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Meeting Abstracts — MA 2009-02

216th ECS Meeting
October 4-9, 2009 — Vienna, Austria

Table of Contents

A1 - General Student Poster Session

All Divisions

15 Development of Hybrid Materials for Efficient Charging/Discharging in Redox Capacitors
M. Skunik and P. Kulesza

16 Study of Conductivity of Triazole-Based Electrolytes for High Temperature Fuel Cell Applications
M. Maalouf, H. Ghassemi and T. Zawodzinski

17 Effect of UV Irradiation on Chemical Etching of InP Substrate Using Noble Metal Catalyst
T. Yokoyama, H. Asoh and S. Ono

18 Sustainable Hydrogen Production via Urea Electrolysis
R. King and G. Botte

19 Prediction of Cell Voltage and Chlorine Current Efficiency of Aqueous HCl Electrolysis Utilizing an Oxygen Reducing Cathode Based on Artificial Neural Network
S. Ashrafizadeh, F. Mohammadi, A. Sattari and N. Shojaikaveh

20 Separator-free LiBOB Based Gel Electrolyte for Li-Ion Batteries
F. Azeez and P. Fedkiw

21 Development of Hybrid Pt-Free Electrocatalytic Systems for Oxygen Reduction
B. Dembinska and P. Kulesza

22 Optimization of Predicted Cell Voltage and Caustic Current Efficiency in a Chlor-Alkali Membrane Cell with Application of Genetic Algorithm
N. Shojaikaveh, S. Ashrafizadeh, F. Mohammadi and A. Amerighasrodashti

23 Analysis of Radical Control in a High Frequency Capacitively Coupled Plasma
S. Kang, M. Jeon, J. Park, B. Park, T. Min and G. Yeom

24 Study of SiO_2 Etching Using a Pin-to-Plate Dielectric Barrier Discharge in Atmospheric Pressure
J. Oh, J. Park, E. Gil and G. Yeom

25 Prediction of Cell Voltage and Chlorine Current Efficiency of Aqueous HCl Electrolysis Utilizing an Oxygen Reducing Cathode Based on Artificial Neural Network
S. Ashrafizadeh, F. Mohammadi, A. Sattari and N. Shojaikaveh

26 InN Piezoelectric Resonator
S. Yang, S. Li and J. Yeh

27 Etch Characteristics of SiO_2 in the C_xF_y Dual-frequency Capacitively Coupled Plasma
M. Jeon, S. Kang, J. Park, B. Park, T. Min and G. Yeom

28 Studies on the Development of a Suitable Protective Conducting Polymer Coating, Using Polypyrrole against the Corrosion of Copper
U. Carragher and C. Breslin

29 Effect of Dispersed Ceramic Nanoparticles on Microstructure and Performance of Ag Cathode for SOFC
Y. Endo, K. Sasaki, M. Muranaka, A. Suzuki and T. Terai

30 Direct Electrolytic Reduction of Porous SiO_2 in Molten $CaCl_2$
Y. Nishimura, T. Nohira, K. Kobayashi and R. Hagiwara

31 Surface Modification of Hydrophilic Amorphous Carbon Using Microwave Induced Arc
J. Jegal and K. Kim

32 Luminescent Properties of Oxynitride Phosphors Prepared by a Spark Plasma Sintering Method
S. Choi, J. Shin, Y. Kim and S. Hong

33 Investigation for a Pathogen DNA Biosensor Using Novel Hydrogen Peroxide Based on Au Nanoparticle Modified Electrode
E. Spain, J. Breannan, T. Keyes and R. Forster

34 Performance of Cathode Platinum Free Nanostructured Carbon Electrodes in Solid Alkaline Anion Exchange Membrane Fuel Cells
M. Perchthaler, E. Wallnöfer and V. Hacker

35 Ion-Current Rectification in Conical Glass Nanopores: How to Control Ion Fluxes
C. Kubeil, H. White and A. Bund

36 Synthesis and Transport Properties of $LiMn(VO_4)_x(PO_4)_{1-x}$($x = 0.01 - 0.1$) Solid Solutions
N. Mukhina, V. Gorshkov and D. Kellerman

99 Electrodeposition and Stripping Analysis of Bismuth Selenide Thin Films Using Combined Electrochemical Quartz Crystal Microgravimetry-Stripping Voltammetry
S. Ham, U. Lee, M. Park, S. Choi, K. Paeng, N. Myung, K. Rajeshwar and I. Paeng

100 Thermal Stability, Oxygen Non-stoichiometry and Electrical Conductivity of $LaNi_{0.8}Fe_{0.2}O_3$
J. Chen, V. Vashook, S. Wang, T. Wen and U. Guth

101 Li-Ion Transfer at the Interface between $Li_4Ti_5O_{12}$ and Ionic Liquid-Organic Solvent Mixtures Electrolyte
Y. Ishihara, Y. Yamada, T. Abe and Z. Ogumi

102 Preparation of Li_2FeSiO_4 and Its Electrochemical Properties
B. Shao and I. Taniguchi

103 Electrocatalytic Behavior of Cu-Based Ceramic-Metal (Cermet) Anodes in Contact with Yttria Stabilized Zirconia for Intermediate Temperature Solid Oxide Fuel Cells
K. Stamoulis, V. Mermiklis, S. Kostea, M. Trichakis and N. Kiratzis

104 Removing Copper Post Etch Residue from BEOL Process Using Aqueous Chemical Solutions
C. Ko and W. Lee

105 Conversion Process of Carbon Dioxide and Methane through Dielectric Barrier Discharge Plasma System
T. Kim, D. Won and W. Lee

106 A Study of Co/Nb-Coated Ni Powder as a MCFC Cathode Material
H. Choi, C. Yi, Y. Jeong, L. Lianga and K. Kim

107 Electrical Properties Measurement for Interface Research in Silicon Bonding
G. Miao, Z. Zhang, T. Ren, H. Lin and L. Liu

108 Fabrication of Moth-Eye Structure on p-GaN Layer of GaN-Based Light-Emitting Diodes for Improvement of Light Extraction
E. Hong, K. Byeon, H. Park and H. Lee

109 UV Nanoimprint Lithography to Enhance the Light Extraction of InGaN-Based Light-Emitting Diodes
K. Byeon, E. Hong, H. Park and H. Lee

110 Electrical Characteristic Study of Nanoscale $Ge_2Sb_2Te_5$ Using Nano Imprint Lithography and Conductive Atomic Force Microscopy
B. Bae, S. Hong and H. Lee

111 Double GST Structure Phase Change Memory for Low Voltage Operation
S. Hong, B. Bae, H. Jung and H. Lee

112 Electroless Ni-Based Alloy as Anode Coating Material for Direct Methanol Fuel Cell
C. Lin, C. Wan and Y. Wang

117 SIBEE Best Presented Paper: A Monte Carlo Model for the Simulation of the Electrodeposition of CoNi Alloys onto Glassy Carbon
A. de Carvalho Frank, E. Leiva and P. Sumodjo

118 SIBEE Best Presented Paper: Design and Performance of a Low Field NMR-Electrochemistry Cell for In Situ Measurements
L. Barbosa, L. Colnago, I. Carlos and L. Nunes

A2 - Nanotechnology General Session

All Divisions

119 Electrochemical Consideration of the Synthesis of Nanoparticles by Electroless Deposition
S. Yagi, H. Nakanishi, M. Kawamori, B. Donnabelle, T. Ichitsubo and E. Matsubara

120 Nanostructured Iron Oxides: Phase Control and Morphological Investigation
F. Harraz

121 Synthesis and Characterization of Fe_2O_3, CuO and ZnO Nanoparticles by Hydrothermal Method from Electric Arc Furnace Dust
L. Hsiao, Y. Wang, W. Wang and L. Wang

122 Self-Organized Crystal Growth of Nanostructured ZnO Morphologies by Hydrothermal Synthesis
K. Foe, P. Boland Jr., G. Namkoong, D. Gu, H. Baumgart and T. Abdel-Fattah

190 Utilizing Surface Enhanced Raman Spectroscopy to Map 3-Aminopropyltriethoxysilane Self-Assembled Monolayers on Nanostructured Titania and Tin(IV) Oxide Nanowires Using Colloidal Silver Nanoparticles
A. Morrill, D. Duong, S. Lee and M. Moskovits

191 Nanoscale Structural Changes in Conducting Polymers upon Doping-Undoping
O. Semenikhin

192 Ionic and Electronic Conductivity of Poly(Ionic Liquid) - Gold-Nanoparticle Composites
M. Firestone and S. Lee

193 Anomalous Scaling in Surface Roughness Evaluation of Electrodeposited Pt Thin Films
G. Nabiyouni

194 Electrocatalysis of Oxygen Reduction: Composition and Surface Structure Effects for PtM/C (M = Fe, Co, Ni) Nanocatalysts
A. Malheiro, J. Perez and H. Villullas

195 Tuning Catalytic Properties of Bimetallic Surfaces: Local Reactivity of Ultrathin Platinum Overlayers and Surface Alloys in (111) Surfaces of Pt(Shell)/Ni(Core) and Pt_3Ni Alloys
P. Shirvanian

196 Structure-Activity Correlation for Oxygen Reduction on Layer-by-Layer Grown Pd(core)-Pt(Shell) Nanoparticles
J. Wang, H. Inada, L. Wu, Y. Zhu, Y. Choi, P. Liu, W. Zhou and R. Adzic

197 A Multiscale Modeling Methodology for the Electro-activity Prediction of Nanostructured PEM Fuel Cell Catalysts
R. Ferreira de Morais, D. Loffreda, P. Sautet and A. Franco

198 Extreme Ultraviolet Interference Lithography for Generation of Platinum Nanoparticles on Glassy Carbon
A. Savouchkina, A. Foelske-Schmitz, R. Kotz, A. Wokaun, G. Scherer, C. Padeste, V. Auzelyte and H. Solak

199 CO Electro-Oxidation on RuO_2 Supported Pt Nanoparticles: Evidence of a Co-catalytic Effect
E. Ciapina and E. Rafael Gonzalez

200 Methanol and Glucose Oxidation Catalyzed by $PtWO_3$ Nanoparticles Supported on Well Defined Mesoporous Carbon Structures
N. van der Laak, C. Yang, S. Ting, F. Li and K. Chan

A3 - Michael Faraday: The First Nanotechnologist? - An Invited Symposium

All Divisions

201 Seeing Sub-microscopic Structures: Faraday's Visual Methods
D. Gooding

202 Faraday's Gold Colloids: Nanoscience in 1856
R. Tweney

203 How Faraday Ceased to Be a Chemist
F. James

204 Play, Invention and Doubt: Re-emerging Ways of Faraday's Creative Exploring
E. Cavicchi

A4 - Tutorials in Nanotechnology: Focus on Physical and Analytical Electrochemistry - An Invited Symposium

All Divisions

3242 Carl Wagner Memorial Award Presentation: Electrochemistry in Synthetic and Biological Nanopores
A. Schibel, T. Edwards, R. Kawano, W. Lan, D. Holden and H. White

206 Nanoscience, Nanotechnology, and Analytical Methods: A Selective Tutorial
M. Ratner

207 Application of Electrochemical and Electrogenerated Luminescence Methods to Studies of Metallic and Semiconductor Nanoparticles
A. Bard

208 Electrochemistry at the Nanoscale: Building Blocks and Techniques
H. Abruna

209 Into the Nanoscale with Scanning Electrochemical Microscopy?
W. Schuhmann

3241 Tutorials in Nanotechnology: Focus on Physical and Analytical Electrochemistry
H. Wolfschmidt, T. Brulle, O. Paschos and U. Stimming

B1 - Battery / Energy Technology Joint General Session

Battery / Energy Technology

210 A Rechargeable Lithium-Air Battery
B. Kumar, J. Kumar, R. Leese and K. Abraham

211 Polymeric Gel Electrolyte Containing Ionic Liquid and Alkylmagnesium Complex for Rechargeable Magnesium Batteries
N. Yoshimoto, N. Nishimura, M. Egashira and M. Morita

212 Power Density Profile of Marine Biofilm Battery Using a TiO_2 Anode
S. Motoda, M. Strom and S. Dexter

213 Towards the 3-D Microfabrication and Integration of a Complete Power Unit Used for Energy Autonomous Wireless System
T. Pichonat, C. lethien, D. Hourlier and P. Rolland

214 Microstructural Control and Optimization of Manganese Oxide Nanostructures for Electrochemical Applications
S. Pang and B. Wee

215 A Novel High Energy Density Rechargeable Lithium-Air Battery
N. Imanishi, T. Zhang, Y. Shimonishi, S. Hasegawa, A. Hirano, Y. Takeda and O. Yamamoto

216 High Energy Rechargeable Li-S Cells for EV Application: Status, Remaining Problems, and Solutions
Y. Mikhaylik, I. Kovalev, R. Schock, K. Kumaresan, J. Xu and J. Affinito

217 New Conductive Salts as Potential Lithium Battery Electrolytes Tested in PC and Gel-PC System
L. Niedzicki, M. Kasprzyk, G. Zukowska, A. Zalewska, M. Armand and W. Wieczorek

218 On the Structure-Conductivity Relationship in Poly(oxyethylene)-Based Electrolytes
J. Syzdek, M. Armand, C. Masquelier, J. Tarascon and W. Wieczorek

219 Ultrafast-Charging/Discharging Nanocomposites of Polypyrrole and Carbon Nanotubes
J. Wang, J. Zhu, Y. Xu, X. Sun, X. Du and F. Xiao

220 Composite Solid Electrolytes $(1-x)Li_nX - xMgO$ ($X^{n-} = ClO_4^-, SO_4^{2-}$) for Intermediate Temperature Lithium Batteries and Supercapacitors
A. Ulihin, N. Uvarov and Y. Mateyshina

221 Combined Study of Li_2FeSiO_4 Otained by Different Synthesis Routes
C. Sirisopanaporn, R. Dominko, G. Mali, D. Hanzel, A. Boulineau and C. Masquelier

222 Capacity-fade Simulation of Li-Ion Batteries under Various Current Profiles
M. Safari, M. Morcrette, A. Teyssot and C. Delacourt

223 Localized Gap States in $LiCoO_2$ and Their Influence on the Transport Properties in Li-Ion Batteries
D. Schmeißer, W. Jaegermann and G. Seibold

224 Novel Silver Metal Oxyfluoride Perovskites as Cathode Materials for Lithium Batteries
W. Tong, W. Yoon and G. Amatucci

225 Material and Design Options for Avoiding Lithium Plating during Charging
K. Eberman, P. Gomadam, G. Jain and E. Scott

226 Towards a Fully Printable Battery: Robocast Deposition of $LiFePO_4$ Cathode Structures
K. Fenton, C. Apblett and P. Atanassov

227 $Na_{0.44}MnO_2$ as a Cathode Material for Hybrid Energy Storage Devices Using Aqueous Electrolyte
J. Whitacre, A. Tevar and S. Sharma

228 Surface Modification and Fabrication of Li-Ion Battery Components for Plug-in Hybrid Electric Vehicle
B. Luan, G. Campbell, X. Liu, J. Nagata, M. Gauthier and I. Davidson

229 Cell-Sandwich Modeling of Redox Shuttles for Overcharge Protection
M. Tang and J. Newman

230 Examination of Pi-Conjugated Organic Compounds as Active Materials
N. Hojo, Y. Inatomi, T. Yamamoto, S. Watanabe and Y. Misaki

231 Electrochemical Investigation Correlated with FT-IR and NMR Spectroscopy of Liquid Battery Electrolytes Containing Supramolecular Additives
M. Piszcz, A. Marczewska, M. Bukat, M. Kalita, P. Rys, G. Zukowska and M. Siekierski

232 Effects of Electrolyte Additives on the Cycling Performance of $LiFePO_4$ Cathodes
S. Wu and M. Chen

233 Study and Characterization of Amorphous-Poly(ethylene oxide) Doped with Lithium Perchlorate
L. Rodrigues, P. Barbosa, M. Silva and M. Smith

234 In Situ Neutron Imaging of Alkaline and Lithium-Ion Batteries
D. Hussey

235 Magnesium Ion Behavior in Ionic Liquids
T. Sutto, T. Duncan and T. Wong

236 Polymerized Ionic Liquids as Novel Ionically Conductive Membranes for Electrochemical Processes
T. Sutto and T. Duncan

237 Electrochemical Properties of Poly(ethylene oxide)-Containing Block Copolymer Electrolytes
N. Wanakule, S. Mullin, A. Panday and N. Balsara

238 New Method for the Energetic Performances Evaluation of Electrochemical Storage Devices
K. Mamadou, A. Delaille, E. Lemaire-Potteau and Y. Bultel

239 Electrospun Metal Oxides for Energy Storage
L. Rubacek, J. Duchoslav and J. Macak

240 Modeling of Lithium Iron Phosphate Batteries with Equivalent Electrical Circuit: Model Parameterization and Simulation
K. Dong, A. Kirchev, F. Mattera and Y. Bultel

241 Dynamic Optimization of Lithium-Ion Batteries: Current Profiles for Improved Utilization
V. Boovaragavan, R. Methekar, V. Ramadesigan, V. Subramanian and R. Braatz

242 Towards Model-Based Optimal Design of Lithium-Ion Batteries
V. Ramadesigan, V. Boovaragavan, R. Methekar, M. Arabandi, V. Subramanian and R. Braatz

243 Diagnostic Analysis and Modeling of Capacity Loss in Li-Ion Cells
K. Gering

244 Development of Multifunctional Catalysts for Electrooxidation of Ethanol
P. Kulesza, P. Barczuk, A. Zurowski, A. Lewera and K. Miecznikowski

245 Electrochemical Modeling and Parameter Estimation of Lithium-Ion Batteries
R. Klein, M. Hess, N. Chaturvedi and J. Christensen

246 Optimal Electrode Structures in Lithium Batteries through Coupled Electrochemical and Mechanical Simulations
S. Golmon, K. Maute and M. Dunn

247 Estimating Thermodynamic Parameters of Electrode Materials for Improved Battery Models
F. Andre, R. Klein, N. Chaturvedi, J. Ahmed and J. Christensen

248 3D Modeling of Particle Structure and Ion Transport in Porous Li-Ion Electrodes
D. Stephenson, B. Walker, D. Wheeler and D. Rowenhorst

249 Supercapacitors Using n- and p-Type Conductive Polymers Exhibiting Metallic Conductivity
P. Kinlen, Y. Kim, J. Jung, J. Mbugua and S. Viswanathan

338 Proton Conductivity Studies of Y-Doped Barium Zirconate: Theoretical and Experimental Approaches
R. Pornprasertsuk, O. Kosasang, P. Chindaudom and F. Prinz

339 Oxygen Incorporation Pathways in Yttria-Stabilized Zirconia Using Oxygen Isotope (O^{18}) and Secondary Ion Mass Spectrometry
J. Park, J. Shim, T. Gur and F. Prinz

340 Electrochemical Modeling of Hydrogen Storage in Hydride-Forming Electrodes
A. Ledovskikh, D. Danilov, P. Vermeulen and P. Notten

B2 - Alkaline Electrochemistry in Fuel Cells

Energy Technology / Physical and Analytical Electrochemistry / Battery

341 Improved Performance of Alkaline Membrane Fuel Cells Based on Newly Developed Electrolyte Materials
H. Yanagi, S. Watanabe, K. Sadasue, T. Isomura, H. Inoue and K. Fukuta

342 Polysulfone-Composed Alkaline Anion Exchange Membrane for Improved Ionic Conductivity
D. Xie, G. Wang, D. Chu and R. Chen

343 Anion Exchange Membrane Based on Comb-Shaped Poly(arylene ether sulfone) for Anionic Fuel Cells
J. Zhou, M. Unlu and P. Kohl

344 Alkaline Fuel Cell Membranes from Xylylene Block Ionenes
K. Lee, R. Wycisk, M. Litt, P. Pintauro and J. Kosek

345 Alkali Doped Poly(vinyl alcohol) for Anion-Exchange Membrane Fuel Cells
J. Qiao, J. Fu, H. Lv and J. Ma

346 Effect of Carbon Dioxide on the Reduction of O_2 in Anion Exchange Membrane Fuel Cells
J. Vega, C. Chartier and W. Mustain

347 Factors Affecting Performances of Fuel Cells Using Anion-Exchange Membranes
R. Chen, W. Sun, A. Hsu, D. Chu and D. Xie

348 Development of Electrocatalysts for the Alcohol Oxidation in Anion Exchange Membrane Direct Alcohol Fuel Cells
C. Cremers, D. Bayer, J. Meier, S. Berenger, B. Kintzel, M. Joos and J. Tübke

349 Investigation of the Oxygen Reduction Activity of Non-platinum Catalysts: A RDE Methodology
G. Wiberg, K. Mayrhofer and M. Arenz

350 Electrocatalysis of the Oxygen Reduction Reaction on Chitosan Covered Catalysts in Alkaline Media
C. Sanches, J. Delezuk, S. Campana and E. ticianelli

351 Synthesis of Silver Nanocubes Electrocatalyst for Oxygen Reduction Reaction in an Alkaline Electrolyte
Y. Chang, Y. Chang, P. Wu and P. Lin

352 Novel Electrocatalysts for Alcohol Oxidation and Oxygen Reduction at High pH Environments
Q. He, N. Ramaswamy and S. Mukerjee

353 The Use of $La_x\ Sr_{1-x}\ MO_3$ as Oxygen Reduction Catalysts in Alkaline Electrolytes
S. Donne and J. Tulloch

354 Study of the Borohydride Oxidation Reaction on Gold in Alkaline Medium Using Online Mass Spectrometry
M. Chatenet, F. Lima and E. Ticianelli

355 Polypyrrole-Based Cathode Catalysts for Alkaline Fuel Cells: Bifunctional Mechanism of Oxygen Reduction Reaction
T. Olson, S. Pylypenko, P. Atanassov, K. Asazawa and H. Tanaka

356 Analysis of Electrode Performance in an Alkaline Microfluidic H_2/O_2 Fuel Cell
F. Brushett, M. Naughton, J. Ng and P. Kenis

357 Selective Oxidation of Ethanol to Acetic Acid in Highly Efficient Polymer Electrolyte Membrane-Direct Ethanol Fuel Cells
C. Bianchini, V. Bambagioni, J. Filippi, A. Marchionni and F. Vizza

380 Direct Borohydride Fuel Cell Development
R. Jamard, C. Coutanceau and A. Martinent

381 Oxygen Reduction Kinetics on Nanostructured NiMnOx/Carbon Black Materials
G. Amanda, A. Diaz, C. Poinsignon, E. Ticianelli and M. Chatenet

382 Energy and Chemicals from Renewables by Electrocatalysis
A. Marchionni, V. Bambagioni, C. Bianchini, J. Filippi, S. Moneti, W. Oberhauser, F. Vizza, V. Dal Santo, R. Psaro, L. Sordelli, M. Foresti and M. Innocenti

383 Ethanol Stripping in Alkaline Medium: A DEMS Study
D. Bayer, C. Cremers and J. Tübke

384 Comparative Study Between Pt/C and Low Cost Cathode NanopParticle Catalyst in Alkaline Direct Ethanol Fuel Cell
M. Zhiani, H. Gasteiger, M. Piana, S. Catanorchi and P. Bert

385 Alkaline Membrane Electrolyte Fuel Cell Research and Development at the U.S. Army Research Laboratory
D. Chu, R. Jiang and R. Chen

386 Comparison Study of Ethanol Electro-Oxidation on Pt/C and PtSn/C Catalysts in Alkaline Solutions
L. Jiang, A. Hsu, D. Chu and R. Chen

387 Concentration Dependence of the Electro-Oxidation of Ethanol and Ethylene Glycol at Platinum in Alkaline Medium
D. Bayer, S. Berenger, C. Cremers and J. Tübke

388 A Novel Anion Exchange Membrane for Alkaline Fuel Cells
Y. Luo, J. Guo, C. Wang and D. Chu

B4 - Intercalation Compounds for Lithium Batteries

Battery / Energy Technology

389 Nanocrystalline High Power Lithium-Ion Batteries
M. Graetzel

390 Enhanced Capacity from Non-stoichiometric Lithium Iron Silicate, $Li_{2-2x}Fe_{1+x}SiO_4$
K. Kam, A. Liivat, D. Ensling, T. Gustafsson and J. Thomas

391 Li_2FeSiO_4 Based Cathode Materials Synthesized by Molten Carbonate Method for Lithium-Ion Battery
A. Kojima, T. Kojima, T. Miyuki, Y. Okumura and T. Sakai

392 Polymorphism and Disorder in Li_2MSiO_4(M = Fe, Mn)
A. Yamada and S. Nishimura

393 Solid Solution Behavior in Li_xMnPO_4
G. Chen and T. Richardson

394 Electrochemical and Structural Characterization of Olivine $LiFePO_4$ with Varying Particle Morphologies
Z. Lu, H. Chen, Y. Zhu, Y. Wang, J. Deng, J. Chung and C. Grey

395 Three Dimensional Ordered Mesoporous Materials as High-Rate Electrode for Li-Ion Batteries
Y. Ren, F. Jiao, J. Bao and P. Bruce

396 Property of the Large Capacity Positive Electrode by Single Crystalline $LiMn_2O_4$ Nanowires
E. Hosono, T. Kudo, I. Honma, H. Matsuda, Y. Saito and H. Zhou

397 Effect of Substitution and Solid Solution Behavior in Lithium Metal Polyanion Materials for Li-Ion Battery Cathodes
S. Badi, T. Ramesh, B. Ellis, K. Lee and L. Nazar

398 Comparative Study of Lithium Transport Kinetics in Olivine Cathodes
N. Meethong, Y. Kao and Y. Chiang

399 Olivine-Phosphates: Atomic-Scale Insight into Lithium Transport, Defect Clustering and Crystal Morphologies
M. Islam

400 Ionothermal Synthesis and Electrochemical Characterization of Nanostructured Lithium Manganese Phosphates
P. Barpanda, N. Recham, M. Armand and J. Tarascon

401 Dynamic Reduction of Crystallinity in $LiFePO_4$ during Fast Cycling
R. Eriksson, T. Gustafsson and K. Edström

402 Novel Lithium Ion Vanadium Phosphate Based Cathode Materials for HEV/PHEV Applications
B. Hult, C. Allen and S. Mukerjee

403 Predicting Active Material Utilization in $LiFePO_4$ Electrodes: An Exercise in Multiscale Mathematical Modeling
T. Farrell and S. Dargaville

404 Defect Model for $LiFePO_4$ Based on Single Crystal Studies
J. Maier and W. Katja

405 Size Effects in $Li_{4+x}Ti_5O_{12}$ Spinel
M. Wagemaker, W. Borghols, U. Lafont, E. Kelder and F. Mulder

406 Optimization of $Li_{1+x}(Ni_{1/2-y}Mn_{1/2-y}Co_{2y})_{1-x}O_2$ - Type Materials as Positive Electrodes for Lithium-Ion Batteries
L. Croguennec, J. Bains, M. Ménétrier and C. Delmas

407 Synthesis and Characterization of $LiNi_{1-x}Mn_xO_2$(x = 0.3, 0.5, 0.7)
D. Mohanty, P. Paudel and H. Gabrisch

408 Dependence of Thermodynamic Stability, Crystal and Electronic Structures, and Cathode Performance on Li Content of $Li_xMn_{0.5}Ni_{0.5}O_2$ as a Cathode Active Material for Li-Ion Batteries
Y. Idemoto, T. Hasegawa and N. Kitamura

409 Phase Stability and Delithiation Mechanism in High Voltage Li-Excess Oxides for Lithium Batteries: A Combined Electron Microscopy and First Principles Study
C. Fell, B. Xu and S. Meng

410 Synthesis, Characterization and Thermal Stability Studies of Al-Doped Positive Electrode Materials for Li-Ion Batteries
A. Rowe and J. Dahn

411 Origin of the Anomalous Rechargeable Capacity of the Li_2MnO_3-$LiCo_{1/3}Ni_{1/3}Mn_{1/3}O_2$ Electrode Materials
N. Yabuuchi, K. Yoshii, Y. Abe, I. Nakai and S. Komaba

412 Improved Rate Capability of High-Capacity xLi_2MnO_3•$(1-x)LiMO_2$ Electrodes by Li-Ni-PO_4 Surface Treatment
S. Kang, C. Lopez, M. Thackeray, D. Shin and C. Wolverton

413 Lithium Nickel Manganese Oxides for Advanced Lithium-Ion Batteries
T. Ohzuku and K. Ariyoshi

414 In and Ex Situ NMR: Application to Silicon, $LiCoO_2$ Nanoparticles, Li Metal and Conversion Reactions
B. Key, R. Bhattacharyya, H. Chen, M. Jiang, D. Zeng and C. Grey

415 Understanding the Room Temperature Potential-Composition Curve of Li/Li_xSi Cells
J. Dahn, V. Chevrier, J. Li, A. Smith and R. Dunlap

416 Local Composition of Cycled Silicon Negative Electrodes
J. Danet, T. Brousse, D. Guyomard and P. Moreau

417 High Capacity and Excellent Cyclability of Nano-Silicon/CB/CMC Composite Anode from Tailored Electrode Preparation
D. Mazouzi, B. Lestriez, L. Roué and D. Guyomard

418 Silicon and Germanium Thin Film Electrodes for all Solid State Lithium Batteries
V. Phan, B. Pecquenard, F. Le Cras and C. Delmas

419 Characterization of Sputter Deposited and Mechanically Milled $[Sn_{0.5}Co_{0.5}]_{1-y}C_y$ Material for Li-Ion Battery Negative Electrodes by Small Angle Neutron Scattering
A. Todd, P. Ferguson, J. Barker and J. Dahn

462 Intercalation of Lithium to the Carbon Fiber
M. Toyoda, A. Takenaka, T. Kinumoto and T. Tsumura

463 Electronic Conductivity Control in Lithium Titanate
V. Gorshkov, N. Mukhina, B. Tsarev and D. Kellerman

464 Origin of Enhanced Li-intercalation in TiO_2-B Nanowires
M. Koudriachova

465 Electrochemical Properties of TiO_2-B Prepared from γ-FeOOH Type Precursors
H. Noguchi, R. Ohga, Y. Tanaka, S. Ennohji and K. Isono

466 Mechanical Synthesis of Nanosized Si Particles via Different Precursors and Application in Li-Ion Batteries
D. Mazouzi, T. Brousse, P. Moreau, D. Guyomard and L. Roue

467 Ordered Macroporous Lithium Manganese Oxide Spinels as Cathodes for Lithium Batteries
D. Tonti, M. Torralvo, E. Enciso, I. Sobrados, J. Amarilla and J. Sanz

468 Lithium Intercalation into the Surface Modified Graphite in Aprotic Solution and Ionic Liquid
N. Yabuuchi, Y. Shinbe, T. Ozeki, T. Miura, Y. Katayama and S. Komaba

469 Electrochemical Properties of the $LiNi_{0.2}Mn_{0.2}Co_{0.6}O_2$ Positive Electrode Material
I. Saadoune, Y. Bentaleb, K. Maher, K. Fujimoto and S. Ito

470 High Temperature Lithium Cells Using Conversion Oxide Electrodes
F. Mestre-Aizpurua, S. Laruelle, M. Armand, J. Tarascon, S. Grugeon and M. Palacin

471 Evaluation of the Cation Mixing in $LiNi_{1/3}Mn_{1/3}Co_{1/3}O_2$ Compound
X. Zhang, F. Gendron, A. Mauger, L. Qi and C. Julien

472 Effect of Ti Substitution in $LiMn_{1.5}Ni_{0.5}O_4$ on Performance and Evaluation of $LiMn_{1.5-x}Ni_{0.5}Ti_xO_4$ as a Cathode Material
S. Niketic, P. Whitfield and I. Davidson

473 Crystal Structures and Electrochemistry of Li_2MnO_3-$LiCoO_2$-$LiCrO_2$ system
N. Yabuuchi, K. Yamamoto, K. Yoshii, Y. Abe, I. Nakai and S. Komaba

474 Study of the Delithiation Processes in Layered $Li[Ni_yMn_yCo_{(1-2y)}]O_2$ (y = 0.2, 0.3)
D. Zeng, J. Cabana, W. Yoon and C. Grey

475 Amorphization Recrystallization Study of Nanocrystalline Li_2MnO_3
T. Sayle, P. Ngoepe and D. Sayle

476 Hollow Carbon Nanosphere Based Lithium-Ion Negative Electrodes Performance with Low Temperature Electrolytes
J. Cox and M. Wagner

477 Transmission Electron Microscopy Study of Heavily Delithiated Li_xCoO_2 Cathode Material with O1 Structure
H. Gabrisch, R. Yazami, S. Tsuruta, K. Yanagida and H. Nakamura

478 Structure and Electrochemical Properties of Epitaxial Thin Film Electrodes for Lithium Batteries
M. Hirayama, T. Toujigamori, K. Suzuki, W. Cho, K. Tamura, J. Mizuki and R. Kanno

479 Electrochemical Characteristics of MoO_2 Anode Materials with Various Morphologies for LIB Applications
J. Song, H. Kang, K. Kim, Y. Jo and Y. Kim

480 Synthesis of Nanostructured Ti-O Compounds and Their Lithium Insertion Properties
S. Myung, N. Takahashi, D. Kim, S. Kim, Y. Sun and H. Yashiro

481 Effect of Surface Energies and Nanoparticle Size Distribution on Open Circuit Voltage of Li-Electrodes
A. Van der Ven and M. Wagemaker

482 Effect of Sn Substitution in Spinel Lithium Manganese Oxide Thin Films
J. Choi, D. Shin, Y. Cho, J. Ahn, W. Bang and S. Yoon

483 Phase Behavior of Nanoscale Intercalation Compounds and Impact on Electrochemical Properties
Y. Chiang, Y. Kao, N. Meethong, M. Tang and W. Carter

B5 - Rechargeable Lithium-Ion Batteries

Battery

568 Stabilized Lithium Metal Powder (SLMP™) - Independent Source of Li for High Energy Li-Ion Batteries
M. Yakovleva, Y. Li, B. Fitch and Y. Gao

569 Thermal Stability of Ionic Liquids as an Electrolyte for Lithium-Ion Batteries
M. Hori, Y. Aoki, S. Maeda, R. Tatsumi and S. Hayakawa

570 Lithium-Nickel-Manganese-Oxide Cathode for Li Battery Prepared by Nanocasting
T. Mizuno, T. Kawase and H. Yoshitake

571 In Situ XRD Studies of Mixed $LiMn_2O_4$-$LiNi_{1/3}Co_{1/3}Mn_{1/3}O_2$ Composite Cathode in Li-Ion Cells during Charge-discharge Cycling
W. Yoon, D. Jang, K. Nam, S. Choi and X. Yang

572 Electrodeposited Copper Sulfide Thin-Film Cathodes for 3D-Microbatteries
H. Mazor, D. Golodnitsky and E. Peled

573 Thin Film Lithium Battery Using Stable Solid Electrolyte Li_4SiO_4 Fabricated by PLD
A. Nakagawa, N. Kuwata, Y. Matsuda and J. Kawamura

574 Effect of Molecular Weight in Composite Polymer Electrolyte for All Solid Lithium Polymer Battery
M. Ueno, N. Imanishi, A. Hirano, Y. Takeda and O. Yamamoto

575 Spinel $LiMn_{2-x}Ti_xO_{4-y}F_y$ (0.2<=x<=0.8, 0<=y<=0.2) with Enhanced Cyclability as Cathode Materials for Li-Ion Batteries
G. He, Y. Li and Y. yang

576 Dilation Control of Anode Materials Based on Spherical Natural Graphite for Lithium-Ion Batteries
S. Yamada, H. Sato, M. Ue, T. Kamada, K. Okanishi and K. Yamaguchi

577 High Power Electrodeposited Copper Sulfide Thin-Film Cathodes for 3D-Microbatteries
H. Mazor, D. Golodnitsky and E. Peled

578 Structural Studies of $LiMn_{0.25}Fe_{0.75}PO_4$ as a Cathode Material for Lithium-Ion Batteries
Y. Chen, C. Hsu, J. Chen, J. Yeh and H. Shih

