butchart

(2190-29P)

[The Characterization of Polycationic Biocides in Multipurpose Contact Lens Solution Using Ultra Performance Liquid Chromatography](#) Xing Wei, Furman University, Brandon Thompson, Fred David, John Wheeler, Kenneth Phillips, Sandra Wheeler

(2190-30P)

[The Use of Microflow UHPLC as a Way to Solvent Usage in Pesticide Screening of Food Samples by LC-MS/MS](#) Andre Schreiber, AB SCIEX, Stephen Lock

(2190-31P)

[New 5 \$\mu\text{m}\$ Core-Shell Particles for Increased Performance with Low Backpressure](#) Jason Anspach, Phenomenex, Jeff Layne, Lawrence Loo, Tivadar Farkas

(2190-32P)

[Chromatographic Retention and Selectivity with Ternary Mobile Phases and "Bio-Inspired" Stationary Phases](#) Jason W. Coym, University of South Alabama

(2190-33P)

[Determination of Drugs in Serum Using Heart-Cutting Two-Dimensional Ultra-High Performance Liquid Chromatography](#) Kenichiro Tanaka, Shimadzu Scientific Instruments, Inc., William Hedgepeth

(2190-34P)

[Determination of Biogenic Amines in Foods and Beverages Using Automated Pre-Column Derivatization](#) Kenichiro Tanaka, Shimadzu Scientific Instruments, Inc., William Hedgepeth

(2190-35P)

[Novel, Universal Approach for the Measurement of Natural Products in a Variety of Botanicals and Supplements](#) David Thomas, Thermo Fisher Scientific, Bruce Bailey, Ian Acworth, Marc Plante, Qi Zhang

(2190-36P)

[Investigating Seasonal Trends in Phenolic Compounds in New Hampshire Maple Sap Using HPLC](#) Elizabeth Brady, University of New Hampshire, Barrett Rock, Martha Carlson, Sterling Tomellini, Walter Shortle

(2190-37P)

[Analysis of Silicone Oils by High Performance Liquid Chromatography and Corona Charged Aerosol Detection](#) Marc Plante, Thermo Fisher Scientific, Bruce Bailey, Ian Acworth, Norman Ramsey, Qi Zhang

(2190-38P)

[Relative Response Factor Determination for a Chromatographic Method Using Nuclear Magnetic Resonance Spectroscopy: Qualification and Application to Mixtures](#) Lakshmy M. Nair, Baxter Healthcare, Catherine Quinn, Christina Szabo, Christopher Cullen, Karalyn Havel, Michael Koberda, Xiaohui Yang, Yakov Genchanok

(2190-39P)

[Development of New Chiral Stationary Phase Based on Functionalized Cyclofructan 6 for Ligand Exchange - High Performance Liquid Chromatography](#) Nilusha L. Padivitage, University of Texas at Arlington, Daniel Armstrong, Milan Dissanayake

(2190-40P)

[Development and Validation of RP-HPLC Method For Simultaneous Estimation of Aspirin, Hydrochlorothiazide, Ramipril, Simvastatin, and Atenolol in Capsule Dosage Form](#) Ankit B. Patel, SK Patel College

(2190-41P)

[NP-HPLC With Amide \(Propyl Amide Bonding Silica Gel\) for the Separation of Nucleic Acid Fragment Isomers](#) Wang Hongyu, Bonna-Agela Technologies, Liu Jack, Wang Qunjie

(2190-42P)

[UHPLC Packed Column Designed for Allowing Continuous Injections Under Ultra High Pressure Conditions](#) Yoshihisa Hiroe, Shiseido Co., Ltd, Kazuko Haseyama

(2190-43P)

[Application of Microwave-Assisted Digestion for the Analysis of Salivary Total Proteins](#) Yangsun Kim, Hudson Surface Tech, Changwon Park, Heysun Maeng, Hyunjung Seo, Sunyoung Ahn, Yongha In

(2190-44P)

[LC/MS/MS Combined with Tandem-Cartridge Solid Phase Extraction for Measurement of Thyroid Hormone and Derivatives in Rat Serum](#) Nanqin Li, Health Canada, Mike Made, Sonia Johnson

(2190-45P)

[Mass Spectrometry Analysis of NXS/T Glycosylation Sites in Recombinant Glycoproteins](#) Izabela Sokolowska, Clarkson University, Alisa Woods, Armand Ngounou Wetie, Costel Darie

POSTER SESSIONS

Session 2200

Physical Measurements

Wednesday PM, Room: 204ABC

(2200-1P)

[The Influence of Thermal Gradients in Rheological Measurements](#) Prajakta Kamerkar, Anton Paar USA, James Eickhoff, Maxine Quitaro

(2200-2P)

[Replacing Mercury Thermometer in Dropping Point of Wax Using Optical Profile Gradient Analysis to Detect the Fall of the Drop](#) Tore Fossum, Mettler Toledo, Inc.

(2200-3P)

[Self-Focusing the Laser Radiation with \$\approx 1,064\$ nm During the Laser Breakdown in Liquids](#) Valery Bulatov, Technion-Israel Institute of Technology, Grigory Toker, Israel Schechter, Tatiana Kovalchuk

(2200-4P)

[Customized Vacuum Systems-Transferring an Idea to an Optimized Vacuum Solution](#) Tobias Stoll, Pfeiffer Vacuum GmbH, Jan Hofmann, Michael Schweighofer

(2200-5P)

[Growth Characterization of Pure Mycelial Ganoderma sp. Culture Isolated from Gujarat, India](#) Vijaya R. Nadagouda, MG Science Institute, Mrugesh Shukla, Shreyas Bhatt

(2200-6P)

[A Method for Completely Dispersing Oil Sands and Tailings Samples Prior to Laser Diffraction Particle Size Distribution Analysis](#) Richard Paproski, Syncrude Canada Ltd., David Duford

(2200-7P)

[Staged-Vacuum Filter Assembly for Particle Size Distribution Analysis of Diluted Bitumen Solids](#) Richard Paproski, Syncrude Canada Ltd., Carla Gerein, Daniel Bulbuc, Dena Lupaschuk, Rebecca Teixeira, Scott Leakey

POSTER SESSION

Session 2210

Undergraduate Poster Session

Wednesday PM, Room: 204ABC

(2210-1P)

[NMR Studies of Enantioselective Interactions of Ibuprofen Derivatives with Guanosine Monophosphate Aggregates](#) William J. Taylor, Rensselaer Polytechnic Institute, Akshar Gupta, James Kempf, Linda McGown, Yingying Dong

(2210-2P)

[Building and Characterization of an Inexpensive Micro-Spectrophotometer](#) Matthew T. Baker, Maryville University, Thomas Spudich, Timothy Perkins

(2210-3P)

[Reconstruction of Color of Optically Active Sensing Wells from Underneath the Skin](#) Slavko N. Rebec, Case Western Reserve University, Miklos Gratzl

(2210-4P)

[Kinetic Characterization of a Peptide Substrate Reporter to Measure Phosphorylation Activity of Spleen Tyrosine Kinase \(SYK\)](#) Uduak F. Udoeyo, Temple University, Abigail Turner, Michelle Kovarik, Nancy Allbritton

(2210-5P)

[Impedance-Assisted Amperometry and Voltammetry for Biological Applications](#) Stephen R. Whitfield, Illinois Wesleyan University, Jennifer Schreiber, John Baur, Melinda Baur

(2210-6P)

[Towards Optimization of Super Resolution Optical Microscopy with Spherical Microlenses](#) Dillon C. Yost, Berry College, Chuanhong Zhou, Punit Kohli

(2210-7P)

[A Rapid Method to Measure Branched-Chain Amino Acid Isomers in Dried Blood Spots](#) Daniel S. Miller, West Chester University of Pennsylvania, Benjamin Herman, Joseph Di Bussolo, Joseph Herman

(2210-8P)

[A Comparison of the Ionization Efficiencies for a Number of Molecules Using Electrospray Ionization and Solvent Assisted Inlet Ionization](#) Loubna Pagnotti, University of the Sciences, Charles McEwen

(2210-9P)

[Synthesis and Characterization of A Series of New Peptide-Based Chiral Ionic Liquids](#) Faiza Filfil, St. John Fisher College, Irene Kimaru

(2210-10P)

[Influence of Alkyl Spacer on Properties of L-Phenylalanine Ester Chiral Ionic Liquids](#) Lydia R. Morris, St. John Fisher College, Irene Kimaru, Nicole Savage

(2210-11P)

[A Fast Scan Cyclic Voltammetry Exploration of Acceptability and Efficacy of Antidepressants In Vivo](#) Anisa Zeqja, Wayne State University, Howard Marvhe, Kristin Gallik, Parastoo Hashemi

(2210-12P)

[Fast-Scan Deposition-Stripping Voltammetry of Metals: Stabilization of Nafion Coatings for Neurochemical](#)

[Applications](#) Audrey Sulkanen, Wayne State University, Karl Charlson, Parastoo Hashemi, Pavithra Pathirathna, Yuanyuan Yang

(2210-13P)

[Synthesis and Kinetics of BSA Microspheres for Drug Delivery](#) Austin T. Keller, Colorado College, Nathan Bower

(2210-15P)

[Evaluation of Hopped Wort to Assess Efficiency of the Industrial Whirlpool Process](#) Kelsey A. Packard, University of New Hampshire, Austin Gregoire, Elizabeth Brady, Sterling Tomellini

(2210-16P)

[Electrografting, Spontaneous Grafting and Solvent-Free Modification of Carbon Electrodes Using Aryldiazonium Tosylates](#) Jonathan Price, Wittenberg University, Kristin Cline, Thomas Mori

(2210-18P)

[Video-based Lip Tracking System Calibration and Enhancement](#) Paul B. Szyszko, La Salle University, Jennifer Kleinow, William Weaver

(2210-19P)

[Determination of Estradiol Aqueous Solubility by High Performance Liquid Chromatography](#) Matthew Grim, Christopher Newport University, Geoffrey Klein

(2210-20P)

[Oxidation of p-cresol to p-hydroxybenzaldehyde Using Metal Catalysts](#) Jordan Esely-Kohlman, Bethel College

(2210-21P)

[Compositional Comparison of Asphaltenes Collected via Two Extraction Techniques](#) Mitchell R. Horten, Christopher Newport University, Geoffrey Klein, Ward Strickland

(2210-22P)

[HPLC Method Development for the Separation and Detection of 17 \$\beta\$ -Estradiol and Its Seven Degradation Products](#) Katherine N. Schumacher, Christopher Newport University, Geoffrey Klein, Jesse Maxwell

(2210-23P)

[The Characterization of Prepared Immobilized -cyclodextrin Beads and Their Binding Affinity with Enkephalin Neuropeptides in Microdialysis Sampling](#) Tiffany Onifer, Waynesburg University, Heidi Fletcher, Sarah Farquhar

(2210-24P)

[Computer Simulation Study of Methane Hydrate Formation in Carbon Nanotubes](#) Roger D. Boff, University of Pittsburgh, Ken Jordan

(2210-25P)

[Capsaicin and Scoville Heat Unit \(SHU\) Quantification of Peppers Using High Performance Liquid Chromatography](#) Scott A. Braden, Westminster College, Sarah Kennedy

(2210-26P)

[Spectroscopic Investigation of Band-Edge Luminescence in Magic-Sized Cadmium Chalcogenide Nanocrystals as a Function of Solution-Phase Equilibria](#) Caitlin R. Eno, Elmira College, Jared Baker, Natalie Robinson

(2210-27P)

[Electroosmotic Flow \(EOF\) in Glass and Plastic Microfluidic Devices](#) Shane M. McMahon, Penn State Berks, James Karlinsey, Ryan Keltz

(2210-28P)

[Optimization of the Recovery of Barium and Strontium from Produced Water](#) Danielle N. Murtagh, Westminster College, Helen Boylan

(2210-29P)

[Assessing the Effectiveness of a Fluorometer for Detecting Oil in the Marine Environment in the Presence of Dissolved Organic Matter](#) Glenn S. Frysiner, US Coast Guard Academy, Corey Green, Curtis Hayes, Deanna Bergondo, Gregory Hall, Richard Nagel

(2210-30P)

[Quantification of Capsaicin and Determination of Scoville Units of Salsas Through High Performance Liquid Chromatography](#) Olivia Miller, Westminster College, Sarah Kennedy

(2210-31P)

[Spectroscopic Characterization of Acetic Acid-Derived Carbon Nanoparticles as a Function of pH](#) Katelyn D. Nicoletta, Elmira College, Jared Baker

(2210-32P)

[LC/MS Comparisons of Mauveine Dyes Prepared by Traditional and Novel Oxidations](#) Robert K. Saxton, Hampden-Sydney College, Kevin Dunn, Paul Mueller

(2210-33P)

[Preliminary Studies in the Chemometric Analysis of Frack Water Samples](#) Gavin Steadman, Westminster College, Brittany Majors, Carolyn Cuff, Helen Boylan, Morgan Swartz

(2210-34P)

[Longitudinal Study of Metal Concentrations in Fingernails, Toenails, and Hair: A Comparative Analysis](#) Krista M. Ulisse, Westminster College, Helen Boylan

(2210-35P)

[Investigating Colligative Properties of Solutions](#) Joshua Walker, Shenandoah University, Diep Ca, Hiwan Brhena, Jason Weibel, Nicholas Petrilla

(2210-36P)

[UVRR Studies of Poly-Glutamine Fibril Aggregation](#) Jonathan Weisberg, University of Pittsburgh, David Punihaole, Liqi Feng, Sanford Asher

(2210-37P)

[Analyzing the Chemistry Behind Color-Changing Paints](#) Nicole E. George, Westminster College, Helen Boylan, Julie Rice

(2210-38P)

[Analysis of a Non-Thermal Microwave Effect on Proteins: A Novel SPROX Approach](#) Sarah A. Welsh, Westminster College, Helen Boylan

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(2210-39P)

[Monitoring Degradation of 1-ethyl-3-methylimidazolium Bromide Ionic Liquid in Aqueous Potassium Permanganate Using HPLC](#) Conrad Liu, Kalamazoo College, Clifford Harris, Danielle Bennett, Jacob Skeans, Jennifer Furchak, Joseph Smith, Kara Sherman

Thursday AM, March 21, 2013

SYMPOSIA

Session 2220

ACS ANYL - Metals in Biology - arranged by Characterization of Moiety and Function - David Koppenaal, PNL

Thursday AM, Room: 125

David Koppenaal, CNRS University, Presiding

8:05 AM

(2220-1)

[Probing for Metals, Metal Moieties and Metal-Containing Molecules in Biological Systems: Can Mass Spectrometry Alone Do The Job?](#) Ryszard Lobinski, CNRS University

8:40 AM

(2220-2)

[Metallomic Markers in Medicine](#) Ariel D. Anbar, Arizona State University, Gwyneth Gordon, Jennifer Morgan, Joseph Skulan

9:15 AM

(2220-3)

[Metallomics Approaches – Powerful Methods to Study Metalloprotein Regulation in Biomedical Research](#) Joseph Caruso, University of Cincinnati, Aleksey Porollo, George Deepe, Julio Landero-Figueroa, Kavitha Subramanian

9:50 AM

(2220-4)

[ESI-MS to Microplasma Elemental MS in Less Than a Minute](#) R Kenneth Marcus, Clemson University, Benjamin Manard, Carolyn Burdette, Lynn Zhang

SYMPOSIA

Session 2230

Analysis of Pathogenic Bacteria in Complex Mixtures and Microbial Communities by Proteomics Mass Spectrometry - arranged by Rabih E. Jabbour, US Army ECBC

Thursday AM, Room: 124

Rabih E. Jabbour, US Army ECBC, Presiding

PITTCON 2013

8:05 AM

(2230-1)

[Mass Spectrometry Based Pan-omic Studies of Complex Host-Pathogen-Commensal Systems](#) Richard Smith, Pacific Northwest National Laboratory, Brooke Deatherage, James Sanford, Jie Li, Joshua Adkins, Marcus Jones, Scott Kronewitter, Young-Mo Kim

8:40 AM

(2230-2)

[Use of Proteomics Mass Spectrometry to Expand our Global Understanding of Tuberculosis](#) Karen M. Dobos, Colorado State University, Angelo Izzo, Carolina Mehaffy, Jessica Prenni, Jolynn Troudt, Lisa Wolfe, Nicole Kruh-Garcia

9:15 AM

(2230-3)

[Identification of Bacteria in Complex Double-Blind Microorganism Mixtures by LC-ESI-MS/MS](#) A Peter Snyder, US Army ECBC, Rabih Jabbour

9:50 AM

(2230-4)

