

2nd International Conference on Bio-Sensing Technology 2011

Procedia Chemistry Volume 6

**Amsterdam, The Netherlands
10 – 12 October 2011**

Editors:

R. Luxton

ISBN: 978-1-62748-781-8

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© by Elsevier B.V.
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact Elsevier B.V.
at the address below.

Elsevier B.V.
Radarweg 29
Amsterdam 1043 NX
The Netherlands

Phone: +31 20 485 3911
Fax: +31 20 485 2457

<http://www.elsevierpublishingsolutions.com/contact.asp>

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

| | |
|--|-----|
| Special Issue Preface..... | 1 |
| Rapid Detection of Foot-and-Mouth Disease Virus with Optical Microchip Sensors..... | 2 |
| <i>D. Bhatta, M. Martí Villalba, C.L. Johnson, G.D. Emmerson, N.P. Ferris, D.P. King, C.R. Lowe</i> | |
| Automated Cancer Marker Characterization in Human Plasma Using Surface PLASMON Resonance in Array combined with Mass Spectrometry (SUPRA-MS)..... | 11 |
| <i>Fabien Remy-Martin, Marven El Osta, Geraldine Lucchi, Rabah Zeggari, Therese Leblois, Sophie Bellon, Patrick Ducoroy, Wilfrid Boireau</i> | |
| Traditional Vinegars Identification by Colorimetric Sensor | 20 |
| <i>XiaoBo. Zou, YanXiao Li, JiYong Shi, Xiaowei Huang, JieWen Zhao</i> | |
| Electrochemical Measurement of Immobilized Onion Leaves PPO in Agar-Abelmoschus Esculentus Gum | 27 |
| <i>Anita S. Goswami-Giri</i> | |
| Development of a Disposable Gold Electrodes-Based Sensor for Electrochemical Measurements of cDNA Hybridization..... | 36 |
| <i>A. Ferrario, M. Scaramuzza, E. Pasqualotto, A. De Toni, A. Paccagnella</i> | |
| An Electrochemical Biosensor for the Determination of Lactic Acid in Expiration | 46 |
| <i>Takeshi Shimomura, Touru Sumiya, Masatoshi Ono, Tetsuji Itoh, Taka-aki Hanaoka</i> | |
| Voltammetric DNA Biosensor Based on a Microcrystalline Natural Graphite-Polystyrene Composite Transducer | 52 |
| <i>Vlastimil Vyskocil, Jirí Barek</i> | |
| Detection of Cytochrome c with Calixarenes Incorporated into Supported Lipid Membranes Via Charge Transient Measurements | 60 |
| <i>V. Nádaždy, K. Gmučová, A. Poturnayová, M. Šnejdárková, I. Karpišová, Š. Lányi, T. Hianik</i> | |
| Development of an Electrode/Electrolyte Interface Model Based on Pseudo-Distributed Elements Combining COMSOL, MATLAB and HSPICE | 69 |
| <i>Matteo Scaramuzza, Alberto Ferrario, Elisabetta Pasqualotto, Alessandro De Toni</i> | |
| Monitoring Electropermeabilization of Adherent Mammalian Cells Through Electrochemical Impedance Spectroscopy | 79 |
| <i>E. Pasqualotto, A. Ferrario, M. Scaramuzza, A. De Toni, M. Maschietto</i> | |
| Comparison of Cytotoxic Changes in ECV304 Cell Through Exposure to DMSO and Sodium Butyrate Using Impedance Spectroscopy | 89 |
| <i>Zhiyan Wang, Janice Kiely, Angelines Martinez Vargas, Richard Luxton</i> | |
| Array of MIP-Based Sensor for Fruit Maturity Assessment | 100 |
| <i>H.F. Hawari, N.M. Samsudin, M.N. Ahmad, A.Y.M. Shakaff, S.A. Ghani, Y. Wahab, S.K. Za'aba, T. Akitsu</i> | |
| Integration of MOSFET/MIM Structures Using a CMOS-Based Technology for pH Detection Applications with High-Sensitivity..... | 110 |
| <i>Joel Molina, Alfonso Torres, Guillermo Espinosa, Maria Teresa Sanz, Erick Guerrero, Berni Perez, Jose Fernandez, Mazhar Hoque, Patrice Parris</i> | |
| Diamond Based Biosensors: Surface-Fluid Interaction Issues..... | 117 |
| <i>M.A. Neto, C.M.F. Gomes, E.L. Silva, A.J.S. Fernandes, F.J. Oliveira, R.F. Silva</i> | |
| Discriminating Bacteria With Functionalised Nanoporous Xerogels..... | 125 |
| <i>Sabine Crunaire, Pierre R. Marcoux, Laure-Hélène Guillemot, Khanh-Quyen Ngo, Frédéric Mallard, Jean-Pierre Moy, Thu-Hoa Tran-Thi</i> | |
| Enhancing Classification Performance of Multisensory Data through Extraction and Selection of Features | 132 |
| <i>M.J. Masnan, N.I. Mahat, A. Zakaria, A.Y.M. Shakaff, A.H. Adom, F.S.A. Sa'ad</i> | |
| Development of a Rapid Sandwich Enzyme Linked Immunoassay Procedure for the Highly Sensitive Detection of Human Lipocalin-2/NGAL | 141 |
| <i>Sandeep Kumar Vashist, Mayank Saraswat, Harry Holthšfer</i> | |
| Linker Free Nitrogen Doped Plasma Polymer Biosensors with Label Free Ellipsometric Diagnosis Technique | 149 |
| <i>Yongbai Yin, Chuan Guo, Hans G.L. Coster, Marcela. M.M. Bilek, David. R. McKenzie</i> | |
| Sensor System for Wireless Bio-Signal Monitoring | 155 |
| <i>Erik Vavrinsky, Peter Telek, Martin Donoval, Lubomir Sladek, Martin Daricek, Frantisek Horinek, Daniel Donoval</i> | |
| Bio-inspired Sensor Fusion for Quality Assessment of Harumanis Mangoes..... | 165 |
| <i>F.S.A. Sa'ad, A. Zakaria, A.Y.M. Shakaff, M.Z. Abdullah, A.H. Adom, M.N. Jaafar, M.J. Masnan, L.M. Kamarudin</i> | |

| | |
|---|-----|
| Infection Monitoring in Wounds | 175 |
| <i>A. Schröter, A. Walther, K. Fritzsche, J. Kothe, A. Rösen-Wolff, G. Gerlach</i> | |
| Comparative Study of the Developed Chemiluminescent, ELISA and SPR Immunoassay Formats for the Highly Sensitive Detection of Human Albumin | 184 |
| <i>Sandeep Kumar Vashist, Mayank Saraswat, Harry Holthšfer</i> | |
| An Electronic Nose to Differentiate Aromatic Flowers using a Real-Time Information-Rich Piezoelectric Resonance Measurement | 194 |
| <i>R Paul Wali</i> | |
| Design of Non-Invasive Setup for Car Driver Biomonitoring..... | 203 |
| <i>Erik Vavrinsky, Vladimir Tvarozek, Pavol Gaspierik, Viera Stopjakova, Martin Donoval, Peter Teleka</i> | |
| Author Index | |