579 Phase Behavior, Thermal Stability, and Conductivity of Ionic Liquid-LiTFSI (IM_{10R}TFSI and PY_{1R}TFSI) Mixtures
Q. Zhou, K. Fitzgerald, E. Paillard and W. Henderson

580 A Multiple-approach Exploratory Research to Improve Lithium-Ion Batteries through Conducting Polymers
I. Boyano, I. Meatza, M. Bengoechea, O. Miguel and H. Grande

581 Low Energy of Activation Lithium-Ion Conducting Channel
L. Scanlon, L. Lucente, M. Lawson, J. Lawson, J. Fellner, W. Feld, P. Balbuena, N. Munichandraiah and H. Xiao

582 All-Solid-State Lithium Batteries Using a Nanoconfined Ionic Liquid Electrolyte
J. Ducros, J. Le Bideau, P. Soudan and D. Guyomard

583 Effects of Oxide Electrolytes Interposed at Oxide Cathode / Sulfide Solid Electrolyte Interface
K. Takada, N. Ohta, L. Zhang, X. Xu, B. Hang, T. Ohnishi and T. Sasaki

584 Interfacial Properties Between $LiFePO_4$ and Poly(ethylene oxide)-$Li(CF_3SO_2)_2N$ Polymer Electrolyte
K. Hanai, K. Kusagawa, N. Imanishi, A. Hirano, Y. Takeda and O. Yamamoto

585 Electrospun PI/PVdF Composite Fibrous Membranes with High Heat Resistance for Lithium-Ion Batteries of Electric Vehicles
J. Son, S. Jang, C. Park, S. Choi and S. Jo

586 The Influence of Additives on Lithium Dope / Undope Reactions for a Tin Film Electrode in a Room-Temperature Ionic Liquid Electrolyte
S. Miyashita, Y. Katayama, T. Miura and S. Komaba

587 Investigation of the Interface between $LiMn_2O_4$ Electrode and Li_2S-P_2S_5 Electrolyte in All-Solid-State Batteries
H. Kitaura, A. Hayashi, K. Tadanaga and M. Tatsumisago

588 The Role of Adipic Acid on the Synthesis of $LiFePO_4$ by Solid-State Approach with High Rate Performance
S. Lee, I. Chang, H. Lim, K. Karthikeyan, Y. Lee and W. Kim

589 Synthesis and Electrochemical Properties of $LiMnPO_4$ Cathode Materials Obtained by Two Different Methods
I. Jang, S. Lee, H. Lim, K. Karthikeyan and Y. Lee

590 Crystalline Halide Substituted Li-Argyrodites as Solid Electrolyte for Lithium-Ion Batteries
F. Stadler and C. Fietzek

591 Formation of SEI on Temperature Controlled Process for Lithium-Ion Batteries
F. Wang, M. Yu, Y. Tsai, Y. Hsiao, C. Lin, Y. Wang and C. Wan

592 Electrochemical Study of SEI of Metallic Li Anode with Improved Cycle Life by Sulfonyl Additives
T. Momma, H. Nara, Y. Suzuki and T. Osaka

593 Cathode Interfacial Design for Solvent-Free All Solid-State Lithium-Ion Batteries
T. Kobayashi, Y. Kobayashi, S. Seki, Y. Ohno, Y. Mita and H. Miyashiro

594 Thin Films for All-Solid-State Lithium Microbatteries
B. Fleutot, V. Phan, D. Poinot, B. Pecquenard, F. Le Cras, A. Levasseur and C. Delmas

595 Novel Side-Chain Rotating Polymer Electrolytes Having an Amide Group in the Main Chain
T. Matsuhira and H. Yamamoto

596 Synthesis and Electrochemical Performance of $LiFePO_4$-Carbon Nanocomposite with Core-Shell Structure
Y. Wang, Y. Wang, E. Hosono, Y. Wang and H. Zhou

597 Synthesis and Electrochemical Properties of Low-Barrier Ion Conductive Polymer Electrolytes Having a Thioamide Group
N. Iwaguchi, T. Ishibashi, T. Okamura and H. Yamamoto

598 Carbon-Impregnated Nanoporous $LiFePO_4$ with Spherical Microscale Particles Having High Volumetric Capacity for Lithium Batteries
S. Oh, S. Oh, K. Amine and Y. Sun

599 Improved Electrochemical Performances of NH_4AlF_4-Coated $LiCoO_2$ Cathode Material for Lithium-Ion Battery
H. JE, J. Prakash and Y. Sun

600 Cross-Linked, Lithium-Conducting Ternary Polymer Electrolytes Containing Ionic Liquids
G. Kim, G. Appetecchi, S. Passerini, M. Joost, A. Balducci and M. Winter

601 Design of Resilient Nano-Silicon Anodes
B. Zdyrko, A. Magasinski, B. Hertzberg, F. Jones, T. Fuller, I. Luzinov and G. Yushin

602 Olivine-Oxide Nanostructured Materials for Li-Ion Batteries
K. Zaghib, P. Charest, M. Dontigny, A. Guerfi, M. Petitclerc, J. Labrecque and A. Vijh

603 Evaluation of Synthesis Routes for Pure and Composite $LiMnPO_4$ with Carbonaceous Additives for Li-Ion Battery
S. Kaymaksiz, U. Dettlaff-Weglikowska, N. Kaskhedikar, N. Sato, J. Maier and S. Roth

604 $LiMnPO_4$ Cathode Material for High Performance Li-Ion Battery
I. Exnar, A. Key, G. Degenghi, T. Drezen and J. Miners

605 Hydrothermal Synthesis of Lithium Iron Phosphate Using Fe(III) Precursor
H. Zou and P. Shen

606 $LiMg_xMn_{1-x}PO_4/C$ Composite Cathodes for Lithium Batteries Prepared by a Combination of Spray Pyrolysis with Wet Ballmilling
Z. Bakenov and I. Taniguchi

607 Synthesis, Structural and Electrochemical Properties of $LiFePO_4$ Nanomaterials Synthesized by Hydrothermal Route
K. Zaghib, F. Brochu, A. Guerfi, M. Kopec, A. Mauger, F. Gendron and C. Julien

629 Comparison of Al and Mg Substitution Effect on the Thermal Performance of Positive Electrode Materials
F. Zhou, W. Luo, X. Zhao and D. Jeff

630 Gel Polymer Electrolyte Based on Cross-Linked Poly(vinylpyridine-co-styrene) for Lithium-Ion Polymer Batteries
Y. Kang, S. Oh, D. Kim, M. Lee and C. Lee

631 $LiMn_{1.5-x}Ni_{0.5}Cr_xO_4$ ($0 \leq x \leq 0.1$) Cathode Materials for High Energy Density and High Rate Capability Li Ion Rechargeable Batteries
R. Singhal, R. Katiyar, K. Asmar and R. Katiyar

632 Three-Dimensionally Ordered Structures for Inhibition of Dendrite Formation on Lithium Metal Electrode
H. Munakata, Y. Yamamoto, K. Sasajima, M. Kijima, D. Yamamoto, S. Woo and K. Kanamura

633 Metal Coating as an Effective Method for Improved Electrochemical Performances of Anatase Electrodes
M. Mancini, P. Kubiak, R. Marassi and M. Wohlfahrt-Mehrens

634 Shape-Controlled Silicon Particles for High-Capacity Negative Electrode of Li-Ion Batteries
K. Nakai, I. Tsutioka, M. Saito, A. Tasaka, T. Takenaka, M. Hirota, A. Kamei and M. Inaba

635 Properties of PVdF/HFP Inorganic Filler Modified Gel Electrolytes
A. Zalewska, K. Piotrowska, J. Syzdek, L. Niedzicki and M. Marcinek

636 Self-Assembly Between $LiFePO_4$ and Carbon Black during Electrode Processing for High Power Li-Ion Battery
W. Porcher, S. Jouanneau, B. Lestriez and D. Guyomard

637 Thin Electrolytes from Self-Assembly of Polyetheramine Oligomers on $LiFePO_4$ Cathode Particles
C. Sisbandini, D. Brandell, T. Gustafsson and L. Nyholm

638 Kinetics of Lithium Nickel Cobalt Oxide Electrode Material for Lithium-Ion Batteries
B. Ravdel and F. Puglia

639 The Influence of Fluorinated Aromatic Isocyanates on the Cycling Performance of Silicon Anodes in Lithium-Ion Batteries
M. Sternad, H. Kren, R. Hohl, C. Bayer, C. God, C. Stangl, B. Fuchsbichler, S. Koller, M. Schmuck, M. Takehara, M. Ue and M. Winter

640 Thermodynamics of Electrode Materials for Lithium-Ion Batteries
B. Ravdel, S. Trebukhova and F. Puglia

641 Gel Electrolyte for High Energy Density Li Ion Rechargeable Batteries
R. Singhal, M. Rivera, V. Dolidze, F. Aliev and R. Katiyar

642 Thermal Behavior of Carbon-Coated Anode Observed in In Situ Transmission Electron Microscopy
T. Ahn, J. Cho and Y. Kim

643 Partial Crystallization of Amorphous Carbon Layer Coated on the Surface of $LiFePO_4$ by Heat Treatment Using Microwave Induced Arc
J. Jegal and K. Kim

644 Thermal Stability of Delithiated Al-Substituted $Li(Ni_{1/3}Co_{1/3}Mn_{1/3})O_2$ Cathodes
C. Love, M. Johannes and K. Swider-Lyons

645 Influence of Electrode Preparation Conditions on the Electrochemical Performance of Cathodes in Li-Ion Batteries
H. Tran, W. Haselrieder, M. Mueller, C. Taeubert, M. Wohlfahrt-Mehrens and A. Kwade

646 Electrodeposition of Polymer Electrolyte Coated MnO_2 for 3D Microbatteries
P. Johns, G. El-Enany and J. Owen

647 Thermal and Electrochemical Behavior of Different Cathode Materials for Lithium-Ion Batteries
C. Taeubert, M. Fleischhammer, P. Axmann and M. Wohlfahrt-Mehrens

648 Synthesis of Water Scavering Compounds Based on Functionalization of Methylalumoxane by Organic Compounds Containing Free Hydroxyl Group for Application in Battery Electrolytes
M. Marczewski, M. Piszcz, A. Plewa-Marczewska and M. Siekierski

649 Estimation of Complex Formation Constants of Supramolecular Additive - Low Molecular Weight Analogs of PEO and Supramolecular Additive - Anion by NMR Spectroscopy
A. Plewa-Marczewska, M. Kalita and M. Siekierski

650 Lithium Plating and Lithium Intercalation Kinetics as a Function of Electrolyte Composition
R. bugga and M. Smart

652 Comparison of Morphology, Particle Size, and Coating on Cycling Performance of Si Based Anodes for Li-Ion Batteries
S. Urbonaite, I. Baglien and K. Edström

653 Interfacial Structure and Interfacial Resistance of EC:DMC/$LiPF_6$ and Ionic Liquid Electrolytes at Graphite and $LiFePO_4$
O. Borodin and G. Smith

654 Direct In Situ Measurements of Li Transport in Li-Ion Battery Negative Electrodes
S. Harris, A. Timmons, S. Kim and C. Monroe

655 On Reasons for Capacity Fade of Lithium-Sulfur Cells during Cycling
V. Kolosnitsyn, E. Kuzmina, E. Karaseva and L. Sheina

656 Field Effects on Bulk and Interfacial Behavior of Electrolytes in Li-Ion Cells
K. Gering

657 Silicon-Decorated Carbon Nanotube Arrays as High Capacity Anodes for Lithium-Ion Batteries
K. Evanoff, B. Hertzberg, T. Fuller, W. Ready and G. Yushin

659 Carbon Coated Li-Mn-Oxide Nanorods as High Rate Electrode Materials for Lithium-Ion Batteries
K. Kim and K. Kim

660 Ionic Liquids in Polymer Electrolytes for Lithium Batteries
C. Hupbauer and J. Tübke

661 Low-Molecular-Weight PEG-Modified RTILs as Electrolytes for Rechargeable Lithium Batteries
O. Geiculescu, R. Rajagopal, P. Hallac, S. Creager and D. DesMarteau

662 Effect of Additives to Electrolyte and Electrodes for Increasing Efficiency of Li-Ion Batteries
E. Shembel, I. Maksuta, V. Redko, D. Meshri, L. Neduzko, V. Maslov and V. Pisny

663 New Binder Materials for Si Electrode
G. Liu, S. Xun, H. Zheng, X. Song and V. Battaglia

664 Effect of Organic Additives on Electrochemical Properties of Li Anode in Room Temperature Ionic Liquid
H. Sano, H. Sakaebe and H. Matsumoto

665 Synthesis and Evaluation of the Side-Chain Structure of Novel Low-Barrier Ion Conductive Solid Polymer Electrolytes
I. Fukuchi, H. Yamamoto, T. Ishibashi, T. Matsuhira, N. Iwaguchi and T. Okamura

666 High Energy Density Metal Oxide Anodes for Li-Ion Batteries
C. Ban, L. Riley, Z. Wu, D. Gillaspie, S. Lee and A. Dillon

667 Phase Transition Pathways of Nanoscale Olivines during Dynamic Electrochemical Cycling
M. Tang, Y. Kao, N. Meethong, W. Carter and Y. Chiang

668 Electrochemical and Thermal Behavior of Metal Electrode in Room Temperature Ionic Liquids with Asymmetric Cations
H. Sakaebe, H. Matsumoto, S. Tsudzuki and K. Tatsumi

669 Charge Transfer Resistance on Lithium in Ionic Liquids Composed of Fluorosulfonyl-(trifluoromethylsulfonyl)amide for Lithium Battery Electrolyte
H. Matsumoto, S. Tsuzuki, T. Umecky, H. Sakaebe and K. Tatsumi

670 Optimum Binder for High Capacity SiO Anode
S. Komaba, K. Shimomura, T. Ozeki, K. Konno and H. Yui

671 Compatibility of Electrolytes Based on BMPl-TFSI with Graphite Anodes for Li-Ion Batteries
M. Reichert, M. Wachtler, P. Kurzweil and M. Wohlfahrt-Mehrens

672 Influence of the Blocks Length and Formulation on Conductivity of Triblock Copolymer as Solid Electrolytes for Lithium Batteries
M. Robinet, R. Bouchet, T. Phan and D. Bertin

673 POE Containing Homogeneous Dispersion of Rigid Organic Nodules as SPE for Lithium Batteries
R. Bouchet, T. Phan, M. Robinet and D. Bertin

674 Hybrid, Nanoarchitectured Tin Anodes for Lithium-Ion Batteries
P. Meduri, C. Pendyala, V. Kumar, G. Sumanasekera and M. Sunkara

675 High Voltage Lithium-Ion Batteries Based on Carbon/$LiMPO_4$ (M = Mn, Co, Ni) Composites
J. Morales, R. Trócoli, R. Saint-Martin, S. Franger and J. Santos Pena

676 Electrochemical Properties of $xLiMnO_3 \bullet (1-x)LiMn_{0.33}Co_{0.33}Ni_{0.33}O_2$ Cathode Materials Prepared by Co-precipitation
J. Jeong, K. Ha, B. Jin and H. Kim

677 Microstructured Porous Silicon/Carbon Composite Anode Materials for Lithium-Ion Batteries
Y. Yen, C. Lin, H. Wu and N. Wu

678 A New Methodology for Evaluating the High-Power Behavior of a Li-Ion Battery Cell
A. Nyman, T. Zavalis, R. Elger, M. Behm and G. Lindbergh

679 Comparative Study of Electrolyte Reactions at the Surface of High Voltage Manganese Spinel, Phosphate, and Metal Oxide Cathodes in Li-Ion Cells
B. Deveney, K. Nechev, J. Peres and A. Salkind

610 Electrochemical Properties of Mixed Cathode Consisting of μ-Scale $LiCoO_2$ and nm-Scale $Li[Co_{0.1}Ni_{0.15}Li_{0.2}Mn_{0.55}]O_2$
K. Kim, S. Kim, Y. Lee and J. Kim

711 Kinetics of Li Ion Transfer at Interface between Cathode Active Material and Electrolyte
I. Takahashi, K. Sasaki and T. Terai

680 Dow Energy Storage Solutions: Innovative Materials for Advanced Lithium-Ion Batteries
J. Cohen, S. Tang, H. Fowler, D. Brune, T. Gregory, S. Montgomery, T. Kuo, M. Newsham, R. Mehta, J. Waeterloos, M. Warnecke and D. Strand

681 All-Solid-State 3D Microbatteries: A Challenge for Efficient Smart Systems
L. Le Van-Jodin, R. Salot and S. Poulet

682 Composite Intermetallic Anodes with 3-D Architectures Made by Electrodeposition
L. Trahey, J. Vaughey and M. Thackeray

683 Long-Term Cycling Stability of LFP Composite Electrodes with Fluorine-Free, Aqueous Processable Binder
S. Lux, A. Balducci, F. Schappacher, S. Passerini and M. Winter

684 Advanced Carbon Anode for Na-Ion Batteries
S. Komaba, W. Murata and T. Ozeki

685 Beyond Intercalation toward the Lithium-Air Battery
L. Hardwick, S. Freunberger, Z. Peng, J. Bao, A. Paterson and P. Bruce

686 Solvent and Conducting Salt Effects on the Oxygen Reduction Mechanism in Nonaqueous Lithium Air Batteries
K. Abraham, C. Olaoire and S. Mukerjee

687 Lithium-Air Rechargeable Batteries Using MnO_2-Carbon Based Air Electrode
A. Thapa, S. Kazuki, H. Matsumoto and T. Ishihara

688 Lithium Batteries with Aqueous Electrolytes
R. Huggins

689 A New Cathode Material for Li-Ion Batteries with the Possibility of Extracting Two Li-Ions per TM-atom
M. Kuezma, D. Ensling, R. Dominko, J. Jamnik, T. Gustafsson, J. Thomas and M. Gaberscek

690 New Types of Lithium-Ion Batteries
B. Scrosati

691 Inkjet Printed $Li_4Ti_5O_{12}$ Electrode for Recharegable Lithium Thin Film Battery
H. Kim, J. Choi, M. Kwon, M. Song, Y. Park and S. Doo

692 What Does Electrode Particle Size Have to Do with High Power Lithium-Ion Batteries?
K. Abraham

693 Towards High Rate Performance Li Ion Electrodes: Suppression of Active Particle Size
B. Erjavec, R. Dominko, J. Come, A. Pintar and M. Gaberscek

694 A New System of High Specific Power Lithium Ion Cell
H. Xu, H. Cao, Z. An, E. Yang and Y. Pan

695 Performance Demonstration of MCMB-$LiNiCoO_2$ Cells Containing Electrolytes Designed for Wide Operating Temperature Range
M. Smart, B. Ratnakumar, L. Whitcanack, K. Smith, S. Santee, F. Puglia and R. Gitzendanner

696 Cathode Materials for High Rate Lithium-Ion Batteries
D. Ghantous, O. Mao, O. Chang, P. Hallac and G. Blomgren

697 High Capacity Double-Layer Surface Modified Layered $Li[Li_{0.2}Mn_{0.54}Ni_{0.13}Co_{0.13}]O_2$ Cathode with Improved Rate Capability
A. Manthiram, Q. Wang, J. Liu and J. Gao

698 Understanding Study of Power Limitations at Low Temperature of $LiFePO_4$
J. Breger, D. Sotta, O. Falchetti, O. Jan, F. Castaing and C. Tessier

699 High Power Evaluation for $LiFePO_4$ / SiO Cell Using Current-Rest-Method
T. Miyuki, A. Kojima, Y. Okumura, T. Kojima and T. Sakai

700 Chemical and Physical Characteristics of Lithium Manganese Nickel Spinel,and Its Performance as a Cathode Material
B. Ravdel, S. Trebukhova and F. Puglia

701 New Electrode Design for Ultrahigh Energy Density Rechargeable Batteries
C. Erdonmez, W. Lai and Y. Chiang

702 AC Impedance Analysis of High-Power Lithium-Ion Secondary Batteries
S. Seki, N. Kihira, Y. Mita, Y. Ohno, K. Takei, T. Ikeya, H. Miyashiro and N. Terada

703 In Situ and ex Situ ^{7}Li Solid State NMR Studies on Lithium Symmetrical Cells with Ionic Liquid Electrolytes
B. Key, R. Bhattacharyya, C. Grey, A. Best, G. Lane and T. Hollenkamp

704 A Mathematical Model for All Solid-State Lithium-Ion Batteries
K. Becker-Steinberger, S. Funken, M. Landstorfer and K. Urban

705 Storage Characteristics of Lithium-Ion Cells
R. Bugga, M. Smart and L. Whitcanack

706 Parallel Cell/Battery Influence on Ultra Low Temperature Battery Performance
J. Erbacher, G. Loeber and C. Riepenhoff

707 Thermal Analysis of Positive Electrodes of Lithium-Ion Batteries
Y. Saito, H. Nitani and M. Shikano

708 Neutron Depth Profiling for In Situ Lithium Analyses in All-Solid-State Thin-Film Microbatteries
J. Oudenhoven, F. Labohm, R. Niessen, F. Mulder and P. Notten

709 Use of Equivalent Circuits and Modified Ragone Plots for Lithium-Ion Battery Performance Prediction
J. Fellner, G. Loeber, B. Kumar, J. Thokchom and C. Riepenhoff

710 Evolved Gas Analysis of Lithium-Ion Battery by Mass Spectroscopy
S. Koike, M. Shikano, H. Sakaebe and K. Tatsumi

651 In Situ and Ex Situ Solid State NMR and Pair Distribution Function Studies to Investigate the Local Structure of the Amorphous Phase(s) in Silicon Anodes
B. Key, R. Bhattacharyya, M. Morcrette, V. Seznec, J. Tarascon and C. Grey

712 Electrochemical and Magnetic Study on the Regeneration of a Completely Air-Oxidized $LiFePO_4$/C Composite
V. Palomares, A. Goñi, M. Bengoechea, I. de Meatza, O. Miguel, L. Lezama and T. Rojo

713 Differential Scanning Calorimetry and Thermogravimetry with In Situ Online Mass Spectrometry Studies on Lithium Iron Phosphate Cathodes and Carbon Anodes
R. Hohl, H. Kren, O. Fruhwirth, B. Fuchsbichler, M. Schmuck, S. Koller and M. Sternad

714 Understand Cell Variations in Commercial Li-Ion Battery Pack and Packaging
M. Dubarry and B. Liaw

715 A Study on the Cause of Deterioration in Float-Charged Lithium-Ion Battery
T. Tsujikawa, K. Yabuta, T. Matsushita, M. Arakawa and K. Hayashi

716 Characterization and Improvement of Power Performance of Lithium-Ion Batteries at Low Operating Temperatures
H. Cho and H. Shin

717 All Solid-State Lithium-Sulfur Battery Using Meso-sized Electrode Structure
R. Kanno, M. Nagao, Y. Imade, K. Homma, Y. Yamakawa, R. Watanabe, T. Yokoi and T. Tatsumi

718 Fast Synthesized $LiFePO_4$/C Cathode Material for High Power Application in Lithium-Ion Battery for HEV
C. Arbizzani, S. Beninati, L. Damen and M. Mastragostino

719 Alternative Binder Systems for Lithium-Ion Batteries
C. Stangl, C. Bayer, C. God, B. Fuchsbichler, H. Kren, M. Sternad, R. Hohl and S. Koller

720 Modeling Capacity Fade of Lithium-Ion Batteries: Challenges in Identifying and Quantifying Possible Mechanisms
V. Ramadesigan, V. Boovaragavan, R. Methekar, V. Subramanian, K. Chen and R. Braatz

721 Understanding Electronic Resistances in Cathodes for High-Rate Applications
I. Thorat, T. Joshi, J. Harb and D. Wheeler

B7 - Photovoltaics for the 21st Century 5

Energy Technology / Dielectric Science and Technology / Electronics and Photonics

722 Photovoltaics Technologies: Today, Tomorrow, and Beyond
T. Surek

723 Enhancing Silicon Photovoltaics R & D via a Government/University/Industry Consortium
G. Rozgonyi

724 Germanium Doped Silicon for Solar Cells
D. Yang, L. Wang, X. Zhu, X. Li, Z. Li, P. Wang, X. Yu and D. Que

725 Formation of Screen-Printed Contacts on Si Solar Cells
B. Sopori and V. Mehta

726 Effect of Pre-cleaning on Texturization of c-Si Wafers in KOH/IPA Mixtures
G. Chen and I. Kashkoush

727 Efficient Crystalline Si Heterojunction Solar Cells
Q. Wang, M. Page, E. Iwaniczko and F. Hasson

728 Control of Microstructures and Crystal Defects in Si Multicrystals Grown by the Dendritic Casting Method
K. Nakajima, K. Kutsukake, N. Usami and K. Fujiwara

729 Annealing Effects on Recombination Velocities at Grain Boundaries in Polycrystalline Si
Y. Ohshita, K. Fukuda and M. Yamaguchi

730 Numerical Investigation of Heat and Mass Transfer during a Unidirectional Solidification Process in Crystalline Silicon for Solar Cells
K. Kakimoto, L. Liu and X. Chen

731 Multicrystalline Silicon Ingot and Wafer Qualities for PV Applications
Y. Wan

732 Modification of μc-Si Structure for the Improvement of Light Absorption Property
M. Yoon, J. Yang, K. Im and S. Lim

777 Inorganic Thin Film Solar Cells: Materials Science Challenges of Advanced Physical Concepts
W. Jaegermann, A. Klein and T. Mayer

778 Fabrication and Modeling of Three-Dimensionally Structured CdTe Thin Film Photovoltaic Devices with Self-Aligned Back-Contacts
D. Josell, C. Beauchamp, S. Jung, B. Hamadani, L. Richter, J. Bonevich, N. Zhitenev, T. Moffat and J. Guyer

779 Investigation of Cu(In, Ga) Se_2 Absorber Layers Prepared from Stacked Electrodeposited and Annealed Elemental Layers: Effect of Ga Deposition Bath on the Morphological and Optoelectrical Properties of the Absorber Layers
M. Kurihara, P. Dale and S. Siebentritt

780 CIGSS Thin Film Solar Cells by Solution Process
J. Suh, K. Song, C. Ham, K. Yoon, J. Yoon and S. Ahn

781 Synthesis and Characterization of $CuInSe_2$ Thin Films by Annealing of Electrodeposited In_2Se_3/Cu and In_2Se_3/Cu-Se Stacks
J. Fischer and P. Dale

782 Towards the Development of an Integrated Power Supply
S. Mitra

B8 - Proton Exchange Membrane Fuel Cells 9 (PEMFC9)

Energy Technology / Physical and Analytical Electrochemistry / Battery / Industrial Electrochemistry and Electrochemical Engineering

783 Modeling of Cathode Catalyst Layers with Mixed-Surface-Wettability in PEM Fuel Cells
Q. Wang, X. Zhang, D. Song, M. Eikerling and S. Liu

784 Interfacial Morphology and Contact Resistance Model for a Polymer Electrolyte Fuel Cell
T. Swamy, F. Hizir, M. Khandelwal, E. Kumbur and M. Mench

785 Analysis of Dominant Parameters in Structure and Properties of Cathode Catalyst Layer on PEM Fuel Cell Performance
Y. Tabe, H. Takamatsu and T. Chikahisa

786 Evaporation Modeling for Proton Exchange Membrane Fuel Cells
D. Fritz and J. Allen

787 A Pore Scale Model for PEMFC Catalyst Layers
R. Flückiger, P. Sui, F. Büchi and N. Djilali

788 Modeling of Pore Systems by 3D Geometric Graphs
R. Thiedmann, C. Hartnig, I. Manke, W. Lehnert and V. Schmidt

789 A Modeling Study of the Effects of the Properties of Anode Porous Layer on the Performance of a PEM Fuel Cell
X. Wang and T. Nguyen

790 Model to Investigate Interfacial Morphology Effects on Polymer Electrolyte Fuel Cell Performance
H. Bajpai, M. Khandelwal, E. Kumbur and M. Mench

791 Multiscale Modeling-Based Prediction of PEM Fuel Cells MEA Durability under Automotive Operating Conditions
A. Franco

792 Estimation of Optimal Operating Profile of PEMFC Using Dynamic Optimization Technique
R. Methekar, V. Ramadesigan, V. Boovaragavan, V. Subramanian and C. Rice-York

793 Complex Dynamics in a PEM Fuel Cell
A. Mota, P. Lopes, E. Ticianelli, E. Gonzalez and H. Varela

794 Reduced Model for a PEMFC Stack: Automated Code Generation and Verification
H. Ly, E. Birgersson and M. Vynnycky

860 Degradation of PEM Fuel Cell Cathode Electrocatalysts: ASAXS Analysis and OER-Based Mitigation
R. Srivastava, C. Yu, B. Choi, Z. Liu and P. Strasser

861 Time Resolved Characterization of Fuel Cell Cathode Catalysts Using Operando XAS
S. Burton, S. Ball, A. Russell, B. Theobald, B. Tessier, D. Thompsett, G. Chouchelamane and M. Newton

862 Electrocatalyst Stability at the Nanoscale
P. Strasser

863 Stability of Pt Alloy High Surface Area Catalysts
K. Hartl, K. Mayrhofer and M. Arenz

864 $Pt_{1-x}M_x$ Intermixes with Enhanced Corrosion Stability for PEM Fuel Cells
D. Stevens, A. Garsuch, S. Wang, R. Sanderson, M. Debe, R. Atanasoski, S. Hendricks and J. Dahn

865 Degradation Mechanism of Platinum Cobalt Alloy Catalyst Revealed by X-Ray Photoemission Spectroscopy
S. Hidai, M. Kobayashi, H. Niwa, Y. Harada, M. Oshima, Y. Nakamori, T. Aoki and E. Ikenaga

866 Dealloyed Nanoporous Metals for PEM Fuel Cell Catalysis
J. Erlebacher and J. Snyder

867 Mass Activity and Durability of $Pt_{shell}/Au_{core}/C$ Core-Shell Catalyst
H. Yamada, H. Tsuji, H. Ito, D. Shimoda, A. Tasaka and M. Inaba

868 Active Sites for PEM Fuel Cell Reactions
D. Strmcnik, D. Tripkovic, D. van der Vliet, J. Greeley, A. Brownrigg, C. Lucas, G. Karapetrov, V. Stamenkovic and N. Markovic

869 Size and Shape Controlled Pt-Alloy Nanoparticles as Fuel Cell Catalysts
H. Yang, L. Dai and S. Zou

870 RRDE Measurements of ORR Activity of $Pt_{1-x}Ir_x$ ($0 < x < 0.3$) on High Surface Area NSTF-Coated GC Disks
G. Liu, R. Sanderson, D. Stevens, G. Verndstorm, R. Atanasoski, M. Debe and J. Dahn

871 Thin Film Platinum Alloys for Use as Catalyst Materials in Fuel Cells
C. Hays, J. Kulleck, B. Haines and S. Narayan

872 Size Effects in Monolayer Catalysis: Case Study -- Pt Submonolayer on Au(111)
D. Gokcen, S. Bae and S. Brankovic

873 Oxygen Reduction Reaction Paths and Behavior of Hydrogen Peroxide Formation on Pt (111) for PEMFC
A. Ohma, T. Ichiya, K. Fushinobu and K. Okazaki

874 Highly Efficient Pt-Pb Catalysts for Oxygen Reduction Reaction
H. Lee, C. Chang, W. Vogel and P. Chu

875 Carbon-Supported Ir-Ti as a Novel Cathode Catalyst for PEFCs
B. Li, J. Qiao, D. Yang and J. Ma

876 Pulse Voltammetry Investigations of Platinum Metal Fuel Cell Electrodes
P. Pietrasz and T. Zawodzinski

877 Highly Stable Titanium Diboride Based Catalysts for Oxygen Reduction Reaction
S. Yin, P. Shen, S. Mu and M. Pan

878 Synthesis of Nanocrystalline Tungsten Carbide by Intermittent Microwave Heating Method as Eletrocatalyst Support
Z. Li and P. Shen

879 PEMFC Performance of MEAs Based on Perfluorinated Nanocomposite Membranes Modified by Polyaniline
C. Vicente, M. Sergio, S. Ana, B. Ninel, S. Karina, S. Omar and R. Evaristo

900 A Study on Ionic Conductivity of Ionic Liquids Based Membranes for Anhydrous and High Temperature Fuel Cells: Effect of Common Ions
J. Baek, J. Park, S. Yim, Y. Yoon, T. Yang, C. Kim and Y. Shul

901 Novel Composites Based on Radiation Grafted Membranes and Polypyrrole for Polymer Electrolyte Membrane Fuel Cells
D. Çilingir and S. Alkan Gürsel

902 Effects of Carbon Supports on PEFC Performance at High Temperature and Low Humidity
H. Shintani and Y. Tsuji

903 Improvement of the Hydrogen Utilization of an Automotive PEMFC Vehicle Using Ejector/blower Hybrid Recirculation System
M. Kim, Y. Sohn, W. Lee and S. Yim

904 Simulation Based Control Strategy Analysis for a Residential Power Generator
M. Kim, Y. Sohn, W. Lee and S. Yim

905 Effect of the Operation and Humidification Temperatures on the Performance of a PEM Fuel Cell Stack
M. Pérez-Page and V. Pérez-Herranz

906 Investigation of the Corrosion Stability of Stainless Steels under Simulated Low and High Temperature Proton Exchange Membrane Fuel Cell Operating Conditions
J. Richards, K. Schmidt, C. Cremers, J. Tübke and A. Lückmann

907 Thermal Characterization, Pretreatment, and Electrochemistry of a Pt/C Fuel Cell Catalyst
O. Pinchuk, S. Aubuchon, C. Marks and K. Wynne

908 Electrochemical and In Situ XAS and XRD Studies on Dissolution of Ruthenium Nanoparticle Surface
H. Imai, M. Matsumoto, S. Uzuka, S. Mitsushima and K. Ota

909 Bulk Structure Analysis of Ta-Oxide Cathode Materials for Identifying Catalytically Active Sites: A High-Resolution Powder X-Ray Diffraction Study
H. Imai, M. Matsumoto, A. Ishihara and K. Ota

910 A Study on Electrochemical Properties of Electrodes Containing Ionic Liquid for High Temperature Fuel Cells
S. Ryu, J. Park, T. Yang, G. Park, Y. Yoon, H. Kim and C. Kim

911 High Temperature Operation of Direct Ethanol Fuel Cells with Nafion-TiO_2 Membranes and PtSn/C Electrocatalysts
R. Isidoro, B. Matos, M. Dresch, E. Spinacé, E. Traversa, F. Fonseca and E. Santiago

912 The Effect of Acid Treatment of GDL on PEMFC Performance
M. Choi and Y. Kim

913 Kinetic Approach to Oxygen Reduction at Cathode of PEMFC Focusing on Oxygen Gas Composition in Gas Flow Channel
S. Lee, Y. Yoon, T. Yang, S. Park and C. Kim

914 A DFT Study for the Durability of Perfluorosulfonic Acid Membrane
T. Tokumasu, I. Ogawa, M. Koyama, T. Ishimoto and A. Miyamoto

915 Microscopic Observation of Freezing Phenomena in PEM Fuel Cell at Cold Start
M. Saito, Y. Tabe and T. Chikahisa

916 Fabrication of GDL Microporous Layer Using FEP for PEMFCs
S. Park, J. Kim, M. Oh, S. Kim and Y. Park

917 Thermally Crosslinked Proton Exchange Membrane Based on Poly(ether sulfone) for High Temperature Proton Exchange Membrane Fuel Cells
H. Kim and K. Kim

918 Experimental and Theoretical Characterizations of MEA Degradation of PEMFC
S. Lee, Y. Yoon, T. Yang, S. Yim, S. Park and C. Kim

919 Degradation Behavior of Membrane in PEFCs under Pressurized Condition
K. Asano and Y. Mugikura

920 Doping Effect of TiO_2 as Supports for Pt Based Electrocatalysts on ORR Activity
J. Kim and Y. Kim

921 Effect of Gas Diffusion Layer Composition on the Performance of Liquid-Direct Methanol Fuel Cells
F. Alcaide, G. Álvarez, A. Querejeta, O. Miguel and I. Boyano