[Quantitative Microbial Community Analysis: Can We Find a Target Bacterium?](#) Kenneth F. Reardon, Colorado State University, Jeremy Chignell, Seijin Park

10:25 AM

(2230-5)

[Metagenomic and Metaproteomic Analyses of Marine Biofilms](#) Dasha Leary, Naval Research Laboratory, Gary Vora

SYMPOSIA

Session 2240

Analytical Chemistry in the Next Ten Years - arranged by M Bonner Denton, University of Arizona

Thursday AM, Room: 201A

M Bonner Denton, University of Arizona, Presiding

8:05 AM

(2240-1)

[Chemical Instrumentation: New Methodologies Open Doors for Advanced Handheld Instrumentation - Taking the Lab to the Sample](#) M Bonner Denton, University of Arizona

8:40 AM

(2240-2)

[Single Cell Assays: Past, Present and Future Trends](#) Jonathan Sweedler, University of Illinois

9:15 AM

(2240-3)

[Advances in Separation Science](#) Edward S. Yeung, Iowa State University

9:50 AM

(2240-4)

[Mass Spectrometry: A Ten Year Forecast](#) Alan G. Marshall, Florida State University

10:25 AM

(2240-5)

[The Future of Analytical and Physical Measurements in Industry](#) Curtis Marcott, Light Light Solutions

SYMPOSIA

Session 2250

Challenges, Opportunities, and Innovation in DNA and RNA Screening - arranged by Joel M. Harris, University of Utah

Thursday AM, Room: 123

Joel M. Harris, University of Utah, Presiding

8:05 AM

(2250-1)

[New Ways to Use Nanostructured Plasmonic Interfaces, Surface Enzyme Chemistries and Surface-Sensitive Optical Spectroscopies for the Ultrasensitive Multiplexed Detection of Nucleic Acids](#) Robert M. Corn, University of California - Irvine, Aaron Halpern, Ting Seefeld, Yulin Chen

8:40 AM

(2250-2)

[Multiplexed Nucleic Acid Analyses Enabled by Silicon Photonic Microring Resonator Arrays: Approaches to Direct Sequence Discrimination, Improved Target Capture and Enhanced Detection Sensitivity](#) Ryan C. Bailey, University of Illinois at Urbana-Champaign, Abraham Qavi, Jared Kindt, Philip Rabe

9:15 AM

(2250-3)

[Force-Induced Unzipping of Lesion-Containing Duplexes in an Alpha-Hemolysin Nanopore](#) Henry White, University of Utah, Aaron Fleming, Cynthia Burrows, Qian Jin

9:50 AM

(2250-4)

PITTCON 2013

[Low Density DNA Microarrays for Rapid, Multiplexed Diagnostics](#) Kathy Rowlen, InDevR Inc.

10:25 AM

(2250-5)

[Single-Molecule Measurements of DNA Hybridization Kinetics](#) Joel M. Harris, University of Utah, Eric Peterson

SYMPOSIA

Session 2260

Environmental Applications of High Resolution Mass Spectrometry - arranged by Earl M. Thurman, University of Colorado

Thursday AM, Room: 118C

Earl M. Thurman, University of Colorado, Presiding

8:05 AM

(2260-1)

[Accurate Mass LC/MS and GC/MS Applications in Agricultural R&D](#) Jeffrey R. Gilbert, Dow AgroSciences

8:40 AM

(2260-2)

[Use of LC-O-TOF-MS for the Identification of Plant and Soil Degradation Products](#) Imma Ferrer, University of Colorado, Earl Michael Thurman, Jerry Zweigenbaum

9:15 AM

(2260-3)

[Leveraging High Performance Time of Flight Mass Spectrometry in the Identification and Trace Analysis of Analytes in Complex Environmental Matrices](#) Jeffrey Patrick, LECO Corporation, David Alonso, Joe Binkley, Kevin Siek

9:50 AM

(2260-4)

[Some Recent Advances in Environmental Proteomics](#) Roberto Samperi, Rome University

10:25 AM

(2260-5)

[Accurate Mass Analysis of Hydraulic Fracturing Waters](#) Earl Michael Thurman, University of Colorado, Imma Ferrer

SYMPOSIA

Session 2270

The Role of the Analytical Laboratory in Biomonitoring Studies - arranged by Brian T. Buckley, Rutgers University

Thursday AM, Room: 122A

Brian T. Buckley, Rutgers University, Presiding

8:05 AM

(2270-1)

[Biomonitoring of Exposure to Environmental Chemicals](#) Dana B. Barr, Emory University

8:40 AM

(2270-2)

[Use of Biomarkers to Evaluate Effects of Residential Chlorpyrifos Exposure During Pregnancy on Fetal Growth and Child Cognitive Development](#) Robin M. Whyatt, Columbia University, Dana Barr, Sriresh Arunajadai, Virginia Rauh

9:15 AM

(2270-3)

[Verification Without Commercial Standards. How Do We Know What We Don't Know?](#) Brian T. Buckley, Rutgers University, Haiping Wang, Janice Coughlin, Yiling Cui

9:50 AM

(2270-4)

[Customized Automation Approach to High-Throughput Analysis of Environmental and Biological Samples for Bio-Monitoring Studies](#) Hilly Yang, Rutgers University, Brian Buckley, Chun Tong

10:25 AM

(2270-5)

[The Future of Human Bio-Monitoring Through Biomarker Discovery Using A Metabolomics Approach](#) Dean P. Jones, Emory University

WORKSHOPS

Session 2280

ALMA - Lab Management: Basics and Beyond - arranged by Kurt Headrick, Vale

Thursday AM, Room: 126B

Kurt Headrick, Vale, Presiding

8:05 AM

(2280-1)

[Essential Skills for Lab Managers and Supervisors](#) Kurt Headrick, Vale

PITTCON 2013

8:35 AM

(2280-2)

[What's It Like on the Other Side - Transitioning into a Managerial Role](#) Anna B. Polanco-Ramos, San Antonio Water System

9:05 AM

(2280-3)

[People Are The Most Important Laboratory Asset: How To Hire And Retain Your Best People](#) Lawrence Murphy, Cabot Corporation

9:35 AM

(2280-4)

[Inspirational Bench Leadership – A Lesson in Communications](#) Rick Parmely, Polished and Professional LLC

10:20 AM

(2280-5)

[Applying Project Management Concepts in the Laboratory](#) Veronica J. Godley, San Antonio Water System

10:50 AM

(2280-6)

[Workload Management in Analytical Laboratories](#) Vishnupriya Bhakthavatsalam, Reliance Technology Group

11:20 AM

(2280-7)

[How To Create a More Effective Lab Safety Program](#) James A. Kaufman, The Laboratory Safety Institute (LSI)

WORKSHOPS

Session 2290

NSF Division of Undergraduate Education: Strategies for Successful Proposals and Projects - arranged by Joseph J Grabowski, National Science Foundation

Thursday AM, Room: 202B

Joseph J Grabowski, National Science Foundation, Presiding

8:00 AM

Introductory Remarks - Joseph J Grabowski, and David Brown

8:05 AM

Interactive Workshop On Writing Proposals, With Discussion And Mock Panel Reviews

WORKSHOPS

Session 2300

The Present and Future of Core-Shell Column Technology - arranged by Jason Anspach, Phenomenex

Thursday AM, Room: 202A

Jason Anspach, Phenomenex, Presiding

8:05 AM

(2300-1)

[Fundamental Differences between Porous-Layer and Fully-Porous Silica HPLC Particles](#) Richard A. Henry, The Pennsylvania State University

8:35 AM

(2300-2)

[Optimizing Particle Size to Maximize Performance and/or Minimize Pressure with Core-Shell Technology](#) Jason Anspach, Phenomenex, A Carl Sanchez, Jeff Layne, Lawrence Loo, Tivadar Farkas

9:05 AM

(2300-3)

[Investigation of Pharmaceutical HPMC Formulation Matrix Effects Upon Superficially Porous Packing C18 Stationary Phases](#) Gregory K. Webster, AbbVie, Inc., Jacquelyn North, Jason Anspach

9:50 AM

(2300-4)

[New Developments in Superficially Porous Particle Technology](#) Xiaoli Wang, Agilent Technologies, William Long, Wu Chen

10:20 AM

(2300-5)

[Superficially Porous Silica Particle Technology Developments for Pharma and Biopharma Applications](#) Barry Boyes, Advanced Materials Technology, Joseph DeStefano, Joseph Kirkland, Tim Langlois

10:50 AM

(2300-6)

[Core Shell Technology Running Tissue Samples](#) James N. Marr, Merck & Co

ORGANIZED CONTRIBUTED SESSIONS

Session 2310

Electrochemistry at Nanoscale Structures - arranged by Takashi Ito, Kansas State University

Thursday AM, Room: 121A

Takashi Ito, Kansas State University, Presiding

8:00 AM

(2310-1)

[Probes for Electrochemical Measurement with Scanning Ion Conductance Microscopy](#) Lane A. Baker, Indiana University

8:20 AM

(2310-2)

[Bed of Needles – Interfacing Microalgae Cells with an Array of Electrodes](#) Hitomi Mukaibo, University of Rochester, Charles Martin, Eric Johnson

8:40 AM

(2310-3)

[Double Layer Dynamics at Nanometer Scale Interface](#) Gangli Wang, Georgia State University, Dengchao Wang, Juan Liu, Maksim Kvetny, Warren Brown, Yan Li

9:00 AM

(2310-4)

[Spatially-Resolved Electrochemical Methods for the Nanoscale Investigation of Reactivity and Transport in Materials for Energy Conversion and Storage](#) Joaquin Rodriguez-Lopez, University of Illinois at Urbana-Champaign

9:35 AM

(2310-5)

[Photoinduced Electron Transfer at Water/Lipid Interfaces: Three Cases Based on Hybrid Lipid Bilayers](#) Zhan Wei, Auburn University

9:55 AM

(2310-6)

[Design Considerations for Nanostructured Semiconductor Photoelectrodes](#) Stephen Maldonado, University of Michigan

10:15 AM

(2310-7)

[Electrochemical Oxidation of Metallic Nanoparticles](#) Francis Zamborini, University of Louisville, Rafael Masitas

10:35 AM

(2310-8)

[Recessed Nanodisk-Array Electrodes with Ferrocene-Functionalized Nanopores for Electrochemical Sensing](#) Takashi Ito, Kansas State University, Feng Li

ORGANIZED CONTRIBUTED SESSIONS

Session 2320

Ion Mobility Spectrometry as a Primary Analytical Technology in the Laboratory and in the Field - arranged by Charles S. Harden, SAIC-ECBC

Thursday AM, Room: 117

Charles S. Harden, SAIC-ECBC, Presiding

8:00 AM

(2320-1)

[A Hand Held Differential Ion Mobility Spectrometer for the Rapid Detection and Identification of Vapor Phase Chemical Species](#) Todd Griffin, Chemring Detection Systems, Eric Wallis, Paul Rauch, Robert McAtee, William Wu

8:20 AM

(2320-2)

[Hyphenated Differential Mobility Spectrometry as a Powerful Analytical Tool For Field Application](#) Erkinjon G. Nazarov, University of Southern Florida, Kenneth Markoski

8:40 AM

(2320-3)

[UH-FAIMS in the Laboratory and Out in the Field: A Systems Perspective](#) Ashley T. Wilks, Owlstone Inc

9:00 AM

(2320-4)

[Real-Time Assessment of Air Quality on the International Space Station by Gas Chromatography-Differential Mobility Spectrometry](#) Thomas Limero, Wyle Laboratories

9:35 AM

(2320-5)

[Metabolic MCC/IMS-Profiles of Human Breath: Detection of Volatile Compounds and Infectious Agents in the Airways by Ion Mobility Spectrometry of Exhaled Breath](#) Joerg Ingo Baumbach, KIST Europe

9:55 AM

(2320-6)

[High Performance Ion Mobility Spectrometry \(HPIMS\): Addressing Analytical Challenges in a New Dimension](#) Ching Wu, Excellims Corporation, Anthony Midey, Carol Moraff, Clinton Kruger, Jianglin Wu, Mark Osgood

10:15 AM

(2320-7)

[Trace Explosives Detection in the Field with Low Power Hand Held Ion Mobility Sensors](#) Alastair Clark, Smiths Detection

10:35 AM

(2320-8)

[Pharmaceutical Applications of Ion Mobility Spectrometry \(IMS\): Chemical Reaction Monitoring and Isomeric Analysis](#) Shelly X. Li, Pfizer, Carol Moraff, Charles Cheng, Ching Wu, Gilles Goetz, Krueger Clinton

ORAL SESSIONS

Session 2330

Advances in Energy-Related Hydrocarbon Analysis - arranged by James Harynuk, University of Alberta

Thursday AM, Room: 122B

James Harynuk, University of Alberta, Presiding

8:00 AM

(2330-1)

[Review of Analytical Methods in Natural Gas Analysis](#) Sohrab Zarrabian, Zegaz Instruments

8:20 AM

(2330-2)

[Bonded High Retentive and Selective Silica PLOT Column for Analyzing Hydrocarbons and Halogenated Compounds](#) Jaap de Zeeuw, Restek Corporation, Bill Bromps, Gary Stidsen, Tom Veza

8:40 AM

(2330-3)

[Quantitative Analysis of Complex Fuel Gas Mixtures with a Quadrupole Mass Spectrometer](#) Charles De Carlo, Extrel CMS, Eric Loose

9:00 AM

(2330-4)

[Method Development for Determination of PCBs in Mineral Insulating Oil by SPME-GC-ECD](#) Massimo Santoro, Thermo Fisher Scientific, Alexandre Teixeira de Souza Machado, Danilo Pierone, Jaqueline de Lorena

9:35 AM

(2330-5)

[Dramatically Improved Hydrocarbon Analysis with a GC-MS with Cold EI](#) Aviv Amirav, Tel Aviv University, Alexander Fialkov, Tal Alon

9:55 AM

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(2330-6)

[Profiling Trace Alkyl Phosphates in Petroleum Samples Using GCxGC-NPD and Capillary Flow Technology](#) James J. Harynuk, University of Alberta, Katie Nizio

10:15 AM

(2330-7)

[Petroleum Sulfur Biomarkers Analyzed by GCxGC-SCD, GCxGC-MS and GC-MS](#) Chang S. Hsu, Florida State University, Hong Lu, Jay Lu, Joe Binkley, Michael Mason, Quan Shih

10:35 AM

(2330-8)

[Accurate Measurement of Hydrocarbon Dewpoint in Natural Gas Streams](#) Sohrab Zarrabian, Zegaz Instruments

ORAL SESSIONS

Session 2340

Analysis of Agricultural Samples (Half Session) - arranged by Fu-mei Lin, The Pittsburgh Conference
Thursday AM, Room: 115A

Fu-mei Lin, The Pittsburgh Conference, Presiding

8:00 AM

(2340-1)

[Side Illuminated Optical Fiber Sensor Colorimeter](#) Claudio O. Egalon, Science & Sensors Technologies, Delbert Lavezzari, Ellen Campbell, Michael Matta, Robert Isley, Wilbur Campbell

8:20 AM

(2340-2)

[Metabolomic Comparison of Tomato Varieties Using Comprehensive GC- and LC-TOF-MS](#) Jeffrey Patrick, LECO Corporation, Joe Binkley, Kevin Siek, Li Zhang

8:40 AM

(2340-3)

[Rapid Detection of Pesticides in Fruit Juice Without Sample Preparation Using High Resolution Chromatography and Highly Sensitive Tandem MS](#) Kenneth Rosnack, Waters Corporation, Dimple Shah, Jennifer Burgess

9:00 AM

(2340-4)

[Nondestructive Measurement of Component Concentration and Internal Temperature in a Turbid Medium with Tree-Fiber-Based Diffuse Reflectance Spectroscopy](#) Yoshiaki Shimomura, Industrial Technology Center of Nagasaki

ORAL SESSIONS

Session 2350

Applications of Surface Analysis and Microscopic Imaging Techniques - arranged by Brian R. Strohmeier, Thermo Fisher Scientific

Thursday AM, Room: 115C

Brian R. Strohmeier, Thermo Fisher Scientific, Presiding

8:00 AM

(2350-1)

[Label-Free Molecular Bio-Imaging by Correlated Confocal Raman Microscopy and Mass Spectrometry Techniques](#) Rachel N. Masyuko, University of Notre Dame, Amanda Hummon, Callan Driscoll, Eric Lanni, Eric Weaver, Jonathan Sweedler, Joshua ShROUT, Paul Bohn

8:20 AM

(2350-2)

[Label-Free Measuring and Mapping of Binding Kinetics of Membrane Proteins in Single Living Cells](#) Wei Wang, Arizona State University, Nongjian Tao

