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205[M&MS.14: *Ab Initio* Study of Ga-Stabilized \$\delta\$ -Pu Bulk and Surfaces](#)

Sarah C. Hernandez (Univ of Texas at Arlington), Daniel S. Schwartz (LANL),
Christopher D. Taylor (DNV GL), Asok K. Ray (Univ of Texas at Arlington)

207[M&MS.15: Precision Lapping of Alpha-Pu Surfaces: Technique and Characterization](#)

M. A. Wall, K. J. M. Blobaum (LLNL)

211[M&MS.16: Finite-Element Simulations of the Coining Process in Plutonium at Ambient and Elevated Temperatures](#)

Y. Morris Wang, Mark Wall, Richard Seugling, Kerri Blobaum (LLNL)

213[M&MS.17: Phase Stability of Plutonium Alloys Following Low Temperature Treatment and Plastic Deformation](#)

S. M. Ennaceur (AWE)

215[M&MS.18: Deformation Processes and Casting Behavior of Unalloyed Pu](#)

Adam M. Farrow, Tarik A. Saleh, D. R. Korzekwa, C. M. Knapp, J. N. Mitchell, T. D. Knapp (LANL)

217[M&MS.19: Grain Boundaries and Interfaces in Delta-Phase Plutonium Alloys](#)

S. M. Valone, S. J. Fensin, R. G. Hoagland (LANL)

220[M&MS.20: Resonant Ultrasound Studies of Naturally Aged Plutonium](#)

A. Migliori, A. Shekhter, B. Ramshaw, J. B. Betts, C. Mielke, F. J. Freibert, M. Ramos, T. A. Saleh (LANL)

222[M&MS.21: Radiogenic-Thermally Coupled Lifetimes in Defects of Aged \$\delta\$ -phase Pu-Ga Alloys](#)

F. J. Freibert, J. N. Mitchell, D. S. Schwartz, A. Migliori (LANL)

224[M&MS.22: Thermal Properties of Plutonium Dioxide Produced from the Oxidation of Metal \(LA-UR-14-22253\)](#)

D. M. Wayne, P. C. DeBurgomaster, J. M. Berg (LANL)

228[M&MS.23: Entangled Crystal, Magnetic, and Electronic Structures of PuGa₃](#)

Sven P. Rudin (LANL)

229[M&MS.24: Beryllium Strain under Dynamic Loading](#)

V. A. Pushkov, A. V. Yurlov, A. A. Okinchits, T. G. Naydanova (RFNC-VNIIEF)

232[M&MS.25: The Current Status in Developing Ce-La Alloys as Pu-Ga Surrogate Alloys at AWE](#)

Michael Ling (AWE)

236[M&MS.26: New Regimes of Plastic Flow in BCC Metals at Extreme Conditions of Pressure and Strain Rate](#)

Bruce A. Remington (LLNL)

237[M&MS.27: A Renaissance of Plutonium Metal Production at the Gram Scale](#)

R. A. Henderson, N. K. Harward, K. E. Roberts, J. A. McNeese, K. J. M. Blobaum (LLNL)

Nuclear Fuel Cycle

238[NFC.1: Dissolution of Aged PuO₂ to Production of ²⁴¹Am for Use in Space Exploration](#)

Chris J. Maher (NNL/Univ of Manchester), S. R. Baker (ESA), Mike Carrott, Bob Lewin, Mark Sarsfield (NNL), Sven L. M. Schroeder (Univ of Manchester), K. Stephenson (ESA)

240[NFC.2: Modeling the PUREX Process for Plutonium Reprocessing at the Savannah River Site](#)

T. Hang, J. A. Pike (SRNL)

242[NFC.3: Stabilisation of Chloride Contaminated Plutonium Oxide for Long Term Storage](#)

Robin Taylor, Kevin Webb, Colin Gregson, Robin Orr, Howard Sims, Chris Mason (NNL), Jeff Hobbs, Robert Bernard (Sellafield Ltd)

243[NFC.4: Discovery of Plutonium-Bismuth and Plutonium-Bismuth- Phosphate Containing Phases in a Hanford Waste Tank](#)

J. G. Reynolds, G. A. Cooke, J. K. McCoskey, W. S. Callaway (Washington River Protection Solutions, LLC)

[244NFC.5: Cask Size and Weight Reduction Through the Use of Materials Based on Depleted Uranium Oxides](#)

Tatiana Kazakovskaya, Sergey Ermichev, Vitaly Matveev, Vyacheslav Shapovalov (RFNC- VNIIEF)