922 Effect of Nanocarbon Substrate Materials on the CO Tolerance of PtRu Electrocatalysts for Fuel Cell
E. Yoo, Y. Takano and J. Nakamura

923 Effect of Gap Clearance in PEMFC Cell Assembly
C. Yang, S. Moon, C. Lee and Y. Jeong

924 Current Distribution of a PEMFC under CO
T. Murahashi and E. Nishiyama

925 Evaluation of Pd-Modified Nafion Membranes for Life Time Test
L. Zhang, L. Liu, X. Cheng, Y. Zhang, F. Weng and Q. Fan

926 Preparation of Triazole-PWA / PVdF Composite Membrane at High Temperature for PEMFC
H. Lee, S. Park, S. Choi and Y. Shul

927 Preparation and Durability of Metal Oxide and Carbon Composite Material as a Catalyst Support for PEMFCs
T. Kinumoto, K. Nagano, Y. Okawa, T. Kanda and M. Toyoda

928 Corrosion Resistance, Cell Performance, and Long-Term Stability of Metal Bipolar Plates for Direct Methanol Fuel Cell
Y. Park, D. Peck, D. Jung, S. Kim, S. Lim and D. Lee

929 Oxidation of Glycerol: Preliminary Electrochemical Studies and Use in PEM Fuel Cells
P. Stuckey, C. Lee, P. Pietrasz and T. Zawodzinksi

930 Doped Mesoporous Materials as PEM Fuel Cell Electrocatalyst Support
I. Alonso-Lemus, Y. Verde and L. Álvarez-Contreras

931 Survey of Commercial Carbon Supported Platinum Catalysts: Durability Studies for Automotive Applications
D. Betancourt and C. Rice-York

932 Impact of Unit Cell Design and Operating Parameters on Membrane Durability in PEMFCs
M. Lauritzen, S. Wessel, R. Nair and E. Rogers

933 Nafion-Mesoporous Silica as Electrolyte for Ethanol Fuel Cells
Z. Ahmed, D. de Florio, F. Fonesca, E. Santiago, B. Matos, V. Esposito, E. Traversa and S. Licoccia

934 Al_2O_3 Aided Deposition of Pt Nanoparticles on Carbon Nanotube by Atomic Layer Deposition for Application in PEMFC
Y. Hsueh, M. Tsai, C. Wang, C. Kei and T. Perng

935 Performance Enhancement of MEA Fabricated by Decal Process by Adding TiO_2 Particles into the Catalyst Layer
S. Yim, S. Park, J. Lee, G. Park, Y. Yoon, C. Kim and T. Yang

936 Effects of Storage Conditions on Performance Degradation of PEMFCs after Shutdown
E. Cho, Y. Jo, J. Kim, J. Kim, T. Lim, I. Oh, J. Jang and H. Kim

937 Carbon-Based Coating on Stainless Steel as PEMFC Bipolar Plate
W. Wang, C. Wu and L. Hsiao

938 Kinetic Study on Degradation of Nafion by Fenton Reaction
T. Sugawara, S. Takanezawa, N. Kawashima and T. Murakami

939 Mesoporous Carbon as Catalyst Supports in Direct Methanol Fuel Cells
F. Li, J. Ren, S. Ting and K. Chan

940 The Effects of Coolant Thermal Management on Performance of a PEMFC
Y. Sohn, M. Kim, G. Park, K. Kim and W. Lee

941 Sulfonated Poly-aryl-ether-ketones for Applications in Carbon-Nanofiber Based Membrane Electrode Assemblies
M. Perchthaler, E. Wallnöfer and V. Hacker

963 Optimization of the Amount of Nafion in Multiwalled Carbon Nanotubes/Nafion Composite as a Pt Support in GDE of PEMFC
H. Gharibi, M. Javaheri, R. Abdollah Mirzaei and M. Alavi

964 First-Principles Based Kinetic Analysis of the Electrochemical Discharge of Water on Pt_3M Skin Alloys
V. Viswanathan, H. Hansen, J. Rossmeisl, T. Jaramillo, J. Nørskov and H. Pitsch

965 Preparation and Characterization of Catalysts Supported on Catalytically Channeled Carbon Nanofibers for Direct Methanol Fuel Cells
J. Jang, S. Lim, S. Kim, D. Jung, D. Peck and Y. Lee

966 Influence of Sulfonating Agent on Degree of Functionalisation and Properties of Sulfonated Ether-Linked Polybenzimidazole
F. Ng, N. Donzel, D. Jones and J. Rozière

967 Wetting and Drying Responses of Gas Diffusion Layers and Proton Exchange Membrane to Current Transients
J. Davey, R. Mukundan, J. Spendelow, P. Mukherjee, D. Hussey, D. Jacobson, M. Arif and R. Borup

968 Effect of Relative Humidity on Water Structure at Nafion Thin Film Studied by Sum Frequency Generation Spectroscopy
H. Noguchi, H. Minowa, K. Taneda, H. Naohara and K. Uosaki

969 Nonlinear Frequency Response Analysis for the Diagnosis of PEM Fuel Cells
T. Kadyk, R. Hanke-Rauschenbach and K. Sundmacher

970 Electrochemical Impedance Spectroscopy of Proton Exchange Membrane Fuel Cells Using Embedded Probes
R. Abbaraju, N. Dasgupta and A. Virkar

971 Understanding the Performances of MEA in PEMFC by EIS and Current Density Measurement
S. Lin, C. Chen, H. Shiu and F. Tsau

972 Dynamic Measurement and Modeling of the Water Vapor Concentration during AC Impedance Measurements in Polymer Electrolyte Fuel Cells
M. Bayer, A. Wokaun, G. Scherer and I. Schneider

973 Progress toward Accurate Through-Plane Membrane Resistance and Conductivity Measurement
K. Cooper

974 Negative Resistance Values in Locally Resolved Impedance Spectra of Polymer Electrolyte Fuel Cells
I. Schneider, M. Bayer, A. Wokaun and G. Scherer

975 Relationship Between Impedance Spectra and the Structure of the Catalyst Layer of a PEMFC
K. Ikeda, N. Nonoyama and Y. Ikogi

976 Complex Capacitance Analysis of Ionic Conductivity and Interfacial Capacitance within Cathode Layers of PEMFC and DMFC Electrodes
J. Jang, S. Jeon, S. Kim, S. Lee, E. Cho, H. Kim, J. Han and T. Lim

977 Effect of Microporous Layer on Impedance Response of PEM Fuel Cell Fed with H_2 and N_2
D. Malevich, E. Halliop, M. Saha, J. Suryana, B. Peppley, J. Pharoah and K. Karan

978 Highly Durable PtIrM (M = Co and Cr) Alloy Electrocatalysts for PEMFC Applications
T. Aindow, W. Bi, E. Izzo, S. Motupally, V. Murthi and C. Perez-Acosta

979 Stabilization Effect of Iridium in Pt-Based Alloy Catalysts for PEM Fuel Cell Cathodes
P. Balbuena, Y. Ma and P. Hirunsit

980 Fuel Cell Performance and Long Term Stability of Platinum Monolayer Electrocatalysts
H. Naohara, K. Sasaki and R. Adzic

981 Structure and Activity of Novel Pt Core-Shell Catalysts for the O_2 Reduction Reaction
S. Ball, S. Burton, J. Fisher, R. O'Malley, B. Tessier, B. Theobald, D. Thompsett, W. Zhou, D. Su, Y. Zhu and R. Adzic

982 Activity and Stability of Pt Monolayer Core Shell Catalysts
S. Ball, S. Burton, E. Christian, A. Davies, J. Fisher, R. O'Malley, S. Passot, B. Tessier, B. Theobald and D. Thompsett

983 Improving the Stability of PtRu Catalysts for DMFC
N. Cabello-Moreno, E. Crabb, J. Fisher, A. Russell and D. Thompsett

984 Effect of Support Surface on Catalyst Activity and Stability under Potential Cycling
B. Merzougui and V. Murthi

985 Investigation and Modeling of Carbon Oxidation of Pt/C under Dynamic Potential Condition
N. Takeuchi, E. Jennings and T. Fuller

986 Electrochemical and Raman Spectroscopic Studies of Ketjen Black Corrosion during Anodic Polarization in Acid
D. Kim, A. Ay, V. Swope, L. Guo and G. Swain

987 Investigation of Pt-C Interaction on Stability of Pt/C Catalysts in Polymer Electrolyte Fuel Cells
M. Wang, F. Xu, R. Cheng and J. Xie

988 Probing the Influence of Polyvinyl Pyrrolidone on Platinum Electrocatalysts Using In Situ X-Ray Absorption Spectroscopy
B. Shyam, D. Ramaker, C. Susut and Y. Tong

989 Analysis of Electronic State of Pt Small Particles on Carbon Substrate by sXPS
E. Toyoda, T. Hatanaka, N. Takahashi, R. Jinnouchi and Y. Morimoto

990 Synchrotron Radiation Analyses of Residual Cobalt in Carbon Alloy Cathode Catalysts for Polymer Electrolyte Fuel Cells
H. Niwa, M. Kobayashi, K. Horiba, Y. Harada, M. Oshima, Y. Koshigoe, J. Ozaki, K. Terakura, T. Ikeda, S. Miyata, H. Ofuchi, S. Ueda, Y. Yamashita, H. Yoshikawa and K. Kobayashi

991 Scanning Electrochemical Microscopy for Direct Imaging of Fuel Cell Reactions
W. Schuhmann

992 In Situ GIXAFS and HERFD-XAS Studies of a Pt-modified Rh(111) Electrode
D. Friebel, D. Miller, H. Ogasawara, T. Anniyev, C. O'Grady, U. Bergmann, J. Bargar, A. Nilsson, K. Wikfeldt and L. Pettersson

993 In Situ Electrochemical X-Ray Absorption Spectroscopic Study on Pt/M/C (M = Pd, Au) Core-Shell Catalyst
Y. Uchimoto, H. Aoki, T. Kamijo, S. Urata and T. Fukutsuka

994 X-Ray Absorption Characterization of Polyaniline-Derived Polymer Electrolyte Fuel Cell Cathode Electrocatalysts
M. Ferrandon, D. Myers, A. Kropf, G. Wu and P. Zelenay

995 Spectroelectrochemical Raman Studies of New Alloy Catalyst Films
M. Pomfret, J. Pietron and J. Owrutsky

996 Characterization of Oxygen Reduction Catalysts Using SECM and an Electrochemical Robotic System
A. Puschhof, D. Schaefer, Y. Ackermann, C. Kulp, M. Bron, T. Erichsen and W. Schuhmann

997 Designing a New Ionomer from Scratch: Pushing Polypoms to the Limit
A. Herring, J. Horan, M. Kuo, S. Dec, M. Frey, H. Ren and A. Perdue

998 Composite Proton Conductive Membranes for Elevated Temperature and Reduced Relative Humidity PEMFC
E. Chalkovaa, C. Wang, S. Komarneni, J. Lee, M. Fedkin and S. Lvov

999 New Hybrid Inorganic-Organic Proton Conducting Membranes Based on Nafion and $[(ZrO_2)\bullet(Ta_2O_5)_{0.119}]$ Oxide Core-Shell Nanofiller
V. Di Noto, S. Lavina, M. Piga, E. Negro and G. Pace

1000 Nafion/Acid Functionalized Mesoporous Silica Nanocomposite Membrane for High Temperature PEMFCs
Z. Chen and R. Hsu

1001 Design and Development of High-Performance Hybrid Inorganic-Organic Fuel Cell Membranes
C. Laberty-Robert, O. Sel, K. Valle, F. Perreira and C. Sanchez

1002 Nanoscale Membrane Based on Filled Nanoporous Anodic Alumina with Polymeric Nanocomposite for H_2/O_2 Fuel Cell
M. Mohajeri, H. Omidvar, M. Hasani-Sadrabadi, S. Tabaian and M. Alfi

1003 Functionalized Hybrid Organic-Inorganic Membranes Investigated by AC-Electrogravimetry
C. Debiemme-Chouvy, C. Gabrielli, C. Laberty-Robert, H. Perrot, L. To Thi Kim and O. Sel

1004 Molecular Level Investigation of PBI Based High Temperature Fuel Cells
C. Cheng, P. Sui, N. Djilali and A. Su

1005 Proton Dynamics in a Polymer Electrolyte Membrane, Sulfonated Polyether Sulfone: A Computational Study
Y. Choe, E. Tsuchida, T. Ikeshoji, A. Ohira and K. Kidena

1006 Water Sorption and Transport Properties of Polymer Electrolyte Membranes: New Insights from Theory
A. Roudgar, C. Monroe and M. Eikerling

1007 On the Mechanism of Proton Transport in Model Perfluorosulfonic Acid Systems: Ab Initio Molecular Dynamics Simulations
B. Habenicht and S. Paddison

1008 Some New Results with Ternary Pt/Rh/SnO_2 Electrocatalysts for Oxidizing Ethanol to CO_2
M. Li, A. Kowal, E. Sutter, K. Sasaki, M. Vukmirovic, N. Marinkovic, P. Liu and R. Adzic

1009 Platinum/Tin Oxide: Single Walled Carbon Nanotube Electrocatalysts for Direct Ethanol Fuel Cell
Z. Chen and R. Hsu

1010 Ethanol and Methanol: Adsorption Rates and Rates of Intermediate Formation at Pt Single Crystal Electrodes
A. Abd El Salehin, B. Lanova and H. Baltruschat

1011 Mechanistic Aspects of Ethanol Electro-Oxidation in Unsupported Platinum Nanoparticles
D. Cantane and E. Gonzalez

1012 High Throughput Screening of Ethanol Oxidation Catalysts
D. Stevens, S. Fitzsimmons, R. Sanderson, E. Moreau and J. Dahn

1013 Ethanol Electro-Oxidation on PtRu and PtRh Mixed-Monolayer Deposited on Au Nanoparticles
F. Lima

1014 Activity of Pt-Sn Catalyst Prepared by Reactive Spray Deposition Technology for Ethanol Electro-Oxidation
K. Fatih, R. Neagu, V. Alazate, V. Neburchilov, R. Maric and W. Haijiang

1015 Sub-millimeter Current Density Distribution in PEFC at Sub-zero Temperatures
T. Colinart and F. Büchi

1016 Active Area Determination for Porous Pt-Electrodes Used in PEM Fuel Cells: Temperature and Humidity Effects
R. Wreland Lindström, K. Korstdottir and G. Lindbergh

1017 Estimation of Local Relative Humidity and Proton Conductivity in Cathode Catalyst Layers of PEMFC
J. Gazzarri, Z. Xia, X. Zhao, Q. Wang, M. Eikerling, S. Liu and Z. Xie

1018 Analysis of Reactant Gas Transport Phenomena in Catalyst Layers
K. Sakai, K. Sato, T. Mashio, A. Ohma, K. Yamaguchi and K. Shinohara

1019 Identification of Dominant Transport Mechanisms in Cathode Catalyst Layers for PEMFC Operated under Low RHs
Z. Xie, X. Zhao, J. Gazzarri, Q. Wang, T. Navessin and S. Holdcroft

1020 Properties of Catalyst Layers Prepared by Electrospray Deposition
A. Chaparro, M. Folgado, B. Gallardo, A. Martín and L. Daza

1021 Detailed Analysis of Fuel Cell's Peak Power Performance: Simulation and Measurement
Á. Kriston, T. Szabó, G. Inzelt and I. Faragó

1022 Codes and Standards for Stationary Fuel Cell Installations and Testing of Single PEMFC as Applicable in the USA
E. Ubong

1023 Degradation Studies of PEMFC Cathodes Based on Different Types of Carbon
M. Wesselmark, C. Lagegren and G. Lindbergh

1045 Electrochemical Characterization of Substituted Perovskites Used as Proton Conducting Solid Electrolyte for Water Vapor Electrolysis
K. Rahmouni, C. Deslouis, C. Hodebourg, M. Keddam, H. Takenouti, B. Sala, S. Willemin and O. Lacroix

1046 The Electrocatalytic Oxidation of Glycerol in a Solid Alkaline Membrane Fuel Cell (SAMFC)
C. Lamy, M. Simoes, C. Coutanceau and J. Léger

1047 Direct Oxidation of Alcohols in an Alkaline Electrolyte Environment
Q. He, P. Krtil and S. Mukerjee

1048 Improving Oxygen Reduction Efficiency in Direct Methanol Fuel Cells through Structured Catalyst Design
J. Yang, J. Xu, M. Saeys and J. Lee

1049 Ni Effect on the Electrochemical Activity of PtRu/MWCNT Catalysts for DMFC
A. Valenzuela Muñiz, G. Alonso-Nuñez, M. Miki-Yoshida, G. Botte and Y. Verde

1050 Key Parameters for the Preparation of High Performance PtRu/C Anode Catalyst for DMFC
Y. Chen, M. Lo, Y. Chen and Y. Chen

1051 Influence of 2H- or Metal-phthalocyanine Impregnation of Pt/C and Pd/C Catalysts on Formic Acid Electro-Oxidation
R. Chenitz and J. Dodelet

1052 The Electrocatalytic Oxidation of Sodium Borohydride at Palladium Based Electrodes for an Application in a Direct Borohydride Fuel Cell
C. Coutanceau, M. Simões, S. Baranton and C. Lamy

1053 Cyclic Voltammetry Investigation of Borohydride Oxidation at a Gold Electrode
D. Santos and C. Sequeira

1054 Perfluorosulfonic Acid Nanofiber Membranes
J. Choi, K. Lee, R. Wycisk, P. Pintauro and P. Mather

1055 Fuel-Cell Performance of Multiply-Crosslinked Polymer Electrolyte Membranes Prepared by Two-Step Radiation Technique
T. Yamaki, S. Sawada, M. Asano, Y. Maekawa, M. Yoshida, L. Gubler, S. Alkan-Guersel and G. Scherer

1056 Development of Covalently Cross-Linked and Composite Perfluorosulfonic Acid Membranes
Y. Zhang, L. Li, J. Tang, B. Bauer, W. Zhang, H. Gao, D. Jones, J. Rozière, N. Lebedeva and R. Mallant

1057 New Ionomeric Membrane for High Temperature Proton Exchange Membrane Fuel Cells: Equivalent Weight and End Groups' Effects on Conductivity
M. Maalouf, B. Pyle, H. Ghassemi, S. Hamrock, S. Paddison and T. Zawodzinski

1058 Novel PVdF-graft-VIm Based Nanocomposite Polymer Electrolyte Membranes for Fuel Cell Applications
K. Stewart, T. Sookdeo, M. Singh and H. Missan

1059 Adsorption Structure of Perfluorosulfonic Acid Polymer Layer on HOPG Surface
T. Masuda, H. Naohara, S. Takakusagi, P. Singh and K. Uosaki

1060 Guidelines for Improving Hydrocarbon Based Membranes for Proton Exchange Membrane Fuel Cells
M. Gross, G. Maier, T. Fuller, S. MacKinnon and C. Gittleman

1061 Comparing Proton Conductivity of Polymer Electrolytes by Percent Conducting Volume
Y. Kim and B. Pivovar

1062 Surface Structure Analysis of Polymer Electrolyte Membrane under Water Permeation Process by Tapping-Mode Atomic Force Microscopy
S. Tsushima, A. Tsubota, Y. Tabuchi and S. Hirai

1063 Study of Wettability and Morphological Properties Effects on Water Percolation in Gas Diffusion Layers of PEMFC
E. Medici and J. Allen

1064 Impact of Diffusion-Media Wettability on Polymer-Electrolyte-Fuel-Cell Performance
A. Weber, R. Mukundan, D. Hussey, D. Jacobson, M. Arif and R. Borup

1065 Engineered Gas Diffusion Layers for PEM Fuel Cells
M. Blanco, D. Wilkinson, H. Wang and S. Liu

1066 Drainage and Imbibition Patterns Inside the Gas Diffusion Layer of a PEM Fuel Cell
A. Podias

1067 Evaluation of Gas Diffusion Performance in Wet GDL with 3D Pore Network Model
G. Inoue, Y. Matsukuma and M. Minemoto

1068 Characterization of GDL Materials for Two-Phase Flow
I. Hussaini and C. Wang

1069 Effective Two-Phase Flow Parameters of Gas-Diffusion Layers
H. Gunterman, A. Weber and J. Newman

1070 Two-Phase Behavior and Compression Effect in a PEFC Gas Diffusion Medium
P. Mukherjee, V. Schulz, Q. Kang, J. Becker and A. Wiegmann

1071 Evaporative Liquid Water Removal from Diffusion Media of PEFC
K. Cho and M. Mench

1072 In-Plane Mass-Transport Studies of GDL Variation Using the Segmented Cell Approach
D. Wood, R. Mukundan and R. Borup

1073 Effective Thermal Conductivity of Gas Diffusion Layer in Through-Plane Direction
M. Kawase, T. Inagaki and K. Miura

1074 Influence of Formic Acid Impurity on Polymer Electrolyte Fuel Cell Performance
X. Zhang, H. Galindo, H. Grace, P. Baker, X. Wang, U. Pasaogullari and T. Molter

1075 Contamination of Membrane-Electrode Assemblies by Ammonia in Polymer Electrolyte Fuel Cells
X. Zhang, F. Serincan, U. Pasaogullari and T. Molter

1076 Mechanistic Investigations of NO_2 Impact on ORR in PEM Fuel Cells: A Coupled Experimental and Multiscale Modeling Approach
O. Lemaire, B. Barthe and A. Franco

1077 The Impact of Impurities on Long Term PEMFC Performance
F. Garzon, T. Lopes, M. Nelson, D. Wood, T. Rockward, R. Mukundan, T. Springer and E. Brosha

1078 Using a Reference Electrode to Understand the Effect of Trace Fuel Contaminants on PEMFC Behavior
M. Jung and J. Van Zee

1079 Development of Contamination-Robust MEA for PEFC
H. Kameda, Y. Tsuji and K. Yamada

1080 In Situ Diagnostics for Cell Performance and Degradation
J. Stumper, R. Rahmani and F. Fuss

1081 Impact of Dispersant on Ionomer Structure and Fuel Cell Durability
K. Lee, T. Rockward, A. Labouriau, N. Mack, Y. Kim and C. Johnston

1082 Electrode and Catalyst Durability Requirements in Automotive Applications: Technology Status of a Recent Stack Design and Next Generation Challenges
H. Haas

1083 Membrane Concepts for Medium Temperature Fuel Cells
M. Schuster and K. Kreuer

1084 PBI/PFSA Blend Membranes Based on "Proton Donor-Proton Acceptor" Concept for High Temperature PEMFC Application
J. Hu, J. Luo, C. Agert and O. Conrad

1085 Proton-Conducting Non-aqueous Triazolium-Based Ionic Liquid as Electrolyte for High Temperature PEMFC Application
J. Luo, J. Hu, G. Wittstock and O. Conrad

1106 In Situ Measurements of Contact Resistance and In Situ Durability Studies of Steels and Coatings to Be Used as Bipolar Plates in PEMFCs
A. Oyarce, N. Holmström, A. Bodén, S. Randström and G. Lindbergh

1107 PEMFC Metallic Bipolar Plates: Effect of Manufacturing Method on Corrosion Resistance
M. Koc

1108 Stainless Steel In Situ Corrosion Testing in a PEFC Multisinglecell
S. Auvinen, T. Tingelöf, J. Ihonen and J. Siivinen

1109 Effect of Tungsten Addition on Electrochemical Property of Austenitic Stainless Steel in a Simulated PEMFC Environment
K. Kim, J. Kim and K. Kim

1110 Accelerated Durability Testing of Perfluorosulfonic Acid MEAs for PEMFCs Using Different Relative Humidities
M. Rodgers, R. Agarwal, B. Pearman, B. Li, D. Slattery, N. Mohajeri, L. Bonville, H. Kunz and J. Fenton

1111 MEA Degradation under OCV in a PEM Fuel cell
X. Yuan, S. Zhang, J. Ng Cheng Hin, H. Wang, A. Friedrich and M. Schultz

1112 Electrode Degradation in PEMFCs as Studied in Model Systems and PEMFC Testing
F. De Bruijn, V. Dam, G. Janssen and R. Makkus

1113 Influence of Operating Parameters on Start/Stop Induced Degradation in Polymer Electrolyte Fuel Cells
N. Linse, C. Aellig, A. Wokaun, G. Scherer and L. Gubler

1114 Development of a Durable Startup Process for Startup-Shutdown Operation of PEMFCs Using a Dummy Load
E. Cho, J. Kim, J. Jang, H. Kim, T. Lim and I. Oh

1115 The Impact of PEMFC Performance and Durability on Setting Hydrogen Quality Specifications
B. Pivovar, J. Ohi, G. Voecks and C. Blake

1116 Electrochemical Filter Design for the Removal of CO Contaminant in Reformate Hydrogen
S. Balasubramanian and J. Weidner

1117 Alternative Support Materials for Fuel Cell Catalysts
F. Ettingshausen, J. Suffner, A. Wolz, A. Weidner, M. Michel and C. Roth

1118 Development of Novel Metal Oxide Supported Pt Catalysts for Proton Exchange Membrane and Unitized Regenerative Fuel Cells Applications
S. Huang, P. Ganesan and B. Popov

1119 Mesoporous Tungsten Oxide with Mixed Electron and Proton Conductivity
G. Orsini and V. Tricoli

1120 New Synthesis of Mesoporous Doped TiO_2 Used as an Electrocatalyst Support in PEM Fuel Cell
L. Chevallier, D. Jones and J. Rozière

1121 Synthesis of Ta-Oxide Based Nanosized Cathode Catalyst on Highly Ordered Meso-porous Carbon for PEM Fuel Cells
M. Shoyama, T. Tomimura, Y. Okubo, H. Nambu, M. Lin, K. Hara, A. Fukuoka, A. Ishihara and K. Ota

1122 Catalyst Structure - Performance Trends for Sibunit Carbon Based Cathodes for Proton Exchange Membrane Fuel Cells
N. Lebedeva, A. Booij, I. Voropaev, P. Simonov, A. Romanenko and V. Bukhtiyarov

1123 Carbon Nanotubes as Support for Heteroatomic Polymer-Derived Non-precious Metal Oxygen Reduction Catalysts
G. Wu, L. Xie, T. Zhang, Y. Yan and P. Zelenay

1124 Nitrogen-Doped Carbon Nanotubes as a Novel Class of Catalyst Support for PEM Fuel Cells
M. Saha, Y. Chen, H. Liu, R. Li, X. Sun and S. Ye

1125 Pt/Modified MWNT as Electrocatalysts for High Temperature PEM Fuel Cells
M. Daletou, F. Paloukis, J. Kallitsis and S. Neophytides

1150 Pt-Co Electrodeposited Electrodes: Surface Distribution and Depth Profile
A. Martín, A. Chaparro, M. Folgado and L. Daza

1151 Preparation of Ultrathin Catalyst Layers by Piezo-electric Printer for PEMFCs Applications
M. Saha, D. Paul, D. Malevich, B. Peppley and K. Karan

1152 Low Platinum Electrodes for Proton Exchange Fuel Cells Manufactured by Reactive Spray Deposition Technology
J. Roller, R. Neagu, R. Maric and Z. Xie

1153 Study of Hydrogen Redox Reactions on Polycrystalline Platinum in Dilute and Concentrated HBr Solutions
N. Travitsky, M. Goor and E. Peled

B9 - Semiconductor Electrolyte Interface and Photoelectrochemistry

Energy Technology / Physical and Analytical Electrochemistry

1154 Chemical and Electronic Structure of the Solid-liquid Interface of Dye Sensitized Solar Cells - Application of Synchrotron Induced Photoelectron Spectroscopy
W. Jaegermann, K. Schwanitz, E. Mankel, R. Hunger and T. Mayer

1156 Numerical Computation of the IV-curve in Dye-Sensitized Solar Cells Based on Microscopic Theories
J. Villanueva-Cab, J. Anta, E. Guillén and G. Oskam

1155 Electrochemical and Photoelectrochemical Investigations of Cobalt Bipyridyl Redox Shuttles in Dye-Sensitized Solar Cells
T. Hamann, B. Klahr and J. Ondersma

1157 Modeling Multicomponent Electrolyte Transport in Dye-Sensitized Solar Cell Anodes
S. Psaltis and T. Farrell

1158 Surface Properties of SnO_2 Nanowires for Enhanced Performance with Dye-Sensitized Solar Cells
S. Gubbala, H. Russell, H. Shah, B. Deb, J. Jasinski, H. Rypkema and M. Sunkara

1159 Symmetric Thin-layer Cells to Study the Electrochemical Reaction of Dye Sensitized Solar Cells (DSSCs)
F. Decker, A. Petrocco, M. Liberatore and A. Di Carlo

1160 Electron Transport Processes in Dye-Sensitized Solar Cells Made of One-Dimensional Titania Nanoscale Materials
M. Adachi and Y. Mori

1161 Photoanodic Polarization Behavior of TiO_2 with Dye Sensitization for Electrochemical Polymerization of Pyrrole
J. Kawakita

1162 A Nanocomposite Electrolyte for Dye-Sensitized Photoelectrochemical Cell Based on Sol-Gel Functionalized Imidazolium Ionic Liquids
M. Colovic, T. Medved, M. Kozelj, P. Lianos, A. Surca Vuk and B. Orel

1163 Transport of Photoinduced Electron in Sensitized TiO_2 Nanocrystalline Films
P. Hsiao and H. Teng

1164 Electrochemical Impedance Spectroscopy of Porous TiO_2 for Photocatalytic Applications
N. Baram, D. Starosvetsky, J. Starosvetsky, M. Epshtein, R. Armon and Y. Ein-Eli

1165 Interfacial Electrochemistry of ZnO: An Influence of the Surface Polarity?
A. Joudrier, N. Simon, L. Santinacci, M. Bouttemy, F. Levy, G. Feuillet and A. Etcheberry

1166 Photoinduced Process at Gold Nano Particles Deposited on TiO_2 Photocatalysts
Y. Nosaka, H. Sakamoto and S. Kishioka

1167 Effects of Processing Parameters on Morphology and Electronic Properties of Nanostructured Titania
Q. Nguyen and T. Devine

1168 Enhanced Photo-Efficiency of Immobilized TiO_2 Catalyst
N. Baram, D. Starosvetsky, J. Starosvetsky, M. Epshtein, R. Armon and Y. Ein-Eli

1191 Photoelectrochemistry of Hematite Thin Films
H. Wang and J. Turner

1192 Comparison of Inexpensive Photo-anode Materials for Hydrogen Production Using Solar Energy
N. Cook, R. Gallen, S. Dennison, K. Hellgardt and G. Kelsall

1193 Photo-induced Alcohol Electroreforming for H_2 Production
A. Seferlis and S. Neophytides

1194 Photoelectrolysis of Water to Hydrogen in Tj-a-Si Solar Cell Biased CM-n-TiO_2/Pt PEC and in Self-Driven Monolithic n-TiO_2 Coated Tj-a-Si PEC
M. Frites, W. Ingler Jr. and S. Khan

1195 Photocatalytic Hydrogen Production and Solar Energy Conversion by an Oxide Semiconductor
Z. Zou

1196 ZnO/CdSe Core/Shell Nanotubes for ETA-Solar Cells
J. Elias, R. Tena-Zaera, M. Ryan and C. Levy-Clement

1197 Electrochemical and Analytical Study of the Si Etching Mechanism in HF
N. Valckx, R. Vos, J. Rip, G. Doumen, P. Mertens, T. Bearda, M. Heyns and S. De Gendt

1198 Photoelectrochemical Property Improvement of GaN Thin Film Through Etching
A. Basilio, H. Yu-Kuei, T. Wen-Hsun, Y. Cheng-Hsuing, H. Geng-Ming, C. Oliver, C. Li-Chyong and C. Kuei-Hsien

1199 Low Reflectance Surface Observed on InP Porous Structures after Photoelectrochemical Etching
T. Sato, N. Yoshizawa, H. Okazaki and T. Hashizume

1200 Corrosion-Resistive and Textile-Compatible Metal Surfaces in the Optimization of Textile-Based Photovoltaic Cells
K. Strauch, T. Loewenstein and D. Schlettwein

B10 - Solid Oxide Fuel Cells, Eleventh International Symposium (SOFC-XI)

High Temperature Materials / Battery / Energy Technology / SOFC Society of Japan

1201 European SOFC R&D - Status and Trends
R. Steinberger-Wilckens

1202 Status of National Project for SOFC Development in Japan
K. Hosoi and M. Nakabaru

1203 The Status of SOFC Programs in USA
W. Surdoval

1204 The Integrated Project SOFC600 Development of Low-Temperature SOFC
B. Rietveld, F. van Berkel, Y. Zhang-Steenwinkel, E. Bouyer, J. Irvine, M. Menon, L. Niewolak, S. Gross, A. Heel, P. Holtappels and S. Modena

1205 A Review of Progress in the UK Supergen Fuel Cell Programme
C. Adjiman, A. Atkinson, R. Baker, N. Brandon, D. Brett, R. Clague, E. Carvalho, K. Choy, J. Irvine, F. Marquis, D. Miller, G. Offer, K. Pointon, S. Pyke, A. Selcuk, K. Scott and P. Shearing

1206 Real-SOFC - A Joint European Effort to Improve SOFC Durability
R. Steinberger-Wilckens, B. Rietveld, L. de Haart, F. Tietz, J. Mougin, O. Bucheli, R. Rosenberg, M. Zahid and P. Holtappels

1207 The Status of SOFC Development at Versa Power Systems
E. Tang, M. Pastula and B. Borglum

1208 Solid Oxide Fuel Cell Stack for Transportation and Stationary Applications
S. Mukerjee, K. Haltiner, D. Klotzbach, J. Vordonis, A. Iyer, R. Kerr, V. Sprenkle, J. Kim, K. Meinhardt, N. Canfield, J. Darsell, B. Kirby, T. Oh, G. Maupin, B. Voldrich and J. Bonnett

1209 Prototype SOFC CHP System (SOFIT) Development and Testing
T. Haga, N. Komiyama, H. Nakatomi, K. Konishi, T. Sutou and T. Kikuchi

1210 Solid Oxide Fuel Cell Development at United Technologies Research Center
E. Sun, J. Yamanis, L. Chen, D. Frame, J. Holowczak, N. Magdefrau, S. Tulyani, J. Hawkes, C. Haugstetter, T. Radcliff and D. Tew

1211 Solid Oxide Fuel Cell Development at NIMTE
W. Wang, W. Guan, H. Li, Z. Wang, J. Wang, Y. Wu, X. Li and G. Zuo

1212 Development of SOFC Stack at NGK Spark Plug Co., Ltd
D. Nishijima, H. Ishikawa, M. Shibata, H. Uematsu, H. Sumi, Y. Okuyama, Y. Todo, D. Komatsu, S. Ishida and K. Furusaki

1213 SOFC Stacks for Mobile Applications
M. Lang, T. Weckesser, C. Auer, P. Jentsch and A. Friedrich

1214 Status Report of SOFC Development and Pilot Manufacturing at SOFCpower Srl
M. Bertoldi, O. Bucheli, A. Ravagni, N. Autissier, M. Signorini and S. Modena

1215 Development of SOFC Stacks at Ceramic Fuel Cells Limited
J. Love, S. Amarasinghe, D. Selvey, X. Zheng and L. Christiansen

1216 3 kW SOFC Power Generation Module Developed by NTT/THG/SPP
H. Arai, K. Hayashi, Y. Yoshida, M. Yokoo, Y. Mizutani, K. Ukai, K. Katsurayama, H. Orishima, M. Hirakawa, H. Uwani and S. Kashima

1217 Status of Development and Manufacture of Solid Oxide Fuel Cell at Topsoe Fuel Cell A/S and Risø/DTU
N. Christiansen, H. Holm-Larsen, M. Juel Jørgensen, P. Vang Hendriksen, A. Hagen, S. Ramousse and M. Wandel

1218 Development and Field Test Results of Residential SOFC CHP System
M. Suzuki, S. Iwata, K. Higaki, S. Inoue, T. Shigehisa, I. Miyachi, H. Nakabayashi and K. Shimazu

1219 Status of Hexis' SOFC Stack Development and the Galileo 1000 N Micro-CHP System
A. Mai, B. Iwanschitz, U. Weissen, R. Denzler, D. Haberstock, V. Nerlich, J. Sfeir and A. Schuler