8:40 AM

(2350-3)

[A Pharmacological Study to Restore Tissue Near the Microdialysis Probes](#) Andrea Jaquins-Gerstl, University of Pittsburgh, Adrian Michael, Katherine Nesbit

9:00 AM

(2350-4)

[Characterization and Visualization of Aptamer-Modified Surfaces and Their Affinity Protein Capture](#) Tian Zhang, Rensselaer Polytechnic Institute, Chris Bjornsson, Christina Albanese, Linda McGown, Molly Kogan

9:35 AM

(2350-5)

[Optochemical Imaging of Functionally Active Surfaces](#) Jacob Miszuk, Case Western Reserve University, Miklos Gratzl, Punkaj Ahuja

9:55 AM

(2350-6)

[In Situ Investigating Nanoparticle Self-Assembly at Solid-Liquid Interface with Stimulated Emission Depletion Microscopy](#) Bhanu Neupane, North Carolina State University, Gufeng Wang, Paul Tyrlik, Yaqing Zhao

10:15 AM

(2350-7)

[Surface Modification Strategies for Metal Oxide Nanoparticles to Reduce Their Toxicity](#) Mustafa Culha, Yeditepe University, Asli Baysal, Mine Altunbek, Seda Kelestemur, Selda Goktas, Sinan Sabuncu

10:35 AM

(2350-8)

[Focused Orientation and Position Imaging \(FOPI\) of Single Anisotropic Plasmonic Nanoparticles by Total Internal Reflection Scattering Microscopy](#) Ning Fang, Iowa State University and Ames Laboratory-USDOE, Ji Won Ha, Kyle Marchuk

ORAL SESSIONS

Session 2360

Chemical Methods (Half Session) - arranged by Fu-mei Lin, The Pittsburgh Conference

Thursday AM, Room: 115A

Fu-mei Lin, The Pittsburgh Conference, Presiding

9:35 AM

(2360-1)

[Ultra High Performance Size Exclusion Chromatography of Synthetic Polymers](#) Miroslav Janco, Dow Chemical, Damien Morrison, Edouard Bouvier, James Alexander

9:55 AM

(2360-2)

[Satisfying the Analytical Needs of Scientists in the Most Efficient Way](#) Brian Everatt, Novartis Institutes for Biomedical Research, Ingo Muckenschnabel, Simon Tullett

10:15 AM

(2360-3)

[Coupling Microwave Irradiation with Supercritical Fluid Reaction Systems](#) Rolf Schlake, Applied Separations

10:35 AM

(2360-4)

[Automated Ion Chromatography Titration System for Water Analysis](#) Bernard G. Sheldon, Thermo Fisher Scientific

ORAL SESSIONS

Session 2370

Environmental: Water Analysis (Half Session) - arranged by Hiranmayee Kandala, South Dakota State University

Thursday AM, Room: 121C

Hiranmayee Kandala, South Dakota State University, Presiding

PITTCON 2013

8:00 AM

(2370-1)

[Monitoring Ecological Changes via Image Analyses of Microalgae Cell Size and Shape](#) Frank Vogt, University of Tennessee, Kendhl Witt, Morgan McConico

8:20 AM

(2370-2)

[Reagent Strips for the Detection of High Range Total Alkalinity and Phosphate in Various Water Samples and Coolants](#) Balaji Tatineni, Industrial Test Systems, Ivars Jaunakais, Yasmine Shoemaker

8:40 AM

(2370-3)

[Occurrence Study of Perchlorate Levels in Missouri Natural and Drinking Waters by Using Ion Exchange Chromatography – Tandem Mass Spectrometry](#) Danielle West, Missouri University of Science and Technology, Craig Adams, Honglan Shi, Sanjeewa Gamagedara, Terry Timmons, Yinfa Ma

9:00 AM

(2370-4)

[Environmental Forensic Studies in Nitrate Source Determination: Alternatives to LC-MS/MS](#) Cecilia Fenech, Dublin City University, Anne Morrissey, Kieran Nolan, Luc Rock

ORAL SESSIONS

Session 2380

Food Components and Characteristics - arranged by Michael Woodman, Agilent Technologies

Thursday AM, Room: 120A

Michael Woodman, Agilent Technologies, Presiding

8:00 AM

(2380-1)

[Nitrogen/Protein Determination in Food Ingredients by Flash Combustion in Alternative to Kjeldahl Method](#) Christian Bruno, Palsgaard, Doris Andersen, Guido Giazzi, Lars Nielsen, Liliana Krotz, Walter Galotta

8:20 AM

(2380-2)

[Rapid Separation of Anthocyanins in Bilberry and Cranberry Extract Using Core Shell Columns](#) Pranathi R. Perati, Thermo Fisher Scientific, Brian De Borba, Jeffrey Rohrer

8:40 AM

(2380-3)

[Importance of Physicochemical Analysis in the Cosmetic Industry](#) Carolina Lucia Mendoza Forero, No

PITTCON 2013

Affiliation Listed

9:00 AM

(2380-4)

[On-Site Elemental Analysis by Desktop Type XRF and Its Applications](#) Tomoki Aoyama, HORIBA, Ltd., Yoshihiro Yokota

9:35 AM

(2380-5)

[SPME vs. LLE: Optimization of Sample Preparation Techniques for Polyphenols of Grape and Wine](#) Fatemeh S. Mirnaghi, University of Waterloo, Fatemeh Mousavi, Janusz Pawliszyn

9:55 AM

(2380-6)

[Spectral Accuracy Approach to Sulfur-Counting by Unit Mass Resolution Single Quadrupole Systems](#) Ming Gu, Cerno Bioscience, Leo Xu, Yongdong Wang

10:15 AM

(2380-7)

[Development of On-Site Measurement of Calcium in Food Samples by Use of Ion Selective Electrode](#) Hisashi Yamanouchi, HORIBA, Ltd., Keiko Kuwamoto, Yasukazu Iwamoto, Yuichiro Komatsu

10:35 AM

(2380-8)

[Comprehensive 2-dimensional UHPLC for the Fast and Flexible Method Development and Application for the Analysis of Polyphenols in Beverages](#) Edgar Naegele, Agilent Technologies R&D and Marketing GmbH & Co.KG, Stephen Reichenbach

ORAL SESSIONS

Session 2390

Gas Analysis (Half Session) - arranged by Sam Subramaniam, Miles College

Thursday AM, Room: 118A

Sam Subramaniam, Miles College, Presiding

8:00 AM

(2390-1)

[One-Step Facile Surface Engineering of Hydrophobic Nanocrystals with Designer Molecular Recognition](#) Tao Chen, University of Florida, Weihong Tan

8:20 AM

(2390-2)

[Bifunctional Metal Oxide Catalysts for Oxygen Evolution and Reduction Reactions](#) Keith J. Stevenson, University of Texas at Austin, Keith Johnston, Will Hardin

8:40 AM

(2390-3)

[Assessment of Hydrogen Quality](#) David Carteau, Air Liquide, Anthony Schleisman, Marie-Claude Konan, Martine Carre, Tracey Jacksier, Valerie Bossoutrot

9:00 AM

(2390-4)

[A New ASTM Method for Pressurized Gas Analysis by Thermal Desorption/Gas Chromatography](#) Lee Marotta, PerkinElmer, Chris Goss, Dan Wispinski, Dave Murray, Jodi Johnston, Tom Kosnik

ORAL SESSIONS

Session 2400

Laboratory Data and Information Management - arranged by Jinesh C. Jain, URS Corporation

Thursday AM, Room: 120B

Jinesh C. Jain, URS Corporation, Presiding

8:00 AM

(2400-1)

[Multicomponent Analysis Without the Need for Separation: Strategic Coupling of Vibrational Spectroscopy Databases](#) Dana Garcia, Arkema, Inc., Farrel Borden, Marie Scandone

8:20 AM

(2400-2)

[Improving Data Acquisition: Real-Time Oversampling Filter for Chemical Measurements](#) Nicholas D. Laude, University of Arizona, Christopher Atcherley, Michael Heien

8:40 AM

(2400-3)

[Feature Extraction, Selection, and Analysis for Multi-Sample Fingerprinting, Classification, and Chemical Marker Discovery with Comprehensive Two-Dimensional Chromatography](#) Stephen E. Reichenbach, University of Nebraska, Edgar Naegele, Qingping Tao, Satya Vijay Devarakonda

9:00 AM

(2400-4)

[Statistical Approach for Effective Cost Saving: Determination of Chloride Concentration in Alumina-Supported Catalysts](#) Khalid S. Al-Ghamdi, Saudi Aramco, Hassen Muttlak

9:35 AM

PITTCON 2013

(2400-5)

[A Computational Platform for High Resolution Mass Spectrometry-Based and Liquid Chromatography Mass Spectrometry-Based Metabolomics](#) Xiaoli Wei, University of Louisville, Craig McClain, Jeffrey Patrick, Joe Binkley, Li Zhang, Seongho Kim, Xiang Zhang, Xue Shi

9:55 AM

(2400-6)

[LIMS or ELN: Which Is Right For My Lab?](#) Ned C. Haubein, CSols, Inc.

10:15 AM

(2400-7)

[Laboratory Information Management Systems \(LIMS\): Introducing a Laboratory to LIMS and Successful IQ, OQ, PQ, QC, Training and Implementation](#) Ed Ingalls, Thermo Fisher Scientific

10:35 AM

(2400-8)

[Instrumental Method for Quantifying USP and EP Colors](#) Paul Barnes, HunterLab

ORAL SESSIONS

Session 2410

Liquid Chromatography: Biomedical, Bioanalytical and Pharmaceutical - arranged by Gary W. Yanik, PDR-Chemical LLC

Thursday AM, Room: 120C

Gary W. Yanik, PDR-Chemical LLC, Presiding

8:00 AM

(2410-1)

[An LC-CAD Method for the Determination of Stereoisomers of Proline Analogs](#) Yan Ma, Bristol-Myers Squibb, Harshad Patel, John Castoro, Yan Zha

8:20 AM

(2410-2)

[Homogeneous Carbon as Stationary Phase for Liquid Chromatography](#) Tian Lu, The Ohio State University, Susan Olesik

8:40 AM

(2410-3)

[Hilic of Proteins Using Controllable Polymer Growth on Silica](#) Charu Yerneni, Purdue University, Kurtis Sluss, Zhen Wu

9:00 AM

PITTCON 2013

(2410-4)

[Evaluation and Characterization of Core-Shell Media for Preparative Purifications](#) Jeff Layne, Phenomenex, Joshua Heng, Marc Jacob, Tivadar Farcas

9:55 AM

(2410-6)

[Automating Chromatography Data System \(CDS\) Workflows](#) John Helfrich, Accelrys

10:15 AM

(2410-7)

[Development of a Validated Stability- Indicating HPLC Method for Clomipramine Hydrochloride](#) Jinesh B. Nagavi, Rakmhsu, Sunil Dhaneshwar

10:35 AM

(2410-8)

[Complete Core-Shell Solution to HPLC and UHPLC Needs](#) Lawrence Y. Loo, Phenomenex, Jason Anspach, Jeff Layne, Mike Chitty, Thuylinh Tran, Tivadar Farkas

ORAL SESSIONS

Session 2420

Materials Science-Characterization (Half Session) - arranged by Sam Subramaniam, Miles College

Thursday AM, Room: 118A

Sam Subramaniam, Miles College, Presiding

9:35 AM

(2420-1)

[The Characterization of Novel Carboxysilane Depositions on Stainless Steel Substrates for Inertness, Wear Resistance, and Corrosion Resistance Applications](#) Gary Barone, SilcoTek Corporation, David Smith

9:55 AM

(2420-2)

[Drying Sub-Micron Sized Powders with Supercritical Fluid](#) Peter Hobbs, Halide Group, Al Kaziunas, Beth Champion, Madhu Anand

10:15 AM

(2420-3)

[High-Quality Automated Filtration of Organic Media for Reuse in Light Scattering Particle Sizing Systems](#) Jack G. Saad, Micromeritics Instrument Corporation

10:35 AM

(2420-4)

[Super Hydrophobic Surfaces Based on Microstructures and Black Silicon Fabricated by Injection Molding](#) Emil Sogaard, Technical University of Denmark, Kristian Smistrup, Rafael Taboryski

ORAL SESSIONS

Session 2430

Microfluidics/Lab-on-a-Chip: Devices - arranged by Scott A. Shippy, University of Illinois at Chicago

Thursday AM, Room: 203B

Scott A. Shippy, University of Illinois at Chicago, Presiding

8:00 AM

(2430-1)

[Microfluidic N-Glycan Analysis](#) Grishma Khanal, Texas Tech University, Dimitri Pappas, Michelle Martinez, Yehia Mechref, Yunli Hu

8:20 AM

(2430-2)

[A Microfluidic Device to Identify Bacteria in Saliva Integrating DNA Extraction and Real-Time PCR](#) Emily A. Oblath, University of North Carolina at Chapel Hill, J Michael Ramsey, Jean Pierre Alarie, W Hampton Henley

8:40 AM

(2430-3)

[A New Colorimetric "Naked-Eye" Detection Method for Paper-Based Analytical Devices](#) David M. Cate, Colorado State University, Charles Henry, John Volckens, Wijitar Dungchai

9:00 AM

(2430-4)

[Fabrication of All-Polymer Nano and Micro-Fluidic Systems Made by Multilevel Dry Etching, Electroplating and Molding](#) Marco Matteucci, Technical University of Denmark, Peter Ostergaard, Rafael Taboryski, Simon Larsen, Simone Tanzi

9:35 AM

(2430-5)

[Spatiotemporal Imaging of Chemical Gradients on Live Tissue Using a Microfluidic System](#) John Wydallis, Colorado State University, Charles Henry, David Dandy, Meghan Mensack, Stuart Tobet

9:55 AM

(2430-6)

[Optimized Multiplex RNA Aptamer Selections in Micro-Columns via RAPID \(RNA Aptamer Isolation via Dual-Cycles\) and High-Throughput Sequencing](#) Kylan Szeto, Cornell University, Abdullah Ozer, Brian White, Christopher Kelly, David Latulippe, David Shalloway, Harold Craighead, John Lis, John Pagano

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10:15 AM

(2430-7)

[A Microanalytical Gas Chromatographic System for Rapid Detection of Explosive Marker Compounds](#) William R. Collin, University of Michigan, Edward Zellers, Gustavo Serrano, Lindsay Wright, Nicolas Nunovero

10:35 AM

(2430-8)

[A Full MEMS-Based GC System with Micro-Machined Injector, FAST-GC Column and TCD Detector](#) Stefano Zampolli, CNR-IMM, Antonella Poggi, Enrico Cozzani, Filippo Baravelli, Fulvio Mancarella, Gian Carlo Cardinali, Ivan Elmi, Maddalena Belluce, Marco Messina, Mario Galli, Matteo Monticelli, Stefano Galli, Stefano Rizzi

ORAL SESSIONS

Session 2440

Novel Techniques for Biomedical Analysis (Half Session) - arranged by Rebecca J. Whelan, Oberlin College

Thursday AM, Room: 116

Rebecca J. Whelan, Oberlin College, Presiding

8:00 AM

(2440-1)

[Fluorescence Measurement of the Penetration of Nano-Carrier Bound Drug Molecules into Model Tissue](#) Miklos Gratzl, Case Western Reserve University, Karin Lee, Logan Hubbard, Nicole Steinmetz

8:20 AM

(2440-2)

[Nanoparticles for Dual-Mode Tracking in Bio-Distribution Studies](#) Prakash D. Nallathamby, ORNL/BMI, Heather Palko, Mike Malfatti, Scott Retterer, Wei Wang

8:40 AM

(2440-3)

[Selection of DNA Aptamers for Ovarian Cancer Cells Using High-Throughput Sequencing](#) Rebecca J. Whelan, Oberlin College, Arvinder Kapur, Jeff Nie, Manish Patankar, Mildred Felder

9:00 AM

(2440-4)

[Rapid Homogeneous Noncompetitive Assay for Breast Cancer Gene Expression Using Two-Photon FRET Linear Probes](#) Sean M. Burrows, Oregon State University, Tuan Vo-Dinh

ORAL SESSIONS

Session 2450

Process Analytical Chemistry - arranged by Fu-Tyan Lin, LIST NMR

Thursday AM, Room: 119B

Fu-Tyan Lin, LIST NMR, Presiding

8:00 AM

(2450-1)

[Ranking of Flour Streams via Chemical Imaging for Endosperm Content Enables Operator Decision to Avoid Non-Endosperm Contamination While Maximizing Flour Yield](#) David L. Wetzel, Kansas State University, Elieser Posner, Jeff Gwartz, Mark Boatwright, Tyler Nickoley