[246NFC.6: HPLC Method for Determination of Th, U and Pu in Irradiated \(Th,Pu\)O₂ Using Hydroxycarboxylic Acids as Eluents](#)

Pranaw Kumar, Sumana Paul, P. G. Jaison, D. Alamelu, Suresh K. Aggarwal (BARC)

[248NFC.7: Rapid Separation of Used Nuclear Fuel Using Extraction Chromatography](#)

Audrey Roman, Ralf Sudowe (UNLV)

[249NFC.8: Simulation of the Products Formed at Storage of the Curium Fraction of High Level Waste](#)

Sergey Stefanovsky, Sergey Dmitriev, Alexander Zherebtsov (RAS)

[253NFC.9: Plutonium Complexation by Ligands for Nuclear Fuel Cycle Separations](#)

Sean D. Reilly, Andrew J. Gaunt, Brian L. Scott (LANL)

[255NFC.10: Creating a Wiki Framework to Navigate Nuclear Forensic Information](#)

K. S. Holliday, M. Robel, L. W. Gray (LLNL)

[257NFC.11: Experimental and Calculated Parameters of Spherical Critical Assemblies with a \$\delta\$ -Phase Plutonium Metal Core \(²³⁹Pu \(98%\)\) and Duralumin, Lead and Tungsten Reflectors](#)

A. A. Kaigorodov, S. V. Vorontsov, E. A. Gumennykh, A. A. Devyatkin, M. I. Kuvshinov, A. V. Panin, S. V. Finogeev, V. Kh. Khoruzhiy (RFNC-VNIIEF)

[260NFC.12: Room-Temperature Oxidation of Hypostoichiometric \(U_{0.55}Pu_{0.45}\)O_{2-x} Mixed Oxide Evidenced by X-Ray Diffraction](#)

Romain Vauchy, Anne-Charlotte Robisson, Renaud C. Belin (CEA DEN, DEC), F. Hodaj (SIMAP, UJF/INP-Grenoble)

Solutions and Gas-Phase Chemistry

[262S&GPC.1: Modeling Actinide Solubilities in Alkaline to Hyperalkaline Solutions: Part One, Solubility of Am\(OH\)₃\(s\) in KOH Solutions](#)

Yongliang Xiong (SNL)

[263S&GPC.2: Radiation Chemistry of Gases in the Presence of an Oxide Surface](#)

Luke Jones (Univ of Manchester)

[264S&GPC.3: Time Resolved Luminescence and Resonant Non-Radiative Energy Transfer in a Cs₂NpO₂Cl₄Doped Cs₂UO₂Cl₄Matrix](#)

Beau J. Barker, John M. Berg, Marianne P. Wilkerson (LANL)

[267S&GPC.4: Selective Separation of Uranium and Select Fission Elements Utilizing \$\beta\$ -Diketones](#)

Daniel Bernard Rego (UNLV), Helen Xun (Gonzaga Univ), Paul M. Forster, Julie Bertoia, Kenneth R. Czerwinski (UNLV)

[270S&GPC.5: Is Octavalent Pu\(VIII\) Viable in PuO₄?](#)

Wei Huang, W. H. E. Schwarz, Jun Li (Tsinghua Univ)

Surface Science and Corrosion

[272SS&C.1: The Effect of Work-Hardening and Thermal Annealing on the Early Stages of the Uranium-Hydrogen Corrosion Reaction](#)

Antonios Konstadinos Banos, Tom B. Scott (Univ of Bristol)

[273SS&C.2: Observation of UO₂-Zr System at the Initial State of Melting](#)

Young-Sang Youn, Jong-Goo Kim, Soon Dal Park, Yeong-Keong Ha, Kyuseok Song (KAERI)

[275SS&C.3: Plutonium Work Function: Effects of Oxidation and Materials Properties](#)

David P. Moore, David L. Pugmire, Thomas J. Venhaus (LANL)

[277SS&C.4: Hydrogen and Oxygen G-Values from Water Adsorbed onto Plutonium Dioxide](#)

D. Kirk Veirs, John M. Berg, Joshua E. Narlesky, Leonardo Trujillo, Edward L. Romero, Kennard V. Wilson, Jr. (LANL)

[280SS&C.5: Gas-Mediated Interior Corrosion of Stainless Steel Containers by Plutonium Oxide with Chloride Impurities](#)

J. M. Berg (LANL), J. M. Duffey, J. I. Mickalonis (SRNL), J. E. Narlesky, D. K. Veirs (LANL)

[283SS&C.6: To the Mechanism of Moisture-Induced Corrosive Processes in Plutonium](#)