1220 Heterogeneous Zirconia-Based Solid Electrolytes Obtained by Sintering TZP+YSZ Powder Mixtures
C. Fernandes, G. Cunto, F. Figueiredo and J. Frade

1221 YSZ Free-standing Membranes for Silicon-Based MicroSOFCs
A. Tarancon, I. Garbayo, J. Santiso, A. Cavallaro, G. Garcia, I. Gràcia, C. Cané and N. Sabaté

1223 Sintering Mechanisms of Cobalt Doped Ceria and Zirconia Electrolytes in Solid Oxide Fuel Cells with Intermediate-Temperature Operation
M. Mori, Z. Wang and T. Itoh

1224 Redox Properties of Ordered Macroporous Ce-Zr Mixed Oxides
D. Tonti, M. Torralvo, E. Enciso, L. Martinez, E. Roman and J. Sanz

1225 Bulk and Grain Boundary Conductivities as Function of Temperature and Oxygen Partial Pressure of Scandia-stabilized Zirconia Co-Doped with Yttria and Ceria
W. Preis, A. Egger, J. Waldhäusl, W. Sitte, E. De Carvalho and J. Irvine

1226 Low Sintering Temperature and Electrical Properties of Samarium-Doped Ceria
E. Camilo de Souza and E. Muccillo

1228 Sol-Gel Process to Prepare a Dense YSZ Electrolyte on Anode Support
E. Courtin, P. Boy, N. Poirot and C. Laberty-Robert

1229 Zirconia (1Ce10ScSZr) Bulk and EB-PVD Film Electrolytes
O. Vasylyev, M. Brychevskyi, I. Pryshchepa, V. Vereschak, A. Smirnova, L. Dubykivskyi, J. Irvine, C. Savaniu and J. Malzbender

1230 Synthesis of ScSZ-Based Electrolyte Powder for IT-SOFC Unit Cell Using Co-precipitation Process
J. Kang, Y. Kim, H. Kim and J. Jang

1231 Effect of La_2O_3 Doping on Conductivity in the ZrO_2 - Sc_2O_3 - CeO_2 System
V. Barbashov, V. Timchenko and E. Nesova

1233 Structural Stability of GDC Electrolyte for Low-Temperature SOFCs Depending on Fuels
H. Ko, J. Lee and S. Hyun

1309 High-Temperature Defect Structure and Crystal Structure of Perovskite Type Oxides
S. Nakayama, K. Sato, K. Yashiro and J. Mizusaki

1310 Solid State NMR Studies of Defect Structures and Mobility in Doped Perovskites
F. Blanc, D. Middlemass, L. Buannic, L. Holmes, R. Dervisoglu, D. Morgan and C. Grey

1311 Role of Lattice Strain and Defect Chemistry on the Oxygen Vacancy Migration at the (8% Y_2O_3-ZrO_2) / $SrTiO_3$ Hetero-Interface: A First Principles Study
A. Kushima and B. Yildiz

1312 Exploring Highly Yttrium Doped Barium Zirconate Proton Conductor Electrolytes for Application in Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs)
E. Fabbri, D. Pergolesi, S. Licoccia and E. Traversa

1313 Medium Temperature Solid Oxide Fuel Cells Based on the Micro-meso-macro-porous Cathodes and Anodes
E. Lust, I. Kivi, R. Küngas, K. Tamm, P. Möller, A. Samussenko, E. Anderson, H. Kurig and G. Nurk

1314 In Situ Investigation of SOFC Patterned Electrodes Using Ambient Pressure X-Ray Photoelectron Spectroscopy
A. McDaniel, F. El Gabaly, R. Farrow, K. McCarty, M. Linne, S. Decaluwe, C. Zhang, G. Jackson, H. Bluhm, Z. Liu, M. Grass and Z. Hussain

1315 Investigation on Oxygen Potential Distribution in a ZrO_2-Based Solid Electrolyte by Using In Situ Micro XAS Technique
K. Amezawa, T. Ina, Y. Orikasa, A. Unemoto, H. Watanabe, F. Iguchi, Y. Terada, T. Fukutsuka, T. Kawada, H. Yugami and Y. Uchimoto

1316 Generalization of Degradation Mechanisms in Terms of Materials Chemical Nature, Operation Condition and Electrode Reaction Mechanisms
H. Yokokawa, H. Hishimoto, K. Yamaji and T. Horita

1317 Long-Term, Redox and Thermal Cycling Stability of Electrolyte Supported Cells
A. Glauche, T. Betz, S. Mosch, N. Trofimenko and M. Kusnezoff

1318 Durability of Anode-Supported SOFCs Stack Using $La(Ni,Fe)O_3$ Cathode
Y. Yoshida, T. Komatsu, R. Chiba, M. Yokoo, K. Hayashi, H. Orui and H. Arai

1319 In Situ Electrochemical Characterization of SOFC Cell Degradation: The Cases of Mechanical Damage and Carbon Deposition
J. Laurencin, K. Girona, G. Delette and F. Lefebvre-Joud

1320 Effect of Humidity in Air on Performance and Long-Term Durability of SOFCs
A. Hagen, M. Chen, K. Neufeld and Y. Liu

1321 Electrochemical Degradation of Fuel Cells: Effect of Electrolyte Composition
H. Lim and A. Virkar

1322 Locally-resolved Study of Degradation in a SOFC
Z. Wuillemin, A. Nakajo, A. Mueller, A. Schuler, S. Diethelm, J. Van herle and D. Favrat

1323 Classification of Mechanical Failure in SOFC and Strategy for Evaluation of Operational Margin
T. Kawada, S. Watanabe, S. Hashimoto, T. Sakamoto, A. Unemoto, M. Kurumatani, K. Sato, F. Iguchi, K. Yashiro, K. Amezawa, K. Terada, M. Kubo, H. Yugami, T. Hashida and J. Mizusaki

1324 Quantification of Ni-YSZ Anode Microstructure Based on Dual Beam FIB-SEM Technique
H. Iwai, N. Shikazono, T. Matsui, H. Teshima, M. Kishimoto, R. Kishida, D. Hayashi, K. Matsuzaki, D. Kanno, M. Saito, H. Muroyama, K. Eguchi, N. Kasagi and H. Yoshida

1325 Nondestructive Imaging and Analysis of Transport Processes in the Solid Oxide Fuel Cell Anode
K. Grew, A. Peracchio, J. Izzo and W. Chiu

1326 Determination of the Anode Flow Distribution in a SOFC Stack at Nominal Operating Conditions by EIS
N. Dekker, J. van Wees and B. Rietveld

1327 Measurement of H_2-H_2O Effective Binary Diffusivity in Porous Anode of Solid Oxide Fuel Cells (SOFCs)
W. He, K. Yoon, R. Eriksen, S. Gopalan, S. Basu and U. Pal

1328 Electrochemical Analysis on Degradation in Ni-GDC Cermet Anode for SOFC
H. Watanabe, A. Unemoto, K. Amezawa and T. Kawada

1329 Aspects of Metal-YSZ Electrode Kinetics Studied Using Model Electrodes
C. Graves and M. Mogensen

1330 In Situ Reduction and Oxidation of Nickel from Solid Oxide Fuel Cells in a Titan ETEM
A. Faes, Q. Jeangros, J. Wagner, A. Hessler-Wyser, J. Van herle, A. Brisse and R. Dunin-Borkowski

1331 Degradation Effects of Ni Patterned Anodes in H_2/H_2O Atmosphere
A. Utz, A. Leonide, A. Weber and E. Ivers-Tiffée

1332 Performance Deterioration of Ni-Based Cermet Induced by Electrochemically-generated Steam in Anode
T. Matsui, R. Kishida, J. Kim, H. Muroyama and K. Eguchi

1333 Chemical Degradation and Poisoning Mechanism of Cermet Anodes in Solid Oxide Fuel Cells
K. Haga, Y. Shiratori, K. Ito and K. Sasaki

1334 Ostwald Ripening and Oxidation Kinetics of Nickel Gadolinia Doped Ceria Anodes
H. Galinski, J. Reuteler, A. Bieberle-Hutter, J. Rupp and L. Gauckler

1335 Solid-State Synthesis of $La_{0.7}Sr_{0.3}MnO_3$ Powders Using Different Grinding Times
L. Conceição, C. Silva, N. Ribeiro and M. Souza

1336 Electronic and Chemical State of $La_{0.7}Sr_{0.3}MnO_3$ and Dense Thin-Film Cathode Surfaces
K. Katsiev, B. Yildiz, B. Kavaipatti and P. Salvador

1337 Plasma Sprayed LSM Cathode for Solid Oxide Fuel Cells
K. Wittmann-Ténèze and A. Sauvet

1338 Structural Characterization of Sr-Doped $LaMnO_3$ and $LaCrO_3$ Powders Synthesized by Combustion Method
A. Silva, L. Conceição, A. Rocco and M. Souza

1339 Studies of Model SOFCs with $Sr_{0.7}Ce_{0.3}MnO_3$ Cathode Material
V. Sinitsyn, I. Kuritsyna, S. Khasanov, D. Matveev and S. Bredikhin

1340 Reducing the Cathode Losses by Optimization of IT-SOFC Cathode Microstructure
L. Ma, H. Wang and B. Xie

1341 Transient Response of LSM Electrode under Cathodic Polarization
J. Yang, H. Muroyama, T. Matsui and K. Eguchi

1342 Scandia-Stabilized Zirconia Impregnated (La, Sr)MnO_3 Cathode for Tubular Solid Oxide Fuel Cells
R. Liu, C. Zhao, J. Li, S. Wang, Z. Wen and T. Wen

1343 Study on the Influence of the Morphology of SOFC Cathodes Electrodes
N. Grunbaum, L. Sant'Ana Gallo, M. Steil and L. Dessemond

1344 Improvement of the Electrocatalytic Properties of IT-SOFC Cathodes Based on the $A_{0.58}Sr_{0.4}Fe_{0.8}Co_{0.2}O_{3-\delta}$ System by Multi-Element Substitution
J. Serra and V. Vert

1345 Inhibition of the Electrode Particle Growth in the SOFC
K. Murata, A. Hirano, N. Imanishi and Y. Takeda

1347 Synthesis and Study of LSCF Perovskites for IT SOFC Cathode Application
L. Ushkalov, O. Vasylyev, Y. Pryschepa, A. Samelyuk and V. Melakh

1348 Performance of $(Ln_{0.5}M_{0.5})FeO_{3-\delta}$ Perovskites as Cathode for SOFCs: Effect of Mean Radius of the A Site Cations
K. Vidal, L. Rodriguez-Martinez, L. Ortega-San-Martín, M. No, A. Laresgoiti, T. Rojo and M. Arriortua

1349 Effect of Infiltrate Solution Additives on Samarium Strontium Cobaltite-Cerium Gadolinium Oxide Nano-Composite SOFC Cathodes
J. Nicholas, Y. Liao and S. Barnett

1350 Electrochemical Study of New Cathode Materials Based on LSCF and BIT07 for SOFC
M. Letilly, A. Le Gal La Salle, M. Marrony, M. Zahid and O. Joubert

1352 Improving Stochiometery and Processing of LSCF Oxygen Electrode for SOFC
A. Ansar, D. Soysal, Z. Ilhan, S. Wolf, N. Wagner and R. Ruckdäschel

1353 Fabrication of Composite LSCF-SDC Cathode Coatings by Plasma Spray Processing
J. Harris and O. Kesler

1354 Composite Cathode Study for Low Temperature SOFC
X. Zhang, M. Robertson, C. Decès-Petit and O. Kesler

1356 Electrochemical Performance of Nanostructured IT-SOFC Cathodes with Different Morphologies
L. Baque, E. Djurado, C. Rossignol, A. Caneiro and A. Serquis

1357 Characterization and Performance of SOFC Components Made by Reactive Spray Deposition Technology
R. Neagu, X. Zhang, R. Maric and J. Roller

1358 Performance Study of Alternative (La,Sr)$FeO_{3-\delta}$ and (La,Sr)(Co,Fe)$O_{3-\delta}$ MIEC Cathode Compositions
A. Leonide, B. Rüger, A. Weber, E. Ivers-Tiffee and W. Meulenberg

1359 Investigations of Graded Cathodes to Improve SOFC Electrochemical Performances
M. Rieu, R. Sayers, M. Laguna, S. Skinner, P. Lenormand and F. Ansart

1360 Oxygen Nonstoichiometry, Crystal Structure, and Mechanical Properties of $La_2NiO_{4+\delta}$
T. Nakamura, Y. Takeyama, S. Watanabe, K. Yashiro, K. Sato, T. Hashida and J. Mizusaki

1361 Property Study of $La_{2-x}Sr_xNiO_4$ ($x \leq 0.8$) to Be Used for IT-SOFCs Cathode
T. Inprasit, P. Limthongkul and S. Wongkasemjit

1363 Characterization of $SmBaCoFeO_{5+\delta}$ Cathode Material for Intermediate-Temperature Solid Oxide Fuel Cells
S. Lu, X. Meng, G. Long, X. Wang and Y. Ji

1364 Improvement of $Ba_{0.5}Sr_{0.5}Zn_{0.2}Fe_{0.8}O_{3-\delta}$ Cathode for Intermediate-Temperature Solid Oxide Fuel Cells
L. Kong, Z. Lu, B. Wei, X. Huang, R. Su and W. Su

1365 Properties of $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\delta}$ Composite Membrane
P. Zhu, M. Han and Z. Yang

1367 Fabrication and Properties of Perovskite-Type $Ln_{0.8}Sr_{0.2}Cu_{0.9}Fe_{0.1}O_{2.5-\delta}$ (Ln = La, Pr, Nd, Sm, Gd)
X. Song, C. Zhong, F. Zhou, X. Hao and S. An

1368 Thermal Expansion Properties of $Sr_{1-x}La_xTiO_{3-\delta}$ Perovskites ($0 \leq x \leq 0.3$) in SOFC Operating Condition
Z. Wang, M. Mori and T. Itoh

1369 The Electrochemical and Thermal Performances of $Ca_3Co_4O_{9-\delta}$ as a Cathode Material for IT-SOFCs
K. Nagasawa, O. Mentre, S. Daviero-Minaud, N. Preux, A. Rolle and H. Nakatsugawa

1371 Fast Oxygen Diffusion in Mixed Ionic-Electronic Conducting $GaBaCo_2O_{5+\delta}$
M. Choi, S. Jeon, J. Lee, H. Hwang and S. Song

1372 Conductivities and Seebeck Coefficients of Donor-Doped-$SrTiO_3$ Oxide Ceramics
E. Niwa, K. Sato, K. Yashiro and J. Mizusaki

1373 Effect of the Synthetic Method on the Structure and Electrical Conductivity of $La_{0.5}Ba_{0.5}FeO_3$ as SOFC Cathode Materials
A. Ecija, K. Vidal, A. Larrañaga, M. No, A. Laresgoiti and M. Arriortua

1374 Synthesis and Characterization of $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\delta}$ as Intermediate Temperature Solid Oxide Fuel Cell Cathode by Solid-State Reaction, Pechini and Citrate-EDTA Complexing Method
I. Hung and C. Laing

1375 Thermal Stability of Silver-MO_x (M = Mn, Fe, Co, Ni) Composite Cathode for IT-SOFCs
H. Saka, A. Hirano, N. Imanishi and Y. Takeda

1376 Combustion Synthesis of $La_{0.6}Sr_{0.4}Co_{0.98}Ni_{0.02}O_3$ Cathode and Evaluation of Its Electrical and Electrochemical Properties for IT-SOFC
A. Dutta, H. Götz, S. Ghosh and R. Basu

1377 Oxygen Pathway in Ag Cathode Using Oxygen Isotope Exchange and Secondary Ion Mass Spectroscopy
M. Muranaka, K. Sasaki, A. Suzuki and T. Terai

1378 Electrode Properties of $Pr_{0.7}Sr_{0.3}Fe_{0.8}Al_{0.2}O_{3-\delta}$ Thin Film Prepared by Pulsed Laser Deposition
H. Takahashi and H. Takamura

1379 Electrochemical Characterization of a $La_{0.8}Sr_{0.2}Ni_{0.4}Fe_{0.6}O_{3-\delta}$ Electrode Interfaced with $La_{9.83}Si_5Al_{0.75}Fe_{0.25}O_{26\pm\delta}$ Apatite-Type Electrolyte
S. Bebelis, H. Gasparyan, C. Argirusis, C. Szepanski, V. Stathopoulos, T. Kharlamova and V. Sadykov

1380 Performance of Zinc-Doped Perovskite-Type Cathodes at Intermediate Temperatures and under Carbon Dioxide Atmosphere
J. Martynczuk, K. Efimov, L. Robben and A. Feldhoff

1381 Characterization of Cuprate Based Cathode Structures by AC Impedance
M. Cassidy and J. Irvine

1382 Ionic and Electronic Conductivity of $(Ln_{1-x}Ca_x)_2Ti_2O_{7-\delta}$ (Ln = Dy, Ho, Yb; x = 0.1) Pyrochlores
S. Savvin, D. Belov, A. Shlyakhtina, L. Shcherbakova, J. Ruiz-Morales and P. Núñez

1383 $SmBaCo_2O_{5+\delta}$ and $LnBa_{0.5}Sr_{0.5}Co_2O_{5+\delta}$, Potential Cathode Materials for IT-SOFC
J. Kim, J. Bae and J. Irvine

1384 Enhanced ASC Performance at 600°C by Ceria Barrier Layer Optimization
F. van Berkel, Y. Zhang-Steenwinkel, G. Schoemakers, M. van Tuel and B. Rietveld

1385 Bias-assisted Sputtering of Gadolinia-Doped Ceria Interlayers for Solid Oxide Fuel Cells
F. Fonseca, S. Uhlenbruck, R. Nedélec and H. Buchkremer

1386 Doped Ceria Diffusion Barrier Layers for LSCo Infiltrated into YSZ
R. Küngas, F. Bidrawn, J. Vohs and R. Gorte

1387 Investigation of the Potential Distribution in SOFC with LSM and SYCM Cathodes by Means of Build-in Potential Electrode
I. Burmistrov and S. Bredikhin

1388 Effect of Electrolyte Contribution on the Electrochemical Behavior of $Pr_{0.8}Sr_{0.2}Fe_{0.8}Ga_{0.2}O_3$
N. Ortiz-Vitoriano, I. Ruiz de Larramendi, J. Ruiz de Larramendi, M. Arriortua and T. Rojo

1389 Nonstoichiometry and Electrochemical Performance of SOFC Cathodes
X. Zhou

1390 Fused LSM: A Novel Powder Limiting the Formation of $La_2Zr_2O_7$ and $SrZrO_3$ Resistive Phases at the Interface with YSZ in SOFC Cathodes
C. Levy, Y. Zhong, C. Morel and S. Marlin

1391 Flexible Contact Layer between Cathode and Interconnect of SOFC
Z. Xie and Q. Zhu

1392 Oxidation Behavior and Electrical Conductivity between $Ln_{0.8}Sr_{0.2}MnO_3$ Cathode and Crofer 22 APU with Spinel Coatings
N. Ledukhovskaya, E. Korovkin, V. Sinitsyn and S. Bredikhin

1393 Electrochemical Study of LSCF/BIT07 as a Possible Cathode/electrolyte Couple for SOFC
M. Letilly, A. Le Gal La Salle and O. Joubert

1394 Sulfur as Pollutant Species on the Cathode Side of a SOFC System
A. Schuler, Z. Wuillemin, A. Hessler and J. Van herle

1395 Effect of SO_2 Concentration on Degradation of $Sm_{0.5}Sr_{0.5}CoO_3$ Cathode
K. Yamaji, Y. Xiong, M. Yoshinaga, H. Kishimoto, M. Brito, T. Horita, H. Yokokawa, J. Akikusa and M. Kawano

1396 Electrochemical Behavior of $La_2Ni_{0.6}Cu_{0.4}O_{4+\delta}$ Oxide on SDC Electrolyte as Cathode for IT-SOFC
D. Pérez-Coll, A. Aguadero, M. Escudero and L. Daza

1397 Strong Metal Support Interactions of Infiltrated Ni with TiO_2 in a Porous YSZ Anode Matrix: A Possible Mechanism for Ni-stabilization
C. Singh, L. Bansal, P. Tiwari and V. Krishnan

1398 Operation of Ni-YSZ Anode Supported Solid Oxide Fuel Cell on Different Simulated Syngas
T. Chen, T. Li, H. Miao, W. Wang and Y. Wu

1469 Analysis of LSM-YSZ Composite Cathode Phase Connectivity from Three-Dimensional Reconstructions
J. Wilson, J. Cronin, A. Duong, D. Mumm and S. Barnett

1470 High Temperature Defect Equilibrium, Solid State Properties and Crystal Structure of $La_{0.6}Sr_{0.4}Co_{1-y}Fe_yO_{3-\delta}$ (y = 0.2, 0.4, 0.6, 0.8) for Cathode of Solid Oxide Fuel Cells
Y. Fukuda, K. Sato, K. Yashiro and J. Mizusaki

1471 Long-Term Study of MIEC Cathodes for Intermediate Temperature Solid Oxide Fuel Cells
C. Endler, A. Leonide, A. Weber, E. Ivers-Tiffée and F. Tietz

1472 Electrochemical Characterization of Micropatterned $La_{0.6}Sr_{0.4}Co_{0.2}Fe_{0.8}O_3$ Thin Film Structures on SiO_2 Chips
T. Ryll, B. Scherrer, R. Toelke, J. Rupp, A. Bieberle-Hutter and L. Gauckler

1473 Oxygen Reduction Kinetics and Transport Properties of $(Ba,Sr)(Co,Fe)O_{3-\delta}$ a SOFC Cathode Material
L. Wang, R. Merkle, T. Acartürk, U. Starke and J. Maier

1474 Structural and Chemical Investigations of $(La, Sr)CoO_{3-\delta}$ Thin Film Electrodes Exhibiting Extremly Fast Oxygen Reduction Kinetics
J. Januschewsky, M. Kubicek, M. Stoeger-Pollach, J. Bernardi and J. Fleig

1370 Synthesis and Characterization of $LnBaCo_2O_{5+\delta}$ Layered Perovskites as Cathodes for Intermediate-Temperature Solid Oxide Fuel Cells
W. Wang, T. Peh, S. Chan and T. Zhang

1475 Design and Characterization of Functionally Graded Cathode Materials for Solid Oxide Fuel Cells
V. Sadykov, S. Pavlova, V. Zarubina, A. Bobin, G. Alikina, A. Lukashevich, V. Muzykantov, V. Usoltsev, A. Boronin, T. Krieger, A. Ishchenko, N. Mezentseva, A. Smirnova, O. Bobrenok and N. Uvarov

1476 $A_2MO_{4+\delta}$ Oxides: Flexible Electrode Materials for Solid Oxide Cells
J. Grenier, F. Chauveau, J. Dailly, C. Lalanne, M. Marrony, F. Mauvy, J. Mougin and J. Bassat

1477 Oxygen Exchange Kinetics and Chemical Stability of the New IT-SOFC Cathode Material $Nd_2NiO_{4+\delta}$
A. Egger, E. Bucher, W. Sitte, C. Lalanne and J. Bassat

1478 Electrochemical Performance of Cells Containing Alternative Oxygen Electrodes, $Ln_2NiO_{4+\delta}$ (Ln = Nd, La)
F. Chauveau, J. Mougin, F. Mauvy and J. Grenier

1479 Solid Oxide Fuel Cell Fuelled by Biofuels
J. Milewski and J. Lewandowski

1480 SOFC Running on Biogas: Identification and Experimental Validation of "Safe" Operating Conditions
K. Girona, J. Laurencin, M. Petitjean, J. Fouletier and F. Lefebvre-Joud

1570 Generation of Electricity from Biowastes Using Solid Oxide Fuel Cell
Y. Shiratori, T. Ijichi, T. Oshima and K. Sasaki

1482 Ethanol in Simple SOFC Systems
M. Breite, M. Jahn, T. Pfeifer and J. Bernard

1483 Ethanol Fuelled SOFC with ZnO Addition in the Anode
D. de Florio, F. N. Tabuti, F. C. Fonseca and R. Muccillo

1484 Development of a Methanol SOFC APU Demonstration System
J. Rechberger, R. Schauperl, J. Hansen and P. Larsen

1485 Direct Methanol Solid Oxide Fuel Cell
S. Kuliyev, S. Aksongur, M. Mat and B. Ibrahimoglu

1486 Utilization Modes for Solid Carbon Conversion in Fuel Cells
T. Gur

1487 A Novel Direct-Carbon Solid Oxide Fuel Cell
Y. Tang, J. Liu and J. Sui

1488 Liquid Tin Anode SOFC for Direct Fuel Conversion: Impact of Coal and Logistic Fuel Contaminants
T. Tao, W. McPhee, M. Koslowske and J. Bentley

1489 Degradation in Solid Oxide Fuel Cells Operating with Alternative Fuels
M. LaBarbera, M. Fedkin, J. Lee, Z. Zhow and S. Lvov

1490 Insight into Rate Limiting Mechanisms of Porous $La_{1-x}Sr_xCoO_{3-\delta}$ Electrodes through Nonlinear Electrochemical Impedance Spectroscopy (NLEIS)
C. Kreller and S. Adler

1491 Oxygen Incorporation Reaction into Mixed Conducting Perovskites: A DFT-Based Kinetic Analysis for $(La,Sr)MnO_3$
R. Merkle, Y. Mastrikov, E. Heifets, E. Kotomin and J. Maier

1492 Trends of Ab Initio Oxygen Reduction Reaction Energetics of $LaBO_3$ (B = Mn, Fe, Co, and Ni) for Solid Oxide Fuel Cells
Y. Lee, D. Morgan, J. Kleis and J. Rossmeisl

1493 Ab Initio Thermokinetic Modeling of LSM{001} Surface Properties for Solid Oxide Fuel Cells
Y. Lee and D. Morgan

1494 Mechanistic Understanding of Cr Poisoning of Solid Oxide Fuel Cell Cathodes
E. Wachsman, D. Oh, E. Armstrong, D. Jung and C. Kan

1495 Accelerated Degradation of SOFC Cathodes by Cr Vapors
T. Horita, Y. Xiong, M. Yoshinaga, H. Kishimoto, K. Yamaji, M. Brito and H. Yokokawa

1497 Chromium Poisoning of LSM Cathodes: Results from Stack Testing
N. Menzler, I. Vinke and H. Lippert

1496 Systematic Study of Chromium Poisoning of LSM Cathodes: Single Cell Tests
A. Neumann, N. Menzler, I. Vinke and H. Lippert

1498 Electrochemical Property of Cr-Containing Cathode Materials for Metal-Supported Solid Oxide Fuel Cell
S. Baek, S. Lee and J. Bae

1499 $La(Ni,Fe)O_3$ Stability in the Presence of Cr Species: Solid-State Reactivity Study
M. Stodolny, F. van Berkel and B. Boukamp

1500 Investigation of Cathode Behavior and Surface Chemistry of Model Thin Film $SrTi_{1-x}Fe_xO_{3-\delta}$ Electrode
W. Jung and H. Tuller

1502 Evaluating SOFC-Based Power System Concepts for Unmanned Undersea Vehicles
R. Braun and K. Kattke

1504 Performance Analysis of Solid Oxide Fuel Cell - Micro Gas Turbine Hybrid System Using Biogas
Y. Komatsu, S. Kimijima and J. Szmyd

1505 From Energy Policies to Active Components in Solid Oxide Fuel Cells: State-of-the-Art and the Way Ahead
A. Aarva, S. McPhail and A. Moreno

1507 Development and Performance of Planar SOFC Stacks
W. Guan, H. Zhai, Z. Li, F. Li and W. Wang

1508 Comparison of the Degradation of the Polarization Resistance of Symmetrical LSM-YSZ Cells, with Anode Supported Ni-YSZ/YSZ/LSM-YSZ SOFCs
I. Torres da Silva, J. Nielsen, J. Hjelm and M. Mogensen

1509 Development of SOFC Performance and Durability Evaluations Technology
T. Yamamoto, H. Morita, M. Yoshikawa, F. Yoshiba, K. Asano, K. Yasumoto and Y. Mugikura

1510 Behavior of High Temperature Type SOFC Materials under Thermal Cycle
K. Yasumoto, T. Yamamoto, K. Takei, Y. Izaki and T. Minamizono

1511 Effect of High Current Loading on the Performance Enhancement of SOFCs
K. Murakami, H. Muroyama, T. Matsui, R. Kikuchi and K. Eguchi

1512 Effect of Presintering Treatment of Anode Substrate on the Densification and Flatness of YSZ Electrolyte by Suspension Spray
L. Zhang, S. Zhang, L. Bi, H. Wang and B. Xie

1513 Structure Modification Effect of Tubular Anode-Supported SOFC Single Cells
H. Ryu, H. Lee, K. Min, J. Jung and J. Yoon

1514 Improvement on the Performance of Cathode-Supported Tubular Solid Oxide Fuel Cells Fabricated by Dip-Coating and Co-sintering Techniques
C. Zhao, R. Liu, S. Wang and T. Wen

1515 Micro-SOFC Supported on Ni-Fe Metal Film
Y. Lee and G. Choi

1516 Metal-Supported SOFC Development at JPOWER
S. Sakuno, S. Takahashi and H. Sasatsu

1517 Fabrication of Cerium Oxide Based SOFC Having a Porous Stainless Steel Support
N. Oishi and Y. Yoo

1518 Novel Procedures for the Microstructural Design of SOFC Materials
J. Ruiz-Morales, S. Savvin, P. Núñez, J. Peña-Martínez, J. Canales-Vázquez, D. Marrero-López, J. Roa and M. Segarra

1519 Fabrication of Proton Conducting Solid Oxide Fuel Cells by Using Electrophoretic Deposition
E. Di Bartolomeo, M. Zunic, L. Chevallier, A. D'Epifanio, S. Licoccia and E. Traversa

1520 Suspension Plasma Spraying to Manufacture Electrodes for Solid Oxide Fuel Cell (SOFC) and Solid Oxide Electrolysis Cell (SOEC)
O. Marchand, E. Saoutieff, P. Bertrand, M. Planche, O. Tingaud and G. Bertrand

1521 Thick-Film Electrolyte-Supported SOFCs for Rapid Thermal Cycling
J. Joo and G. Choi

1522 Development of Disk-Type Intermediate Temperature Solid Oxide Fuel Cell by KEPCO & MMC
F. Nishiwaki, A. Kinugasa, M. Kato, T. Inagaki, K. Hirata, M. Sato and H. Eto

1524 The Opportunity of Using Mesoporous Thin Films as Interface in SOFC Devices
C. Laberty-Robert, J. Hierso, O. Sel, A. Ringuede, L. Bianchi and C. Sanchez

1525 Fabrication of Trilayered Structure for Solid Oxide Fuel Cells by Electrophetic Depositions
H. Tsai, Y. Chang, P. Wu and P. Lin

1526 Influence of Thermal Treatment during Cell Manufacturing on the Performance of Tape Cast Solid Oxide Fuel Cells
W. Schafbauer, N. Menzler and H. Buchkremer

1527 Preparation of Thin Functional Layers for Anode Supported SOFC by Roll Coating Process
O. Büchler, M. Bram, R. Mücke and H. Buchkremer

1530 Co-extrusion / Phase Inversion / Co-sintering for Fabrication of Hollow Fiber Solid Oxide Fuel Cells
N. Droushiotis, M. Othman, U. Doraswami, K. Li and G. Kelsall

1532 Current Instability in Solid Oxide Fuel Cells
I. Burmistrov and S. Bredikhin

1533 Determination of Global/Local Fuel Utilization via Variation of Fuel Utilization
A. Reinert and T. Strohbach

1534 Effect of Flowfield Design on Solid Oxide Fuel Cell Performance
M. Kornely, A. Leonide, A. Weber and E. Ivers-Tiffée

1535 Numerical Modeling and Performance Study of a SOFC Button Cell
Y. Mollayi and A. Raoufi

1536 Performance Analysis of a Tubular SOFC Using a Comprehensive Thermoelectrochemical Model
J. Ghanadan, Y. Mollayi Barzi and M. Ghassemi

1537 Near-Infrared Imaging of SOFCs with Methane and Propane Fuels
M. Pomfret, D. Steinhurst, D. Kidwell and J. Owrutsky

1538 Electrochemical Properties of Electrode-Supported $La_{0.75}Sr_{0.25}Ga_{0.8}Mg_{0.16}Fe_{0.04}O_{3-\delta}$ Solid Oxide Fuel Cells
J. Yu and S. Woo

1539 Effects of Clamping Load on the Thermal Stress Distribution in a Planar SOFC with Compressive Sealing
C. Lin, L. Huang, L. Chiang and Y. Chyou

1589 Modeling Potential, Current and Gas Velocity Distributions in Hollow Fiber SOFC Stacks
U. Doraswami, N. Droushiotis and G. Kelsall

1590 Coupling Complex Reformer Chemical Kinetics with Three-Dimensional Computational Fluid Dynamics
G. Goldin, H. Zhu, K. Katte, A. Dean, R. Braun, R. Kee, D. Zhang and O. Deutschmann

1591 Physics of Failure Based Damage Modeling for SOFC Development and Validation
G. Gassner, F. Langmayr and P. Prenninger

1592 High Volume Component Fabrication of Ready-to-Stack Components for Planar SOFC Concepts
A. Venskutonis, M. Brandner, W. Kraussler and L. Sigl

1594 Oxidation and Creep Studies of Porous E-Brite for Solid Oxide Fuel Cell Interconnects
J. Scott and D. Dunand

1595 Thermal Spray Processes and Materials for Coating Applications of SOFC Components
M. Gindrat, A. Refke and H. Höhle

1260 Influence of the Processing Method on the Quality of the Protective Coatings for SOFC Applications
C. Comminges, M. Zahid, I. Larring and F. Tietz

1596 Novel Method for Measuring Chromia Evaporation from SOFC Interconnect Materials
M. Casteel, P. Willson, T. Goren, P. O'Brien and D. Lewis

1597 Reduction of Chromium Evaporation with Manganese-Based Coatings
R. Trebbels, T. Markus and L. Singheiser

1598 Interface Resistance between FeCr Interconnects and $La_{0.85}Sr_{0.15}MnO_3$
L. Mikkelsen and P. Vang Hendriksen

1599 New Glass Ceramic Sealants for SOFC
D. Goedeke, J. Besinger and B. Ruedinger

1600 High Temperature Glass-Ceramic Seals for SOFC Applications
C. Liu, T. Yung, K. Lin, R. Lee and S. Wu

1601 Gas Sealing Reliability of Glass/Ceramic Composite Seals under SOFC Working Conditions
S. Suda, K. Kawahara, K. Jono and Y. Mizuta

1602 Materials Development for SOFC Applications
M. Seabaugh, M. Day, M. Beachy and S. Ibanez

1603 Development of a Lower Temperature SOFC
E. Wachsman

1506 2R-Cell: Reliability upon Multi Thermo and Redox-Cycles
R. Ihringer

1501 Performance Map of the Staxera Integrated Stack Module with Partly Internal Reforming
S. Kluge, O. Posdziech, B. Mai and J. Lawrence

1604 Investigation of the Oxygen Exchange Reaction on Pt/YSZ: The Relation Between Three Phase Boundaries and Electrode Performance
A. Opitz, A. Schintlmeister, A. Lutz, H. Hutter and J. Fleig

1606 Activation of LSM-Based SOFC Cathodes: Dependence of Mechanism on Polarization Time
M. Haider, A. Vance and S. McIntosh

1400 The Role of Interstitial Hydrogen Species in Ni/YSZ Patterned Anodes: A 2D Modeling Study
M. Vogler and W. Bessler

1607 Chemically Assisted Hydrogen Generation through Oxygen Ion Conducting MIEC Membranes
H. Wang, R. Eriksen, S. Gopalan and U. Pal

1608 Co-generation of Electricity and Syngas under Electrochemical Partial Oxidation Using Novel SOFCs
I. Kim, N. MCDonald, P. Blaszczak, S. Barnett and T. Shastry