8:20 AM

(2450-2)

[A Novel Device for Hydrogen Analysis](#) Jacques Mettes, Power and Energy, Fred Gornick, Luis Breziner, Peter Bossard

8:40 AM

(2450-3)

[Trace Water Analysis Using Metal Tubing as a Concentrator, A Pulsed Discharge Detector, and a Nanovalue](#) Dale Ashworth, Valco Instruments Co Inc., Andrew Rochon, Huamin Cai, Martin Brisbin, Stanley Stearns, William Coontz

9:00 AM

(2450-4)

[Reduce Downtime and Increase Analytical Reliability for Sampling and Transfer Systems Used in Corrosive Service](#) Gary Barone, SilcoTek Corporation, James Mattzela, Marty Higgins

9:35 AM

(2450-5)

[Three Dimensional Nanofunnels Lower the Threshold Voltage for Threading DNA Molecules into Fluidic Nanochannels](#) Jinsheng Zhou, University of North Carolina at Chapel Hill, J Michael Ramsey, Jean Pierre Alarie, Laurent Menard

9:55 AM

(2450-6)

[Quantitative Near Infrared Chemical Imaging Enables Revelation of Milled Wheat Fraction Physical Separation Relative to Particle Size](#) Mark D. Boatwright, Kansas State University, David Wetzel, Elieser Posner, Jeff Gwartz

10:15 AM

(2450-7)

[Improving Chromatographic Performance for Mercury, Sulfur and Ammonia in Refinery, Petrochemical and Stack Emission Applications](#) Gary Barone, SilcoTek Corporation, David Smith, Marty Higgins

PITTCON 2013

10:35 AM

(2450-8)

[Effects of Changing the Eutectic Melt Composition on the Electrochemical Properties of Europium\(III\)Chloride Under Pyroprocessing Conditions](#) Cynthia A. Schroll, University of Cincinnati, Samuel Bryan, Sayandev Chatterjee, Tatiana Levitskaia, William Heineman

ORAL SESSIONS

Session 2460

Sample Preparation for Environmental Analysis - arranged by Kory Kelly, Phenomenex

Thursday AM, Room: 121B

Kory Kelly, Phenomenex, Presiding

8:00 AM

(2460-1)

[A New Approach For Extracting Semi-Volatile Organic Compounds \(EPA 8270/625\) From Water](#) Michael Ebitson, Horizon Technology Inc., David Gallagher

8:20 AM

(2460-2)

[Applications of the Waterloo Membrane Sampler in Sampling of Volatile Organic Compounds from Different Environmental Matrices](#) Faten Salim, University of Waterloo, Tadeusz Gorecki

8:40 AM

(2460-3)

[Solvent-Free Centrifugal Extraction for Rapid Analysis of Emerging Contaminants in the Environment](#) Ruipu Mu, Missouri University of Science and Technology, Adcharee Karnjanapiboonwong, Honglan Shi, Joel Burken, Yinfa Ma, Yuan Yuan

9:00 AM

(2460-4)

[Scaling Down the Silica-Gel Cartridge to Enable Automation of Extractable Petroleum Hydrocarbon Fractionation from Water Extracts](#) William R. Jones, Horizon Technology Inc., Alicia Cannon, Brian LaBrecque

9:35 AM

(2460-5)

[Simultaneous Extraction and Trace Quantification of Volatile and Nonvolatile Persistent Organic Pollutants by Stir Bar Sorptive Extraction and Isotope Dilution Mass Spectrometry](#) Andrew J. Boggess, Duquesne University, HM Skip Kingston

9:55 AM

(2460-6)

[Applying Incremental Sampling Methodology to Sediments](#) Mark Bruce, TestAmerica

10:15 AM

(2460-7)

[A Guide to EPA Method 1664B Utilizing Automated Solid Phase Extraction](#) David Gallagher, Horizon Technology Inc., Michael Ebitson

10:35 AM

(2460-8)

[Double Lab Production Overnight: Extract PAHs and PCBs Simultaneously from Tissue and Soil Samples Using a New Accelerated Solvent Extraction \(ASE\) Procedure](#) Bruce Richter, Thermo Fisher Scientific, Brett Murphy, David Knowles, Richard Carlson, Selvan Lingam

ORAL SESSIONS

Session 2470

Separation Sciences: Applications to Pharmaceuticals and Others (Half Session) - arranged by Hiranmayee Kandala, South Dakota State University

Thursday AM, Room: 121C

Hiranmayee Kandala, South Dakota State University, Presiding

9:35 AM

(2470-1)

[Electrospun Ordered Carbon – Polyacrylonitrile Composite Nanofibers as UltraThin Layer Chromatography Stationary Phase](#) Xin Fang, The Ohio State University, Susan Olesik

9:55 AM

(2470-2)

[Chromatographic Method Development Strategies with Carbon Dioxide Mobile Phases](#) Paula Hong, Waters Corporation, Michael Jones, Patricia McConville

10:15 AM

(2470-3)

[Ultra-High Performance Supercritical Fluid Chromatography \(UPSFC\) for the Development and Validation of Rapid Enantiomeric Methods for Active Pharmaceutical Ingredients](#) Jing Wang, Boehringer Ingelheim, Jeff Trenck, Kim Lilley, Michael Burns, Shaun Mendonsa

10:35 AM

(2470-4)

[Protein A Modification of Polypropylene Capillary-Channeled Polymer \(C-CP\) Fibers for the Capture and Recovery of Immunoglobulin G \(IgG\)](#) Abby J. Schadock-Hewitt, Clemson University, R Kenneth Marcus

POSTER SESSIONS

Session 2480

Atomic Spectroscopy

Thursday AM, Room: 204ABC

(2480-1P)

[Arsenic Speciation in Apple Juice Using Ion Chromatography Hydride Generation Atomic Fluorescence Spectrometry \(IC-HG-AFS\)](#) Bin Chen, P S Analytical, Peter Stockwell, Warren Corns

(2480-2P)

[Non-Chromatographic Speciation of Inorganic Arsenic by Atomic Fluorescence Spectrometry with Flow Injection Hydride Generation by a Tetrahydroborate-Form Anion-Exchanger](#) Nan Wang, University of Massachusetts, Amherst

(2480-3P)

[Further Adventures in Phytoremediation: Preliminary Results From Uptake of Arsenic by Sunflowers, Tomatoes, and Lettuce](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Edyta Szewczyk, Marissa Menanno

(2480-4P)

[Phytoremediation of Iron-Contaminated Soil by Orchids and Various Succulents: How Do These Different Plant Types Compare in Terms of Iron Uptake?](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Zachary Willis

(2480-5P)

[The Effectiveness of Coffee Grounds in the Removal of Lead and Copper Found in Tap Water](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Brittany Kessler

(2480-6P)

[A Sequential Extraction Approach to Determination of Selected Metals in Farm and Residential Soils From the East Coast and the Central United States](#) Mark T. Stauffer, University of Pittsburgh at Greensburg, Jesse Vargo

(2480-7P)

[Speciation of Organotin Compounds in Serum by Ion-Pair Reverse Phase Ultra Performance Liquid Chromatography Coupled to Sector Field Inductively Coupled Plasma Mass Spectrometry](#) Daniel J. Young, RTI International, Cynthia Smith, Keith Levine, Kilibarda Nikola, Kristina Thayer, Reshan Fernando, Scott Afton, Suramy Waidyanatha, Veronica Robinson

(2480-9P)

[Mercury in Skin Whitening Creams](#) Reeya K. Oogarah, P S Analytical, Jasmina Allen, Warren Corns

(2480-10P)

[Measurements of Density by Using the Emission Intensity Ratio Between Ionic to Atomic Lines in a Nd:YAG L.I.B.S Indicate Aluminum Alloy \(Zeolites\) Fantastic Properties](#) Osama M. Khalil, Cairo University, Mohamed El Faham, Mohamed Harith

(2480-11P)

[Techniques for Decreasing Total Analysis Time and Sample Consumption for ICP-OES](#) Cindy Anderau, PerkinElmer, Chad Schneider

(2480-12P)

[A New, Fast Automated Flame AA Sample Introduction System for Improved Reproducibility, Throughput and Detection Limits](#) Andrew Kavan, Elemental Scientific, Daniel Wiederin

(2480-13P)

[Comparison of Argon Versus Helium as Carrier Gas](#) Scott Hughes, Elementar Americas, Inc., Danny Loeser, Nicholas DelGiorno, Tyson Rowland

POSTER SESSIONS

Session 2490

Capillary Electrophoresis: Method Development and Applications

Thursday AM, Room: 204ABC

(2490-1P)

[Development of a Coupled Air-Sampler Capillary Electrophoresis System](#) Eric T. da Costa, Chemistry Institute - USP, Claudimir do Lago

(2490-2P)

[Self-Assembled Nanogels for Capillary Electrophoresis Separations of DNA](#) Brandon C. Durney, West Virginia University, Lisa Holland

(2490-3P)

[Automated Two-Dimensional Capillary Electrophoretic Separations of Complex Mixtures](#) Ryan Flaherty, University of Notre Dame, Bonnie Huges, Norman Dovichi, Oluwatosin Dada

(2490-5P)

[Fast Separation of Monohydroxy Metabolites of Polycyclic Aromatic Hydrocarbons by Capillary Zone Electrophoresis with UV-Vis Detection](#) Gaston Knobel, University of Central Florida, Andres Campiglia

(2490-6P)

[CZE-ESI-MS/MS as an Alternative Strategy to UPLC-MS/MS for E.coli Proteome](#) Xiaojing Yan, University of Notre Dame

(2490-7P)

[Multiple-Location Monitoring of Neurotransmitters on an Integrated Microfluidic System](#) Maojun Gong, Wichita State University, Qiyang Zhang

(2490-8P)

[MEKC and ¹H NMR Studies to Investigate the Effects of Cationic Counterions on Bile Salt Micelles](#) Claire M. Ouimet, Bucknell University, David Rovnyak, Kendall Sandy, Timothy Strein

(2490-9P)

[Multi-Pathway Metabolism of Glycosphingolipids by Capillary Electrophoresis-Laser Induced Fluorescence](#) Jennifer Arceo, University of Notre Dame, David Essaka, Jillian Prendergast, Monica Palcic, Norman Dovichi, Ole Hindsgaul, Richard Keithley, Ronald Schnaar

(2490-10P)

[Electroosmotic Flow Stability Studies](#) Ashley L. Morris, San Diego State University, Christopher Harrison

(2490-11P)

[Capillary Electrophoresis Coupled to ESI Mass Spectrometry for the Study of Matrix Metalloproteinase](#) Xu Wang, University of Leuven, Ann Vanschepdael, Erwin Adams

POSTER SESSIONS

Session 2500

Drinking Water

Thursday AM, Room: 204ABC

(2500-1P)

[Drinking Water Analysis Conditions for USEPA Method 524.3 and 524.4](#) Anne Jurek, EST Analytical, Doug Meece, Justin Murphy, Lindsey Pyron

(2500-2P)

[A Comparative Study of On-Line and Laboratory TOC Analyzers for Analysis of Raw and Finished Drinking Water](#) William C. Lipps, OI Analytical, Gary Engelhart, Jeffrey Lane, Steve Skalski

(2500-3P)

[Investigation of PPCPs Occurrence and Removal in Missouri Drinking Water System Using UFLC-MS/MS](#) Ruipu Mu, Missouri University of Science and Technology, Craig Adams, Honglan Shi, Terry Timmons, Yinfa Ma

(2500-4P)

[Use Concurrent Solvent Recondensation - Large Volume Splitless Injection to Decrease Sample Preparation Times for Semivolatiles Analysis in Drinking Water](#) Christopher Rattray, Restek Corporation, Jack Cochran, Michelle Misselwitz

(2500-5P)

[Use Concurrent Solvent Recondensation - Large Volume Splitless Injection in an Unmodified Split/Splitless GC Inlet to Lower Detection Limits for 1,4-Dioxane in Drinking Water](#) Christopher Rattray, Restek Corporation, Chris English, Jack Cochran

(2500-6P)

[TiO₂ Photocatalysis of 6-hydroxymethyl Uracil As A Model for the Cylindrospermopsin](#) Cen Zhao, Florida International University, Kevin O'Shea

POSTER SESSIONS

Session 2510

FTIR/Raman/ NIR Applications

Thursday AM, Room: 204ABC

(2510-1P)

[New Technology of Oils Characterization: Chemometric Treatments of Fourier Transform Near-Infrared \(FT-NIR\) Heavy Fuel Oils \(HFO\) by a New Diffuse Supporting](#) Sandrine Amat, Aix-Marseille Universite, Jacky Kister, Nathalie Dupuy, Zeineb Braham

(2510-2P)

[The Applications of SHINERS Technology on Chemical Identification](#) Huaizhi Kang, Xiamen University, Qizhen Chen, Yongming Zeng, Zhongqun Tian

(2510-3P)

[Accelerating High Throughput FTIR Oil Condition Monitoring](#) Chris Lynch, PerkinElmer, Ben Perston

(2510-4P)

[Silver Nanoparticle Imbedded Polymer for SERS Detection of Drugs](#) Honey Madupalli, Central Michigan University, Mary Tecklenburg

(2510-5P)

[PMMA/PLA Blends Compositional Analysis ATR-FT-IR Coupled with Chemometrics Methods](#) Susan Pirolo, Arkema, Inc., Dana Garcia, Florence Mehlmann, Thomas Richards

(2510-6P)

[Using FT-IR-ATR to Study Fuel Diffusion in Flexible Coated Fabrics](#) James Sloan, US Army Res Lab

(2510-7P)

[Nanoparticle-Based DNA Biosensor For the Detection of Genetically Modified Organisms by Surface-Enhanced Raman Spectroscopy](#) Mehmet Soforoglu, Hacettepe University, Adem Zengin, Aykut Onay, Burcu Guven, Ismail Boyaci, Ugur Tamer

(2510-8P)

[Determination of Malachite Green in Nanogram Levels by Surface-Enhanced Raman Spectroscopy](#) Tumay H.

Temiz, Hacettepe University, Akif Bozkurt, Ismail Boyaci, Ugur Tamer

(2510-9P)

[SERS Based Non-Enzymatic Glucose Sensor Using Functional Gold Nanorod Particles](#) Hilal Torul, Gazi University

(2510-10P)

[Infrared Analysis of Carbon-Rich Polymers Using Cantilever Enhanced Photoacoustic Detector](#) Kaori Watanabe, Systems Engineering Inc., Hiwatashi Fumiko

(2510-11P)

[Infrared Analysis of Thin Multilayered Polymer Film Using Cantilever Enhanced Photoacoustic Detector](#) Kaori Watanabe, Systems Engineering Inc., Hiwatashi Fumiko

(2510-12P)

[SERS Based Plasmin Activity Determination on Specifically Designed Surface](#) Nur N. Yazgan, Hacettepe University, Ali Topcu, Ceyda Dudak Seker, Ismail Boyaci, Ugur Tamer

(2510-13P)

[Study on AgTCNQ Complex with Spectral Methods](#) Jing Wang, Jilin University, Shuping Xu, Weiqing Xu

(2510-14P)

[Probing Phospholipid Vesicle Stability and Acyl Chain Order in Aqueous Solution](#) Chen Qiu, Michigan State University, Gary Blanchard

(2510-15P)

[Identification of Microcalcifications in Breast Cancer Using Shell-Isolated Nanoparticle-Enhanced Raman Spectroscopy\(SINERS\)](#) Chengxu Hu, Jilin University, Bing Han, Chao Zheng, Shuping Xu, Weiqing Xu

(2510-16P)

[Label-Free Detection of Individual Macromolecular Assemblies by Surface Enhanced Raman Spectroscopy](#) Steven M. Asiala, University of Notre Dame, Zachary Schultz

(2510-17P)

[Determination and Validation of Dissolution Testing for Isoniazid, Rifampicin, Pyrazinamide and Ethambutol in Pharmaceutical Formulation by Near Infrared Spectroscopy and Multivariate Calibration](#) Kassio Lima, UFRN, Fernanda Costa

(2510-18P)

[In Vitro Simulation Studies for the Development of a Nocturnal Hypoglycemic Alarm Based on Near-Infrared Spectroscopy](#) Sanjeewa Rasika Karunathilaka Ranasinghe Pathirajage, University of Iowa, Gary Small

(2510-19P)

[Structure and Conformation Studies from Temperature Dependent Infrared Spectra of Xenon Solutions and Ab Initio Calculations of Cyclobutylgermane](#) Bhushan S. Deodhar, University of Missouri - Kansas City, James Durig