A. A. Karnozov, V. K. Orlov (VNIINM)

[285SS&C.7: Structural Insights into the Oxide Formed During the Room Temperature Corrosion of Plutonium](#)

Alison L. Pugmire (LANL), Corwin H. Booth (LBNL), Thomas J. Venhaus, David L. Pugmire (LANL)

[287SS&C.8: Analysis of Pu Surfaces with Time-of-Flight SIMS](#)

T. J. Venhaus, D. P. Moore (LANL)

[289SS&C.9: Corrosion of Nuclear Waste: A Surface Study of Single Crystal UO₂ Thin Films](#)

Sophie Rennie, Laura Glaubes, Camilla Stitt (Univ of Bristol), Elizabeth Cocklin (Univ of Liverpool), Didier Wermielle (ESRF), David Morgan (Cardiff Univ), William Nuttall (The Open Univ), Chris Lucas (Univ of Liverpool), Gerry Lander (EC, Joint Research Centre Inst for Transuranium Elements), Ross Springell (Univ of Bristol)

[291SS&C.10: Oxidation Rates of Alpha Versus Delta Plutonium: An X-Ray Photoelectron Spectroscopy Study](#)

A. J. Nelson, J. A. Stanford, W. K. Grant, R. G. Erler, W. J. Siekhaus, W. McLean (LLNL)

**WEDNESDAY, SEPTEMBER 10, 2014, 8:00-10:00
A.M.**

WEDNESDAY PLENARY

Session Chair: Patrick Allen (LLNL)

[293Management of Used Fuel and the Nuclear Fuel Cycle](#)

Peter Lyons (DOE), plenary

**WEDNESDAY, SEPTEMBER 10, 2014, 10:20 A.M.-
12:00P.M.**

COMPOUNDS, COMPLEXES AND COORDINATION CHEMISTRY—I

Session Chair: Tatiana Kazakovskaya (RFNC-VNIIEF)

294 [The Future of Actinide Science with Soft X-Ray Synchrotron Radiation](#)

David K. Shuh (LBNL), Sergei Butorin (Uppsala Univ), Jinghua Guo (LBNL), Stosh Kozimor (LANL), Stefan G. Minasian, David G. Prendergast, Tolek Tyliczszak (LBNL), Tsuyoshi Yaita (JAEA)

296 [Unusual Electronic Properties in Plutonium\(III\) N-Donor Complexes and Materials](#)

Samantha K. Cary, Justin N. Cross, Jared T. Strirzinger, Matthew J. Polinski, Thomas E. Albrecht-Schmitt (FSU)

298 [Molecular Np and Pu Coordination Chemistry](#)

Andrew J. Gaunt, Jessie L. Brown, Sean D. Reilly, Brian L. Scott (LANL), Nikolas Kaltsoyannis (UCL)

299 [Actinide \(IV\) Hydrolysis and Condensation Products: Polynuclear An\(IV\) Clusters Isolated from Aqueous Solution](#)

Karah E. Knope, L. Soderholm (ANL), invited

NUCLEAR FUEL CYCLE—I

Session Chair: Gordon Jarvinen (LANL)

301 [Plutonium Management in France: Future Possible Scenarios](#)

Bernard Boullis (CEA), invited

302 [Actinide Separations by Membrane Based Methods](#)

P. K. Mohapatra (BARC), invited

305 ²⁴¹[Am Production for Use in Radioisotope Power Systems](#)

M. J. Sarsfield, K. Bell, C. J. Maher M. J. Carrott, C. Gregson, J. Brown, D. A. Woodhead, S. R. Baker, R. J. Taylor, T. P. Tinsley, T. G. Rice, C. J. Rhodes, M. Clough (NNL), K. Stephenson (ESA), T. Wiss (EC-JRC)

WEDNESDAY, SEPTEMBER 10, 2014, 1:00-3:00 P.M.