1609 A Combined System of an SOFC and PEFCs
H. Yakabe, H. Yoshida and S. Amaha

C1 - Organic and Biological Electrochemistry General Poster Session

Organic and Biological Electrochemistry

1610 The Regularities of Electrolytic Dissociation of Mesaconic and Iaconic Acids
E. Kvaratskhelia and R. Kvaratskhelia

1611 Deglycosylation of Glucose Oxidase to Improve Biofuel Cell
A. Prevoteau, O. Courjean, F. Gao and N. Mano

1612 Laws of Chloride - Ions Oxidation on Various Electrodes and "Green" Electrochemical Method of Higher α-Olefins Processing
Y. Budnikova, S. Krasnov, I. Magdeev and O. Sinyashin

1613 Electroanalysis of Bovine Serum Albumin by Chronopotentiometric Peak H
V. Ostatna and E. Palecek

1614 In Situ Electrochemical Synthesis of Silver / Poly(N-vinyl-2-pyrrolidone) Hydrogel Nanocomposites
Z. Jovanovic, V. Panic, V. Miskovic-Stankovic, A. Krkljes and Z. Kacarevic-Popovic

1615 Direct Electron Transfer from Living Cells to Electrodes Mediated by c-Cyts Embedded in Outer Cell Membrane
A. Okamoto, R. Nakamura and K. Hashimoto

1616 Na Electrodeposition in Propylene Carbonate Containing $NaPF_6$
M. Ueda, H. Hayashi and T. Ohtsuka

1617 Electrochemical Micro Technologies for Polymeric MEMS and Biochip Applications
R. Ofek Almog, Y. Sverdlov and Y. Shacham-Diamand

1618 Biologically Closed Electrical Circuits in Mimosa Pudica
J. Foster and A. Volkov

1619 Molecular Electronics of Venus Flytrap and Mimosa Pudica
T. Ashby, J. Foster, R. Walker, J. Johnson, D. Caleb, H. Carrell, K. Hunter and A. Volkov

1620 In Situ Micro-Raman Studies of Composite Electrodes Modified with Syringaldazine and Laccase from Cerrena Unicolor
G. Zukowska, M. Marcinek, W. Nogala, Y. Svartsov, K. Szot and M. Opałło

1621 Bioactivity of Ni-Free Ti-Based Metallic Glasses after a Two-Step Treatment
F. Qin, X. Wang, T. Wada and A. Inoue

1622 The Influence of Intercalators on Changes in Double Stranded DNA Structure
E. Zabost, A. Nowicka, M. Donten and Z. Stojek

1623 Novel Glucose Sensor Based on Hydroquinone Functionalized Polymeric Mediator
M. Takai, Y. Himuro and K. Ishihara

1624 The Performance of Starch Films Electrolyte for Bismuth Electrodeposition Devices
P. Ponce, V. Gonçales, S. Córdoba de Torresi and A. Lugão

C2 - New Biomimetic Materials for Electrochemical Sensing

Organic and Biological Electrochemistry / Sensor / Physical and Analytical Electrochemistry

1625 Molecularly Imprinted Polymer Nanocomposites: Synthetic Receptors for Biosensors and Biochips
K. Haupt, A. Linares, M. Bompart and B. Tse Sum Bui

1626 Molecularly Imprinted Polymers for Electrochemical Sensing: Where Are We Going?
G. Díaz Díaz, M. Blanco López, M. Lobo Castañón, A. Miranda Ordieres and P. Tuñón Blanco

1627 Molecular Imprinting of Oxybutynin
F. Meier and B. Mizaikoff

1628 Detection of Human Chorionic Gonadotropin Using Stable Field Effect Transistor with Antibody-Modified Gate
S. Hideshima, T. Nakanishi and T. Osaka

1629 Application of Redox Catalysis to the Chemical Modification of Carbon Electrodes
L. Hernandez Muñoz, R. Fragoso, C. Frontana, P. Astudillo and F. Gonzalez

1630 Layered Assemblies of Electroactive Redox Proteins and Enzymes on Electrodes
F. Lisdat, D. Sarauli, R. Dronov, F. Scheller, D. Kurth and H. Möhwald

1631 Development of Electrochemical Enzyme Sensor for Phenylalanine as a Biomaker of Phenylketonuria
H. Shinohara, H. Horie, K. Teramura, M. Suga and Y. Asano

1632 Development of Electroactive and Molecularly Imprinted Polymer Composites
A. McCluskey, T. Kirkman, N. Byrne, C. Holdsworth and M. Bowyer

1633 A Theoretical-Experimental Approach for the Design of Biomimetic Materials for Electrochemical Sensing
J. Seminario, C. Kubli-Garfias, K. Salazar-Salinas and P. Salazar

1634 Biofunctionalization of Nanoelectrode Ensembles
M. Silvestrini, L. Moretto, M. Zamuner and P. Ugo

1635 Design of a New Electrogenerated Polyquinone Film Substituted with Oligopeptide Glutathione: Towards Direct Electrochemical DNA Sensor
B. Piro, S. Reisberg, D. Acevedo, A. Korowitch, V. Noel, C. Barbero and M. Pham

1636 Patterned Microcavity-Arrays for Cell-Trapping in Biomedical Sensor Architectures
S. Damnjanovic, H. Wanzenboeck, M. Fischeneder, M. Hufnagl, E. Bertagnolli, M. Wirth and F. Gabor

1637 Localized Microscale Electrochemistry on a Monolithic Electrode: An Electrochemical Microarray Chip
G. Gil, S. Lee, G. Singh and R. Saraf

C3 - Synthetic and Mechanistic Organic Electron Transfer Reactions

Organic and Biological Electrochemistry / Physical and Analytical Electrochemistry

1638 Reactivity of Electrogenerated Imidazole-2-ylidenes in Ionic Liquids: Synthetic Implications
M. Feroci, I. Chiarotto, M. Orsini, G. Sotgiu and A. Inesi

1639 Benzoin Condensation in Ionic Liquids via Electrochemical Generation of Carbene
I. Chiarotto, M. Feroci, M. Orsini, G. Sotgiu and L. Rossi

1640 Electrochemical Methyl-Transfer Reaction Catalyzed by Hydrophobic Vitamin B_{12} Using Sacrificial Electrode
Y. Hisaeda, L. Pan and H. Shimakoshi

1641 Synthesis and Properties of B_{12} Complex with Photosensitizing $Ru(bpy)_3$ Moiety
H. Shimakoshi, J. Aoki and Y. Hisaeda

1642 Electrocatalytic Oxidation of Benzyl Alcohol in an Ionic Liquid and Acetonitrile: Tempo vs Ar_3N as Mediators
A. Herath and J. Becker

1643 Mediatory Use of Task-Specific Ionic Liquid for Selective Electrochemical Fluorination
T. Sawamura, S. Inagi and T. Fuchigami

1644 Electroreductive Intramolecular Cyclization of Haloaryl Ethers through Aryl Radicals
K. Mitsudo, Y. Nakagawa and H. Tanaka

1645 Patterns in Anodic Conversions of Olefins
H. Schaefer, W. Krumme and B. Sommer

1646 Neutral H_2O_2 Synthesis by Electrolysis of O_2 and Water
T. Murayama and I. Yamanaka

1647 Development of New Concept SOFCs at Murata
N. Mori, M. Iha, J. Harada and H. Takagi

1648 Cathodic Reduction of Dicarbonyl Compounds
F. Barba and B. Batanero

1649 Study of the Electrochemical Carbonylation of Ethanol and Ethylene at Pd/C Anode
A. Funakawa, T. Murayama and I. Yamanaka

1650 What's Wrong with Tetramethylammonium?
A. Fry and L. Steffen

1672 Development of a Chemoselective Microflow Reactor: Application to Regioselective Cathodic Carbonyl Allylation
F. Amemiya, T. Fuchigami and M. Atobe

1673 Ni-Catalyzed Electroreductive Dehalogenation of Aryl Halides on an Activated Carbon Adsorbing Layer Using a Stacked-Type Cell
M. Kuroboshi, N. Hara and H. Tanaka

1674 Electroreduction of Nitrocyclopropanes
F. Couture-Martin, C. Cristea, A. Sardahsti, J. Chapuzet and J. Lessard

1675 Discovery of RGB Emission Probe Based on Firefly Bioluminescence
S. Maki

1676 Nanocluster Catalysts in Electrochemical Transformations with Formation and Break of P- and C- Bonds
Y. Budnikova, D. Mikhaylov, T. Gryaznova and O. Sinyashin

1677 Anodic Modification of Proline Derivatives
T. Kawai, K. Yamamoto and K. Chiba

1678 Electrochemical Investigations of Ketone Complexation by Lewis Acids
G. Cheek

D1 - Corrosion General Session

Corrosion

1679 Influence of La-Content and Microstructure on the Corrosion Properties of a New Free Machining Titanium Alloy
S. Benfer, C. Siemers, J. Rösler and W. Fürbeth

1680 Galvanic Corrosion Behavior of Friction Stir Welded Copper Alloy in 3.5% NaCl
R. Parvizi, M. Moayed, A. Davoodi and M. Haddad Sabzevar

1681 Chemical Characterization and Anticorrosion Properties of Corrosion Products Layers Formed on Pure Copper in Synthetic Rainwater of Rio de Janeiro and São Paulo
R. Hernandez, Z. Paszti, H. De Melo and I. Aoki

1682 General Corrosion Behavior of Low Ni Austenitic Stainless Steels Cathodically Modified with Interstitial Elements
H. Ha, T. Lee, C. Oh and S. Kim

1683 Corrosion Protection by Electrochemically Formed Magnesium Particles
K. Mangold, S. Hild, C. Weidlich and D. Ende

1684 Electrochemical Characterization of Technetium Containing Wasteforms in Acidic Media
E. Mausolf, F. Poineau, K. Czerwinski, T. Hartmann and G. Jarvinen

1685 Electrodissolution of Metallic Technetium in Acidic Media
F. Poineau, E. Mausolf and K. Czerwinski

1686 Dissolution Behavior of α and γ Phases of a Duplex Stainless Steel in a Simulated Crevice Solution
S. Aoki, H. Yakuwa, K. Mitsuhashi and J. Sakai

1687 Quantitative Analysis of the Passivation Degree of Stainless Steels
J. Heo, Y. Lee and H. Shin

1688 Role of Corrosion Products in the Suppression of Atmospheric Corrosion of Aluminum and Its Alloys
Z. Dan, I. Muto and N. Hara

1689 Corrosive Behavior of 7075 Aluminum Alloy
C. Panagopoulos and D. Lagaris

1690 Electrochemical-Mechanical Polishing of Amorphous Ni-P in Acid Solutions
F. Muscolino, P. Cojocaru, O. Citterio and L. Magagnin

1691 Corrosion Performance of Reinforcing Steel in Modified Concrete Mixtures
D. Koleva, K. van Breugel, J. Mol and H. de Wit

1692 An Investigation on CO_2 Corrosion Resistance of Carbon Steel in Relation with Microstructural Changes
C. Vega, N. Ochoa, N. Pebere, J. Lacaze and J. Brito

1735 Localized Corrosion Mechanisms of 2024 Aluminum Alloy: Atomic Force Microscopy and Kelvin Force Microscopy Contribution
L. Lacroix, C. Blanc and L. Ressier

1736 Automated Analysis of Electrochemical Noise from Potentiostatic Conditioning of Iron and Aluminum
J. Soltis, D. Krouse, K. Zavadil and N. Laycock

1737 SKP-SECM: System Development and First Applications
A. Maljusch, C. Senöz, M. Rohwerder and W. Schuhmann

1738 Investigation of Magnesium in NaCl 0.02 M Using LSV Combined with Electrochemical Impedance Spectroscopy
M. Nascimento, C. Fleck and W. Müller

1739 Effect of Laser Shock Processing (LSP) on the Resistance to Localized Corrosion of Aluminum Alloy 2050 in Chloride Media
H. Amar, V. Vignal, H. Krawiec and P. Peyre

1740 Investigation of POD - Oil Steel Corrosion Inhibitor as Surfactant
G. Ostapenko, P. Gloukhov and S. Sadivskiy

1741 Use of Phosphates as Corrosion Inhibitors of Steel Reinforcements Embedded in Fly Ash Mortars
D. Bastidas, M. Criado, S. Fajardo, V. La Iglesia, E. Cano, A. La Iglesia and J. Bastidas

1742 Corrosion Stability of Nonprecious Metal Nickel- and Cobalt-Based Alloys in Dentistry
A. Klostermann, E. Rahm and R. Holze

1743 Electrochemical Characterization of Galvanic Coupling Corrosion Processes under Crevice Conditions for Metallic Materials Used in Biomedical Applications
E. Cardilli and P. Schmutz

1744 Extending the Concept of Semiconductor Defect Chemistry to Electrochemistry: A Novel Approach to Construct Ab Initio Electrochemical E/pH Diagrams
M. Todorova and J. Neugebauer

1745 Measurement Model Analysis of the Thermal Degradation of a Mg-Rich Primer on AA 2024-T3
K. Allahar, D. Battocchi, M. Orazem and G. Bierwagen

1746 Aqueous Oxidation and Microelectrochemical Characterization of Corrosion Mechanisms for Al-Cr-(Cu)-Fe Complex Metallic Alloys
A. Beni, N. Quach, E. Ura-Bińczyk, J. DeRose and P. Schmutz

1747 Microstructural Corrosion of AlCu4Mg1 and AlMg2 As-cast Aluminum Alloys under Straining Conditions
H. Krawiec, V. Vignal and Z. Szklarz

1748 The Corrosion Resistance of Nanocrystalline Materials Produced by Hydrostatic Extrusion
E. Ura-Bińczyk, H. Garbacz, M. Lewandowska and K. Kurzydłowski

1711 The Corrosion Inhibition Study of 2-Aminobenzoic Acid on Mild Steel in 0.5 M H_2SO_4 Solution
A. Dadgar and F. Baghaee

1712 Bronze Protection in Artificial Seawater
A. Granic, H. Otmacic Curkovic, E. Stupnisek-Lisac, M. Kharshan and A. Furman

1713 Effect of Chloride Ions on the Selective Dissolution of Alfa Brass
S. Awadh, F. Al Kharafi and B. Ateya

1714 Corrosion of Austenitic Stainless Steels in Phosphoric Acid Polluted by Chloride and Sulfate Ions
M. Ibáñez-Ferrándiz, M. Blasco-Tamarit, D. García-García, J. Garcia-Anton, A. Guenbour and S. Bakour

1715 Effect of Chlorate on Pitting Corrosion of 316 and 304 Stainless Steel Weldments
G. Sozhan, B. Rengarajan and V. Gopalachari

1716 Thermodynamical Analysis of the Adsorption Process of Albumin on CoCrMo Biomedical Alloy: Influence of Surface Conditions
C. Valero Vidal and A. Igual-Muñoz

1717 Corrosion of Titanium in Acid and Alkaline Solutions
S. Donne and W. Utomo

1718 Numerical Simulation of the Galvanic Displacement Process of Porous Silicon by Metal Ions
J. Brito-Neto

1719 Determination of the Electrochemical Corrosion and Electrochemical Parameters of Nickel in Sodium Hydroxide Solutions at Different Concentrations Using the Polarization Resistance Method
J. Vega, Y. García, M. Tenorio, A. Oropeza and B. Martínez

1720 Noise Suppression Technique Application in SVET Studies of Chromatized Aluminum Alloys Surface
R. Irigoyen, R. Zlatev, M. Stoytcheva, J. García, B. Valdez and T. Dobrev

1721 Electrochemical Behaviors of Hot Dipped Al-Mg-Si Coating Layer on Steel
C. Kruehong, A. Nishikata and T. Tsuru

1722 Benzotriazole Inhibitive Action on Copper Local Activation in Alkaline-Nitrate Solutions under Different Temperatures
S. Kaluzhina, E. Skrypnikova and Y. Provotorova

1723 Effect of Cystine on the Semiconductive and Protective Properties of Oxide Film Formed on Steel in sat. $Ca(OH)_2$
L. Valek Zulj, S. Martinez, D. Bjegović and I. Brnardić

1724 Electrochemical Measurement of the Galvanic Corrosion Effects on the Pair AISI 316L/Welded AISI 316L in H_3PO_4 Solutions at Different Temperatures
R. Sánchez-Tovar, J. Garcia-Anton, M. Montañes, A. Guenbour and S. Bakour

1725 The Effect of Temperature on the Hydrogen Evolution Reaction on Chromium in LiBr Solution by Means of Polarization Techniques
V. Guiñón-Pina, A. Igual-Muñoz and J. Garcia-Anton

1726 Tribological Study of CoCrMo Alloys in Simulated Body Fluids
L. Casabán Julián and A. Igual-Muñoz

1727 Impedance Behavior of Copper Coated with Artificial Patina Layers under Continuous and Intermittent Exposure Conditions
R. Hernandez, I. Aoki, B. Tribollet and H. De Melo

1728 Pulse and Steady DC Cathodic Prevention of Reinforced Mortar in Chloride Environment
D. Koleva, K. van Breugel, J. Mol and H. de Wit

1729 Durability and Corrosion Performance of Mortars and Concretes with Polyurethane Additions
E. Esparza, H. Camacho, P. García, V. Orozco, F. Almeraya and C. Gaona

1730 Rapid Pitting Corrosion Studies of Chromated Aluminum Alloys by SVET
R. Irigoyen, R. Zlatev, M. Stoytcheva, J. García, B. Valdez and T. Dobrev

1731 The Influence of H_2SO_4 Addition on the Corrosion Behavior of Some Ferritic Stainless Steels in Bio Ethanol Solutions
A. Banu, M. Marcu, T. Spataru, I. Voiculescu and O. Radovici

D2 - Coatings for Corrosion Protection

Corrosion

1749 Corrosion Protection by Conducting Polymers
M. Rohwerder

1750 Study of the Adhesion and Delamination of Organic Coatings on Steel by Controlling the Interfacial Properties
W. Jan, P. Christian, G. Guido, H. René and H. Terryn

1751 The Electrochemical and Structural Changes of Cerium Based Conversion Coatings during Exposure to a Salt Spray Environment
W. Pinc, W. Fahrenholtz and M. O'Keefe

1752 Microelectrochemical Testing of Cerium Based Conversion Coatings
S. Joshi, M. O'Keefe and W. Fahrenholtz

1753 Physical, Chemical and Electrochemical Investigations of Trivalent Chrome Process (TCP) Coatings Applied to Aluminum Alloys
B. Lee, D. Woodbury, G. Swain and G. Swain

1754 Corrosion Protection of 2024-T351 by a Mg-Rich Primer: Discrepancies Between Field versus Laboratory Exposures
A. King, M. Taylor and J. Scully

1755 Investigation of Cathodic Properties of Mg-Rich Primers for Protection of AA2024-T3
D. Battocchi, K. Allahar, N. Richter, G. Bierwagen and S. Hayes

1756 Corrosion Inhibition of AA2024 by Decanoate Ions
G. Boisier, N. Portail and N. Pebere

1757 Modification of Anodic Layers on Aluminum Alloys To Improve Corrosion Resistance and Adhesion Properties
S. Weidmann, W. Fürbeth, O. Yezerska, U. Sydow and M. Schneider

1758 Chitosan Films for Corrosion Protection of Galvanized Steel and Aluminum Alloys
M. Zheludkevich, J. Tedim, S. Kallip and M. Ferreira

1759 Cr-Free and Phosphate-Free Surface Treatments for Steel and Al Alloys
S. Adhikari, Y. Guo, B. Rincon Troconis, K. Unocic and G. Frankel

1760 Through the Corrosion Protection of Al-2024 Alloy with Carbon Black/Epoxy-Amine Nanocomposite Coating
A. Foyet, W. Te-Hui, L. van der Ven, S. Kodentsov, D. Gijsbertus and R. van Benthem

1761 Alkoxysilyl Functionalized POSS Coatings As Anticorrosion Coatings for AA 2024 Alloy
I. Jerman, A. Surca Vuk, M. Kozelj and J. Kovac

1762 The Effect of Different Amounts of Modifiers on the Anticorrosion Properties of Silane Layers Applied on Al Alloy 2024-T3
L. Palomino, P. Suegama, I. Aoki and H. De Melo

1763 Assessment of the Corrosion Inhibition Properties of Sol-Gel Coatings Modified with Hydroxyapatite Particles Doped with Corrosion Inhibitors
D. Snihirova, F. Montemor, W. Wijting, G. Grundmeier and S. Lamaka

1764 Edge Corrosion Behavior of Organic Coated Galvanized Steels in Atmospheric Environment
H. Katayama, Y. Miyahara, I. Shitanda, M. Itagaki, K. Watanabe and H. Masuda

1765 Role of Magnesium in Corrosion Performance of Zn-Mg and Zn-Al-Mg Alloy Coatings in Atmospheric Conditions
T. Prosek, A. Nazarov and D. Thierry

1766 Analysis of Corrosion Products Formed by Edge Corrosion of Residual Coated Steel Sheets
A. Tahara and T. Shinohara

1767 Corrosion Resistance of Pulse Zinc Coatings
M. Zemanová and M. Cocural

1768 Scanning Kelvin Probe Analysis of Cut Edge Corrosion on Prepainted Galvanized Steel with Chromate-Containing Epoxy Primer
I. Muto, K. Sato and N. Hara

1769 Combinatorial Studies of Thermally Interdiffused Magnesium on the Kinetics of Organic Coating Cathodic Delamination from Zinc (Galvanized Steel)
H. McMurray, Z. Barrett and G. Williams

1770 Inhibition of Cathodic Coating Delamination on Zinc Electrocoated Steel Substrates by PVD Deposited Thin Aluminum Films
Z. Barrett, N. McMurray and G. Williams

1771 Wet/Dry Cycle Corrosion Behavior of Model Cut-Edge Formed on Zinc Coated Steels by Laser Fabrication
M. Sakairi, A. Kageyama and T. Kikuhci

1772 Simulation of Solution Chemistry in Edge Corrosion
T. Shinohara

1793 Oxygen Resistance of Organic/Inorganic Hybrid Layer for Passivating the Organic Light-Emitting Diodes
S. Choi, H. Shin, K. Kim, H. Lee, J. Yoo and C. Kim

1794 Optimization of Plasma Electrolytic Oxidation Process Parameters for Modification of Ti6-Al4-V Corrosion Resistance
B. Farshid, S. Mir Hosseini, M. Faghighi Sani, M. Meghdari and A. Raoufi

1795 Poly(2,5-dimethoxyaniline) Film for Corrosion Protection of Iron
J. Yano, A. Muta, Y. Harima and A. Kitani

1796 Sol-Gel Coatings As Anticorrosion Coatings for Commercial Spectrally Selective Sunselect Surfaces
M. Kozelj, A. Surca Vuk, I. Jerman and B. Orel

1797 Investigation of Degradation Processes At Defective Coated Metals by Scanning Electrochemical Microscopy Using Oxygen As Redox Mediator
S. González and R. Souto

1798 Application of AC-SECM in Corrosion Science: Inhibitors for Corrosion
M. Paehler, K. Eckhard, J. Santana, R. Souto and W. Schuhmann

1799 Characterization of Organic Antifouling Coatings by EIS
K. Allahar, V. Upadhyay, G. Bierwagen and E. Risberg

1800 Multiphyics Simulation of Coating Systems during EIS Measurements and Interpretation of Equivalent Circuit Elements
B. Hinderliter and S. Croll

1801 Study of the Corrosion of Al-Rich Metallic Coated Steel with Odd Random Phase Multisine EIS
E. Tourwé, A. Alvarez-Pampliega, J. Jorcin, J. Gonzalez, F. Horzenberger, H. Terryn and A. Hubin

1802 Combined Spectroscopic and Electrochemical Studies of Ultrathin Conversion Layers at Polymer/Metal Interfaces
N. Fink, R. Posner, G. Giza and G. Grundmeier

1803 Self-Assembled Monolayer / Au(111) Model Systems for Delamination Studies at Metal/Organic Interfaces
M. Muglali and M. Rohwerder

1804 Antibacterial and Corrosion Properties of Ag-Containing Oxide Coating on AZ31 Magnesium Alloy Formed by Micro-Arc Oxidation
H. Ryu and S. Hong

1805 Insights into the Nature of Ionic Liquid Surface Film Formation on Reactive Metals
M. Forsyth, W. Neil, P. Howlett, J. Lin, J. Efthimiadis and D. Macfarlane

1806 An Anticorrosion and Wear-Resistance Coating on Magnesium Alloy with Trivalent Chromium Electrodeposition from An Eco-Friendly Bath
C. Lin, Y. Yeh and C. Huang

1807 Novel Approaches in Designing Protective Coatings for Magnesium Alloys
A. Makhlouf and M. Farahat

1808 Coating Properties of Electrodeposited Layers with Self-Healing Effect
A. Dietz and T. Hochsattel

1809 High-Temperature Oxidation Resistance of Cr_2AlC Coatings and Phase Stability of $Cr_{2-X}M_xAlC$ (M = Y, Hf, Ta, Pd, Pt, Rh)
M. to Baben, D. Hajas, D. Music, B. Hallstedt, J. Emmerlich and J. Schneider

1810 The Corrosion and Wear Resistance of Cr-C Deposited Steel Specimens With and Without Ni Undercoat
C. Chuang, Y. Lieu and C. Huang

1811 Electrodeposition of Rhenium and Its Alloys from Aqueous Solutions
A. Naor, N. Eliaz and E. Gileadi

1812 Electrochemical Characterization of Ultrathin Carbon Overcoats for Magnetic Hard Disk Components
W. Kobsiriphat, L. Supadee and K. Siangchaew

1813 Deposit of Chromium Layers from Trivalent Chrome Electrolytes
J. Bohnet and K. Romankiewicz

D3 - Corrosion of Electronic and Magnetic Materials

Corrosion

1814 Fundamentals of Atmospheric Corrosion
C. Leygraf

1815 Corrosion of Cu and Steels Exposed to Simulating Accelerated Atmospheric Corrosion Conditions
M. Reid, K. Shannon and L. Garfias-Mesias

1816 Initial Atmospheric Corrosion of Zinc Induced by Organic Acids
P. Qiu, J. Hedberg and C. Leygraf

1817 Effect of Condensation in a Mixed Flowing Gas Environment
M. Reid, E. Daltion and J. Punch

1818 Perspectives on Environmental Reliability of Electronic Devices
R. Ambat

1819 Understanding the Effect of Flux Chemistry on Creep Corrosion
M. Reid and M. Collins

1820 Investigation of Electrochemical Migration on Component and PCB Level under Controlled Experimental Parameters
D. Minzari, M. Jellesen, U. Rathinavelu, P. Moller, M. Johnsen, P. Wahlberg and R. Ambat

1821 Do Copper Wire Bonds Corrode in Epoxy Encapsulated Electronic Devices?
M. Reid and G. Derkits

1822 Corrosion in Electronics at Device Level
M. Jellesen, D. Minzari, U. Rathinavelu, P. Moller and R. Ambat

1823 Degradation of Microcircuits Arising during Post CMP Cleaning in Oxalic Acid Solutions
C. Gabrielli, E. Ostermann and H. Perrot

1824 Corrosion of Two Copper Stripes under Permanent Bias in Chloride Containing Solutions
E. Sutter, S. Jebnoun, M. Tran and B. Tribollet

1825 Electrochemical Characterization of the Corrosion of Pulse Plated Microbondable Silver-Tin Layers
W. Hansal, S. Hansal, G. Sandulache and M. Halmdienst

1826 Corrosion Resistance of Sintered Nd-Fe-B Magnets Corrosion and Surface Treatments for Corrosion Protection
I. Costa, E. Martins and H. De Melo

1827 Mechanisms of Corrosion under a Magnetic Field
F. Rhen

1828 Magnetic Field Driven Inhomogeneous Corrosion of Ferromagnetic Electrodes in Acidic Solutions
R. Sueptitz, J. Koza, M. Uhlemann, A. Gebert, L. Schultz, X. Yang and K. Eckert

1829 Potentiostatic Current Oscillations of Iron in H_2SO_4 Solution under Applied Magnetic Fields
X. Yang, K. Eckert, R. Sueptotz, A. Gebert, M. Uhlemann and S. Odenbach

1830 High End Corrosion Protection of Rare-Earth Permanent Magnets
L. Zapf

1831 Corrosion of Polycrystalline NiMnGa Alloys for Magnetic Shape Memory Applications
A. Gebert, S. Roth, S. Oswald and L. Schultz

1832 Overview of Corrosion Protection with Volatile Corrosion Inhibitors
J. Granath

D4 - High Temperature Corrosion and Materials Chemistry 8

High Temperature Materials / Corrosion

1833 Oxidation Kinetics of Y/Zr-Doped FeCrAl-Alloys in Low and High pO_2 Gases
D. Naumenko, D. Young, L. Niewolak, E. Wessel, L. Singheiser and W. Quadakkers

1855 Characterization and Pickling Behavior of Thermal Oxide Scales on Hot-Rolled Carbon Steel Strips Produced from Medium Slabs
S. Chandra-Ambhorn, J. Tungtrongpairoj, T. Nilsonthi and A. Somrak

1856 Combined Effect of High Temperature and VUV Radiation on C/C Composites
M. Balat-Pichelin, J. Eck and J. Sans

1857 Oxidation of C/SiC Composites in Reduced Oxygen Partial Pressures
E. Opila and J. Serra

1858 High Temperature Oxidation of SiC under Helium with Low Oxygen Partial Pressure
M. Balat-Pichelin, L. Charpentier and F. Audubert

1859 Oxidation of Hf-Ta-N Based Ceramic-Metal Composites
M. Opeka, S. DiPietro and E. Wuchina

1860 Interplay Between Molten Silicate Deposits and Flowing Water Vapor on EBCs
K. Grant, S. Krämer and C. Levi

1861 Coatings and Oxidation of $(Ti_{1-x}, A1_x)N$ Films from Alkoxide Solutions by Thermal Plasma CVD
S. Shimada, Y. Terao, J. Tsujino and I. Yamazaki

1862 High Temperature Materials Division J. B. Wagner, Jr. Young Investigator Award: Crystal Structure Effects on the Conductivity of Ionic and Protonic Ceramics
J. Nino

1863 Nanometer-Thick Cobalt-Iron Spinel Oxide Films for High Temperature Splitting of H_2O and CO_2
A. McDaniel, J. Scheffe, G. Evans, A. Weimer and M. Allendorf

1864 Thermochemical Behavior and Permeability of $Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-\delta}$ Membranes in CO_2-Containing Atmosphere
A. Möbius, D. Schlehuber, A. Ellett, L. Singheiser and T. Markus

1865 Microstructure Change of Single Crystal TiO_2 under Chemical Potential Gradient at 1273 K
M. Lyta, T. Watanuki, M. Ueda, K. Kawamura and T. Maruyama

1866 Diffusion in High-Temperature Piezoelectric Single Crystals
J. Sauerwald, M. Schulz, D. Richter and H. Fritze

1867 Liquid-Phase Oxidation Joining of Yttria-Stabilized Zirconia via Al/Fe-Cr Alloy/Al Interlayers
T. Akashi, T. Shimura and H. Kiyono

1868 Thermal Stability of FeS_2 Cathode Material in "Thermal" Batteries: Effect of Dissolved Oxides and Hydroxides in Molten Salt Electrolytes
P. Masset

D5 - Surface Treatment for Biomedical Applications 2

Electrodeposition / Corrosion / Sensor

1869 Influence of Chemical Surface Modification on Corrosion and Biocompatibility of Magnesium
S. Virtanen, C. Lorenz, P. Kollmannsberger, L. Jaafar and B. Fabry

1870 Challenges in Correlating In Vitro Corrosion Data to In Vivo Performance for Implantable Electrode Materials
G. Martinez

1871 Anodic TiO_2 Nanotube Surfaces: 15 nm - An Optimal Length Scale of Surface Topography for Cell Adhesion and Differentiation
S. Bauer, J. Park, K. von der Mark and P. Schmuki

1872 Antimicrobial Activity of Electrochemically Oxidized Silver and Copper
S. Djokic

1873 Influence of Surface Charge on the Adsorption of Proteins on Titanium
I. Van De Keere, J. Vereecken and A. Hubin

1874 Electrochemical Characterization of a Natural Bioceramic Material for Biomedical Applications
Y. Yoon, A. Mount, K. Hansen and D. Hansen

1875 Leave No Trace: Vapor Deposited Bioabsorbable Mg Alloy Implants
J. Petrilli, B. Shaw, E. Sikora, M. Horn and S. Pursel

1876 Carbon Containing Titanium Coating for Ti_6Al_4V Implants
U. Ruiz de Gopegui, R. Bayon, C. Zubizarreta, V. Sáenz de Viteri and X. Fernandez

1877 The Effect of Fluoride Ions on the Behavior of Titanium and Its Alloys in Artificial Saliva
I. Milošev

1878 Electrochemical Properties and Biological Activity of Carbon Materials Modified by Polypyrrole
M. Goldin, M. Abakumov, A. Stepanov, A. Volkov and V. Kolesnikov

1879 Preparation of Nano-Structured Titanium Oxide Film by Wet Corrosion Process as an Electrode Material for Biosensor
S. Lee, M. Takai and K. Ishihara

1880 Functionalized Nanostructured Parylene Film for Biomedical Applications
M. Demirel

1881 Formation of Calcium Phosphate Layer on Bioabsorbable Magnesium to Improve Its Corrosion Resistance
S. Hiromoto and M. Tomozawa

1882 Cell Activity on Biomedical Pure Ti and Ti Alloys with Various Surface Oxide Layers
S. Fujimoto, T. Sugimoto, T. Tamura, H. Tsuchiya, R. Nakatsu and S. Hiromoto

1883 Magnetically Guided TiO_2 Nanotubes for Site Selective Photoinduced Drug Release
N. Shrestha, J. Macak, F. Schmidt-Stein, R. Hahn and P. Schmuki

1884 Synthesis and Evaluation of the Polypyrrole Film As the Cell Culture Substrate
N. Batina, U. Paramo-Garcia, A. Avalos-Perez, M. Tapia-Tapia, M. Acosta-Garcia, C. Lara-Cruz, P. Damian-Matsumura, I. Morales-Reyes and R. Godinez-Fernandez

1885 Using EIS to Assess the Protection Afforded by Phosphate Layers to PM Produced Nd-Fe-B Magnets
E. Martins, H. De Melo and I. Costa

1886 ZrO_2 Coating to Restrain Metal Ion Release on Dental Ni-Cr Alloy
C. Chang and K. Tung

1887 Titanium Anodic Treatment Process for Porous Structure
P. Hsieh and M. Chen

1888 Electrochemical Etching of NiTi Alloy in a Neutral Fluoride Solution
S. Cattarin, P. Guerriero, M. Musiani, A. Tuissi and L. Vázquez-Gómez

1889 Conducting Polymer Layers on Membranes for the Prevention of Biofouling
C. Weidlich, K. Mangold, G. Schaule and A. Rumpf

1890 Novel Porous Composite Polymeric/Ceramic Scaffolds for Bone Reconstruction
J. Serra Moreno, S. Panero and E. Landi

1891 Characterization of Acrylic Bone Cements in Simulated Body Fluid by Near-Field Scanning Optical Microscopy
R. Vargas-Coronado, J. Cauich-Rodriguez and L. Garfias-Mesias

1892 Bioactivation of Porous Electrode Composed of Sintered Titanium Spheres by Hydroxyapatite Coating
S. Ono, A. Kodama and H. Asoh

1893 Ionic Liquid Electropolishing of Metal Alloys for Biomedical Applications
T. Abdel-Fattah and J. Loftis

1894 Redox Potential as a Reflection of Hyperbaric Oxygenation Effect on Certain Systems in the Organism
M. Khubutiya, V. Krylov, M. Romasenko, A. Evseev, M. Goldin, A. Volkov, O. Levina and E. Aleschenko

D6 - Oxide Films

Corrosion

1895 Metal Nanoparticles on Oxide Ultrathin Films: A Class of Materials with Unprecedented Properties
G. Pacchioni

1896 DFT Study of Voiding Mechanisms at Oxide/Alloy interfaces
M. Islam, B. Diawara, V. Maurice and P. Marcus

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J. Greeley

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P. Marcus, Y. Beh and B. Diawara