(2510-20P)

[Polarization Modulation Infrared Reflection Adsorption Spectroscopy \(PM-IRRAS\): A Powerful Technique for the Study of Adsorption and Floating Monolayers on Metal Surfaces](#) Rickielle Ngongang Nganteu, Air Liquide, Christopher Methivie, Claire-Marie Pradier, Eric Marceau, Jean-Luc Blanc, Martine Carre, Xavier Carrier

(2510-21P)

[Suppression of Pyrite Oxidation in Acidic Aqueous Environments Using Deferoxamine Mesylate, A Trihydroxamate Siderophore](#) Amber Riendeau, Temple University, Ann Valentine, Daniel Strongin, William Wuest

(2510-24P)

[Synthesis of Silver-Teflon Nanocomposites and Their Application in Surface Enhanced Raman Spectroscopy](#) Kristin K. Cooke, Western Carolina University, David Evanoff

POSTER SESSIONS

Session 2520

Mass Spectrometry for Biomedical Applications

Thursday AM, Room: Exposition Floor, Aisles 1600-2100

(2520-1P)

[Effects of Vernonia Amygdalina Aqueous Leaf Extract on the Pharmacokinetics of Nifedipine in](#)

[Rabbits](#) Mbang A. Owolabi, University of Lagos, Emmanuel Adeniji, Oluwafunke Oribayo, Oluwaseun Akindehin

(2520-2P)

[GC-MS Analysis of the Essential Oil from the Aerial Parts of Crassocephalum Crepidioides, A Medicinal Plant Used in the Management of Breast Cancer](#) Wesley Okiei, University of Lagos, Edith Ofor, Funmi Odukoya, Modupe Ogunlesi

(2520-3P)

[Elucidation of Antifungal Drug Action by High Resolution GC/QTOF](#) Jennifer N. Gushue, Agilent Technologies, Bob St Onge, Gary Peltz, Manhong Wu, Ron Davis, Sofia Aronova, Stephan Baumann, Sundari Suresh

(2520-4P)

[Improvements in Charge Detection Mass Spectrometry](#) Nathan C. Contino, Indiana University, David Keifer, Elizabeth Pierson, Martin Jarrold

POSTER SESSIONS

Session 2530

Pharmaceutical: Spectroscopy Methods

Thursday AM, Room: Exposition Floor, Aisles 1600-2100

(2530-1P)

[Dye-Protein Binding Monitored in a Microliter Volume Using Time-Resolved Fluorescence](#) Jeremy Pronchik, HORIBA Scientific, Graham Hungerford, Kulwinder Sagoo

(2530-2P)

[Detection of Economically Motivated Adulteration in Povidone and Crospovidone](#) Fan Wu, Ashland, Inc., Michael Tallon, Patrick Rice, Qin Yuan, Wayne Xu

(2530-3P)

[Vibrational Spectroscopic Analysis of Pseudo-Polymorphism Conversion of Theophylline During A Tableting Process](#) Tomoaki Sakamoto, National Institute of Health Sciences (Japan), Haruhiro Okuda, Hiroko Kimura, Jun-ichi Nishizawa, Noriko Katori, Tadao Tanabe, Tetsuo Sasaki, Yasuto Fujimaki, Yukio Hiyama

(2530-4P)

[Classification and Analysis of Counterfeit Medicines by Raman Spectroscopy and Chemometrics](#) Kaho Kwok, Purdue University, Lynne Taylor

(2530-5P)

[Analysis of Acetaminophen in Pharmaceutical Compounds Utilizing RAMAN Spectroscopy and High Performance Liquid Chromatography](#) Kimberly D. Chichester, St. John Fisher College, Fang Zhao, Irene Kimaru, Kacie Rich, Zachary VanAernum

(2530-6P)

[Global Mass Spectrometry Scent Printing \(GMSSP\) In Vitro Diagnostics](#) Hans Wiech, VOCscan AG, Colin Mitchell, Thierry Zesiger

(2530-7P)

[Method Development for the Quick Screening of Pharmaceuticals by Atmospheric Solids Analysis Probe-Mass Spectrometry \(ASAP-MS\) and Solvent Assisted Inlet Ionization-Mass Spectrometry \(SAII-MS\)](#) Lyla Hassan, University of the Sciences, Charles McEwen

(2530-8P)

[A Novel Enclosed Nano-Electrospray Ion Source - Advantages in Ionization Efficiency and Spray Stability for Both Nano and Micro LC-ESI-MS Applications](#) Christine Y. Wang, Advion, Bradley Schneider, Chelsea Weidman, Daniel Eikel, Jay Corr, Nicole Hebert, Tom Covey

(2530-9P)

[Identification of Pharmaceuticals on High Resolution LC-TOF-MS System](#) Kevin Siek, LECO Corporation, Jeffrey Patrick, Joe Binkley, Li Zhang

(2530-10P)

[Approaching USP Method 233 – Results of Sample Preparation and Analysis of Several Pharmaceutical Sample Types](#) Jason D. Keith, CEM Corporation, Daniel Iversen, Elaine Hasty, Ivana Mrvalj, Tina Restivo

(2530-11P)

[In Vitro UV/VIS Measurements of Highly Scattering Cosmoceuticals: The Use of a 150 mm Integrating Sphere with Center Mount to Accurately Measure Nanoparticle Containing Cosmoceuticals](#) Jillian Dlugos, Glenelg High School, Chris Lynch

(2530-12P)

[Evaluation of MTC Gel Formulations Stability via Fourier Transform Infrared Spectroscopy in Preformulation Studies](#) Ziya Bayrak, Gulhane Military Medical Academy, Ali Cagmel, Ayhan Savaser, Cansel Kose Ozkan, Cetin Tas, Yalcin Ozkan

(2530-13P)

[Effect of Milling on Surface Energy Heterogeneity and Aspect Ratio for Needle-Shaped Mannitol Crystals](#) Daniel J. Burnett, Surface Measurement Systems, Adam Keith, Greg Thiele, Majid Naderi, Peter Bouza

(2530-14P)

[Formulation Development and Optimization of Fast Dissolving Film of Losartan Potassium](#) Parth B. Patel, Gujarat Technological University, Kinjal Patel

POSTER SESSIONS

Session 2540

Process Analytical Chemistry

Thursday AM, Room: Exposition Floor, Aisles 1600-2100

(2540-1P)

[An Ion Chromatography Method for Carbohydrates Determination in Sugar-Cane Juice with Reduced Time](#) Teixeira Wokimar, Unicamp, Celso Caldas, José Tiago Barragan, Larissa Zanuni, Lauro Kubota, Leopoldo Ferronato, Victor Bassetto, Wokimar Garcia

(2540-2P)

[An On-line Cyanide Analyzer and Slurry Sample Filtration System for Measurement of Cyanide in Hydrometallurgical Processing of Precious Metal Ores](#) William C. Lipps, OI Analytical, Gary Engelhart

(2540-3P)

[New Spectrophotometric Method for Determination of Cobalt \(II\)](#) Rashmikant M. Patel, Atul Ltd, Valsad, Kalpesh Parikh

(2540-4P)

[Real-Time Measurement of Volatile Components in the Bioreactor via Proton Transfer Reaction Mass](#)

[Spectrometry \(PTR-MS\) – An Approach for Advanced Bioprocess Monitoring](#) Jens Herbig, Ionimed Analytik, Armin Hansel, Gerald Striedner, Karl Bayer, Markus Luchner, Rene Gutmann

(2540-5P)

[Synthetic Organic Reactions Are Monitored Using A High Performance Ion Mobility Spectrometer](#) Clinton Krueger, Excellims Corporation, Carol Moraff, Ching Wu

(2540-6P)

[A Flow Microcalorimeter \(FMC\) for High Throughput Analysis of Enzyme Activity / A Wide Range of Biological Processes](#) Gillian Lewis, TTP Labtech Ltd, Reuben Pardoe, Wayne Bowen, Wendy Gaisford

(2540-7P)

[Real-time Reaction Monitoring and Separation as a Process Analytical Technology Tool](#) Gopalakrishnan Venkatasami, Seton Hall University

(2540-8P)

[Procedures for Preparation and Chromatographic Determination of Organic Pollutants in Airport Runoff Waters](#) Anna Sulej, Gdansk University of Technology, Jacek Namienik, Zaneta Polkowska

(2540-9P)

[Preparations and Applications of Boronic Acid Modified BODIPY Fluorescent Probes](#) Jingying Zhai, Nanjing University

(2540-10P)

[Improvisation of Pigmentary Properties of Dioxazine Pigment](#) Sanjay S. Shah, Arts, Science and Commerce College, Mehul Parikh

(2540-11P)

[Use of TG-IR-GCMS to Identify Low Level Impurities](#) Kevin P. Menard, PerkinElmer, David Norman, Maria Garavaglia

(2540-12P)

[Sparse Deconvolution Methods as Applied to REC-TOF Ionization Efficiency Curves](#) Gregory P. Gutshall, Oregon State University

(2540-13P)

[Comparative Study between the ISO 9516-1 Methodology for Analysis of Iron Ore and the Use of a Calibration Based on Certified Reference Materials](#) Mathieu Bouchard, Corporation Scientifique Claisse, John Anzelmo, Marie-Ève Provencher, Sébastien Rivard, Sharon Ness

(2540-14P)

[New Compatibility of the Micro-GC with the ISA SP76 Standard](#) Ronan Cozic, SRA Instruments, Alain Delauzun, Axel Bart, Jean-Paul Viricelle, Laetitia Vieille, Philippe Breuil

(2540-15P)

[High-Performance Quantitative ¹H-NMR Yields Organic Certified Reference Materials \(CRM\) with Traceability and Low Measurement Uncertainty](#) Michael Weber, Sigma-Aldrich, Alan Nichols, Alexander Rueck, Christine Hellriegel

(2540-16P)

[Application of a 60 MHz Permanent Magnet NMR System to Online NMR Reaction Development in the Pharmaceutical Industry](#) David A. Foley, Pfizer, Brian Marquez, John Edwards, Mark Zell, Paul Giammatteo

POSTER SESSIONS

Session 2550

Separation Sciences

Thursday AM, Room: Exposition Floor, Aisles 1600-2100

(2550-1P)

[Selective Separation of Ethylaniline Isomers Using Molecular Imprinted Polymer Prepared from Methyl Methacrylate/acrylic acid/3-\(trimethoxysilyl\)propyl Methacrylate](#) Hye R. Park, Chonnam National University, Kwang Park, Sung Chough

(2550-2P)

[Separation of Aniline Derivatives Using Molecular Imprinted Polymer Prepared from Methyl Methacrylate/Acrylic Acid](#) Hye R. Park, Chonnam National University, Eun Lee, Kwang Park, Sung Chough

(2550-3P)

[Sensitive Detection of Amyloid Fibrils by Flow-Injection Analysis with Fluorescence Detection](#) Hiromichi

Asamoto, Nihon University, Hiroaki Minamisawa, Kazunori Saitoh, Tatsuro Nakagama

(2550-4P)

[Using SEC/Viscometry to Determine Oligosaccharide Flexibility in Solution](#) Mallory J. Morris, Florida State University, Andre Striegel

(2550-5P)

[Improvement of the Response of Evaporative Light-Scattering Detector \(ELSD\) Coupled to Supercritical Fluid Chromatography \(SFC\)](#) Eric Lesellier, ICOA, Caroline West, Cecile Garcia, Eric Verette, Michel Dreux, Rodolphe Pennanec

(2550-6P)

[The Development of SFC Optimized Stationary Phases Using High Performance Silica Particle Technology](#) Matthew Przybyciel, ES Industries

(2550-7P)

[Influence of Mobile Phase Composition Upon Analyte Diffusion in a Lauryl Acrylate Porous Polymer Monolithic Stationary Phase](#) Xuanli Deng, Trinity University, Brady Iba, Charlisa Daniels, Douglas Nolan, Michelle Bushey, Nicholas Kuklinski

(2550-8P)

[Quantifying Diffusion and Retention on Lauryl Acrylate Porous Polymer Monoliths used in Capillary Electrochromatography](#) Kelly A. Hewes, Trinity University, Charlisa Daniels, Michelle Bushey, Nicholas Kuklinski, Si Ying Li

(2550-9P)

[Modification of Capillary-Channeled Polymer \(C-CP\) Fibers with Functionalized Lipids for the Separation and Extraction of Analytes](#) Marissa J. Pierson, Clemson University, Abby Schadock-Hewitt, R Kenneth Marcus

(2550-10P)

[Enantiomeric Separation of Ruthenium Based DNA Cleaving Molecules Using HPLC with Aromatic – Derivatized Cyclofructan 6 and 7 Chiral Stationary Phases \(CSPs\)](#) Sirantha Perera, The University of Texas at Arlington, Daniel Armstrong, David Boston, Frederick MacDonnell, Zachary Breitbart

POSTER SESSIONS

Session 2560

PITTCON 2013

UV-VIS Applications

Thursday AM, Room: Exposition Floor, Aisles 1600-2100

(2560-1P)

[Enhancement of Amylase Activity by Enzymatic Immobilization on Polymer Substances](#) Casey Burton, Missouri University of Science and Technology, Gu Xu, Yinfa Ma

(2560-2P)

[Characterization of Microliter Plate SDS Concentration Determination Method](#) Svetoslava Gregory, Abbott, Ewa Lang, Jeffrey Fishpaugh, Kevin Rupprecht

(2560-3P)

[Development and Validation of Citicoline Sodium and Piracetam in Combined Tablet Dosage Form By Dual Wavelength Method Using UV Spectrophotometer](#) Ankit B. Patel, SK Patel College, Dhaval Patel

(2560-4P)

[The Future of UV/VIS/NIR Instrument Calibration and Method Validation](#) Jeffery Taylor, PerkinElmer, Chris Lynch

(2560-5P)

[Optical Beam Deflection Approach for Studying Effects of Acid Rain on Plants](#) Xing-Zheng Wu, Fukuoka Institute of Technology

(2560-6P)

[Spectrophotometric Determination of Nickel Using 2-Hydroxy-4-Isobutoxy Acetophenone Oxime](#) Sanjay S. Shah, Arts, Science and Commerce College, Janak Shukla

(2560-7P)

[Do Plate Readers Agree? Understanding Performance Differences Between Different Plate Reader Makes/Models](#) Dana Campbell, Artel, Geary Ritter, John Bradshaw, Rachel Parshley, Richard Curtis, Tanya Knaide

Thursday PM, March 21, 2013

SYMPOSIA

Session 2570

ACS ANYL SCSC - Supercritical Fluid Chromatography - arranged by David Pinkston, Kellogg

Thursday PM, Room: 118C

David Pinkston, Pfizer, Presiding

2:05 PM

(2570-1)

[Overcoming the Challenges of Separating Highly Polar Components Using SFC/MS](#) Christine Aurigemma, Pfizer, Michael Greig, Michael Greig, Phuong Tran, Phuong Tran, William Farrell, William Farrell

2:40 PM

(2570-2)

[Utilizing Coupled Achiral and Chiral Columns to Improve SFC Purifications](#) Manuel Ventura, Amgen

3:15 PM

(2570-3)

[Accurate Measurements of the Mobile Phase Density and Mass Flow Rate in Supercritical Fluid Chromatographic Operations](#) Georges Guiochon, University of Tennessee, Abhijit Tarafder, Abhijit Tarafder

3:50 PM

(2570-4)

[Remaining Current in SFC: Optimizing an Aging SFC Laboratory](#) Ray T. McClain, Merck

4:25 PM

(2570-5)

[Experimental Strategies Leading to Successful Packed Column Supercritical Fluid Chromatography of Polar Analytes](#) Larry T. Taylor, Virginia Tech, Mehdi Ashraf-Khorassani, Mehdi Ashraf-Khorassani

SYMPOSIA

Session 2580

Adaptation of Platform Analytical Technologies in Pharmaceutical Development - arranged by Michael W. Dong, Genentech

Thursday PM, Room: 119B

Michael W. Dong, Genentech, Presiding

2:05 PM

(2580-1)

[Adaptation of Platform Analytical Technologies in Pharmaceutical Development](#) Michael W. Dong, Genentech, Derrick Yazzie, Nik Chetwyn

PITTCON 2013

2:40 PM

(2580-2)

[Platform Analysis and Purification Technologies in Support of Pharmaceutical Discovery and Development](#) Christopher Welch, Merck Research Laboratories

3:15 PM

(2580-3)

[Analytical Strategies for Determining Genotoxic Impurities](#) Scott Miller, Bristol-Myers Squibb

3:50 PM

(2580-4)