**COMPOUNDS, COMPLEXES AND COORDINATION CHEMISTRY—
II**

Session Chair: Thomas Fanghaenel (Inst for Transuranium Elements)

307 [Interaction of An\(III/IV/V and VI\) with Borate in Dilute to Concentrated NaCl, CaCl₂ and MgCl₂ Solutions](#)

K. Hinz, M. Altmaier, X. Gaona, Th. Rabung (KIT-INE), E. Alekseev (FZJ), D. Schild, H. Geckeis (KIT-INE)

309 [Divergence Between Pu\(III\) and Am\(III\) Oxoanion Materials](#)

Thomas E. Albrecht-Schmitt (FSU), invited

311 [Complexation of Nitrate with An\(III\) and Ln\(III\) in Na-, Mg- and Ca-Brines: Thermodynamic and Activity Models](#)

M. Herm, X. Gaona, Th. Rabung, D. Fellhauer (KIT-INE), C. Crepin (ENSCM), K. Dardenne, M. Altmaier, H. Geckeis (KIT-INE)

313 [Actinide and Lanthanide Recognition Properties of Oxygen- Nitrogen Hetero Donor Ligand PTA](#)

Toru Kobayashi, Shinichi Suzuki, Hideaki Shiwaku, Tsuyoshi Yaita (JAEA)

315 [Ionochemical Flux Syntheses of Isomorphous Molecular f-Element Borate Cluster Complexes](#)

T. Gannon Parker, Thomas E. Albrecht-Schmitt (FSU)

NUCLEAR FUEL CYCLE—II

Session Chair: Robin Taylor (NNL)

317 [Mathematical Modelling of the Oxidation of Uranium Carbide Fuel](#)

James Shepherd, Michael Fairweather, Bruce Hanson, Peter Heggs (Univ of Leeds)

319 [Potential Applications of Uranyl Peroxide Cage Clusters in the Nuclear Fuel Cycle](#)

Ginger E. Sigmon, Peter C. Burns, Enrica Balboni, Kristi L. Pellegrini, Yi Liu, Brendan T. McGrail, Kathryn M. Peruski, Ernest M. Wylie (Univ of Notre Dame), invited

321 [Evaluation of Oxygen Stoichiometry during the Sintering of \(U, Pu\)O₂ Fuel](#)

S. Vaudez, J. Léchelle, S. Berzati (CEA)

323 [New Opportunities in Plutonium Research and Development in the UK](#)

Tim Tinsley, Robin Taylor, Fiona E. Rayment (NNL)

WEDNESDAY, SEPTEMBER 10, 2014, 3:20-5:20 P.M.

COMPOUNDS, COMPLEXES AND COORDINATION CHEMISTRY— III

Session Chair: Marcus Altmaier (KIT)

325 [Impact of a Phosphonate Compound \(NTMP\) on Plutonium Oxalate Structure and Morphology](#)

Anne-Lise Vitart (CEA, Marcoule), Murielle Rivenet (ENSCL-Lille1), Bénédicte Arab-Chapelet (CEA, Marcoule), Nicolas Clavier, Nicolas Dacheux (ICSM-UMR), Isabelle Bisel, Stephane Grandjean (CEA, Marcoule), Francis Abraham (ENSCL-Lille1)

329 [Actinide Oxalates: Main Structural Features and Comparison With Lanthanide Oxalates](#)

Murielle Rivenet (UCCS-UMR), Bénédicte Arab-Chapelet (DRCP/SERA/LCAR), Christelle Tamain (DRCP/SMCS/LILA), Anne-Lise Vitart (DCRP/SERA/LCAR), Stéphane Grandjean (DRCP/DIR), Francis Abraham (UCCS-UMR)

333 [Structural Characterization of Actinide Single-Crystals with Several Ligands of Interest in the Nuclear Fuel Cycle](#)

C. Tamain, C. Marie, J. Bisson, R. Copping (CEA, Marcoule), I. Charushnikova (Frumkin Inst), G. Dupouy, M-C. Charbonnel, M. Miguiditchian, B. Arab-Chapelet (CEA, Marcoule), M. Rivenet (UCCS-UMR), S. Grandjean (CEA, Marcoule), F. Abraham (UCCS-UMR), D. Dubreuil (Univ of Nantes)

336 [Speciation of Actinides and Lanthanides with Extractants Proposed for Use in Next Generation Partitioning of Spent Nuclear Fuel](#)

Clint A. Sharrad (Univ of Manchester), invited

NUCLEAR FUEL CYCLE—III

Session Chair: Harvé Bernard (CEA)

339 [Cathodic Reduction of Plutonium IV Nitric Acid Solutions in a Plate Electrolyzer](#)

S. Georgette, S. Picart, C. Bouyer, J. Maurin, L. Venault, I. Bisel, S. Grandjean (CEA), J. Deseure (LEPMI, UMR), F. Lapique (LRGP, UPR)

342 [Experimental and Computational Analysis of Nuclear Physics Properties of Assemblies Containing ²³⁷Np and ²³⁵U\(36%\) in the Core and a Duralumin Reflector](#)

A. A. Kaigorodov, E. A. Gumennykh, A. A. Devyatkin, I. Yu. Drozdov, N. V. Zavalov, M. I. Kuvshinov, A. V. Panin, S. V. Finogeev, V. Kh. Khoruzhiy (RFNC-VNIIEF)

THURSDAY, SEPTEMBER 11, 2014, 8:00-9:00 A.M.