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D. LeClere, S. Garcia-Vergara, F. Zhou, T. Hashimoto, P. Skeldon and G. Thompson

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I. De Graeve, P. Laha, D. Verwimp, R. Furneaux and H. Terryn

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H. Strehblow

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F. Wang and T. Devine

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T. Yamamoto, K. Fushimi, S. Miura and H. Konno

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D. Dalla Corte, L. Taveira and L. Dick

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S. Fujimoto, Y. Osakabe and H. Tsuchiya

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A. Maria, T. Benedetti, R. Torresi and L. Dick

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S. Policastro, R. Rayne, P. Moran, F. Martin and P. Natishan

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K. Shimizu

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J. Choi, J. Shim, S. Hwang, J. Joo, J. Lim, K. Park, H. Kim, H. Lee, M. Moon and D. Jung

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M. Huh, B. Yang, S. Oh, S. Won, J. Jeong, C. Hwang and H. Kim

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I. Parkin, G. Hyett and A. Kafizas

E1 - Analytical Techniques for Semiconductor Materials and Process Characterization 6

Electronics and Photonics

1945 Defect Analysis in Solar Cell Silicon by Photoluminescence Spectroscopy and Topography
M. Tajima and H. Sugimoto

1946 New Modes of Fast Fourier Impedance Spectroscopy Applied to Solar Materials Characterization and Semiconductor Pore Etching
J. Carstensen and H. Foell

1947 Advanced Application of Resistivity and Hall Effect Measurements to Characterization of Silicon
V. Voronkov, G. Voronkova and R. Falster

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R. Job, F. Niedernostheide, H. Schulze and H. Schulze

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M. Uematsu, M. Naganawa, Y. Shimizu, K. Itoh, K. Sawano, Y. Shiraki and E. Haller

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V. Komarnitskyy and P. Hazdra

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J. Maehliss, R. Hakim, F. Brunier and B. Kolbesen

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W. Vandervorst

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U. Scheithauer

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S. Prussin and J. Reyes

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M. Inagaki and S. Matsumoto

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C. Frausto Reyes, J. Molina-Contreras, H. Pérez Ladrón de Guevara, C. Medel Ruiz and Y. López Álvarez

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A. Jiang

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Y. Hua, L. Ping, T. Qinghua and N. Rao

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M. Kolbe, B. Beckhoff, M. Krumrey, M. Reading, J. van den Berg, T. Conard and S. De Gendt

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S. Sasamori, F. Meirer, N. Zoeger, C. Streli, P. Kregsamer, S. Smolek, C. Mantler and P. Wobrauschek

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M. Bellodi and S. Gimenez

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E. Pecheva, L. Pramatarova, A. Toth, T. Hikov, D. Fingarova, S. Stavrev, E. Iacob and L. Vanzetti

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T. Kim, M. Jeong, N. Mun, Y. Kil, J. Kim, T. Jeong, S. Kang, C. Choi, K. Shim and S. Kim

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A. Nassiopoulou, V. Gianneta, M. Huffman, M. Reading, J. van den Berg, I. Tsiaoussis, N. Frangis and S. Kennou

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A. Parisini, V. Morandi, J. van den Berg, M. Reading, D. Giubertoni, P. Bailey and T. Noakes

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E2 - Atomic Layer Deposition Applications 5

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T. Usui, N. Dasgupta, X. Jiang, W. Lee and F. Prinz

2011 Formation of Photovoltaic Buffer Layers by Atomic Layer Deposition
J. Bakke and S. Bent

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T. Yoshimura, A. Oshima and D. Kim

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J. Musschoot, D. Deduytsche, R. Van Meirhaeghe and C. Detavernier

2014 Remote Plasma Atomic Layer Deposition of Co_3O_4 Thin Films
M. Donders, H. Knoops, M. van de Sanden, W. Kessels and P. Notten

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P. Stair, J. Elam, J. Libera, H. Feng, M. Pellin and H. Kim

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K. Choy

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D. King, X. Liang, J. Li, S. Johnson and A. Weimer

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K. Tapily, D. Gu, H. Baumgart, G. Namkoong and A. Elmustafa

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T. Abdel-Fattah, D. Gu, H. Baumgart, R. Bajpai and M. Zaghloul

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2021 In Situ studies of ALD High-k/III-V Interfaces
R. Wallace

2022 Atomic Layer Deposition of High-k Oxides on InAlN/GaN-Based Materials
S. Abermann, C. Ostermaier, G. Pozzovivo, J. Kuzmik, O. Bethge, C. Henkel, G. Strasser, D. Pogany, C. Giesen, M. Heuken, M. Alomari, E. Kohn and E. Bertagnolli

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P. Ardalan, C. Musgrave and S. Bent

2024 ALD Applications Outside IC Technology: Existing and Emerging Possibilities
M. Putkonen

2025 Formation of Silicide Nanowires by Atomic Layer Deposition of Cobalt
H. Lee and H. Kim

2026 Particle ALD/MLD -Functionalization of Fine Particles (Invited)
D. King, X. Liang and A. Weimer

2027 ALD Synthesis of Tube-in-Tube Nanostructures of Transition Metal Oxides by Template Replication
D. Gu, P. Shrestha, H. Baumgart, G. Namkoong and T. Abdel-Fattah

2028 New Materials and Emerging Applications of Plasma ALD
C. Hodson and Q. Fang

2029 Particle Performance of SUNALE(TM) ALD Batch Reactor
K. Elers, J. Marles, P. Soininen and J. Kostamo

2030 Highly Conformal ALD of ZrO_2 at Higher Process Temperatures than the Conventional TEMAZr-Based Process
Y. Senzaki, Y. Okuyama, G. Kim, H. Kim, C. Barelli, J. Lindner, Z. Karim and S. Ramanathan

2031 Recent Development of ALD Precursors for Semiconductor Devices
S. Wada

2032 Sr and Ti Precursor Development for Next Generation Thin Films Applications
R. Katamreddy, Z. Wang, V. Omarjee, P. Rao, C. Dussarrat and N. Blasco

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A. Esteve, C. Mastail, S. Olivier, M. Djafari Rouhani, G. Landa and A. Dkhissi

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S. Potts, L. van den Elzen, G. Dingemans, E. Langereis, W. Keuning, M. van de Sanden and W. Kessels

2035 Atomic Layer Deposition of $GdAlO_x$ and $GdHfO_x$ Using $Gd(iPr\text{-}Cp)_3$
C. Adelmann, D. Pierreux, J. Swerts, J. Kesters, O. Richard, T. Conard, A. Franquet, H. Tielens, V. Afanasiev, M. Schaekers, S. Van Elshocht and J. Kittl

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M. Tallarida, K. Karavaev, K. Kolanek and D. Schmeisser

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D. Pierreux, V. Machkaoutsan, E. Tois, J. Swerts, T. Schram, C. Adelmann, S. Van Elshocht, J. Tseng, L. Ragnarsson and J. Maes

2038 Copper Oxide ALD from a Cu(I) Beta-Diketonate: Growth Studies and Application as Seed Layers for Electrochemical Copper Deposition
T. Waechtler, L. Hofmann, R. Mothes, S. Schulze, S. Schulz, T. Gessner, H. Lang and M. Hietschold

2039 Liquid Injection Atomic Layer Deposition of Metallic Ru Thin Films from $Ru(tmhd)_3$ and of High-k TiO_2 Thin Films from $Ti(O\text{-}i\text{-}Pr)_2(tmhd)_2$
S. Hoffmann-Eifert, S. Kim and R. Waser

2040 Ru-Si-N Thin Films Prepared by Plasma Enhanced Atomic Layer Deposition as a Diffusion Barrier of Direct Plating of Cu
T. Eom, W. Sari and S. Kim

2041 Transmission and Reflection Properties of $Al_xTi_{1-x}O$ Films for Si Thin Film Solar Cell
J. Lim, S. Lee, J. Kim, S. Yun and J. Kim

2042 Effects of Pt/Al Top Electrode Selectively Formed by Metal Organic Chemical Vapor Deposition on Resistive Switching Properties of ALD TiO_2 Thin Films
J. Lee, K. Lee, A. Kim and C. Lee

2043 Preparation of Pt-Deposited TiO_2 Nanotubes by Atomic Layer Deposition
C. Wang, Y. Hsueh, C. Kei and T. Perng

2044 Plasma-Enhanced Atomic Layer Deposition of Ta(C)N Thin Films for Copper Diffusion Barrier
K. Kim, J. Yoon, Y. Kim and S. Kwon

2045 Patterning of ALD HfO_2 Layers on Silicon
R. Andreu, J. Sanchez, A. Sanchez, M. Zabala, M. Acero, J. Rafi and F. Campabadal

2046 Optimizing the Release of ALD Grown Transition Metal Oxide Nanotubes from Anodic Aluminum Oxide Templates
T. Abdel-Fattah, D. Gu, H. Baumgart and G. Namkoong

2047 Metal Alloy Catalysts with Pt Surface Coating by Atomic Layer Deposition for Intermediate Temperature Ceramic Fuel Cells
J. Shim, X. Jiang, S. Bent and F. Prinz

2048 Atomic Layer Deposition for All-Solid-State 3D-Integrated Batteries
H. Knoops, M. Donders, M. van de Sanden, P. Notten and W. Kessels

2049 ALD Based Metal-Insulator-Metal Nanocapacitors for Energy Storage
P. Banerjee, I. Perez, L. Henn-Lecordier, S. Lee and G. Rubloff

2050 Detailed Correlation of Electrical Characteristics and Breakdown Properties to the Growth Behavior of ALD Deposited HfO_2- and ZrO_2-Based Dielectrics
U. Schroeder, W. Weinreich, E. Erben and J. Mueller

2051 Interface Analysis of Transparent Analog Capacitor Using ITO Electrodes and ALD High-k Dielectrics
S. Won, M. Huh, S. Park, S. Seo, Y. Choi, J. Heo, C. Hwang and H. Kim

2052 Atomic Layer Deposition of Ru and RuO_2 for MIMCAP Applications
C. Zhao, M. Pawlak, M. Schaekers, E. Sleeckx, E. Vancoille, D. Wouters, Z. Tokei and J. Kittl

2053 MIMIM Trench Capacitors with Plasma-Assisted ALD Al_2O_3 and TiN Films
D. Hoogeland, K. Jinesh, F. Roozeboom, W. Besling, W. Keuning and F. Voogt

2054 Atomic Layer Deposition of Materials for Phase-Change Memories
M. Leskelä, V. Pore, T. Hatanpää, M. Heikkilä, M. Ritala, A. Schrott, S. Raoux and S. Rossnagel

E3 - Cleaning Technology in Semiconductor Device manufacturing 11

Electronics and Photonics

2097 Cleaning-Free Deposition System Using Pulsed-Plasma CVD under Near-Atmospheric Pressure for Highly Crystallized Poly-Si Thin Films on Plastic Films
M. Matsumoto, Y. Inayoshi, S. Murashige, H. Fukidome, M. Suemitsu, S. Nakajima, T. Uehara and Y. Toyosihima

2098 Etching of Sacrificial CVD Silicon Dioxides with Anhydrous HF Vapor
H. Ritala and J. Kiihamäki

2099 Monitoring of Semiconductor Surfaces Using Photoconductance Decay (PCD) Method
P. Drummond, S. Ramani and J. Ruzyllo

2100 Metrology for Implanted Si Substrate and Dopant Loss Studies
D. Radisic, D. Shamiryan, G. Mannaert, W. Boullart, E. Rosseel and J. Bogdanowicz

2101 Quantitative Analysis of Transition Metals Penetrating the Silicon Substrate by Dopant Ion Implantation
K. Saga, K. Ueno, H. Iida and R. Ohno

2102 Electrochemical and Analytical Study of the Si Etching Mechanism in HF
N. Valckx, R. Vos, J. Rip, G. Doumen, P. Mertens, T. Bearda, M. Heyns and S. De Gendt

2103 Shockwave Induced Deformation of Organic Particle in Laser Shockwave Cleaning Process
T. Kim, A. Busnaina and J. Park

2104 Non-reagent Real-Time Monitoring of DSP+ Cleaning Solutions
E. Shalyt, J. Tyutina, G. Liang, G. Lu and P. Bratin

E4 - High Dielectric Constant Materials and Gate Stacks 7

Dielectric Science and Technology / Electronics and Photonics

2105 Anomalous V_{FB} Shift in High-k Gate Stacks: Is Its Origin at the Top or Bottom Interface?
A. Toriumi and T. Nabatame

2106 Impact of Alkali Earth Elements Incorporation on Electrical Characteristics of La_2O_3 Gated MOS Device
T. Koyanagi, K. Okamoto, K. Kakushima, P. Ahmet, K. Tsutsui, N. Sugii, K. Natori, T. Hattori and H. Iwai

2107 Flatband Voltage and Structural Properties of Hafnium Dioxide Films Grown by Liquid-Injection MOCVD
F. Ducroquet, E. Rauwel and C. Dubourdieu

2108 Work Functional Control at High-k Metal Gates for CMOS Devices
J. Robertson

2109 High-k Dielectrics and Interface Passivation for Ge and III/V Devices on Silicon for Advanced CMOS
M. Heyns, C. Adelmann, G. Brammertz, M. Caymax, B. De Jaeger, A. Delabie, G. Eneman, M. Houssa, D. Lin, K. Martens, C. Merckling, M. Meuris, J. Mitard, J. Penaud, G. Pourtois, M. Scarrozza, E. Simoen, S. Sioncke and W. Wang

2110 Electrical Properties of Lanthanum-Scandate Gate Dielectric Directly Deposited on Ge
M. Bera, J. Song, K. Kakushima, P. Ahmet, K. Tsutsui, N. Sugii, T. Hattori and H. Iwai

2111 Effect of the Semiconductor Substrate Material on the Post-breakdown Current of MgO Dielectric Layers
E. Miranda, E. O'Connor, G. Hughs, P. Casey, K. Cherkaoui, S. Monaghan, R. Long, D. O'Connell and P. Hurley

2112 InAs-Channel Metal-Oxide-Semiconductor HEMTs with Atomic-Layer-Deposited Al_2O_3 Gate Dielectric
C. Chang, E. Chang, W. Huang, Y. Su, H. Trinh, H. Hsu and Y. Miyamoto

2113 Barrier Characterization at Interfaces of High-Mobility Semiconductors with Oxide Insulators
V. Afanas'ev and A. Stesmans

2114 Defects Generation under Constant Voltage Stress in La_2O_3/HfO_2 Gate Stacks Grown on Ge Substrates
E. Evangelou, M. Rahman, A. Dimoulas and S. Galata

2115 Capacitance-Voltage and Conductance Analysis of High-k/$In_xGa_{1-x}As$ Structures (x = 0, 0.15, 0.3, and 0.53)
P. Hurley, E. O'Connor, S. Monaghan, R. Long, A. O'Mahony, I. Povey, K. Cherkaoui, M. Pemble, J. MacHale, A. Quinn, G. Brammertz, M. Heyns, S. Newcomb and V. Afanas'ev

2116 Modeling of Alternative High-k Dielectrics for Memory Based Applications
G. Pourtois, S. Clima, K. Sankaran, P. Delugas, V. Fiorentini, W. Magnus, B. Soree, S. Van Elshocht, C. Adelman, J. Van Houdt, D. Wouters, S. De Gendt, M. Heyns and J. Kittl

2117 Dielectric Properties of Thin Hf- and Zr-Based Alkaline Earth Perovskite Layers
G. Lupina, P. Dudek, G. Kozlowski, J. Dabrowski, G. Lippert, H. Müssig and T. Schroeder

2118 Stable HfO_2 Based Layers Fabricated by RF Magnetron Sputtering
L. Khomenkova, C. Dufour, P. Coulon, C. Bonafos and F. Gourbilleau

2119 Surface-Directed Spinodal Decomposition in Hf Silicate Thin Films
J. Liu, W. Lennard, D. Landheer and X. Wu

2120 Formation and Characterization of Thin Silicon Dioxide Films Obtained by Inductively Coupled High-Density Plasmas Using a Dual Rotated Spiral Antenna System
J. Ji, Y. Kim, S. Woo, H. Kim, P. Um and C. Kim

2121 Nitrogen Incorporation in Al_2O_3 Thin Films Prepared by Pulsed Ultrasonic Sprayed Pyrolysis
S. Carmona-Tellez, C. Palacio, S. Gallardo, Z. Rivera, J. Guzman-Mendoza, M. Aguilar-Frutis, M. Garcia-Hipolito, G. Alarcon-Flores and C. Falcony

2122 Electron Beam Induced Orientation Selective Epitaxial Growth of CeO_2(100)/Si(100) Structures Using Absorption Electron Imaging System
T. Inoue and S. Shigenari

2123 High Density MIM Capacitors Using $HfAlO_x$
M. Hota, C. Mahata, C. Sarkar and C. Maiti

2124 Physical and Electrical Characterization of Fluorine Plasma Treated Hafnium Oxide Film for High Density Metal-Insulator-Metal Capacitors
S. Ding, Y. Huang, Q. Sun and W. Zhang

2125 Group-II Hafnate, Zirconate, and Tantalate High-k Dielectrics for MIM Applications: The Defect Issue
J. Dąbrowski, P. Dudek, G. Kozłowski, G. Lupina, G. Lippert and C. Wenger

2126 Impact of Voltage and Current Stress on TiN/$HfSi_xO_y$/TiN MIM Capacitors
K. Jyothi, A. Chandorkar and D. Misra

2127 Progress Towards Passivation of High-Mobility Channels
M. Houssa, V. Afanas'ev, A. Stesmans, M. Meuris and M. Heyns

2128 Electrical Characteristics of HfO_2 and La_2O_3 Gate Dielectrics for $In_{0.53}Ga_{0.47}As$ MOS Structure
K. Funamizu, Y. Lin, K. Kakushima, P. Ahmet, K. Tsutsui, N. Sugii, E. Chang, T. Hattori and H. Iwai

2129 Small Signal Response of Inversion Layers in High Mobility $In_{0.53}Ga_{0.47}As$ MOSFETs Made with Thin High-k Dielectrics
A. Ali, H. Madan, S. Koveshnikov and S. Datta

2130 High-k Dielectrics for Ge, III-V and Graphene MOSFETs
S. Banerjee, E. Tutuc, S. Kim, T. Akyol, M. Jamil, D. Shahredji, J. Donnelly and L. Colombo

2131 Low Temperature Fabrication of AlN/Ge Structure Using Electron Cyclotron Resonance Plasma Nitridation
J. Kishiwada, N. Mohamed, Y. Oniki, Y. Iwasaki and T. Ueno

2132 Interface Engineering of a Metal/ High-k/ Semiconductor Layered Structure by Water Vapor Discharge
K. Muraoka

2133 Annealing-Temperature Dependence of Compositional Depth Profiles and Chemical Bonding States of CeOx/LaOx/Si and LaOx/CeOx/Si Structure
H. Nohira, Y. Kon, K. Kitamura, M. Kouda, K. Kakushima and H. Iwai

2134 Comparison of Lateral Nonuniformity Phenomena between HfO_2 and SiO_2 from Magnified C-V Curves in Inversion Region
J. Cheng, C. Huang and J. Hwu

2135 Electrical Characteristics of La_2O_3 Gated MOS Capacitors with Different Wafer Orientation
H. Nakayama, K. Kakushima, P. Ahmet, K. Tsutsui, N. Sugii, T. Hattori and H. Iwai

2111 Effect of the Semiconductor Substrate Material on the Post-breakdown Current of MgO Dielectric Layers
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2126 Impact of Voltage and Current Stress on TiN/$HfSi_xO_y$/TiN MIM Capacitors
K. Jyothi, A. Chandorkar and D. Misra

2136 Interface Defects at the Si(100)/HfO_2 Interface Using DLTS Measurement
D. Kwak, D. Kim, C. Shin, H. Kim and H. Cho

2139 Interface and Bulk Properties of MBE-Grown Rare-Earth Metal Oxides on Silicon
A. Nazarov, V. Lysenko, Y. Gomeniuk, Y. Gomeniuk, H. Osten and A. Laha

2140 Residual Stress Effect on the Dielectric Properties of $La_{0.7}Sr_{0.3}CoO_3$ Buffered (Ba,Sr)TiO_3 Thin Films
S. Lu and Z. Xu

2141 Characteristics of Plasma Nitridation in Inductively Coupled High-Density Plasmas Using a Dual Rotated Spiral Antenna System
S. Woo, Y. Kim, H. Kim, P. Um, S. Cho and C. Kim

2145 Effects of the Inductively Coupled Plasma Nitridation Process on the Reliability of $HfAlO_x$ Thin Films
K. Chang, B. Chen and M. Su

2156 Role of Nitride Traps in NBTI of Charge Trap Flash Memory with Oxide-Nitride-Al_2O_3 (ONA) Structures
D. Kim, D. Kwak, C. Shin, W. Kim and H. Cho

E5 - Processing, Materials and Integration of Damascene and 3D Interconnects

Dielectric Science and Technology

2157 Integration Challenges for Copper Damascene Electroplating: An Invited Talk
U. Stoeckgen, S. Wehner, J. Heinrich and A. Kiesel

2158 Process Compatibility of New Advanced Low-k Dielectric
A. Ferchichi, K. Vanstreels, N. Heylen, G. Beyer, M. Baklanov, S. Asakuma and M. Nakajima

2159 Plasma Deposition and Development of Ultralow-k Bilayer $SiCN_x$/$SiCN_y$ Dielectric Cu Cap for 32 nm CMOS Devices
S. Nguyen, A. Grill, S. Cohen, H. Shobha, N. Klymko, E. Simonyi, T. Haigh Jr, C. Hu, E. Adams, E. Liniger, A. Madan, T. Shaw, E. Ryan, T. Cheng, J. Herman and R. Young

2160 Mechanical Reinforcement of Porous-Silica Low-k Film by Pore Surface Silylation
Y. Kayaba, K. Kohmura, H. Tanaka, Y. Seino, S. Chikaki and T. Kikkawa

2161 Chemical Repair of Plasma Damaged Porous Ultra Low-k SiOCH Film Using a Vapor Phase Process
T. Oszinda, M. Schaller, D. Fischer, S. Leppack and S. Schulz

2162 Acceleration of Copper Electroless Plating with Addition of PEG-Thiols
F. Inoue, T. Yokoyama, S. Tanaka, K. Yamamoto and S. Shingubara

2163 Mechanistic Aspects of SPS Decomposition in Iron Mediated Copper Plating Solution
J. Adolf, R. Preisser and U. Landau

2186 Evaluation of Stability and Reactivity of Solutions by In Situ Transmittance in Electroless Deposition
K. Park, H. Koo, T. Lim and J. Kim

2187 The Functional Group Effect of Complexing Agent on Cu CMP in the Neutral Environment
J. Bae, Y. Kim and J. Kim

2188 Effects of High-Temperature Porogens on the Moisture Uptake and Diffusion Behavior of Novel MSQ/Porogen Hybrid Low-k Dielectrics
M. Che, J. Teng, P. Lai and J. Leu

E6 - One-Dimensional Nanoscale Electronic and Photonic Devices 3

Electronics and Photonics / Sensor / Corrosion

2189 Multifunctional Si Nanotips-Array: Antireflection and Tip-Enhanced Electroluminescence and Magnetoresistance
L. Chen and K. Chen

2190 SWNT FETs as Functional Structures in Sensors
C. Hierold, T. Helbling, M. Mattmann and C. Roman

2191 Connectivity in Carbon Nanotube Networks
P. Nirmalraj, P. Lyons, S. De, J. Coleman and J. Boland

2192 Nanowire-Based Thin-Film Devices as High-Performance Transparent and Flexible Electronics
W. Lu

2193 Noble-Metal Covered W(111) Single-Atom Electron Sources
I. Hwang, H. Kuo, C. Chang and T. Tsong

2194 Pumping Single Electrons by Nanotube Turnstiles
V. Siegle, C. Liang, S. Lothkov, B. Kaestner, H. Schumacher, F. Jessen, R. Kleiner, D. Kölle and S. Roth

2195 Stability Requirements in Nanowire Electronic Devices
G. Kim, J. Ha and S. Kahng

2196 The Silicon Nanowire Accumulation-Mode MOSFET
P. Garg, J. Wu, Y. Hong, M. Iqbal, P. Migliorato and S. Fonash

2197 DOS Spectrum Deconvolution from $C(V_g)$ and $Q(V_g)$ Dependencies of Si Nanowire-Based MOS Structure
V. Ligatchev and S. Chin

2198 Growth of Metal Nanowhiskers on the Patterned Substrate by Glancing Angle Deposition at High Temperature
M. Suzuki, H. Hara, R. Kita, K. Hamachi, K. Nagai, K. Nakajima and K. Kimura

2199 Multiple Heterostructures of Ni_2Si/Si Formed by the Point Contact Reaction
H. Ouyang, M. Cheng, Y. Shiu, S. Chen, W. Wu, S. Lo and L. Chen

2200 Chemically Designed Nanowires and Nanocomposites: Processing and Integration in Sensor Devices
S. Mathur

2201 Thermal Expansion Behaviors of Bi Nanowires Fabricated via Centrifugal Processing
C. Wang, S. Chen, C. Chao and L. Chen

2202 Plasmonic Behaviors of Gold-in-Ga_2O_3 Nanostructures
Y. Wu, C. Hsu, S. Chen, L. Chou and L. Chen

2203 Single Crystal Au Nanowires and Their Field Emission Properties
C. Chen and L. Chou

2204 Growth of Large Transparent and Conducting Graphene Sheets Using Chemical Vapor Deposition
H. Park, V. Skakalova and S. Roth

2205 Group IV Semiconductor Nanowire Optoelectronics
C. Kim, K. Kang, H. Lee, G. Lee and M. Jo

2227 Characteristics of Silicon Nanocrystals Embedded in the Amorphous-Silicon Carbide Films Deposited by Cat-CVD at Low Temperature for Optoelectronics Applications
J. Hwang, K. Lee, Y. Lee, S. Jang, M. Han, S. Won, J. Sok, K. Park and W. Hong

2228 Excimer Laser Annealing Effects of Silicon-Rich Silicon Nitride Films Prepared by Using Catalytic Chemical Vapor Deposition
K. Lee, J. Hwang, Y. Lee, S. Kim, M. Han, S. Jang, M. Han, S. Won, J. Sok, K. Park and W. Hong

E7 - Organic Semiconductor Materials, Devices, and Processing 2

Electronics and Photonics / Dielectric Science and Technology

2229 Materials Design and Structural Control in Organic Solar Cells
C. Kim, J. Yoo, E. Gomez, S. Lee and Y. Loo

2230 Flexible Polymer Photovoltaic Devices Prepared with Inverted Structures on Metal Foils
F. Chen, J. Wu, C. Lee, W. Huang, H. Chen and W. Chen

2231 Thin Films of New Molecular Materials with Very High Electron Affinity
C. Keil, S. Nagel, R. Gerdes, S. Gorun and D. Schlettwein

2232 Investigation of the Reduction Processes in New Perylenediimide Derivates by In Situ Techniques
B. Meana-Esteban, E. Kozma, H. Neugebauer, S. Luzzati, M. Catellani and N. Sariciftci

2233 Effect of CeO_2 Layer on Enhancement of Hole Injection in Inverted Top-Emitting Organic Light Emitting Diodes
K. Hong, K. Kim, S. Kim and J. Lee

2234 Progress on Printed Low Voltage Electrolyte Gated OTFTs
C. Frisbie

2235 Nanometer-Scale-Thick Polymer Gate Spacers for n-Channel Organic Thin-Film Transistors
K. Noda, S. Tanida, H. Kawabata and K. Matsushige

2236 Liquid Gated Transistors with Organic and Inorganic Semiconductors
Y. Iwasa, H. Shimotani, M. Kawasaki and K. Ueno

2237 The Design of High Mobility Semiconducting Polymers
I. McCulloch and M. Heeney

2238 Crystal Engineering Semiconductors for Transistors and Photovoltaics
J. Anthony

2239 Thin Film Transistors of Liquid Crystalline Semiconducting Polymers on Inorganic and Polymeric Dielectrics
M. Chabinyc, J. Cochran and M. Toney

2240 Molecular Orientation in Thin Films of Solution Processable Organic Semiconductors
L. Richter, D. DeLongchamp, R. Kline, X. Zhang, S. Hudson, O. Jurchescu, D. Gundlach, T. Jackson, J. Anthony, N. Shin and D. Yoon

2241 On Theoretical Description of Charge Transport in Disordered Organic Materials
S. Baranovski

2242 Microscopic Modeling of Charge Transport in Molecular Crystals, Polymers and Liquid Crystals
A. Troisi

2243 Trap-Controlled Transport in Organic Field-Effect Transistors
L. Zuppiroli, S. Konezny, S. Suarez, F. Fleischli and M. Bussac

2244 Compact Modeling of Organic Thin Film Transistors
O. Marinov, M. Deen and B. Iniguez

2245 Carrier Velocity, Mobility, and Charge Transport in Organic Thin-Film Transistors
A. Dodabalapur, B. Cobb and L. Dunn

2246 Fast OTFT Model Parameter Estimation
R. Picos, E. Garcia and B. Iniguez

2247 Study of the Physical Mechanisms at the Contact Regions of Organic Transistors
J. Jiménez Tejada, P. Lara Bullejos, M. Deen and O. Marinov

2270 DOD InkJet Deposition of Functional Materials for Flexible Electronic Devices
F. Ely, C. Molina, T. Santos, V. Mammana and J. Swart

2260 Development of Polycarbazole Based High Efficiency Solar Cells
S. Alem, T. Chu, S. Wakim, J. Lu, P. Verly, Y. Tao, S. Beaupré, M. Leclerc, F. Bélanger, D. Desilets, S. Rodman, D. Waller and R. Gaudiana

E8 - First International Symposium on Semiconductor and Plasmonics-Active Nanostructures for Photonic Devices and Systems

Electronics and Photonics

2271 Electroluminescence in Metal-Oxide-Semiconductor Tunneling Diodes with Ultrathin Silicon
K. Matsumura, R. Yamada, K. Arima, J. Uchikoshi and M. Morita

2272 Colloidal Nanocrystal-Based Light-Emitting Diodes Fabricated on Plastic: Towards Flexible Quantum Dot Optoelectronics - Invited Talk
J. Xu, Z. Tan and A. Wang

2273 Colloidal Quantum Dot Based Photonic Emitters and Circuits - Invited Talk
V. Menon, M. Luberto, N. Valappil and S. Husaini

2274 InGaAs Quantum Dot Microtube Nanoscale Coherent Light Sources on GaAs and Si
F. Li, S. Vicknesh and Z. Mi

2275 Theory of Semiconductor Quantum Dot Lasers - Invited Talk
L. Asryan

2276 Stimulated Emission from ZnO Nanostructures - Invited Plenary Talk
C. Klingshirn, J. Fallert and H. Kalt

2277 ZnO Nanorod Light-emitting Diode
X. Sun and Y. Yang

2278 GaN-Based Optolectronics on Silicon Substrate - Invited Talk
A. Krost

2279 ZnO Nanostructures for LED and Photovoltaic Applications - Invited Talk
D. Rogers, F. Hosseini Teherani, E. Sandana and M. Razeghi

2280 InGaAs/InP Quantum Dot Formation Employing Diblock Copolymer Lithography and Selective Growth - Invited Talk
T. Kuech, J. Park, J. Kirch, C. Liu, M. Rathi, P. Nealey and J. Mawst

2281 Luminescence Characterization of $Y_3Al_5O_{12}$:Ce Nanoparticles Treated with Hexamethyldisilazane (HMDS)
Y. Nien and I. Chen

2282 Metal-Semiconductor Nanoassemblies for Improving of Sensing Efficiency - Invited Talk
M. Miu, I. Kleps, M. Simion, T. Ignat, M. Danila and A. Bragaru

2283 Molecular Beam Epitaxial Growth and Photoluminescence Properties of Homogeneous InN Nanowires on Si(111) - Invited Talk
Y. Chang, F. Li and Z. Mi

2284 Electrochemical Reduction Synthesis of Photoluminescent Silicon Nanocrystals
V. Reipa and J. Choi

2285 Breast Cancer Cell Imaging Using Semiconductor Quantum Dots - Invited Talk
H. Xu, Z. Aguilar, H. Wei and A. Wang

2286 Far-Field and Near-Field Engineering of Semiconductor Lasers Using Plasmonics - Invited Plenary Talk
F. Capasso, N. Yu, E. Cubukcu, R. Blanchard, J. Fan, Q. Wang, C. Pflugl, L. Diehl, T. Edamura, S. Furuta, M. Yamanishi and H. Kan

2287 Comparative Analysis of Surface Enhanced Raman Scattering Substrates Fabricated by Focused Ion Beam Milling and Electron Beam Lithography - Invited Talk
M. Gerhold, A. Dhawan, Y. Du and T. Vo-Dinh

2288 Extraordinary Transmission through Nanoapertures for Imaging and Nanolithography - Invited Talk
S. Chen

2289 Measurements on Single-Molecule Surface-Enhanced Raman Scattering from Controlled Metal Nanogap
K. Muraokshi

2290 Fabrication and Properties of Au Nanoflowers for SERS Substrates
J. Krishnan, I. Kim, W. Park, Z. Kim and S. Kim

2291 Tunable Electrochemical Switch of the Optical Properties of Metallic Nanoparticles
Y. Leroux, J. Lacroix, V. Stockhausen, C. Fave, N. Felidj, J. Grand, A. Hohenau and J. Krenn

2292 Semiconductor-Core Metal-Shell Plasmonic Lasers - Invited Talk
C. Ning, M. Hill, M. Marell, E. Leong, B. Smalbrugge, Y. Zhu, M. Sun, P. van Veldhoven, E. Geluk, F. Karouta, Y. Oei, H. Wang, K. Ding, R. Liu, R. Notzel and M. Smit

2293 Development of Silicon-Integrated Infrared Quantum Dot Light Emitting Diodes
T. Zhu, S. Gao, C. Zhang, F. Zhang and J. Xu

2294 Device Structure Modification: Towards A More Efficient Infrared Nanocrystal Solar Cell
T. Zhu, Z. Tan, S. Gao, F. Zhang and J. Xu

2295 1.55 μ Light Emission from Microcavity Light-Emitting Devices with PbSe Colloidal Quantum Dots
F. Zhang, L. Wei, T. Zhu, S. Gao, C. Zhang, J. Xu, B. Downey and S. Mohney

2296 Frequency Up-Converted Lasing of Nanocrystal Quantum-Dots in Microbeads
C. Zhang, F. Zhang, J. Xu and A. Wang

2297 Performance Degradation of P3HT:PCBM Polymer/Fullerene Photovoltaic Cells under Gamma Irradiation
A. Todd, T. Zhu, F. Zhang, C. Zhang, A. Berger and J. Xu

2298 Synthesis of Near-IR Emitting CdTe/CdS/ZnS Core-Shell-Shell Quantum Dots
H. Su, J. Xu and A. Wang

2299 Microwave Synthesis of Nearly Monodisperse CdSe Nanocrystals
H. Su, J. Xu and A. Wang

2300 Electrochromic All-Solid-State Switchable Mirror on Flexible Polyethylene Terephthalate Sheet Fabricated by Only Dry Process
K. Tajima, Y. Yamada, S. Bao, M. Okada and K. Yoshimura

2301 Solid Polymer-Ionic Liquid Electrolyte for Flexible Electrochromic Devices under a European Community Program
K. Zaghib, J. Labrecque, A. Guerfi, U. Posset, A. Celik-Cochet and G. Schottner

2302 Preparation of Ni Oxyhydroxide Thin Films by Reactive Sputtering in H_2O Atmosphere and Their Electrochromic Properties
Y. Abe, H. Ueta, T. Obata, M. Kawamura, K. Sasaki and H. Itoh

2303 Energy-Saving Effect of Switchable Mirror Window
K. Yoshimura, S. Bao, K. Tajima and Y. Yamada

2304 Novel Switchable Mirrors Based on Mg-Ca Alloy
Y. Yamada, S. Bao, K. Tajima, M. Okada and K. Yoshimura

2305 Electrochromic Li-Ni-O Thin Film in Aqueous Liquid Electrolyte
D. Park, B. Min, G. Campet and A. Rougier

2307 One Material, Multiple Faces: Nanostructured Bismuth - Invited Talk
H. Park, J. Kim, C. Hsu, H. Shin and J. Xu

2306 High Contrast Nanocomposite Material for Ophthalmic Electrochromic Devices
R. Ruffo, L. Beverina, A. Celik, U. Posset, C. Mari, G. Pagani and G. Schottner