[Current Practices of GC and GCMS Technologies in Pharmaceutical Development](#) Heewon Lee, Boehringer Ingelheim, Earl Spinelli, Ling Wu, Nelu Grinberg, Shengli Ma

4:25 PM

(2580-5)

[New Platform Technologies in Ion Analysis](#) Kelly Zhang, Genentech

SYMPOSIA

Session 2590

Advances in Applications of Surface Analytical and Microscopic Imaging Techniques for the Characterization of Nanostructured Materials - arranged by Brian R. Strohmeier, Thermo Fisher Scientific

Thursday PM, Room: 201B

Brian R. Strohmeier, Thermo Fisher Scientific, Presiding

2:05 PM

(2590-1)

[Nanoscale Chemical Imaging of Biomaterials with Cluster SIMS](#) Nicholas Winograd, The Pennsylvania State University

2:40 PM

(2590-2)

[Analysis of Surface Corrosion Layers in Ancient Roman Coins with Modern Analytical Techniques: \(HS-LEIS, HR-XPS and HR-Raman\)](#) Israel E. Wachs, Lehigh University, Alex Blenheim, Alfred Miller, Ben Notis, Christopher Keturakis, Michael Notis, Rob Pafcheck

3:15 PM

(2590-3)

[Nanoscale Surface Characterization of Polymeric Materials Using Combined Atomic Force Microscopy and](#)

PITTCON 2013

[Infrared Spectroscopy \(AFM-IR\)](#) Curtis Marcott, Light Light Solutions

3:50 PM

(2590-4)

[Surface and In-Depth Characterization of Multilayer Nanosystems Using X-Ray Photoelectron Spectroscopy \(XPS\) and a Combined Monatomic and Gas Cluster Argon Ion Source for Soft Depth Profiling](#) Brian R. Strohmeier, Thermo Fisher Scientific, Paul Mack, Richard White, Tim Nunney

SYMPOSIA

Session 2600

Nanomaterials and Analytical Chemistry: A Blissful Marriage - arranged by Isiah M. Warner, Louisiana State University

Thursday PM, Room: 201A

Isiah M. Warner, Louisiana State University, Presiding

2:05 PM

(2600-1)

[UHPLC with Submicrometer Particles](#) Mary J. Wirth, Purdue University, Benjamin Rogers

2:40 PM

(2600-2)

[Controlling the Polarization-Dependent Optical Near-field Behavior of Plasmonic Nanostructures for Plasmon Enhanced Spectroscopy](#) Jennifer Shumaker-Parry, University of Utah

3:15 PM

(2600-3)

[Functional DNA Nanotechnology and Its Application in Sensing and Imaging](#) Yi Lu, University of Illinois at Urbana-Champaign

3:50 PM

(2600-4)

[Nanofiber Technology for Enhanced Performance in Analytical Sciences](#) Susan Olesik, The Ohio State University, Martin Beres, Michael Beilke, Tian Lu, Xin Fang

4:25 PM

(2600-5)

[Analytical Chemistry Using NanoGUMBOS](#) Isiah M. Warner, Louisiana State University, Bishnu Regmi, Das Susmita, Paul Magut, Sergio de Rooy

SYMPOSIA

Session 2610

Spectroscopic Dissection and Quantification of Biomolecular Assemblies - arranged by Michael Trakselis, University of Pittsburgh

Thursday PM, Room: 125

Michael Trakselis, University of Pittsburgh, Presiding

2:05 PM

(2610-1)

[Single Molecule Nucleic Acid Dynamics](#) David Rueda, Imperial College London

2:40 PM

(2610-2)

[Visualizing Protein-DNA Interactions at the Single Molecule Level with DNA Curtains](#) Eric Greene, Columbia/HHMI

3:15 PM

(2610-3)

[FRETing the DNA Replisome](#) Michael Trakselis, University of Pittsburgh

3:50 PM

(2610-4)

[Exploring Protein Superstructures in Bacterial and Mammalian Cells Using Single-Molecule Active-Control Microscopy](#) W E. Moerner, Stanford University

4:25 PM

(2610-5)

[Developing Ion Mobility-Mass Spectrometry Approaches for Structural Proteomics](#) Brandon Ruotolo, University of Michigan, Russell Bornschein, Suk-Joon Hyung, Yueyang Zhong

ORGANIZED CONTRIBUTED SESSIONS

Session 2620

Advances in Orthogonal Separations - arranged by Mark R. Schure, Kroungold Analytical

Thursday PM, Room: 121A

Mark R. Schure, Kroungold Analytical, Presiding

2:00 PM

(2620-1)

[Orthogonal Separations](#) Mark R. Schure, Kroungold Analytical, Joe Davis

2:20 PM

PITTCON 2013

(2620-2)

[Multiplexed Dual-Secondary Column Comprehensive Two-Dimensional Gas Chromatography](#) Robert A. Shellie, University of Tasmania

2:40 PM

(2620-3)

[Can Multidimensional Separations Be Achieved in Liquid Chromatography via a Sequential Use of Orthogonal Mobile Phases Rather than Stationary Phases \(Columns\)?](#) Joe P. Foley, Drexel University, Adam Socia

3:00 PM

(2620-4)

[Orthogonality of Retention Mechanisms in Comprehensive Two-Dimensional Separations](#) Leonid M. Blumberg, Fast GC Consulting

3:35 PM

(2620-5)

[Fast, High Peak Capacity Separations with GC - TOFMS and GC x GC – TOFMS](#) Robert E. Synovec, University of Washington

3:55 PM

(2620-6)

[Multi-Dimensional Gas Chromatography - Practical Industrial Applications](#) Jim Luong, Dow Chemical Canada

4:15 PM

(2620-7)

[Advances in Multidimensional Liquid Chromatography: Beyond the Separation](#) Luigi Mondello, University of Messina, Paola Donato

4:35 PM

(2620-8)

[Beyond Orthogonality: Understanding and Exploiting the Selectivity of Comprehensive Two-Dimensional Gas Chromatography](#) John V. Seeley, Oakland University, Abhijit Ghosh, Stacy Seeley

ORGANIZED CONTRIBUTED SESSIONS

Session 2630

Rapid Methods for Determination of Additives, By-Products and Contaminants in Technical Oils - arranged by Shubhen Kapila, University of Missouri

Thursday PM, Room: 117

Shubhen Kapila, University of Missouri, Presiding

2:00 PM

(2630-1)

[Monitoring of Additives, Contaminants and Degradation Products in Insulating Liquids a Critical Tool in Asset Management](#) Vander Tumiatti, Sea Marconi Technologies, Michela Tumiatti, Riccardo Maina

2:20 PM

(2630-2)

[Rapid Determination of Additives, Contaminants and By-products in Mineral Insulating Oils](#) Carlo Roggero, University of Missouri, Shubhen Kapila

2:40 PM

(2630-3)

[Using Acid By-Products to Monitor the Health of Natural Ester-Filled Transformers](#) Kevin J. Rapp, Cargill Inc

3:00 PM

(2630-4)

[Determination of Additives, Contaminants and Byproducts in Insulating Liquids with Desorption Electrospray Mass Spectrometry](#) Shubhen Kapila, University of Missouri, Carlo Roggero

3:35 PM

(2630-5)

[Application and Detection of Passivators in Insulating Oils](#) Lance R. Lewand, Doble Engineering Company

3:55 PM

(2630-6)

[Characterization of Oxidative Products of Natural Ester Based Insulating Liquids](#) Racha (Ann) Seemamahannop, Brewer Science Inc.

4:15 PM

(2630-7)

[Insulating Mineral Oil Fingerprinting Techniques: Tools for Aging and Degradation Assessment](#) Riccardo Maina, Sea Marconi Technologies, Maria Bruzzoniti, Vander Tumiatti

4:35 PM

(2630-8)

[Multicomponent Chemical Imaging of Pharmaceutical Solid Dosage Forms with Broadband CARS Microscopy](#) Christopher Hartshorn, National Institute of Standards and Technology, Charles Camp, Marcus Cicerone, Patrick Marsac, Young Lee

ORAL SESSIONS

Session 2640

Biosensors (Half Session) - arranged by Jason Link, Agilent Technologies

Thursday PM, Room: 115A

Jason Link, Agilent Technologies, Presiding

2:00 PM

(2640-1)

[Intelligent Cancer Theranostics: Profiling Multiple Cancer Markers by Aptamer-Encoded Cell Surface Logic Gates](#) Mingxu You, University of Florida, Weihong Tan

2:20 PM

(2640-2)

[Flexible Resistive Detector to Monitor Prosthetic Socket Environment](#) Nathaniel J. Blasdel, The University of Akron, Chelsea Monty, Christopher Alcorn, Evan Wujcik

2:40 PM

(2640-3)

[Electrochemical Detection Approach for Acetylcholine Using Enzyme Functionalized Nanoparticles](#) Jacqueline Keighron, Chalmers University of Technology, Ann-Sofie Cans, Joakim Wigström, Michael Kurczyk

3:00 PM

(2640-4)

[Enhanced Colorimetric Aptasensors Using Engineered Aptamers for Tetracyclines](#) Young Seop Kwon, Korea University, ManBock Gu, Nurul Hanun Ahmad Raston

ORAL SESSIONS

Session 2650

Capillary Electrophoresis: Method Development - arranged by Mary Ellen McNally, DuPont Crop Protection

Thursday PM, Room: 115C

Mary Ellen McNally, DuPont Crop Protection, Presiding

2:00 PM

(2650-1)

[Microchip Capillary Electrophoresis Separation Methods for Analysis of Atmospheric Aerosol Compositions](#) Julie E. Denham, Colorado State University, Arsineh Hecobian, Charles Henry, Jeffrey Collett, Kanokporn Boonsong, Scott Noblitt, Susanne Hering

2:20 PM

(2650-2)

[Understanding Transient Isotacophoresis of an In-Capillary Generated Reaction Product Using EMMA](#) Adam R. Meier, Bucknell University, Aravinda Seneviratne, Derek Schildt, Diana Beblo, Timothy Strein

2:40 PM

(2650-3)

[Development of an Electrophoresis-Based Method for Monitoring the Integrity of Oxytocin Formulations in Developing Countries](#) Jessica S. Creamer, University of Kansas, Jose da Silva, Shannon Krauss, Susan Lunte

3:00 PM

(2650-4)

[Mixed SDS-Phospholipid Bilayer as Capillary Coatings](#) Christopher R. Harrison, San Diego State University, Nicole Allen

3:35 PM

(2650-5)

[Ultrasensitive Capillary Electrophoresis with Three Color Fluorescence Detection for Metabolic Cytometry Analysis](#) Richard B. Keithley, University of Notre Dame, Alison Rosenthal, David Essaka, Hide Tanaka, Norman Dovichi, Ole Hindsgaul

3:55 PM

(2650-6)

[MEKC and NMR Studies of Bile Salt Micelle Aggregation: 1,1-bi-2-naphthol As A Probe Molecule](#) Kendall E. Sandy, Bucknell University, Claire Ouimet, David Rovnyak, Timothy Strein

4:15 PM

(2650-7)

[Cysteine, Cystine and Glutathione Identification in Individual *D.melanogaster*](#) Srivani Borra, University of Illinois at Chicago, David Featherstone, Scott Shippy

4:35 PM

(2650-8)

[Towards Highly Sensitive Detection of Biogenic Compounds in Microscale Electrophoresis Using On-Line Sample Concentration](#) Koji Otsuka, Kyoto University, Fumihiko Kitagawa, Hiroshi Koino, Kenji Sueyoshi, Saeko Kinami, Takayuki Kawai

ORAL SESSIONS

Session 2660

Environmental Analysis - arranged by John Saffell, Alphasense Limited

Thursday PM, Room: 116

John Saffell, Alphasense Limited, Presiding

2:00 PM

(2660-1)

[Formaldehyde in Ambient Air: UV Spectroscopy and Metal Oxides Technologies Compared for a Growing](#)

[Market](#) John R. Saffell, Alphasense Limited, James Covington, Jane Hodgkinson, John Davenport, Ralph Tatam

2:20 PM

(2660-2)

[Ion Analysis of Hydraulic Fracking Fluids in Fracking Process](#) Jay Gandhi, Metrohm USA, Anne Shearrow, Johnson Mathew

2:40 PM

(2660-3)

[High Throughput Metals Analysis of Soil](#) James Hannan, Thermo Fisher Scientific, Fergus Keenan

3:00 PM

(2660-4)

[Weathering of Macondo Well Oil: Identification of Oxygenated Residues by GCxGC & PLS](#) Gregory J. Hall, US Coast Guard Academy, Catherine Carmichael, Christoph Aeppli, Christopher Reddy, Glenn Frysinger, Jonas Gros, Karin Lemkau, Robert Nelson

3:35 PM

(2660-5)

[Analyzing Leachates from Trona-integrated Class C Fly Ash Using Inductively Coupled Plasma-Mass Spectrometry](#) Yongbo Dan, Missouri University of Science and Technology, Casey Zimmerman, Honglan Shi, Jianmin Wang, Kun Liu

3:55 PM

(2660-6)

[Improved Determination of Trace Concentrations of Perchlorate in Drinking Water with Analytical/Capillary Two-Dimensional Ion Chromatography](#) Yongjing Chen, Thermo Fisher Scientific, Brian De Borba, Jeffrey Rohrer

4:15 PM

(2660-7)

[A New Ratiometric Fluorescent Cu\(II\) Sensor based on Poly N-isopropylacrylamide on Silica Gel](#) Rui Ding, University of New Hampshire, Justin Massing, Roy Planalp, William Seitz

4:35 PM

(2660-8)

[Electrochemical Studies on Action of Extract of Refused Tea as a Green Corrosion Inhibitor for Mild Steel](#) Madurani Edussuriya, University of Ruhuna, Bala Acharige Gimhani

ORAL SESSIONS

Session 2670

PITTCON 2013

Drug Discovery (Half Session) - arranged by Jason Link, Agilent Technologies

Thursday PM, Room: 115A

Jason Link, Agilent Technologies, Presiding

3:35 PM

(2670-1)

[Limit of Ethylene Glycol \(EG\), Diethylene glycol \(DEG\), and Triethylene Glycol \(TEG\) in Ethoxylated Substances](#) Karen V. Gilbert, US Pharmacopeia, Claire Chisolm, Edmond Biba, Hong Wang, Kornepati Ramakrishna, Samir Wahab

3:55 PM

(2670-2)

[Liquid Handling Processes Impact Computational Modeling in Drug Discovery](#) Joe Olechno, Labcyte, Anthony Williams, Rich Ellson, Sean Ekins

4:15 PM

(2670-3)

[Guidelines for a Phased Approach to Validation \(Including Method Development, Qualification, and Validation\) for Non-Bioassays in Biotherapeutics Pharmaceutical Sciences](#) Deanna C. Schuchmann, Pfizer, Kevin Bullock, Laura Bass, Nathan Lacher

ORAL SESSIONS

Session 2680

GCMS: Analysis - arranged by Vinod Bathula, South Dakota State University

Thursday PM, Room: 118A

Vinod Bathula, South Dakota State University, Presiding

2:00 PM

(2680-1)

[Extremely Accurate Prediction of Gas Chromatographic Retention by Back-Calculation of Temperature and Hold-up Time Profiles](#) Paul G. Boswell, University of Minnesota, Adrian Hegeman, Jerry Cohen, Peter Carr

2:20 PM

(2680-2)

[Determination of the End Groups in PVP \(PolyVinylPyrrolidone\) Using High Resolution LCMS](#) Bala Balasanmugam, Ashland, Inc., Joy Yapchulay, Najeh Kharbatia

2:40 PM

(2680-3)

[Identification of the Impurities in N-Methyl-2-Pyrrolidone \(NMP\) Using GC/MS and Development of a Better](#)

[GC-FID Method That Separates Most of These Impurities Compared to That Attainable by USP Equivalent](#) Bala Balasanmugam, Ashland, Inc., Joy Yapchulay

3:35 PM

(2680-5)

[Global Mass Spectrometry Scent Printing \(GMSSP\): Comparison of Samples on the Basis of their VOCs Content](#) Hans Wiech, VOCscan AG, Colin Mitchell, Thierry Zesiger

3:55 PM

(2680-6)

[Identification of Impurities and Recovery of Starting Material from Industrial Distillation Bottom from Gamma Butyrolactone Production](#) Maria Diss, Ashland, Inc., Bala Balasanmugam

4:15 PM

(2680-7)

[An Inter-Laboratory Study of a New Retention Prediction Methodology for GC-MS](#) Brian B. Barnes, University of Minnesota, Adam Heuberger, Corey Broekling, Gregory Janis, Henry Corcoran, Mark Vitha, Michael Wilson, Nicholas Snow, Panhia Yang, Paul Boswell, Peter Carr, Shilpi Chopra, Tony Borgerding