THURSDAY PLENARY SESSION

Session Chair: David Hobart (LANL retired)

345 [Analytical Techniques for Plutonium in Nuclear Safeguards and Nuclear Security Applications](#)

Klaus Luetzenkirchen, Klaus Mayer (Inst for Transuranium Elements), plenary

THURSDAY, SEPTEMBER 11, 9:00-10:00A.M.

DETECTION AND ANALYSIS—I

Session Chair: Melissa Denecke (University of Manchester)

347 [Small Scale Plutonium Analysis](#)

Pamela Thompson (AWE), invited

351 [Plutonium Detection with Straw Neutron Detectors](#)

Sanjoy Mukhopadhyay, Richard Maurer (NSTec), Paul Guss (Remote Sensing Lab-Nellis)

SURFACE SCIENCE AND CORROSION—I

Session Chair: Art Nelson (LLNL)

353 [The Study of Reaction of \$\delta\$ -Plutonium Surface with Water Vapor](#)

Xinchun Lai, Xiaoguo Fu, Yongqiang Zhong (China Academy of Engineering Physics)

355 [The Room Temperature Oxidation/Corrosion of \$\delta\$ -Pu: Historical Perspective vs. Modern Understanding](#)

David L. Pugmire (LANL), Harry G. Garcia Flores (SRNL), invited

THURSDAY, SEPTEMBER 11, 2014, 10:20 A.M.-12:00 P.M.

DETECTION AND ANALYSIS—II

Session Chair: Dominic Peterson (LANL)

358 [Advanced X-Ray Imaging of Uranium Distribution in Biological Samples](#)

Manuel Sturzbecher-Hoehne, Abdelmoula Haboub, Kathleen A. Bjornstad, Dahlia D. An, Albert Thompson, Alastair A. MacDowell, Rebecca J. Abergel (LBNL)

360 [Overview on Plutonium Particle Analysis](#)

Mats Eriksson (Swedish Radiation Safety Authority), invited

362 [Experimental and Theoretical Aspects of Nuclear Magnetic Resonance Spectroscopy of Pu Compounds](#)

H. Cho (PNNL), E. Bauer, D. Clark, S. Kozimor, A. Mounce, H. Yasuoka (LANL), K. Mueller, J. Sears, N. Washton (PNNL), invited

SURFACE SCIENCE AND CORROSION—II

Session Chair: David Moore (LANL)

364 [The Microstructure of Plutonium Hydride Reaction Sites](#)

Martin Brierley, John Knowles, Gordon McGillivray (AWE)

366 [Plutonium Hydriding: Hydrogen Transport, Chemistry, and Reaction Front Morphology](#)

L. N. Dinh, S. K. McCall, C. K. Saw, J. M. Haschke, P. G. Allen, W. McLean II (LLNL), invited

368 [The Roles of Pu-Oxide Overlayers in Surface Corrosion of Pu-Metal: A View from Ab Initio Molecular Dynamics](#)

Bo Sun, Hai-Feng Liu, Hai-Feng Song, Ping Zhang (Inst of Applied Physics and Computational Mathematics), invited

THURSDAY, SEPTEMBER 11, 2014, 1:00-3:00 P.M.

DETECTION AND ANALYSIS—III

Session Chair: Kiel Holliday (LLNL)

370 [Safeguarding Nuclear Materials and Countering Nuclear Terrorism](#)

Marion D. Moxley, William W. Terry, Vahid Majidi, (Department of Defense), invited

371 [Application of Focused Ion Beam \(FIB\) to Nuclear Forensics](#)

Brandon W. Chung, Robert G. Erler (LLNL)

373 [High-Selective Chemiluminescence Initiated by Multi-Step Laser-Induced Excitation of Actinide and Lanthanide Ions in Solutions](#)

I. N. Izosimov (Joint Inst for Nuclear Research), N. G. Firsin, N. G. Gorshkov, S. N. Nekhoroshkov (Khlopin Radium Inst)

375 [Present Status of Pu-238 Determination by Mass Spectrometry and Radiometry](#)

Suresh K. Aggarwal (BARC)

377 [Plutonium Speciation Influence on the \$^{22}\text{Na}\$ Yield from the \$^{19}\text{F}\[\alpha, n\]\$ Reaction](#)

William M. Kerlin (UNLV), John D. Despotopoulos (UNLV/LLNL), Dallas D. Reilly (PNNL), Ralf Sudowe, Kenneth R. Czerwinski (UNLV)

THURSDAY, SEPTEMBER 11, 2014, 1:00-2:20 P.M.