2308 Nanophotonic Devices Based on Fano Resonances on Stacked Nanomembranes - Invited Talk
W. Zhou and Z. Ma

2309 Co-deposition of Composite Lithium Nickel Tungsten Oxide Films for Electrochromic Applications
D. Gillaspie, C. White, J. Pankow, S. Lee and A. Dillon

2311 One Dimensional Metal-Dielectric Photonic Crystals Using Metal Nanocomposites
S. Husaini, N. Valappil and V. Menon

2310 Improved Transmittance for Electrochromic Ni-W Oxide Films
C. White, D. Gillespie, J. Pankow, S. Lee and A. Dillon

2312 Photonic Crystal Slotted Waveguides and Cavities - Invited Talk
A. Di Falco and T. Krauss

2313 Tungsten Oxide Electrochromic Windows with Lithium Polymer Electrolytes
C. Sequeira and D. Santos

2315 Measured Colloidal Quantum Dot Absorption Enhancement in Fano Filters on Flexible Substrates
L. Chen, H. Yang, Z. Qiang, H. Pang, Z. Ma, J. Xu and W. Zhou

2314 Ultrasonic Spray Deposition of Electrochromic Materials
R. Tenent, D. Gillaspie and A. Dillon

2316 Enhancing Photonic Devices with Metal Nanoparticles - Invited Talk
S. Bank, A. Crook and H. Nair

2317 Development of Flexible Electrochromic Devices Based on Crystalline WO_3 Nanostructures Produced with Hot-Wire Chemical Vapor Deposition
E. Whitney, C. White, D. Gillaspie, S. Lee and A. Dillon

2319 Temperature Dependence of the Photoluminescence Intensity in $Si_{3+x}N_4$:H Films with Amorphous Si Nanoclusters: Evidence for Two Processes Involved in the Nonradiative Relaxation of Photoexcitations
V. Volodin, V. Stuchinsky, T. Korchagina, A. Popov and M. Vergnat

2318 Synthesis of 2-(Selenophen-2-yl)pyrroles and 2-(Thien-2yl)-1H-pyrroles for Electrochromic Devices
C. Pozo-Gonzalo

E9 - State-of-the-Art Program on Compound Semiconductors 51 (SOTAPOCS 51) and Wide-Bandgap Semiconductor Materials & Devices 10

Electronics and Photonics / Sensor

2320 Diamond FET Arrays for Biosensors and Bioelectronics
J. Garrido, M. Dankerl, M. Hauf, A. Reitinger and M. Stutzmann

2321 Development of Lateral Quantum Dots with Cryogenic Silicon Circuit Assisted Read-Out
M. Carroll, E. Nordberg, T. Gurrieri, K. Eng, G. Ten Eyck and M. Lilly

2322 Facet Specific Gold Tip Growth on Semiconductor Nanorod Assemblies
C. O'Sullivan, S. Ahmed, R. Gunning, C. Barrett, H. Geaney, A. Sanyal, A. Singh and K. Ryan

2323 Novel Inorganic-Organic Hybrid Semiconductors with Extraordinary Properties
Y. Zhang

2324 The Growth of Semiconductor and Dielectric Nanowire and Nanowire Arrays and Their Plasmonic Applications
S. Prokes, L. Mazeina, D. Alexson, O. Glembocki, H. Park, H. Qi and R. Rendell

2325 Electrochemical Sensing with Diamond Nanotips
C. Nebel, N. Yang and W. Smirnov

2326 Group III-Nitrides: From Bioelectronics to Nanosensors
M. Eickhoff

2327 Au Free Ohmic Contacts for High Temperature InAlN/GaN HEMTs
M. Alomari, D. Maier, J. Carlin, N. Grandjean, M. Poisson, S. Delage and E. Kohn

2328 Nanocrystal LEDs by Spray Layer-by-Layer Deposition
T. Otto, P. Mundra, D. Dorfs, M. Schelter, J. Poppe, E. Frolova, V. Lesnyak, N. Gaponik and A. Eychmüller

2329 Optoelectronic Properties of AlGaN-Films Studied by Means of Ellipsometry
C. Cobet, C. Werner, M. Röppischer, N. Esser and R. Goldhahn

2330 Defect Reduction through Confined Epitaxy of GaN on SiC
J. Hite, C. Eddy Jr. and M. Mastro

2331 Characterizations of Sidewall Reflected GaN-Based LEDs Using Self-Aligned Nanorod Arrays as Localized Photonic Crystals
Y. Cheng, K. Pan, L. Chen, M. Ke, C. Chen and J. Huang

2332 Enhanced Vertical Emission from GaN Based Light Emitting Diode with ZnO Nanorod Arrays Produced by Hydrothermal Method
S. Dalui, C. Lin, H. Lee and C. Lee

2333 Electron-Beam Evaporation of Distinctive Indium-Tin-Oxide Nanorods for Enhanced Light Extraction from InGaN/GaN Light Emitting Diodes
C. Chiu, M. Tsai, P. Yu and H. Kuo

2334 Strain Relaxation and Emission Characteristics of Size-Dependent InGaN/GaN Nanorod Arrays
C. Chiu, P. Yu, H. Kuo, T. Lu, S. Wang, C. Chang and Y. Wu

2335 InGaN-Based Light-Emitting Diodes with the Photoelectrochemical Treated Microhole Array Structures
C. Lin and C. Lin

2336 Nanostructured Surface Morphology of ZnO Grown on A-Plane GaN
C. Chen, C. Pan, F. Tsao, Y. Liu, G. Chi, C. Chang and T. Hsueh

2337 Local Vibration Modes of N-H Related Complexes in GaAsN Grown by Chemical Beam Epitaxy
H. Suzuki, T. Tanaka, Y. Ohshita, N. Kojima and M. Yamaguchi

2338 Suppression of Leakage Current of AlGaN/GaN HEMT by HF Treatment
Y. Choi, J. Lim, Y. Kim and M. Han

2339 Effect of Doping on the Optical and Structural Properties of ZnO Thin Films Prepared by RF Diode Sputtering
K. Shtereva, V. Tvarozek, P. Sutta, I. Novotny and A. Pullmannova

2340 Wide Bandgap Oxide Semiconductors for Novel Functions and Applications
S. Fujita, T. Oshima and K. Kaneko

2341 High-Operating Current ZnO Based Thin Film Transistors with a Bilayer ZnO/GZO Channel
K. Liu, H. Chiang, S. Hsiao, L. Su, L. Peng and J. Huang

2342 Fabrication and Characterization of Zinc Oxide Nanorods Based Heterojunction Devices Using Simple Solution Method
N. Reddy, S. Kim, E. Lee and Y. Hahn

2343 SiC Power Device Technology: Differences to Silicon and Their Influence on Device Processing and Performance
P. Friedrichs

2344 On the Driving Force of Shockley Stacking Fault Motion in 4H-SiC
J. Caldwell, R. Stahlbush, M. Ancona, O. Glembocki and K. Hobart

2345 Correlation of Substrate Quality and Epitaxial Layer Lifetime and Defectivity in 4H-SiC Homoepitaxy
C. Eddy Jr., B. VanMil, K. Lew, R. Myers-Ward, J. Tedesco, R. Stahlbush, J. Caldwell and D. Gaskill

2346 4H-SiC on C-Plane Sapphire with C_{60}
J. Li, P. Batoni and R. Tsu

E10 - ULSI Process Integration 6

Electronics and Photonics

2347 Modeling Techniques for Strained CMOS Technology
V. Sverdlov and S. Selberherr

2348 Integration Challenges and Opportunities of Nanoelectronic Devices
Y. Nishi

2349 Bio Inspired Architectures in the Nanoscale Integration Era
T. Shibata

F1 - Current Trends in Electrodeposition, an Invited Symposium

Electrodeposition

F2 - Electrodeposition of Nanoengineered Materials and Devices 3

Electrodeposition

F3 - EuroCVD 17 and CVD 17

High Temperature Materials / Dielectric Science and Technology / Electronics and Photonics

2466 Hot Wire Chemical Vapor Deposition: Recent Progress, Present State of the Art and Competitive Opportunities
R. Schropp

2467 Investigation of Triethylgallium Thermal Decomposition Using In Situ Raman Spectroscopy and DFT Calculations
J. Lee, Y. Kim and T. Anderson

2468 Gas Phase Deposition and Characterization of (Si)-B-C Ceramics
G. Chollon, J. Berjonneau and F. Langlais

2469 A Density Functional Theory Study of Chlorosilanes Polymerization in Silicon Epitaxy
D. Moscatelli, M. Dossi, A. Fiorucci and M. Masi

2470 Electrical Properties of Plasma-Deposited Silicon Oxide Clarified by Chemical Modeling
A. Kovalgin, A. Boogaard, I. Brunets, T. Aarnink and R. Wolters

2471 Catalytic-CVD: Its Fundamentals and Application
H. Matsumura and K. Ohdaira

2472 N Titania Thin Films, Prepared by Atmospheric Pressure Chemical Vapor Deposition: Enhanced Visible Light Photocatalytic Activity and Antimicrobial Effects
C. Dunnill and I. Parkin

2473 A Comparative Study of the Photoinduced Properties of TiO_2/SiO_2 and $TiO_2/ZnO/SiO_2$ Layers Prepared by Chemical Routes
D. Vernardou, E. Spanakis, K. Vlachou, G. Kalogerakis, J. Costello, E. Koudoumas, N. Katsarakis and M. Pemble

2474 Selective Growth of B- and C-Doped SiGe Layers in Unprocessed and Recessed Si Openings for pMOSFET Application
M. Kolahdouz, E. Trybom and H. Radamson

2475 Surface Chemistry Controlling Technology: Multiscale Spatial Behavior in Atomic Layer Deposition
G. Rubloff, L. Henn-Lecordier, E. Cleveland, P. Banerjee and I. Perez

2476 Multiscale Simulation and Optimization of an Atomic Layer Deposition Process in a Nanoporous Material
V. Dwivedi and R. Adomaitis

2477 A Detailed Investigation of the Gas Phase and Surface Chemistry Active during the PECVD of nc-Silicon: A Detailed Model of the Gas Phase and Surface Chemistry
C. Cavallotti, M. Rondanini, T. Moiseev, D. Chrastina and G. Isella

2478 A Comprehensive Insight in the MOCVD of Aluminum Through Interaction Between Reactive Transport Modeling and Targeted Growth Experiments
T. Xenidou, N. Prud'homme, C. Vahlas, N. Markatos and A. Boudouvis

2479 Kinetic Modeling of Pyrocarbon Deposition Obtained by Propane Pyrolysis
R. Lacroix, R. Fournet, I. Ziegler-Devin and P. Marquaire

2489 Atomospheric Pressure SiC Film Deposition at Low Temperatures Using SiH_3CH_3 and HCl Gases
H. Habuka and H. Omori

2490 Innovative $M(Hfa)_2$•TMEDA (M = Co, Cu) Precursors for the CVD of Copper-Cobalt Oxides: An Integrated Theoretical and Experimental Approach
A. Gasparotto, D. Barreca, A. Devi, R. Fischer, E. Fois, A. Gamba, C. Maccato, R. Seraglia, G. Tabacchi and E. Tondello

2491 Influence of N_2 and H_2 Gas Flow Rates on Properties of n-Type Nanocrystalline 3C-SiC:H Thin Films Prepared by Hot-Wire Chemical Vapor Deposition
A. Tabata, Y. Hoshide and A. Kondo

2492 New Group of TiO_2 CVD Precursors $[Ti_4O_4(O^tBu)_4(OOCR')_4]$, R' = ^{t}Bu, $C(Me)_2Et$, $CH_2{}^tBu$
A. Radtke, P. Piszczek, T. Muzioł, A. Wojtczak and W. Bartkowski

2493 PECVD Deposition of nc-Si, μc-Si, and a-Si of Different Isotopic Composition in Form of Films and Bulk Material from SiF_4 Precursor
P. Sennikov, S. Golubev, V. Shashkin, D. Pryakhin, B. Andreev, M. Drozdov and H. Pohl

2494 AFM Study of PECVD DLC Films for Solar Selective Absorber
S. Tinchev, A. Gusterov, P. Sharlandzhiev, P. Nikolova and Y. Dyulgerska

2495 Correlation Between Plasma OES and Properties of B-Doped Diamond Films Grown by MW PE CVD
M. Belousov, V. Krivchenko, P. Minakov, A. Pal, A. Rakhimov, N. Suetin and V. Sen'

2496 Functional Complex Oxides: Interplay between the Structure, Electrical Properties and Surface Reactivity
N. Bahlawane, P. Tchoua Ngamou and K. Kohse-Höinghaus

2497 Deposition of WN_xC_y from the Tungsten Piperidylhydrazido Complex $Cl_4(CH_3CN)W(N\text{-}pip)$ as a Single-Source Precursor
D. Kim, O. Kim, H. Ajmera, T. Anderson, J. Koller and L. McElwee-White

2498 Variation in Properties CVD−ZnS_xSe_{1-x} with Composition
D. Savin, E. Gavrishchuk and V. Ikonnikov

2499 In Situ Doped Si Selective Epitaxial Growth at Low Temperatures by Atmospheric Pressure Plasma CVD
T. Ohnishi, Y. Kirihata, H. Ohmi, H. Kakiuchi and K. Yasutake

2500 Comparison of Diamond Deposition with Boron or Sulfur Addition
R. Haubner

2501 Barium Titanate Thin Film Growth by Low-Pressure Metallorganic Chemical Vapor Deposition
T. Sekine, Y. Okumura, A. Satou and Y. Akiyama

2502 Formation of Silicon Nitride Layer on Microcrystalline Silicon Thin Films by Hot-Wire Chemical Vapor Method Using Nitrogen and Hydrogen Gases
A. Tabata, K. Mazaki and A. Kondo

2503 CVD of Pure Copper Films from Amidinate Precursor
L. Aloui, V. Krisyuk, N. Prud'homme, B. Sarapata, F. Senocq, D. Samelor and C. Vahlas

2504 Reactor Scale Simulations of Boron and Boron Carbide Deposition
G. Reinisch, D. Alotta, N. Bertrand, G. Chollon, C. Descamps and G. Vignoles

2505 Theoretical Study of the Gas-Phase System B/C/Cl/H for Boron Carbide Deposition
G. Reinisch, J. Leyssale, N. Bertrand, C. Deschamps and G. Vignoles

2506 $La_{1-x}Sr_xMnO_3$ Films on Perovskite and Technological Substrates: In Situ Growth by MOCVD from a Liquid Multimetal Source
R. Toro, D. Fiorito, G. Malandrino and I. Fragalà

2507 Deposition of Metastable Nickel Nitride by CVD
E. Lindahl, M. Ottosson and J. Carlsson

2508 Effect of Ozone on Deposition of Titanium Oxide Films from Tetraisopropoxide
S. Alexandrov, M. Barishnikova, L. Filatov and V. Protopopova

2509 In Situ Investigation of the Processes of Precursor Adsorption by Means of Ellipsometry and Mass Spectrometry
I. Igumenov, P. Prozorov, P. Semyannikov and I. Zhukova

2510 Characterization of High-Rate Deposited Microcrystalline Si Films Prepared Using Atmospheric-Pressure Very High Frequency Plasma
K. Tabuchi, K. Ouchi, H. Ohmi, H. Kakiuchi and K. Yasutake

2511 Texture and Residual Stress Analysis by XRD on Metastable Tetragonal Zirconia Films Obtained by MOCVD
M. Jouili, M. Andrieux, I. Gallet, N. Prud'homme and V. Ji

2512 Novel Precursors for the MOCVD of Molybdenum Nitride
T. Thiede, V. Gwildies, L. Alsamann, D. Rische and R. Fischer

2513 Alkylsilyl Compounds of Selenium and Tellurium: New Precursors for ALD
T. Hatanpää, V. Pore, M. Ritala and M. Leskelä

2514 ALD TaN from PDMAT and NH_3/H_2 for Cu Diffusion Barriers
V. Virginie BRIZE, P. Violet, F. Volpi, I. Nuta, A. Mantoux, R. Boichot and E. Blanquet

2515 Tuning the Thermal Properties of Hafnium Precursors by Tailoring the Ligands
K. Xu, A. Milanov and A. Devi

2516 Photoluminescence Properties of Polar and Nonpolar ZnO Films Grown by Atmospheric-Pressure CVD Using Zn and H_2O as Source Materials
T. Terasako, K. Taniguchi, K. Taira, M. Yagi and S. Shirakata

2517 An Ab Initio RRKM/Master Equation Investigation of SiH_4 and GeH_4 Decomposition Kinetics Using a Kinetic Monte Carlo Approach
C. Cavallotti, D. Polino and A. Barbato

2518 Rapid Thermal MOCVD of Undoped and Al Doped ZnO Thin Films
A. Nebatti, C. Pflitsch, C. Eckert and B. Atakan

2519 Synthesis of Transparent ZrO_2 Thin Films by MOCVD
P. Cárcamo-León, A. Torres-Huerta, M. Domínguez-Crespo and E. Ramírez-Meneses

2520 Atomic Layer Deposition of Magnesium Oxide on GaAs
A. O'Mahony, R. Chiodo, M. Nolan, J. Hamilton, I. Povey and M. Pemble

2522 The Application of Advanced Spectroscopic Diagnostics with Chemometric Modeling to Optimize Thin Film Properties Grown by Atmospheric Pressure PECVD
D. Sawtell, D. Sheel and P. Martin

2523 Reaction Kinetics of GaN Metal-Organic Vapor-Phase Epitaxy Analyzed by Multiscale Profiles of Growth Rate
M. Sugiyama, S. Yasukochi, T. Shioda, Y. Shimogaki and Y. Nakano

2524 In Situ Monitoring of the Initial Nucleation for the Formation of Uniform InGaAs Microdiscs on Si
M. Deura, Y. Kondo, T. Hoshii, M. Takenaka, S. Takagi, Y. Nakano and M. Sugiyama

2525 A New Low-Melting Barium and Strontium Precursors for MOCVD Growth of BST Thin Films
N. Kuzmina, I. Malkerova, A. Alikhanyan, D. Tsymbarenko, O. Kreinin, G. Schuster and E. Zolotoyabko

2527 Atmospheric Pressure Chemical Vapour Deposition of Electrochromic Mo-W Oxide Films: Structure and Optoelectronic Properties
T. Ivanova, K. Gesheva, S. Bojadjiev, M. Kalitzova and O. Lebedev

2528 Effect of the Substrate Nature on the ALD ZrO_2 Films Crystalline Structure
D. Monnier, M. Gros-Jean, E. Deloffre, B. Doisneau, S. Coindeau, A. Crisci, J. Roy, Y. Mi, B. Detlefs, J. Zegenhagen, C. Wyon, C. Martinet, F. Volpi and E. Blanquet

2529 Effect of H_2 on the Microstructure and Properties of TiO_2 Films Grown by Atmospheric Pressure MOCVD on Stainless Steel Substrates
D. Duminica, F. Maury and R. Hausbrand

2530 Morphological and Structural Study of CVD MoO_3-Cr_2O_3 Films
T. Ivanova, K. Gesheva, S. Bojadjiev and M. Kalitzova

2531 On Gaseous Phase of ALD Precursors by Means of Thermodynamics
P. Violet, I. Nuta, C. Chatillon and E. Blanquet

2532 Thermal Properties of Some Volatile Titanium(IV) Precursors
E. Filatov, H. Nizard, P. Semyannikov, S. Sysoev, S. Trubin, N. Morozova, K. Zherikova and N. Gelfond

2533 MOCVD of Zirconium Oxide from the Zirconium Guanidinate Complex $[ZrCp'\{\eta^2\text{-}(^i PrN)_2CNMe_2\}_2Cl]$
C. Blackman, C. Carmalt, H. Davies, S. Moniz, S. Potts and D. Pugh

2534 Online Control by IR Pyrometry of Nanostructured Multilayer CrC_x/CrN Coatings Grown by MOCVD
A. Douard, D. Samelor, S. Delclos, C. Tendero and F. Maury

2535 Preparation and Physical Characterization of SnO_2:Sb
S. Haireche, A. Boumeddiene, A. Guittoum, A. El Hdiy and A. Boufelfel

2536 Microstructural Control of Zirconium Carbide Coating Prepared by Chemical Vapor Deposition
W. Sun, X. Xiong, B. Huang, G. Li, H. Zhang, P. Xiao, Z. Chen and X. Zheng

2537 High-Speed Growth and Characterization of AlN Polycrystalline Layers by High Temperature Chemical Vapor Deposition
A. Claudel, E. Blanquet, D. Chaussende, B. Doisneau, H. Mank, D. Pique and M. Pons

2538 Preparation of Strontium Titanate Film by Low Pressure Chemical Vapor Deposition
D. Kon, K. Hashiba, T. Kawashima and Y. Akiyama

2539 Novel N-Containing Precursors of Nickel(II) for Film Deposition by MOCVD
K. Zherikova, N. Morozova, A. Kil'metiev, L. Zelenina, P. Semyannikov, N. Gelfond, T. Chusova and I. Igumenov

2540 PECVD BC_xN_y Films from Mixtures of N-Trimethylborazine with Hydrogen and Ammonia: Modeling, Synthesis, and Characterization
V. Sulyaeva, M. Kosinova, A. Golubenko, Y. Rumyantsev, N. Fainer and F. Kuznetsov

2541 In Situ Infrared Spectroscopy of Hydrocarbons in a Pyrocarbon CVD Reactor
M. Kawase, T. Ito and K. Miura

2542 Modeling of the Gas Dynamic Processes during the Deposition of Nanolayers on the Surface of Submicrometer Channels of Porous Solids
I. Golovnev, V. Fomin, I. Igumenov and B. Kuchumov

2543 Highly Conformal Film Growth by Chemical Vapor Deposition: A Zone Diagram Based on Kinetics
A. Yanguas-Gil, N. Kumar, Y. Yang and J. Abelson

2544 Effect of Ozone on Deposition of Silicon Oxide Films from Decamethylcyclopentasiloxane
S. Alexandrov, L. Filatov and A. Speshilova

2545 CVD Flow Field Modeling Using the Quiet Direct Simulation (QDS) Method
H. Cave, C. Lim, M. Jermy, C. Wu, M. Smith and S. Krumdieck

2546 Dimethylgallium Isopropoxide as a New Volatile Source for ALD and MOCVD of Ga_2O_3
H. Lee, K. Kim, J. Woo, D. Jun, Y. Park, Y. Kim, H. Lee, Y. Cho and H. Cho

2547 Investigation of Precursor Adsorption on Silicon Surface by Means of Molecular Dynamics
I. Zhukova, I. Golovnev, I. Igumenov, P. Semyannikov and E. Filatov

2548 Predictable Simple Reaction Model for Poly-Silicon LPCVD Process
K. Kaneko, M. Ogino, R. Shimizu, Y. Shimogaki and M. Koshi

2549 Impact of Small Deviations in EEDF on Silane-Based Plasma Chemistry
A. Kovalgin, A. Boogaard and R. Wolters

2550 Zinc Malonate Based Precursors for MOCVD of ZnO
D. Bekermann, R. Fischer and A. Devi

2551 MOCVD of Gallium Oxide Thin Films Using Homoleptic Gallium Complexes: Precursor Evaluation and Thin Film Characterization
M. Hellwig, K. Xu, D. Barreca, A. Gasparotto, B. Niermann, J. Winter, R. Fischer and A. Devi

2552 Growth of ZnO Nanowires by MOCVD: Fundamental Role of the Substrates
C. Ternon, G. Rey, M. Labeau, N. Thiré, C. Jimenez and D. Bellet

2553 MOCVD of Epitaxial Alkali-Earth Fluorides Thin Films
A. Blednov, O. Gorbenko, S. Samoilenkov, R. Muydinov and A. Kaul

2554 Atmospheric Pressure CVD of Tin Oxide and Fluorine-Doped Tin Oxide
T. Abendroth, H. Althues and S. Kaskel

2555 In-Line Monitoring of Atmospheric Pressure Plasma Processes by Fourier Transform Infrared Spectroscopy
M. Leistner, D. Linaschke, W. Graehlert and S. Kaskel

2556 New Thin-Film $BiFe_{1-x}Co_xO_3$ and $BiFe_{1-x}Ni_xO_3$ Multiferroics: Preparation and Analysis of Structure
A. Akbashev, E. Ganshina, T. Murzina and A. Kaul

2557 Synthesis of $ZnO\text{-}Ce_2O_3$ Thin Films by APCVD
A. Torres-Huerta, M. Domínguez-Crespo, S. Brachetti-Sibaja and M. Hernández-Pérez

2589 TiO_2 *Strelitzia*-like Hybrid Nanocomposites Obtained by a Synergic Combination of Vapor Techniques
S. Battiston, M. Bolzan, M. Fabrizio, R. Gerbasi, P. Guerriero, E. Miorin, C. Mortalò, C. Pagura and F. Visentin

2590 Surface Modification of PMMA with DLC Using RF-PECVD
P. Barhai, R. Sharma, A. Yadav, A. Singh, H. Gaur and V. Buck

2591 AlGaN Multiple Quantum Wells and AlN Grown in a Hot-Wall MOCVD for Deep UV Applications
A. Henry, A. Lundskog, J. Palisaitis, I. Ivanov, A. Kakanakova-Georgieva, U. Forsberg, P. Persson and E. Janzén

2592 Carbon Nanostructures Produced by High Pressure CVD
V. Khavrus, E. Ibrahim, A. Leonhardt, A. Elgendy, S. Hampel, R. Klingeler and B. Büchner

2593 Comparative Study of SiN_x and BN_x Nanolayers Prepared by Different Chemical Vapour Deposition Methods
G. Beshkov, N. Nedev, D. Spassov, J. Terrazas, B. Salas and V. Krastev

2594 Photocatalytic Activity Dependence on the Structural Orientation of MOCVD TiO_2 Anatase Films
R. Gerbasi, M. Bolzan, N. El Habra, G. Rossetto, L. Schiavi and A. Strini

2595 Growth of Carbon Nanotube Layers in a Thermal CVD Reactor on Substrates Prepared by Catalyst Spray Deposition
M. Traxler and R. Haubner

2596 Resistive Switching in Metal Oxide Films Deposited by Metallorganic Chemical Vapor Deposition
T. Nakamura, K. Onogi, K. Homma and K. Tachibana

2597 Deposition of Ir Nanostructured Thin Films by Pulse CVD
N. Gelfond, P. Semyannikov, S. Trubin, N. Morozova and I. Igumenov

2598 HfO_2-High-k Dielectric for Nanoelectronics
T. Smirnova, F. Kuznetsov, L. Yakovkina, V. Kaichev, V. Kosyakov, M. Lebedev and V. Kichai

2599 Pulse CVD Deposition of Ru Films from Ru(II) $\acute{\eta}^3$-Allylic Complex
S. Trubin, N. Morozova, P. Semyannikov, A. Bessonov, N. Gelfond and I. Igumenov

2600 Preparation of Iridium Thin Film by Pulse CVD from $Ir(acac)(CO)_2$
P. Semyannikov, N. Morozova, K. Zherikova, S. Trubin, I. Igumenov and N. Gelfond

2601 Initial Stages of Thermally and Hot-Wire Assisted CVD Copper on SiLK and LTO Substrates Activated with Mercaptopropyl Triethoxysilane Self-Assembled Monolayers
G. Papadimitropoulos, T. Speliotis, A. Arapoyianni and D. Davazoglou

2602 Capacitance-Voltage Analysis of ZrO_2 Thin Films Deposited by MOCVD Technique
T. Mih, S. Paul, A. Milanov and A. Devi

2603 MOCVD of the $(Al_2O_3)_x(HfO_2)_{1-x}$ Films as Alternative Gate Dielectric for MIS Nanostructures
T. Smirnova, M. Lebedev, V. Kaichev, L. Yakovkina, N. Morozova, K. Zherikova, P. Semyannikov and S. Trubin

2604 Low-Temperature VUV-Stimulated MOCVD Process of Palladium Layer Deposition
B. Kuchumov, T. Koretskaya, Y. Shevtsov, S. Trubin, G. Zharkova, V. Danilovich, I. Igumenov and V. Kruchinin

2605 Selective Growth of Carbon Nanotubes on Printed Fe_3O_4 Nanoparticles
R. Haubner, W. Schwinger, B. Dittert and R. Schöftner

2606 Synthesis of Carbon Nanotubes by Catalytic Chemical Vapour Deposition in a Fluidized Bed Reactor
K. Danova, I. Jipa, U. Zenneck and N. Popovska

2607 Synthesis and Thermal Stability of Nanocomposite SiC_xN_y:H Films from Cycle Siliconorganic Precursor
N. Fainer, Y. Rumyantsev, V. Kesler, E. Maximovski and F. Kuznetsov

2608 Pulsed MOCVD Processes of MgO Layer Deposition from $Mg(thd)_2$
B. Kuchumov, Y. Shevtsov, P. Semyannikov, E. Filatov and I. Igumenov

2609 Investigation of Tantalum Oxide Films Prepared by Atmospheric Pressure Chemical Vapour Deposition for Use as Water Splitting Photocatalysts
G. Hyett, J. Darr, A. Mills and I. Parkin

2610 Controlled Protein Adsorption on Nanostructured Zinc Oxide Thin Films Deposited by Colloidal Assisted-Low Temperature MOCVD
M. Fragala, C. Satriano and G. Malandrino

2611 Atmospheric Pressure Plasma Enhanced CVD of Fe Nanoparticles
S. Alexandrov, I. Kretusheva and M. Mishin

2612 Dynamics of Pulsed DC Discharges Used for PACVD of a-C:H:Si
M. Traxler, A. Puchhammer, H. Störi, T. Müller and J. Laimer

2613 Synthesis of ZnS Nanoparticles by Spray Pyrolysis: Morphology Control Using the Same Precursors in Different Reactor Systems
S. Liu and M. Swihart

2614 Fabrication of ZnO Thin Film Transistor by MOCVD Using Bis(acetylacetonato)zinc(II) Fiber and Ozone
M. Sakuma, S. Seki and K. Haga

2615 Exploring Multiple Calcium Phosphate Precursors for Pulsed Pressure-MOCVD
D. Clearwater, R. Hartshorn and S. Krumdieck

2616 VUV-Stimulated MOCVD Processes of Copper Layer Deposition
I. Igumenov, B. Kuchumov, S. Kozlova, T. Koretskaya, S. Trubin, R. Sokuev, V. Lyakh and V. Kruchinin

2617 Pulsed-Pressure MOCVD Processing Investigation for TiO_2 Films on Si_3N_4 Substrate from TTIP
V. Siriwongrungson, S. Krumdieck and M. Alkaisi

2618 Hierarchical Nanostructure Produced by Growing Carbon Nanotubes on Silicon Oxide Nanowires
H. Woo, J. Kim, D. Choi and C. Yoon

2619 Dynamic Study of Gas-Phase Species during Single-Walled Carbon Nanotubes Production by Chemical Vapor Deposition of Ethanol
K. Kouravelou and X. Verykios

2620 A Single-Step APCVD Route to Novel Dual Functionality: Self-Cleaning Biocidal Titania-Copper Films
P. Evans, H. Foster, D. Sheel, A. Steele and H. Yates

2621 Deposition of Germanium Nanowires from Digermane Precursor: Influence of the Substrate Pretreatment
V. Dřínek, R. Fajgar, J. Šubrt and M. Klementová

2622 ArF Laser-Induced Deposition of Carbon Encapsulated CoFe Nanoparticles
R. Fajgar, Z. Bastl, J. Subrt, N. Murafa and M. Maryško

2623 Strain Evaluation in SiC MEMS Test Structures
M. Bosi, G. Attolini, B. Watts, C. Frigeri, F. Rossi, A. Poggi, A. Roncaglia, F. Mancarella, O. Martinez and V. Hortelano

2624 Silver Films Deposited by Liquid-Delivery MOCVD Using (Tertbutylcarboxylate)(triethylphosphine)silver with Toluene as the Solvent
M. Lisca, B. Kalkofen, M. Lisker, E. Burte, I. Szymańska and E. Szłyk

2625 Vertical Aligned Carbon Nanotube Deposition on Metallic Substrates by CVD
S. Doerfler, A. Meyer, H. Althues, I. Dani and S. Kaskel

2626 Low Temperature Atmospheric Pressure CVD of Photoactive Titanium Dioxide
T. Abendroth, H. Althues, B. Leupolt and S. Kaskel

2627 Shape Optimization of a Showerhead System for the Control of Growth Uniformity in a MOCVD Reactor Using CFD-Based Evolutionary Algorithms
T. Xenidou, N. Prud'homme, L. Aloui, C. Vahlas, N. Markatos and A. Boudouvis

2628 Preparation of High Permittivity $GdScO_3$ Films by Liquid Injection MOCVD
K. Huseková, M. Jurkovič, K. Cico, D. Machajdik, E. Dobročka, R. Lupták, K. Fröhlich and A. Mackova

2629 Plasma Composition and Kinetic Reaction Rates in a LEPECVD Ar-SiH_4-H_2 Plasma during Deposition of nc-Si Films for Photovoltaic Applications
T. Moiseev, D. Chrastina, G. Isella and C. Cavallotti

2650 Growth and Characterization of Zinc Oxide Thin Films Containing Directly Incorporated Silicon Nanoparticles by Aerosol Assisted Chemical Vapour Deposition
J. Hamilton, D. Iacopino, M. Nolan, S. O'Brien, I. Povey, M. Pemble, C. Licitra, N. Rochat, B. Florin, D. Lafond and P. Mur

2651 CVD Synthesis of Shape and Size Controlled ZnO Nanoparticles for Application as UV Filters
R. Bacsa, P. Serp, K. Pierzchala and A. Sienkiewicz

2652 MOCVD Grown Thin Film Nanocomposites Based on YBCO with Columnar Defects Comprised of Self-Assembled Inclusions
O. Boytsova, S. Samoilenkov, A. Vasiliev, A. Kaul and I. Voloshin

2653 Plasma Nanoarchitectronics: Thermokinetic Pathways from Higher-Complexity and Strongly Non-equilibrium CVD to Exotic Self-Organized Nanoassemblies
K. Ostrikov, S. Xu and I. Levchenko

2654 Locally Beam Assisted Deposition: An Overview
P. Hoffmann

2655 Supercritical Chemical Fluid Deposition of High Quality Compound Semiconductors
M. Afzaal, P. O'Brien, F. Cheng, M. George, A. Hector, S. Howdle, J. Hyde, W. Levason, M. Malik, K. Mallik, C. Nguyen, G. Reid, P. Sazio, D. Smith, M. Webster, J. Wilson, J. Yang and W. Zhang

2656 Comparative Study on the Step Coverage Quality of Cu Film by SCFD and CVD
Y. Shimogaki, T. Momose and M. Sugiyama

2657 Pulsed-Pressure MOCVD Science, Materials and Technology
S. Krumdieck

2658 Combinatorial Chemical Vapor Deposition of Lithium Niobate Thin Films
A. Dabirian, Y. Kuzminykh, P. Hoffmann, S. Sandu, E. Wagner, G. Benvenuti, C. Parsons and S. Rushworth

2659 Initiated and Oxidative Chemical Vapor Deposition (CVD) of Conformal and Functional Polymer Films
S. Baxamusa, S. Im, M. Karaman, W. Tenhaeff, S. Vaddiraju and K. Gleason

2660 Initiated Chemical Vapor Deposition (iCVD) of Hydrogel Polymers
R. Bose, S. Nejati and K. Lau

2661 Processing of Biomorphic Porous Ceramics by Chemical Vapor Infiltration and Reaction (CVI-R) Technique
N. Popovska

2662 Combinatorial CVD: New Oxynitride Photocatalysts
I. Parkin, G. Hyett and A. Kafizas

2663 Study of TiC Coatings on Nicalon Fiber Prepared by Pressure-Pulsed Reactive Chemical Vapor Deposition at Low Pressure
I. Jouanny, S. Jacques, P. Weisbecker, B. Rufino, L. Maillé and R. Pailler