ORAL SESSIONS

Session 2690

Laboratory Information Management: Integration and Implementation - arranged by Chang S. Hsu, Florida State University

Thursday PM, Room: 120A

Chang S. Hsu, Florida State University, Presiding

2:00 PM

(2690-1)

[Use of Harmonized Data Standards to Simplify Use of Chemometric Methods for Online Analysis](#) David Joyce, Thermo Fisher Scientific

2:20 PM

(2690-2)

[What Medical Manufacturers Need to Know About Updated Lab Equipment Standard](#) Todd Konieczny, Intertek

2:40 PM

(2690-3)

[The Changing Face of Lab Automation – Alternative Computing Devices and the Cross Platform Revolution](#) Steven M. Neri, LabWare

3:00 PM

(2690-4)

[CDS and LIMS Integration: The Next Generation](#) Barry Coope, Thermo Fisher Scientific

3:35 PM

(2690-5)

[I Like My Excel Spreadsheets - Why Can't I Use Them?](#) Robert Nespolo, LabWare

3:55 PM

(2690-6)

[Using LIMS to Drive Productivity in the Manufacturing Environment](#) Michelle C. Sharron, Thermo Fisher Scientific

4:15 PM

(2690-7)

[Delivering Better Value From Your Laboratory Informatics Strategy](#) Jon Walker, LabWare

4:35 PM

(2690-8)

[Is There a "Cloud" in Your Laboratory's Future?](#) Donald Tucker, LabWare

ORAL SESSIONS

Session 2700

Liquid Chromatography: Method Development - arranged by Frank L. Dorman, The Pennsylvania State University

Thursday PM, Room: 120B

Frank L. Dorman, The Pennsylvania State University, Presiding

2:00 PM

(2700-1)

[A Novel Orthogonal Background Correction Method for Fast 2D-LC Coupled with Diode Array Detector](#) Marcelo R. Filgueira, University of Minnesota, Cecilia Castells, Peter Carr

2:20 PM

(2700-2)

[The Influence of the Counter Ion of 1-Methy, 3-Butyl Imidazolium Ionic Liquid as a Mobile Phase Additive on the Adsorption Behavior of Tryptophan on Reversed Phase Liquid Chromatography](#) Tarab Ahmad, Western Illinois University, Ahlam Alalwait, Bartlomiej Redlinski, Tariq Z Ahmad

2:40 PM

(2700-3)

[Development of LC-IR Methods to Support Industrial Polymer R&D Programs](#) Nancy L. Jestel, SABIC, Cherie Pomeranz, Stephan Moyses

3:00 PM

(2700-4)

[Three Dimensional Planar Chromatography on a Silica Monolith Plate](#) Qifeng Ma, Janusep

3:35 PM

(2700-5)

[Reversed-Phase Liquid Chromatographic Method Development in an Analytical Quality by Design \(AOBD\) Framework](#) George L. Reid, Pfizer, Charles Cheng, David Fortin, Gang Xue, James Morgado, Jeffrey Harwood, Jian Wang

3:55 PM

(2700-6)

[Peak Capacity Optimization of Low MW Analytes in Reversed Phase Gradient Elution Chromatography](#) Arianne Soliven, University of Minnesota, Imad Haidar Ahmad, Marcelo Filgueira, Peter Carr

4:15 PM

(2700-7)

[Development and Evaluation of the Relative Accuracy and Precision of an SEC Method for the Determination of Monomer Conversion in Polymerization Systems Containing Non-Volatile Reactants and Additives](#) Walter B. Shepherd, Organomation Associates

4:35 PM

(2700-8)

[Evaluating Orthogonal Stationary Phase Selectivities with Different Organic Modifiers and Mobile Phase pHs for Efficient RPLC Method Development](#) Thomas J. Waeghe, MAC MOD Analytical, Inc., Carl Zimmerman, Geoffrey Faden

ORAL SESSIONS

Session 2710

Microfluidics/Lab-on-a-Chip: Fundamentals - arranged by Stephanie Archer-Hartmann, University of Georgia

Thursday PM, Room: 120C

Stephanie Archer-Hartmann, University of Georgia, Presiding

2:00 PM

(2710-1)

[Aqueous/Oil Interfacial Synthesis and Characterization of a PEG-Modified Fluorocarbon Surfactant for Droplet Microfluidics Applications](#) Cheryl J. DeJournette, Auburn University, Christopher Easley, Haley Medlen, Joonyul Kim

PITTCON 2013

2:20 PM

(2710-2)

[Unique Surface Modification Strategies for High Aspect Ratio Polymeric Microfluidic Devices](#) Joshua M. Jackson, University of North Carolina at Chapel Hill

2:40 PM

(2710-3)

[Measurement of Microchannel Fluidic Resistance with a Standard Voltage Meter](#) Leah A. Godwin, Auburn University, Christopher Easley, Kennon Deal, Lauren Hoepfner, Louis Jackson

3:00 PM

(2710-4)

[Visualization of Gas/Water Two Phase Flow and Displacement of Gas/Water in Nanochannels Using Single Molecule Imaging System](#) Qihua Wu, Missouri University of Science and Technology, Baojun Bai, Keith Neeves, Yinfu Ma

3:35 PM

(2710-5)

[Effects of Confinement on Macromolecular Transport in Nanochannels Studied by Fluorescence Correlation Spectroscopy](#) Dane A. Grismer, University of Notre Dame, Paul Bohn

3:55 PM

(2710-6)

[Recent Advances in the Separation Chemistry and Collection Interfaces for Microchip Electrophoresis Analysis of Aerosol Composition](#) Scott D. Noblitt, Colorado State University, Charles Henry, Jeffrey Collett

4:15 PM

(2710-7)

[Fluidic Characterization of a Thermally Responsive Nanogel in a Microfluidic Chip](#) Laura Casto, West Virginia University, Brandon Durney, Lisa Holland, Tyler Davis, Xingwei Wu

4:35 PM

(2710-8)

[Quantitative Ink-Jet Injection for Capillary Electrophoresis](#) Ying Weng, Tokyo Metropolitan University, Katsumi Uchiyama

ORAL SESSIONS

Session 2720

Nanoparticles and SPR - arranged by Xioshan Zhu, University of Nevada

Thursday PM, Room: 121B

PITTCOON 2013

Xioshan Zhu, University of Nevada, Presiding

2:00 PM

(2720-1)

[Photo-Reversible Phase Transfer of Nanoparticles and Its Applications in Catalysis](#) Lu Peng, University of Florida, Weihong Tan

2:20 PM

(2720-2)

[Palladium-Coated Gold Nanorods Drastically Expedite Reduction Reaction of Resazurin](#) Luyang Zhao, North Carolina State University, Gufeng Wang, Pollara Cobb, Yaqing Zhao

2:40 PM

(2720-3)

[Fabrication and Characterization of Buckycolumn Electrodes for Electroanalytical Measurements](#) Aidan Fagan-Murphy, University of Brighton, Bhavik Patel, Raymond Whitby

3:00 PM

(2720-4)

[Switching of the Enzyme-Like Activity of Gold Nanoparticles by Metal Ions and Proteins](#) Chih-Ching Huang, National Taiwan Ocean University, Chia-Wen Lien, Huan-Tsung Chang

3:35 PM

(2720-5)

[Plasmonic Sensors Based on Nano- and Microhole Arrays](#) Jean-Francois Masson, Universite de Montreal

3:55 PM

(2720-6)

[Tailoring Nanostructure Surface Plasmons for Optimal Sensor Substrate Selection](#) Laurel L. Kegel, University of Delaware, Karl Booksh

4:15 PM

(2720-7)

[Total Surface Plasmon Resonance Sensor System Using Various Thiol Compounds](#) Toshikazu Kawaguchi, No Affiliation Listed, Katsuaki Shimazu, Kinichi Morita, Shinji Suzuki

4:35 PM

(2720-8)

[Functionalized Alkanethiol Monolayer Domain Structure Effect on SPR Sensing](#) Su Herman, No Affiliation Listed, Katsuaki Shimazu, Kinichi Morita, Shinji Suzuki, Toshikazu Kawaguchi

POSTER SESSIONS

Session 2730

Agriculture

Thursday PM, Room: 204ABC

(2730-1P)

[Chemometric Correlation of Meat Quality Measurements and Visible/ Near-Infrared Spectra of Freeze Dried Breast Filets](#) Samantha Hawkins, USDA-ARS, Brian Bowker, Hong Zhuang

(2730-2P)

[Enhancement of Trichoderma spp by Gamma Radiation for Stimulating of Biodegradation of Carbofuran Pesticide](#) Abd El-Moneim Afify, Cairo University, Bassam Kassem, Ghada Ibrahim, Mohamed Abo El-Seoud

(2730-3P)

[Low Sulfur Determination in Geological and Agronomy by Combustion Method](#) Guido Giazzi, Thermo Fisher Scientific, Lilliana Krotz

(2730-4P)

[Cooking Effect on Copper Concentration in Different Brazilian Beans \(Phaseolus vulgaris L.\) by FAAS](#) Juliana Naozuka, UNIFESP, Alessandra Takara Ferreira

(2730-5P)

[Oxidative Study of Cactus Oil by Chemometric Treatment of Mid-Infrared Spectra](#) Sandrine Amat, Aix-Marseille Universite, Jacky Kister, Miloud El Hadek, Nathalie Dupuy, Salma Zine, Zeineb Braham

(2730-6P)

[Green, Enzyme-Based Test Kit for Phosphate Utilizing a Hand-Held Photometer](#) Jacob L. Ladd, NECi, Ellen Campbell, Kyle Scott, Wilbur Campbell

(2730-7P)

[Distribution of Penicillin G Residues Among Sow Muscles](#) Marilyn J. Schneider, USDA-ARS-ERRC, David Newman, David Smith, Sara Lupton, Weilin Shelver

(2730-8P)

[Characterization of Multiple Classes of Pesticide Compounds in Foods by Liquid Chromatography-High Resolution TOF MS and a QuEChERS Extraction Approach](#) Jeffrey Patrick, LECO Corporation, Joe Binkley, Kevin Siek, Li Zhang

(2730-9P)

[Calibration Transfer and Identification of French Olive Varieties by Stone Artificial Vision](#) Sandrine Amat, Aix-Marseille Universite, Dominique Bertrand, Jacques Artaud, Nathalie Dupuy, Pierre Vanloot

(2730-10P)

[Novel Impedimetric Biosensor Based on Enzyme Catalysis-Induced Ion Strength Increase](#) Yingchun Fu, University of Arkansas, Jacob Lum, Ronghui Wang, Yanbin Li, Zachary Callaway

(2730-11P)

[Emerging Contaminants in Agricultural Soils of the Sinu Basin, Colombia](#) Amado E. Navarro, Technological University of Izúcar de Matamoros, José Marrugo

POSTER SESSIONS

Session 2740

Electroanalytical Applications

Thursday PM, Room: 204ABC

(2740-1P)

[Multifiber Electrodes for the Direct Detection of Neurotransmitter Release from Taste Buds](#) Melinda B. Baur, Illinois Wesleyan University, Aaron Moore, John Baur, Stephen Whitfield

(2740-2P)

[Investigation of Dissimilarity Metal Reduction \(DMR\) Pathways of \[i\]Shewanella\[/i\] by Scanning Electrochemical Microscopy](#) David A. Crisostomo, Vanderbilt University, Danielle Kimmel, David Cliffl, Gongping Chen

(2740-3P)

[Optimization of Boron Doped Diamond Array of Micro Electrodes For Electrochemical Detection in HPLC](#) Drancois Dardoize, UPMC, Didier Devilliers, Eric Mahe

(2740-4P)

[Studying the Effect of Cholesterol on Membrane Dynamics Using an Artificial Cell Model for Exocytosis](#) Neda Najafinobar, Chalmers University of Technology, Ann-Sofie Cans, Michael E Kurczy

(2740-5P)

[Enzymatic Synthesis of Conducting Polymer Based Nanoparticles](#) Arunas Ramanavicius, Vilnius University, Almira Ramanaviciene, Arunas Stirke, Asta Kausaite-Minkstimiene, Viktor Mazeiko, Yasemin Oztekin, Zigmantas Balevicius

(2740-6P)

[Kinetics and Low Temperature Studies of Electron Transfer between Small Au Monolayer Protected Clusters](#) Tessa M. Carducci, The University of North Carolina at Chapel Hill, Royce Murray

(2740-7P)

[A New Method for Synthesis of Sol-Gels](#) Diep V. Ca, Shenandoah University, Hiwan Brhena, James Cox, Joshua Walker, Nicholas Petrilla

(2740-8P)

[Synthesis and Electrogenerated Chemiluminescence of Water Soluble Silicon Quantum Dots](#) Wujian Miao, The University of Southern Mississippi, Allen Reed

(2740-9P)

[Electrochemical and Fluorescent Microscopy Studies of Ion Transport in Nanopipettes](#) Wenqing Shi, Indiana University, Lane Baker, Niya Sa

(2740-10P)

[Spectro-Electrochemistry with a Nanostructured Electrode](#) Matthew R. Bailey, University of Notre Dame, Zachary Schultz

(2740-11P)

[Scanning Electrochemical Microscopy Using Nano-Electrodes](#) James M. Marr, University of Notre Dame, Zachary Schultz

(2740-12P)

[Water Oxidation Electrocatalysis via Electroflocculated Films of Iridium Oxide Nanoparticles \(IrO_x NPs\)](#) Katherine E. Michaux, University of North Carolina at Chapel Hill, Royce Murray

(2740-13P)

[Development of an Optimized Pulsed Amperometric Detection Waveform for Aqueous Copper](#) William M. Cuning, University of Maryland Baltimore County, William LaCourse

(2740-14P)

[A Study on the Use of SECM for Electrochemical Depletion of Ascorbate and Selective Determination of Paracetamol in Pharmaceutical Formulations](#) Gabriel N. Meloni, University of São Paulo, Alex Lima, Mauro Bertotti

POSTER SESSIONS

Session 2750

Environmental: Sample Preparation and Air/Vapor Analysis

Thursday PM, Room: 204ABC

(2750-1P)

[Membrane Extraction with Sorbent Interface \(MESI\) Coupled with Gas Chromatography-Ion Mobility \(GC-IMS\) and Mass Spectrometry Detection \(GC-MS\) for On-Site Semi-Continuous Monitoring](#) Nathaly Reyes-Garcés, University of Waterloo, German Gómez-Ríos, Janusz Pawliszyn

(2750-2P)

[Solid Phase Microextraction \(SPME\) and Needle Trap Devices \(NTD\) Coupled with Gas Chromatography-Ion Mobility Spectrometry \(GC-IMS\) and Gas Chromatography-Mini Toroidal Ion Trap Mass Spectrometry \(GC-TMS\) for On-Site Analysis](#) Nathaly Reyes-Garcés, University of Waterloo, German Gómez-Ríos, Janusz Pawliszyn

(2750-3P)

[Solid Phase Extraction Using Carbon Cryogels](#) Justin Shearer, Rose-Hulman Institute of Technology, Gregory Horne

(2750-4P)

[Mold Odor Analysis Using a Purge and Trap Multimatrix Autosampler](#) Nathan Valentine, Teledyne Tekmar, Holly Graves, Tom Hartlein

(2750-5P)

[Compound Specific Isotope Ratio Analysis in Vapor Intrusion Studies Using PDMS Based Permeation Passive Sampler](#) Oana C. Goli, University of Waterloo, Humam Mugammar, Massimo Marchesi, Ramon Aravena, Tadeusz Gorecki

(2750-6P)

[Trace Level Nitric Oxide Standard Stability in Gas Cylinders](#) Kenneth Wong, American Air Liquide, Donna McClain, Melissa Green, Tom Sassaman

(2750-7P)

[Determination of Trace-Level Odorous Components from a Polluted Air Sample Using a Hyphenated TD-GC/TOF-MS Technique and Data Analysis Software](#) Nick Bukowski, ALMSCO International, Kurt Thaxton, Nicola Watson, Paul Morris, Steve Smith

(2750-8P)

[Development of a New Needle Trap Pen-Like Personal Diffusive Sampler](#) German A. Gómez-Ríos, University of Waterloo, Janusz Pawliszyn, Nathaly Reyes-Garcés

(2750-9P)

[EPA 8015d : Determination of VOC Compounds in Environmental Matrices Using a New Generation of Static Headspace – GC FID](#) Ilaria Ferrante, DANI Instruments, Chiara Abate, Manuela Bergna

(2750-10P)