SURFACE SCIENCE AND CORROSION—III

Session Chair: Robert Hanrahan (NNSA)

379 [Oxygen Vacancies in \$\text{PuO}_2\$ \(110\) Surfaces via Density Functional Theory](#)

Edward F. Holby (LANL)

381 [Adsorption of Water on Plutonium Dioxide Powder](#)

Robin M. Orr, Robin J. Taylor, Howard E. Sims, Kevin J. Webb, David A. Woodhead (NNL), Paul M A. Cook, Jeff W. Hobbs (Sellafield Ltd.)

383 [The Adsorption of CO₂, H₂O and CO₂-H₂O on Plutonium Dioxide](#)

Xiaolin Wang, Gan Li, Junbo Lv (China Academy of Engineering Physics)

385 [Nuclear Waste Viewed in a New Light](#)

C. A. Stitt, T. B. Scott (Univ of Bristol)

THURSDAY, SEPTEMBER 11, 2014, 2:20-3:00 P.M.

JOINT METALLURGY AND MATERIALS SCIENCE/CONDENSED MATTER PHYSICS—I

Session Chair: Franz Freibert (LANL)

387 [Local Structure in Plutonium and Plutonium Intermetallics Damaged by Self-Irradiation](#)

C. H. Booth, Yu Jiang, S. A. Medling, D. Olive, D. L. Wang (LBNL), A. L. Pugmire, D. S. Schwartz, J. N. Mitchell, P. H. Tobash, E. D. Bauer (LANL), S. K. McCall, M. A. Wall, P. G. Allen (LLNL)

THURSDAY, SEPTEMBER 11, 2014, 3:20-5:00 P.M.

NUCLEAR FUEL CYCLE—IV

Session Chair: P. K. Mohapatra (BARC)

388 [Overview of the CEA's R&D Dedicated to the Treatment/Recycling of Pu-Based Fuels \(Towards PuMulti-Recycling\)](#)

Stephane Grandjean, Nathalie Reynier-Tronche, Andrea Salvatores, Nathalie Herlet, Xavier Heres, Jean-Philippe Dancausse, Michel Masson, Christophe Poinssot, Laurent Paret, Dominique Warin, Bernard Boullis (CEA), invited

392 [Oxygen Self-Diffusion in Polycrystalline \(U_{0.55}Pu_{0.45}\)O₂ Mixed Oxide](#)

Romain Vauchy, Anne-Charlotte Robisson, Philippe Bienvenu, Ingrid Roure (CEA, DEN, DEC), Fiqiri Hodaj (SIMAP,UJF/INP), Philippe Garcia (CEA, DEN, DEC)

394 [Particle Size as a Function of Age in ²³⁸Plutonium Oxide](#)

Roberta N. Mulford (LANL)

397 [Diffusion Studies of U-Zr Alloys with HT-9 Stainless Steel at 700 C](#)

Daniel Koury, Ken Czerwinski, Andrew J. Swift (UNLV), Morgan Luckey (Harvey Mud College)

JOINT METALLURGY AND MATERIALS SCIENCE/CONDENSEDMATTER PHYSICS—II

Session Chair: Brandon Chung (LLNL)

Growth and Characterization of Poly- and Single-Crystal Uranium-Alloy Thin Films

A. M. Adamska, T. B. Scott, R. Springell, A. D. Warren, L. Pico, O. Payton (Univ of Bristol)

401 [The Phase Stability of Actinide Alloys: An *ab Initio* Aided CALPHAD Study](#)

A. Perron, P. E. A. Turchi, A. Landa, P. Söderlind (LLNL), B. Oudot, B. Ravat, F. Delaunay (CEA-Centre de Valduc), invited

405 [Phase Equilibria in the Uranium-Plutonium-Oxygen System](#)

Renaud C. Belin, Michal Strach, Christine Guéneau, Thibaut Truphemus, Romain Vauchy, Jean-Christophe Richaud (CEA), Jacques Rogez (IM2NP, UMR 6122, CNRS), invited