[Processing Highly Particulate Laden Samples Using Automated SPE Extractors](#) David Gallagher, Horizon Technology Inc., Michael Ebitson

(2750-11P)

[Determination of Polycyclic Aromatic Hydrocarbons in Drinking Water Samples via BEA Zeolite and High-Performance Liquid Chromatography](#) Walter B. Wilson, University of Central Florida, Andreia Costa, Andres Campiglia, Huiyong Wang, Jose Dias, Silvia Dias

(2750-12P)

[Maximizing Lipid Load With Less Time and Solvent With 2-Column GPC Cleanup](#) Jessica Netzer, J2 Scientific, Jeff Wiseman, Jennifer Salmons, Tom Dobbs

(2750-13P)

[Automated Extraction of Artificial Sweeteners from Drinking Water](#) Jessica Netzer, J2 Scientific, Jeff Wiseman, Jennifer Salmons, Tom Dobbs

(2750-14P)

[Determination of Monocrotophos, Diazinon, Malathion, EPN, and Methamidaphos from Aqueous Samples](#) Jim Fenster, Horizon Technology Inc., Julie McGettrick

(2750-15P)

[Monitoring of Gases and Odors Around Industrial Sites with Stationary Gas Sensor Arrays](#) Andreas Walte, Airsense Analytics, Bert Ungethuem, Fernando Crivelli, Philippe Niklisch, Wolf Muenchmeyer

(2750-17P)

[Cavity Ring-Down Analyzer for Continuous Emissions Monitoring Applications](#) Graham A. Leggett, Tiger Optics

(2750-18P)

[Fluorescence Microscopy-Based Method for Selective Detection of Asbestos](#) Takenori Ishida, Hiroshima University, Akio Kuroda, Maxym Alexandrov

(2750-19P)

[Faster Digestions of Environmental Samples](#) Ian D. Brindle, Brock University, Ravi Kanipayor, Wang Yong

POSTER SESSIONS

Session 2760

Gas Chromatography: Optimization

Thursday PM, Room: 204ABC

(2760-1P)

[Oh! It's My O-Ring? - A Commonly Misdiagnosed Source of Gas Chromatographic Bleed](#) Scott L. Grossman, Restek Corporation, Gino Tambourine

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(2760-2P)

[Optimizing GC Parameters for Faster Separations with Conventional Instrumentation](#) Luisa Pereira, Thermo Fisher Scientific, Anila Khan

(2760-3P)

[Novel Metal Ferrule Design for Fused Silica Tubing Improves System Performance, Productivity and Usability](#) Lindy Miller, Agilent Technologies, Ponna Pa, Xiaomi Xu

(2760-4P)

[Inert Flow Path for GC - Eliminating the Weakest Link](#) Lindy Miller, Agilent Technologies, Xiaomi Xu

(2760-5P)

[Comparison of the Selectivity of Ionic Liquid Stationary Phases for the Analysis of FAME Isomers](#) Leonard M. Sidisky, Sigma-Aldrich/Supelco, Daniel Shollenberger, Greg Baney, Gustavo Serrano, James Desorcie, Katherine Stenerson

(2760-6P)

[The Critical Need for Certified Clean Vials for Mass Spectroscopy](#) Dave Edwards, Thermo Fisher Scientific, Detlev Lennartz, Loy Shick

(2760-7P)

[A Matter of Degrees, But Do Degrees Really Matter?](#) Scott L. Grossman, Restek Corporation, Gino Tambourine, Jack Cochran

(2760-8P)

[Hydrogen as Carrier Gas for GC Analysis](#) Ilaria Ferrante, DANI Instruments, Daniele Recentì

POSTER SESSIONS

Session 2770

Laboratory Management

Thursday PM, Room: 204ABC

(2770-1P)

[Development of a 'Virtual' Instrument for Every Laboratory](#) Simon Tullett, TTP Labtech Ltd, Brian Everatt, Wendy Gaisford

(2770-3P)

[Laboratory Solution Preparation Using Hydrodynamic Impedance and Diffusional Resistance](#) Miklos Gratzl, Case Western Reserve University, Prasad Oruganti

POSTER SESSIONS

Session 2780

Liquid Chromatography: Materials Science, Polymers, and Others

Thursday PM, Room: 204ABC

(2780-1P)

[Deuterium NMR and HPLC Characterization of \(²H₃\)Methyl Undecanoate Modified Silica](#) Mahinda E. Gangoda, Kent State University

(2780-2P)

[Preparation of Core-Shell Polymer/Nanodiamond/Carbon Particles for HPLC](#) Matthew R. Linford, Brigham Young University, Andrew Dadson, Bhupinder Singh, Chuan-Hsi Hung, David Jensen, Landon Wiest, Michael Vail

(2780-3P)

[50 Years of Size Exclusion Chromatography \(SEC\)](#) Michael J. OLeary, Waters Corporation

(2780-4P)

[Gel Permeation Chromatography Coupled to a Dual-Flow Refractive Index Detector for Precise Molar Mass Determination of Polymers](#) Amanda K. Brewer, Tosoh Bioscience

(2780-5P)

[Quantitation of Surfactants in Samples by High Performance Liquid Chromatography and Corona Charged Aerosol Detection](#) Marc Plante, Thermo Fisher Scientific, Bruce Bailey, David Thomas, Ian Acworth, Qi Zhang

(2780-6P)

[Overcoming Obstacles to Hexavalent Chromium Analysis at Trace Levels](#) Nadine Kotlarz, University of Michigan, Giridhar Upadhyaya, Kim Hayes, Lutgarde Raskin, Ryan Darnton, Thomas Yavaraski

(2780-7P)

[Microfabricated Carbon Nanotube Templated Thin Layer Chromatography Plates Show An Increase in Efficiency Over Traditional TLC Plates](#) David S. Jensen, Brigham Young University, Andrew Dadson, Andrew Miles, Matthew Linford, Michael Vail, Richard Vanfleet, Robert Davis, Supriya Kanyal

(2780-8P)

[Profiling Hoodia Extracts by HPLC with Charged Aerosol Detection, Electrochemical Array Detection and Principal Components Analysis](#) David Thomas, Thermo Fisher Scientific, Bruce Bailey, Ian Acworth, Marc Plante, Qi Zhang

(2780-9P)

[Fully Automated SPE-GC/MS-Analysis of Delta-9-Tetrahydrocannabinol \(THC\) and Its Metabolites in Serum](#) Oliver Lerch, GERSTEL GmbH&Co. KG, Andreas Hoffmann, Edward Pfannkoch, Gertrud Rochholz, Hans-Werner Schuetz, Lars Raduenz, Susanne Rose

(2780-10P)

[A Novel Dry Sampler for Determination of Isocyanates in Vapor Phase and Particulate](#) Michael Ye, Sigma-Aldrich/Supelco, Daniel Karlsson, Gunnar Skarping, Jamie Brown, Kristen Schultz, Marianne Dalene, Michael Halpenny, Olga Shimelis

(2780-11P)

[Automated Solid Phase Extraction and Concentration for Emerging Contaminants in Drinking Water](#) William R. Jones, Horizon Technology Inc., Alicia Cannon, Brian LaBrecque

(2780-12P)

[Gas Chromatographic Analysis of Organic Pollutants in Runoff Water From Airport](#) Anna Sulej, Gdansk University of Technology, Jacek Namienik, Zaneta Polkowska

(2780-13P)

[Fast Ion Determinations and Efficient Separations of Complex Samples Using Smaller Particle-Size Ion Exchange Columns](#) Terri T. Christison, Thermo Fisher Scientific, Barbara Shao, Cathy Tanner, Fei Pang, Linda Lopez

(2780-14P)

[Enrichment of Phospholipids from Biological Matrices with Zirconium Oxide-Modified Silica Sorbents](#) Xiaoning Lu, Sigma-Aldrich/Supelco, David Bell, Jennifer Claus

(2780-15P)

[Metalloproteome of Histoplasma Capsulatum: The Role of Metals in Microbial Growth](#) Anna Daigle, University of Cincinnati, George Deepe, Joseph Caruso, Julio Landero, Kavitha Sumbaramanian

(2780-16P)

[Evaluation of New Technologies for the Effective Removal of Phospholipids During Protein Precipitation by LC-MS-MS](#) Milton Furtado, Algorithme Pharma, Christopher Barbieri, Craig Aurand, David Bell, Fabio Garofolo, Richard Lavallee

(2780-18P)

[Choosing the Right Filters for Biological Samples Filtration](#) Limian Zhao, Agilent Technologies

(2780-19P)

[Effect of Hyaluronan Molecular Weight on Uptake and Release from Contact Lenses](#) Patricia Harmon, Bausch & Lomb, X Michael Liu

(2780-20P)

[SERS Imaging of Developed HPTLC Plates via Blotting onto Nanocomposite Substrate](#) Nichole Crane, University of Tennessee-Knoxville, Chris Freye

POSTER SESSIONS

Session 2790

Nanotechnology

Thursday PM, Room: 204ABC

(2790-1P)

[Phospholipid-Assembled Doxorubicin/Gold Nanoconjugates: Targeted and pH-Responsive Drug Delivery](#) Yu-Fen Huang, National Tsing Hua University, Chieh-Wei Chen, Ya-Ling Chen

(2790-2P)

[Preparation of H-ZSM-5 Nanozeolite and Its Effect as a Catalyst on the Synthesis of Some Clip Molecules](#) Saeideh Yahyaei, Islamic Azad University, Esmail Vessally

(2790-3P)

[Dansylated Calix\[4\]pyrrole: Selective Turn Off Fluorescent Sensor for Metal Ions](#) Disha J. Vyas, Gujarat University, Vinod Jain

(2790-4P)

[Antibacterial Multifunctional Silver Nanoparticles for Selective Signaling of Fe³⁺](#) Disha J. Vyas, Gujarat University

(2790-5P)

[Indocyanine Green Dye Conjugated Magnetic Graphene Oxide for Photothermal Therapy and Magnetic Resonance Imaging](#) Huseyin Erdal, University of Florida, Emir Yasun, Ismal Ocsoy, Muserref Arslan Ocsoy, Weihong Tan

(2790-6P)

[Novel Method of Nanosizing and Deagglomeration For Many Materials by Wet Milling](#) Takayuki Takatsuka, THINKY USA, Eric Kuramoto

(2790-7P)

[Preparation of a Cu Mixed Valence System within Copper \(Cu\)/Silica Nanocomposite Material: Characterization and Systematic Antibacterial Studies](#) Mikaeel I. Young, University of Central Florida, Swadeshmukul Santra

(2790-8P)

[Measurement of Extinction, Absorption, and Scattering Cross Sections of Novel Multilayered Silver Nanostructures](#) James P. Cook, Western Carolina University, David Evanoff

(2790-9P)

[Immunomagnetic Separation Efficiencies of Different Magnetic Gold Nanoparticles](#) Akif G. Bozkurt, Hacettepe University, Adem Zengin, Ismail Boyaci, Ugur Tamer

(2790-10P)

[Surface Enhanced Raman Spectroscopy Using Novel Multilayered Silver Nanoparticles Containing an Encapsulated Internal Standard](#) David D. Evanoff, Western Carolina University, James Cook, Joseph Richardson

(2790-11P)

[NMR Studies of Molecular Dynamics in Imidazolium Based Ionic Liquids](#) Batchimeg Ganbold, University of Western Sydney, Gang Zheng, Price William

(2790-12P)

[Synthesis and Characterization of CeO-NiO NanoComposites](#) Ashwani Sharma, MD University

(2790-13P)

[A Facile Sonochemical Synthesis of Polydopamine Microspheres](#) Gil Yeroslavsky, Bar Ilan University

POSTER SESSIONS

Session 2800

Nanotechnology: Sensors

Thursday PM, Room: 204ABC

(2800-1P)

[Electrochemical Sensing Platform Based on Nanostructures](#) Yasemin Oztekin, Vilnius University, Almira Ramanaviciene, Arunas Ramanavicius, Esra Bilici, Mutahire Tok, Zafer Yazicigil

(2800-2P)

[Highly Selective and Sensitive Fluorescent Probe for Detection of Cd \(II\) Based on Octa-O-Methoxy Resorcin\[4\]Arene Tetra Hydrazide \(OMRTH\) Stabilized Silver Nanoparticles](#) Disha J. Vyas, Gujarat University

(2800-3P)

[Carbon Nanotube Based Detector for Toxic Industrial Chemicals](#) Poliang Chien, Design West Technologies, Inc., Dheeraj Jain, Ryan Hur

(2800-4P)

[Nonenzymatic Electrochemical Glucose Sensor Based on Gold Nanoparticles](#) Hakan Ciftci, Kirikkale University, Ugur Tamer

(2800-5P)

[Nanoparticle-Based Biosensing Systems](#) Yasemin Oztekin, Vilnius University, Almira Ramanaviciene, Arunas Ramanavicius

(2800-6P)

[Electrospun Nanofibers Sorbents for Pre-Concentration of pp -1,1-dichloro-2,2 bis-\(4-chlorophenyl\) Ethylene with Subsequent Desorption by Pressurized Hot Water Extraction](#) Adeyemi D. Kehinde, University of Lagos

POSTER SESSIONS

Session 2810

Quality

Thursday PM, Room: 204ABC

(2810-1P)

[Detection of Irradiated Foodstuffs, Drugs and Relative Products: Quality Control](#) Sandrine Amat, Aix-Marseille Universite, Jacky Kister, Jacques Raffi, Nathalie Dupuy

(2810-2P)

[Traceability of Mercury Vapor](#) Annarita Baldan, VSL Dutch Metrology Institute, Hugo Ent

(2810-3P)

[Advanced X-Ray Fluorescence Technologies](#) Marissa Mikkelson, Amway, Hilary Cadeau

(2810-4P)

[Enantiomeric Impurities in Chiral Synthons, Catalysts, and Auxiliaries](#) Haixiao Qiu, The University of Texas at Arlington, Daniel Armstrong, Lillian Frink, Nilusha Padivitage

POSTER SESSIONS

Session 2820

Sample Preparation of Food

Thursday PM, Room: 204ABC

(2820-1P)

[Determination of Antibiotic Residues in Milk Using OuEChERS Method and UFLC-ESI-MS](#) Diego A. Ahumada, Universidad Jorge Tadeo Lozano

(2820-2P)

[Application of Surfactant Assisted Dispersive Liquid Liquid Microextraction \(DLLME\) for the Determination of Fluoroquinolones in Chicken Liver by Liquid Chromatography](#) Simiso Dube, University of South Africa, Dineo Moema, Mathew Nindi

(2820-3P)

[Supercritical Carbon Dioxide Extraction of Microalgae Oils for Biodiesel Production](#) Rudy Baskette, Supercritical Fluid Technologies, Ken James

(2820-4P)

[Enhanced Sensitivity in GC-MS and GCxGC-MS for Food Aroma Profiling by Dynamic Headspace Sampling Technique](#) Daniela Cavagnino, DANI Instruments, Alessandra Mantegazza, Antonella Siviero

(2820-5P)

[Selective Extraction of Bisphenol A, From Baby Food \(Infant Milk Formula and Canned Food\) Using Solid Phase Extraction Based on Molecularly Imprinted Polymer](#) Kaynoush Naraghi, Polyintell, Benoit Chevalier, Delphine Derrien, Johann Travers, Sami Bayouhd

(2820-6P)

[Fast and Selective Solid Phase Extraction of Zearalenone from Edible Corn Oil Using Molecularly Imprinted Polymers SPE Zearalenone Cartridges](#) Kaynoush Naraghi, Polyintell, Benoit Chevalier, Delphine Derrien, Johann Travers, Sami Bayouhd

(2820-7P)

[Hot Injection and Trapping \(HIT\) Using Multi-Fiber Exchange \(MFX\)-HS-SPME and a Thermal Desorption System for GC-MS Analysis of Odor Compounds](#) Nobuo Ochiai, Gerstel KK, Kikuo Sasamoto, Teruyo Ieda

(2820-8P)

[Determination of 3-chloro-1,2-propanediol in Soy Sauce by Supported Liquid Extraction Coupled with Gas Chromatography-Mass Spectrometry](#) Suzi Qin, Bonna-agela

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(2820-9P)

[Testing Infant and Adult Nutritionals for Additives, Adulterants and Contaminants Starts with Selecting the Right Sample Prep](#) Mike Chang, Agilent Technologies, Anne Mack, Kenneth Lynam, William Long

(2820-10P)

[Analysis of Contaminants and Adulterants in Milk and Milk Products- Sample Preparation Approaches for Optimal Results](#) Mike Chang, Agilent Technologies, Anne Mack, Kenneth Lynam, Limian Zhao, William Long