2664 Liquid Droplet Evaporation in Simulations of the Flow in Pulsed-Pressure MOCVD
C. Lim, H. Cave, M. Jermy and S. Krumdieck

2665 Influence of the Heating Mode and the Spray Introduction on Chemically Vapour Deposited Aluminum Doped Zinc Oxide Thin Films
J. Garnier, R. Sreekumar and A. Bouteville

2666 Residual Stress Mechanisms in Aluminum Oxide Films Grown by MOCVD
S. Soni, D. Samelor, B. Sheldon, C. Vahlas and A. Gleizes

2667 Mass Spectrometry as a Tool to Study CVD Process
A. Turgambaeva, V. Krisyuk, N. Prud'homme and C. Vahlas

2668 Fiber-Scale Modeling of C/C Processing by Chemical Vapor Infiltration Using X-Ray CMT Images and Random Walkers
G. Vignoles, C. Germain, O. Coindreau, C. Mulat and W. Ros

2669 Fabrication of Micro- and Nanoelectrodes by Selective Chemical Vapor Deposition of Cu on Si Substrates Patterned with AZ5214 and PMMA
G. Papadimitropoulos, S. Cibella, R. Leoni, A. Arapoyianni and D. Davazoglou

2670 Dy^{3+}:Al_2O_3 and (Dy^{3+}+Cr^{3+}):Al_2O_3 Films for Temperature Sensor Applications Derived by Thermal CVD and Sol-Gel Techniques
C. Eckert, C. Pflitsch and B. Atakan

F4 - Fundamentals of Electrochemical Growth: From UPD to Microstructures – Symposium in Memory of Prof. Evgeni Budevski

Electrodeposition

2671 2D Nucleation and Growth Phenomena in UPD of Cd on Ag(111) and Ag(100)
G. Staikov, S. García and D. Salinas

2672 Metal Deposition for Emerging Nanoelectronic Applications
D. Kolb

2673 Epitaxial Growth of Metals, Alloys and Multilayers Assisted by a Monolayer Amount of UPD Atoms
N. Dimitrov

2674 In Situ STM Studies of Electrochemical Processes on Bimetallic Surfaces
A. Damian, F. Maroun and P. Allongue

2675 Electrochemical ALD for Photovoltaics, Thermoelectrics and Fuel Cells
J. Stickney, D. Banga, N. Jayaraju and C. Thambidurai

2676 Structural Study on Electrochemically Deposited Pt Layers on Au Single Crystal Electrodes by Resonant Surface X-Ray Scattering
T. Kondo, M. Shibata, N. Hayashi, N. Umezawa, T. Sakurai, H. Fukumitsu, T. Masuda and K. Uosaki

2677 Design of a Video-Rate EC-STM for In Situ Observation of Electrodeposition
M. Rost

2678 Nucleation and Growth of Pt Submonolayers via Galvanic Displacement of UPD Monolayers
D. Gokcen, S. Bae and S. Brankovic

2679 Electrochemical Growth of Magnetic Alloys in the Ultrathin Film Limit
P. Allongue, F. Maroun, H. Jurca, R. Cortès, A. Damian and D. Thiaudière

2680 Electrodeposited Spintronic Superlattices
J. Switzer, E. Kulp and R. Gutavarthy

2681 Initial Stages of Electrochemical Growth Studied by Impedance Spectroscopy
Z. Stoynov and D. Vladikova

2682 In Situ Monitoring of Electrochemical Oxidative Adsorption of Sulfur on Silver Single Crystals by Scanning Tunneling Microscopy
E. Lastraioli, F. Loglio, M. Innocenti, F. Carlà and M. Foresti

2683 Study of Bi UPD Structures on Au(100) Using In Situ Surface X-Ray Scattering
S. Zheng, K. Krug, F. Golks, D. Kaminski, O. Magnussen and S. Morin

2684 In Situ Stress and Nanogravimetric Measurements during Underpotential Deposition
G. Stafford, U. Bertocci and J. Shin

2685 Surface Stress Measurements of Lead UPD on Electrodeposited Copper Films
N. Vasiljevic, J. Velleuer and W. Schwarzacher

2686 Stress Effects in Aluminum Coatings Deposited from Ionic Liquids
A. Abbott, M. Elhadi, R. Hillman, M. Mohamoud and K. Ryder

2687 In Situ Stress Measurement of Electrodeposited Ni Films by Television Holographic Interferometry
N. Fukumuro, T. Do, S. Kakunai, S. Yae and H. Matsuda

2688 Stress Evolution in Co_xFe_{1-x} Electrodeposited Films
I. Tabakovic, J. Gong, S. Riemer and M. Kief

2689 Stress in Electrodeposited High Moment CoFe Films
I. Shao, L. Romankiw and C. Bonhote

2690 Self-Organization of Periodically Nanostructured Metal Filaments Array by Electrodeposition
M. Wang

F5 - Semiconductors, Metal Oxides, and Composites: Metallization and Electrodeposition of Thin Films and Nanostructures

Electrodeposition

2776 Langmuir-Blodgett Monolayers of Colloidal Iron Oxide Nanocrystals: Deposition, Micropatterning and CNT Catalysis
M. Cirillo, M. van der Veen, K. Lambert, M. Bondarchuk, M. Kovalenko, W. Heiss, P. Vereecke and Z. Hens

2777 Self Assembly of Periodic Serrated Nanowires
D. Li and J. Lu

2778 Characterization of Novel Silver Nanopaste Inks as Electrochemically Active Materials Using Microfluidic Electrochemistry
D. Steingart, J. Gallaway and A. Gaikwad

2779 Copper Plating on Resistive Substrates, Diffusion Barrier and Alternative Seed Layers
A. Radisic, M. Nagar, K. Strubbe, S. Armini, Z. El-Mekki, H. Volders, W. Ruythooren and P. Vereecken

2780 Impact of "Terminal Effect" on Cu Plating: Theory and Experimental Evidence
S. Armini and P. Vereecken

2781 Electrodeposition of Copper in Trenches from a Citrate Plating Bath
F. Lizama Tzec and G. Oskam

2782 Pulse Electroplating of Cu-Ni Thin Films and Narrow Trenches
K. Hong, D. Keum and Y. Ryu

2783 Directly Patterned Copper by Selective Electroless Plating on a Novel Organocopper Seed Layer
N. Kulyk, D. Rhen, M. Shahid, D. Kang and C. Chung

2784 Electrochemical Deposition of Iron Nanoparticles on n-Si: Influence of Additives on the Properties of the Deposit
K. Strubbe and K. De Henau

2785 Understanding Island Formation from Pd Electrodeposition on 4-Mercaptopyridine Self Assembled Monolayers
J. Keith and T. Jacob

2786 Electrochemical Platinum Deposition on Modified Glassy Carbon Electrodes
A. Foelske-Schmitz, A. Savouchkina, R. Kötz, G. Scherer and A. Wokaun

2787 Electrografting of Organic Monolayers on Planar and Nanowire Silicon Substrates
J. Ngunjiri, S. Vegunta, W. Xu and J. Flake

H1 - Carbon Nanotubes and Nanostructures: From Fundamental Properties and Processes to Applications and Devices

Fullerenes, Nanotubes, and Carbon Nanostructures / Dielectric Science and Technology

2788 CVD Synthesis of Carbon Nanotubes Using Iron Catalysts
T. Abdel-Fattah, P. Williams, R. Wincheski and Q. Shams

2789 Epitaxial Graphene Materials Issues Impacting Device Technology
D. Gaskill, J. Moon, J. Robinson, J. Tedesco and P. Campbell

2790 Manipulation of Graphene Layers Using a Nano-Manipulator System
H. Floresca, S. Park, B. Kee, J. Kim and M. Kim

2791 Graphene Ribbon Devices from Unzipped Carbon Nanotubes
N. Rangel, J. Sotelo-Campos and J. Seminario

2792 Synthesis of Diamond-like Carbon Nanorod Films
D. Varshney, V. Makarov, B. Weigner and G. Morell

2793 Scanning Electrochemical Microscopy Applications in Carbon Based Materials: Graphene and Porous Graphite
M. Carano, F. Paolucci, M. Marcaccio, S. Rapino and A. Penicaud

2794 Functionalizationof Carbon Nanotubes
M. Prato

2836 Multifunctional Graphitic Nanotube/Nanofiber Compositions Synthesized by Solid-State Methods for Electrochemical and Gas-sorption/Storage Applications
J. Long, M. Laskoski, T. Keller, K. Pettigrew and S. Qadri

2837 Elastic and Thermal-Elastic Properties of Carbon Nanotube Network Reinforced Metallic Thin-Film Nanomechanical Resonators
Y. Kim, S. Cho and Y. Park

2838 Capacitance Performance of the Multiwall Carbon Nanotube Films as well as Films of Composites of the C_{60}-Pd Polymer and Multiwall Carbon Nanotubes
K. Winkler, E. Grodzka, M. Plonska-Brzezinska, P. Pieta and W. Kutner

2839 Synthesis and Properties of Carbon Nanotube/Silver Matrix Composites
S. Gu, J. Kang, P. Nash, J. Li and N. Zhao

2840 Modified Carbon Nanoparticles for Electrochemical Capacitors
S. Park and K. Lian

2841 Nanotube-Tipped Intracellular Probes
R. Singhal, Z. Orynbayeva, S. Bhattacharyya, E. Vitol, G. Friedman and Y. Gogotsi

2842 Field Emission, Current stability, and Simultaneous Synthesis of Carbon Nanotubes and Diamond by HFCVD
D. Varshney, V. Makrov, B. Weiner and G. Morell

2843 Semiempirical Simulations on Effects of Crystalline Orientation, Structural Disorders, and Granular Morphology on Superconductivity in Boron-Doped Diamond
V. Ligatchev

2844 Effect of Acid Washing for Residual Transition Meal in Iron Phthalocyanine-Based Carbon Alloy Catalysts
M. Kobayashi, H. Niwa, M. Saito, Y. Harada, M. Oshima, H. Ofuchi, K. Terakura, T. Ikeda, Y. Koshigoe, J. Ozaki and S. Miyata

2845 Formation of Carbon Structures on Stepped and Chiral Surfaces
P. Balbuena, J. Burgos, G. Ramirez-Caballero and D. Gomez-Gualdron

2846 Collision Synthesis of Unique Carbon Nanomaterials Inspired by the Allende Meteorite
S. Ohara, Z. Tan, K. Sato and H. Abe

H2 - Nanostructure and Function of Fullerenes

Fullerenes, Nanotubes, and Carbon Nanostructures

2847 Fullerenes in Microreactors
T. Carofiglio, P. Donnola, M. Maggini and E. Rossi

2848 Enantioselective Cycloaddition onto Fullerenes
S. Filippone, E. Maroto, A. Martin-domenech, M. Suarez and N. Martin

2849 Synthesis and Liquid Crystallinity of Fullerodendron Having Cyanobiphenyl Groups at the Terminals
Y. Takaguchi, Y. Sako and T. Tajima

2850 Synthesis and Photoinduced Electron Transfer Dynamics in Porphyrin-[60]Fullerene Hybrid Systems with Catenane and Rotaxane Topologies
D. Schuster, J. Megiatto Jr. and D. Guldi

2851 Fullerenes and Nanotubes See the Light (!)
D. Guldi

2852 Synthesis, Characterization and Photoinduced Electron Transfer Processes of Orthogonal Rutheniumphthalocyanine-Fullerene Assemblies
M. Rodriguez-Morgade, M. Marta E. Plonska-Brzezinska, A. Athans, E. Carbonell, G. de Miguel, L. Echegoyen, D. Guldi and T. Torres

2853 Fullerene-Ferrocene Conjugates
B. Delavaux-Nicot and J. Nierengarten

2854 Soluble Homo and Hetero Fullerene Dimers (C_{60}/C_{70}) for Photovoltaic Devices
N. Martin, J. Delgado, E. Espildora, M. Liedtke, D. Rauh, A. Baumann, A. Sperlich, C. Deibel and V. Dyakonov

2855 Photoinduced Charge Separation of Directly Linked Porphyrin- and Phthalocyanine-Fullerene Dyads
K. Ohkubo, S. Hiroto, H. Shinokubo, A. Osuka, F. Tani, Y. Naruta and S. Fukuzumi

2856 Synthesis and Electronic Properties of Fullerene-Porphyrin Conjugates
J. Nierengarten

2857 Construction of Supramolecular System Based on Endohedral Metallofullerene
T. Tsuchiya, T. Akasaka, K. Ohkubo, S. Fukuzumi, T. Kato and S. Nagase

2858 Reactivity of Trimetallic Nitride Endohedral Fullerenes
J. Poblet, R. Valencia, A. Rodriguez-Fortea, N. Alegret, M. Chaur and L. Echegoyen

2859 Stabilities in Metallofullerene Series: The X@C_{74} and Y@C_{82} Cases
Z. Slanina, T. Akasaka and S. Nagase

2860 Molecular Structures and Bonding Situation in Endohedral Fullerenes
A. Popov and L. Dunsch

2861 Three Metals in Fullerene Cages: Nitride Cluster versus Metallofullerenes
A. Popov, L. Zhang and L. Dunsch

2862 Understanding the Stabilization of New Endohedral Metallofullerenes
A. Rodriguez-Fortea, R. Valencia, X. Aparicio, A. Clotet and J. Poblet

2863 Fullerene-Based Materials as Catalysts for Fuel Cells
M. Gabriel, T. Deutsch and A. Franco

2864 Electrical and Structural Characterization of Epitaxial-Grown Mg-Doped C_{60} Thin Films
N. Kojima, M. Natori and M. Yamaguchi

2865 Towards Fullerene-Based Molecular Wires: Tether-Assisted Bis-functionalization of Fullerenes
C. Andersson and H. Grennberg

2866 Properties of Fullerite/Other Symmetric Forms of Carbon
F. Torrens and G. Castellano

2867 Production and Characterization of Lanthanum Carbide Encapsulated Carbon Nanocapsule/Lanthanum Hexaboride Nanocomposites
Y. Sato, I. Waki, M. Namura, K. Motomiya and K. Tohji

2868 Deposition of the Fullerene C_{60} Thin Films by VS method
D. Varshney, V. Makarov, S. Katar, B. Weiner and G. Morell

I1 - Physical, Electroanalytical and Bioanalytical Electrochemistry

Physical and Analytical Electrochemistry

2869 Fabrication and Characterization of Hierarchically Structured Biofuel Cell Anodes
R. Rincon, K. Artyushkova, P. Atanassov, M. Germain, S. Minteer, C. Lau, V. Svoboda, B. Liau and M. Cooney

2870 Bioelectrocatalysis of Pyruvate
S. Minteer and D. Sokic-Lazic

2871 Designing of Molecular Interfaces on Electrodes for Detection of DNA Hybridization
W. Schuhmann, M. Gebala, N. Hüsken, L. Stratmann, L. Stoica and N. Metzler-Nolte

2872 Integration of Enzymes, Redox Complexes, and Structured Materials to Provide Bioelectrochemical Devices
P. Kavanagh, S. Boland, R. Saravanan and D. Leech

2873 Integrated Carbon Nanotube Based Enzymatic Systems for Bioelectrocatalytic Applications
P. Kulesza and B. Kowalewska

2874 Theoretical Aspects of Light-Activated Microelectrodes in Redox Electrolytes
H. Zhu, B. Miller and D. Scherson

2894 Solid State Reference Electrodes with Conducting Polymers and Their Application in Potentiometric Cells
K. Maksymiuk, A. Kisiel, A. Michalska and E. Hall

2895 Arrays of Nanoelectrodes: Critical Evaluation of Geometrical and Diffusion Characteristics with Respect to Electroanalytical Applications
P. Ugo, L. Moretto and M. Tormen

2896 New Porous Ceramic Electrodes for the Elimination of Cyanide
L. Jones, E. Chavez, J. Diez and J. Etxeberria

2897 Formation of Porphyrin/Polyaniline Nanostructures by Layer-by-Layer Assembly and Their Application in ppb Level Lead Sensing
R. Pandey, B. Avinash and V. Lakshminarayanan

2898 Recent Advances in Solid-Contact Ion Sensors and Solid-Contact Reference Electrodes
J. Bobacka, U. Mattinen, A. Lewenstam, A. Ivaska, S. Anastasova, A. Radu, D. Diamond and B. Paczosa-Bator

2899 Laser-Ablation Inductively Coupled Plasma Mass Spectrometry Aided Look into Ion-Sensing Membranes
A. Michalska, M. Wojciechowski, E. Bulska and K. Maksymiuk

2900 Inducing Cationic Sensitivity of Conducting Polymer Films Doped with Metal Complexing Ligands
J. Migdalski, T. Blaz and A. Lewenstam

2901 Amperometric Determination of Total Acid of Beverages Based on the Reduction of Quinone
K. Takamura, A. Kotani and F. Kusu

2892 Fabrication and Characterization of Nile Blue/Functionalized SWCNTs Composite Electrodes for Electrochemical Sensing and Biofuel Cell Applications
F. Saleh, M. Rahman, T. Okajima and T. Ohsaka

2946 High Surface Area Conducting Paper Materials composed of Polypyrrole and Cladophora Cellulose
A. Mihranyan, A. Razaq, G. Nyström, M. Strømme and L. Nyholm

2947 Molecular Architectures Based on Electrostatic Interactions and Their Potentialities for Electrochemical Label-Free Biosensing
T. Doneux, M. Steichen, A. De Rache, E. Triffaux and C. Buess-Herman

2948 Determination of Diffusion Coefficients of Oxygen in Thin Cast Ionomer Films Using Chronoamperometry at Ultramicroelectrodes
J. Chlistunoff

2949 Elaboration of Porous Electrodes for (Bio)analytical Applications
V. Urbanova, B. Yvert, K. Vytras and A. Kuhn

2950 Stability of an Electrochemical System with the Negative Differential Resistance Caused by the Potential-Dependent Convection at the Liquid Electrode|Solution Interface
M. Orlik and M. Gorzkowski

2951 Electrochemical Reduction of Oxygen on Quinone Modified HOPG Electrodes in Alkaline Solution
A. Sarapuu, K. Helstein, D. Schiffrin and K. Tammeveski

2952 Electric Field Modulation of Electron Transfer Dynamics in Heme and Copper Proteins
D. Murgida

2953 Bio-Inspired Materials for H_2 Production and Oxidation: Multiscale Mechanistic Modeling of the Electrocatalytic Processes on $[Ni\ (PNP)_2]^{2+}$ Complexes
A. Kachmar, V. Vetere, P. Maldivi, V. Artero and A. Franco

2954 Palladium and Palladium-Cobalt Nanoparticles Synthesis for Oxygen Reduction Reaction
L. Arroyo-Ramirez, R. Raptis and C. Cabrera

2955 Tools for Assessing Functionality and Binding of Immobilized Enzymes: Towards Enhanced Biosensor Performance
R. Fogel and J. Limson

2956 New Multifunctional Materials: Towards Single Molecule Magnets with Electroswitchable Shell
V. Stockhausen, C. Fave, R. Lescouezec, G. Trippe, R. Clerac, J. Lacroix and Y. Journaux

2957 Electrochemiluminescence for Differential Anions Sensing and Multiplexed Sandwich Immunoassays
N. Sojic

2958 Local Control of Cell Adhesion by Electrochemically Patterned Oligoethyleneglycol-Terminated Self-Assembled Monoalyers
G. Wittstock, I. Brand (Zawisza), M. Nullmeier, B. Vaske, R. Jogireddy, J. Christoffers, T. Klüner, O. Goldbaum and C. Richter-Landsberg

2959 Synthesis and Surface Modifications with Doxorubicin of Mixed Ferrite Colloidal Magnetic Nanoparticles
P. Krysinski, A. Nowicka, A. Kowalczyk, M. Donten and Z. Stojek

2960 Acoustics and Electrochemical Biosensors Utilizing Engineered DNA Aptamers for Thrombin Detection
T. Hianik, I. Grman and I. Karpisova

2961 Quantum Dot-Modified Electrodes for Spatially Resolved Detection of NADH Generating Enzyme Reactions
K. Schubert, W. Parak and F. Lisdat

2962 Increasing the Coulombic Efficiency of Glucose Biofuel Cell Anodes by Combination of Redox Enzymes
F. Tasca, G. Nöll, M. Kujawa, I. Pate, W. Harreither, C. Peterbauer, R. Ludwig and L. Gorton

2963 Analytical Applications of DNA Electrochemistry
M. Filipiak, M. Ligaj and M. Tichoniuk

2964 Modeling Inhibition in Mediated Laccase Electrodes for Oxygen Reduction
D. Chakraborty and S. Calabrese Barton

2965 Characterization of PQQ-Dependent Alcohol Dehydrogenase from Gluconobacter in L-Cysteine Monolayer on Pd Surface
I. Feliciano, E. Nicolau, Z. Zavala, Z. Zulic, S. Minteer and C. Cabrera

2966 In Situ Electrochemical Detection of Enzymes Using Ferrocene Affinity Label
C. Baier, A. Schlichtiger, J. Eppinger and U. Stimming

2967 Charge Transfer in Self-Assembled Monolayers of Peptide Nucleic Acid
K. Davis, A. Paul and D. Waldeck

2902 Hydrogen Evolution Reaction on Nickel Foam Covered by Spontaneously Formed Trace of Pt/Pd
J. Wu and P. Shen

2903 A Sensitive Voltammetric Sensor for Determination of Triamcinolone, a Synthetic Corticosteroid, Abused for Doping
R. Goyal and S. Chatterjee

2904 Hybrid Materials from Carbon Nanotubes, Nickel Phthalocyanine, and Polymer Thin Films for the Electrochemical Oxidation of Nitric Oxide in Solution
A. Porras Gutierez, S. Griveau, C. Richard, A. Pailleret, S. Gutierrez Granados and F. Bedioui

2905 The Electroactive Poly(2,5-dimethoxyaniline) Owing to Electron Donating Groups in Neutral Solution
T. Chang and T. Wen

2906 A Study of Neural Networks for Electrochemical Data Analysis
K. Hsueh

2907 Double Layer Effects at a GC Electrode Modified with Zirconium Phosphonylethylviologen Monolayer
L. Oo and F. Kitamura

2909 Influence of Bulk Reaction Kinetics on Potentiometric and Impedance Responses of Ion-Selective Membrane Electrodes
W. Kucza, M. Danielewski and A. Lewenstam

2910 Numerical and Experimental Results on Copper Electrolysis in Homogeneous and Inhomogeneous Magnetic Fields
G. Mutschke, P. Schäfer, T. Weier, A. Hess, A. Bund and J. Fröhlich

2912 Electrochemical Behavior of Arsine Azo III-Uranium(VI) Chelate and Its Analytical Application for the Analysis of Ultra Trace Concentrations of Uranium in Marine and Underground Water
I. Ismail, M. Kadi and M. El-Shahawi.

2978 Engineering Hybrid Nanotubes Wires for Efficient Miniature Membrane-less Biofuel Cell
F. Gao, P. Poulin and N. Mano

2973 Properties of a Polypyrrole/Magnetite/Vitamin B_{12} Hybrid: A Conducting Polymer Based Electrode for Bio-electrocatalysis
C. Janáky, B. Endrődi, E. Kriván and C. Visy

2980 Rational Design of Localized Surface Plasmon Resonance Systems
A. Vaskevich, A. Tesler, O. Kedem, T. Karakouz and I. Rubinstein

2981 An Electrochemical Approach to Quantify Free Radicals and Radical Scavengers in Solution
H. Kahlert

2982 Study of Triphenylmethane Dyes as Redox Mediators and Their Application in Bioanodes for Enzymatic Biofuel Cells
C. La Rotta, G. P. M. K. Ciniciato and E. Gonzalez

2983 Electrochemical Imaging of Model Fuel Cell Catalyst Films
A. Wain, S. Zhou, P. Nicholson and A. Turnbull

2984 Ab Initio Study of Stability and Site-Specific Adsorption Energies of Pt Nanoparticles
L. Wang, A. Roudgar and M. Eikerling

2985 New Generation of Diazonium Based on Heterocyclic Amines : Electrochemical Investigations
V. Stochausen, J. Ghilane, P. Martin, G. Trippe, H. Randrimahazaka and J. Lacroix

2986 Mechanistic Performance of Platinum Nanoparticles Compared with Bulk Platinum Surfaces for the Electrochemical Oxidation of Aqueous Sulfur Dioxide
J. O'Brien, S. Donne and J. Hinkley

2987 Micro and Nanometer-Sized Electrode as Sensors and Immunoassays Platform
C. Zuliani, T. Keyes and R. Forster

2988 Electrochemical Quantification of Electroactive Surface Functionalities on Carbon Used in Electrochemical Capacitors
A. Oickle and H. Andreas

2989 Electrochemical Investigation of Electroactive Layer Deposit onto Glass Substrate: Cases of Organic Thin Film and Gold Nanoparticles
J. Ghilane, M. Janin, P. Martin, H. Randriamahazaka, P. Hapiot and J. Lacroix

I2 - Electrochemistry: Symposium on Interfacial Electrochemistry in Honor of Brian E. Conway

Physical and Analytical Electrochemistry / Energy Technology / Battery / Corrosion / Electrodeposition

2990 The Life and Scientific Times of Brian E. Conway
B. Macdougall

2991 The Role of Adsorbed Intermediates in Electrode Reactions - Revisited
E. Gileadi

2992 Nitrate Electroreduction on Cu Modified Pt(111) Electrode
J. Souza-Garcia, V. Climent and J. feliu

2993 Temperature-Induced Ordering of Metal/Adsorbate Structures at Electrochemical Interfaces
C. Lucas and N. Markovic

2994 Physical Manipulation of Kinetics: Magnetic Facilitation of Electron Transfer Processes in Adsorption and Self Exchange Reactions
W. Gellett, S. Minteer and J. Leddy

2995 First Principles Studies on Electrochemical Nanostructuring of Ir and Re Surfaces
T. Jacob

2996 Surface Oxide Formation on Pt and Pt Alloys during Cathodic Polarization
Y. Fujiwara, L. Qi and J. Li

2997 Electrochemical Approaches to Problems in Surface Science and Heterogeneous Catalysis
G. Attard

2998 Factors Governing Electrocatalysis
E. Guerrini, A. Colombo and S. Trasatti

2999 Active Site and Electrocatalytic Behavior at Palladium Electrode Surfaces
L. Nagle, D. Burke and S. Garbarino

3000 Step Decoration with Cocatalysts for CO and Methanol Oxidation: Effect on Transfer Coefficient and Mechanism
H. Baltruschat, H. Wang, E. Mostafa, A. Abd El Salehin and B. Lanova

3001 Electrocatalysis and Electrochemical Promotion with Oxygen Ion and Proton Conductors
C. Vayenas

3002 Rhodium Model Electrodes for Electrocatalysis
Q. Xu and T. Wandlowski

3003 Electrocatalytic Properties of Platinum Stepped Surfaces
J. Feliu, E. Herrero and V. Climent

3004 Electrocatalysis on Precisely Tailored Nanosized Model Systems
V. Komanicky, H. Iddir, K. Chang, A. Menzel, P. Zapol and H. You

3005 Electrochemical Characteristics of Titanium Carbide Derived Carbon|1-Ethyl-3-methylimidazolium Tetrafluoroborate Electrical Double Layer Capacitors
H. Kurig, A. Janes and E. Lust

3006 Effect of Carbon Pore Size Compared to Ion Size on Capacitive Behavior of EDLC Electrodes
C. Largeot, R. Lin, P. Taberna, J. Chmiola, Y. Gogotsi and P. Simon

3007 Asymmetric Supercapacitors for Capacitive Deionization
K. Leonard and M. Anderson

3008 Multifunctional Metal Oxide-Carbon Nanoarchitectures as Electrode Structures for High-Performance Aqueous Asymmetric Electrochemical Capacitors
M. Sassin, J. Long, A. Mansour, A. Fischer, K. Pettigrew and D. Rolison

3009 Interfacial Capacitance of the Platinum Group Metals in Aqueous Solutions
T. Pajkossy and D. Kolb

3010 Ionic Liquid Electrolytes for Electrochemical Capacitors: Influence of Solvent Additives on $PY_{15}TFSI$ Viscosity, Density, and Thermal Behavior
E. Paillard and W. Henderson

3011 Ionic Liquid-Based Supercapacitor for HEV Application
C. Arbizzani, M. Lazzari, F. Soavi and M. Mastragostino

3012 Molybdenum Carbide Derived Carbon Based Electrode Materials for High Energy and Power Density Electrochemical Double-Layer Capacitors
A. Janes, T. Thomberg and E. Lust

3013 Study of Charge Storage Properties in MnO_2 Based Electrochemical Supercapacitors
O. Ghodbane, J. Pascal and F. Favier

3014 What Really Determines the Rate of the ORR at Metal Catalysts in Acid and in Alkaline Electrolytes and How Is the Answer Tied to Bryan Conway's Contributions
S. Gottesfeld

3015 The Reduction of Oxygen at Cobalt Phthalocyanine Modified Gold(111) Surfaces
M. Khanfar and S. Morin

3016 Nanostructured Electrocatalysts Degradation in PEM Fuel Cells: Key Role of the Electrochemical Interface in Engineering Practice
A. Franco

3017 Oxygen Reduction on Se/Ru Electrodes
P. Zelenay and A. Wieckowski

3018 Synthesis of Ordered Porous Carbon Materials for Capacitor and PEM Fuel Cell Applications
D. Banham, F. Feng, J. Burt and V. Birss

3019 Triode Operation of a Proton Exchange Membrane Methanol Electrolyzer
C. Cloutier and D. Wilkinson

3020 A First-Principles Study of the Electropotential Dependent Shape Stability of Metal Nanoparticles
N. Bonnet, I. Dabo and N. Marzari

3021 Molecular Dynamics Study of the Dissociation of H_2 on Pt(111) Surface Including Thermal Motion of Surface Atoms
T. Koido, D. Ito, T. Tokumasu, K. Tomarikawa and S. Yonemura

3022 Electrochemical Properties of Porous Bismuth
T. Romann and E. Lust

3031 Mesoscopic Transport Effects in Electrocatalytic Reactions
Y. Seidel, Z. Jusys and R. Behm

3032 Oxygen Evolution on Nanocrystalline Electrodes Based on Oxides with Rutile Structure: DEMS and In Situ XAS Study
P. Krtil, K. Macounova, V. Petrykin and S. Mukerjee

3033 Materials for Electrocatalysis of Oxygen Evolution in PEM Water Electrolysis
R. Tunold, A. Marshall, E. Rasten, M. Tsypkin, L. Owe and S. Sunde

3034 Hydrogen Evolution on Ni Electrodes and the Formation of Ni Hydrides
P. Nelli, P. Salvi, M. Villa and G. Zangari

3035 Active Sites for O_2 Evolution and PbO_2 Deposition on IrO_2-Ta_2O_5/Ti Electrodes
K. Kawaguchi, G. Haarberg and M. Morimitsu

3036 Spectroelectrochemical Studies of Co Containing Catalytic Electrodes for Water Electrolysis
A. Fuchsbauer, B. Meana-Esteban, H. Neugebauer and N. Sariciftci

3037 Hydrogen Evolution Reaction Catalyzed by the Redox Cycle of 4,4'-Bipyridine Adsorbed on Silver Electrodes
T. Uchida, A. Yamakata, Y. Sasaki and M. Osawa

3038 Nonprecious Metal Electrocatalyst for Oxygen Evolution in Polymer Electrolyte Water Electrolysis
K. Matsuzawa, C. Igarashi, S. Mitsushima and K. Ota

3039 Theoretical Analysis of the Limiting Diffusion Current at a "Particulate Rotating Disk Electrode"
A. Chaparro, A. Martín and L. Daza

3040 Bulk Conductivity vs "Surface" Conductivity in Heterogeneous Systems
R. Bouchet, D. Devaux, V. Wernert and R. Denoyel

3041 Production of Caustic Soda, Sulfuric Acid, and Oxygen from Splitting Waste Sodium Sulfate from the ClO_2 Generator Using the FM-21 Electrolytic Commercial Cell
J. Cloutier and M. Boucher

3042 Li-Air Battery Technology
M. Salomon, B. Meyer, A. Driedger and D. Bansal

3043 Approach to Bimaterial Electrodes for Electrochemical Double Layer Capacitor: Li-Ion Battery Hybrids
D. Cericola, P. Ruch, P. Novák, R. Kötz and A. Wokaun

3044 Variation of the Electrode Potential with Elastic Strain
M. Smetanin, D. Kramer, S. Mohanan, U. Herr and J. Weissmüller

3045 In Situ Video-STM Studies of Metal Electrodeposition Processes and Surface Phase Transitions
H. Matsushima, C. Haak, A. Taranovskyy, E. Lin, S. Morin and O. Magnussen

3046 High Temperature Electrospun Separators for Lithium-Ion Batteries
B. Meyer, M. Salomon, D. Bansal and M. Morgan

3047 Anodic Oxide Formation on Ag(111) Studied by STM
H. Strehblow, V. Maurice, L. Klein and P. Marcus

3048 Pd Nanofilms: Influence of the Thickness and of the Substrate on Hydrogen Electroinsertion Studied via In Situ SXRD
Y. Soldo-Olivier, E. Sibert, M. Lafouresse, M. De Santis, C. Lebouin and M. De Boissieu

3049 Acceleration of Manganese Oxide Deposition on IrO_2-Ta_2O_5/Ti Anodes
N. Oshiumi and M. Morimitsu

3050 Performance of Amorphous of IrO_2-Ta_2O_5 Coated Titanium Electrodes for Cobalt Electrowinning
K. Uno and M. Morimitsu

3023 Pulse Electrodeposition of Manganese Oxide for Electrochemical Capacitors
F. Xiao, Y. Xu and H. Bai

3024 Evidence on the Electrocalytic Synergetic Effect of V_2O_5 + Co Co-deposit toward Hydrogen Evolution Reaction in Alkaline Media
N. Potkonjak, S. Blagojevic and D. Suznjevic

3025 Using Porous Carbon Composite Electrode in Electrosorptive Deionization of Waste Water
J. Lee, S. Kwon, H. Kim, H. Kim and S. Park

3026 Electrochemical Behavior of a Sodium Citrate Solution on Various Metalic Working Electrodes
O. Aaboubi

3027 Capacitive Behavior of Vertically Aligned Multilayered Manganese Oxide Film
R. Inoue and M. Nakayama

3028 Halogen Adsorption on Pt(111) and Palladium Monolayer Electrocatalysts: DFT Study
I. Pasti and S. Mentus

3029 Electrochemical Behaviors of Ferrocene Derivatives Anchored on Silicon(111) by Different Tethering Bonds
M. Zhao, H. Sano, T. Ichii, K. Murase and H. Sugimura

3030 Novel Oxygen Ion Transport LGBS Membranes
V. Belousov, S. Fedorov and A. Vorobiev

3051 Single Bubble Growth during Water Electrolysis under Microgravity
Y. Fukunaka, H. Matsushima, D. Kiuchi and K. Kuribayashi

3052 Synchrotron X-Ray Studies of CO Interaction with Hexagonally Reconstructed Au(001) in Gas and in Electrolytes
M. Pierce, A. Menzel, V. Stamenkovic, N. Markovic, V. Komanicky and H. You

3053 Enhanced CO Activity for Pt/WO_x Materials: Surface Structure Effects
F. Micoud, F. Maillard, A. Bonnefont and M. Chatenet

3054 Local Atomic Arrangement in the Ni-Doped RuO_2 Electrocatalytic Materials Probed by X-Ray Absorption Fine Structure Approach
V. Petrykin, K. Macounova, M. Macarova and P. Krtil

3055 Construction and Electrocatalytic Activity of Two-Dimensional Pt-Ru Nanocomposite Prepared from Pt-Ru Dinuclear Complexes
K. Uosaki, H. Uehara, Y. Okawa and Y. Sasaki

3056 Influence of Cations on Nitrate Reduction at Boron-Doped Diamond Electrodes
A. Manzo-Robledo, N. Alonso-Vante and C. Levy-Clement

3057 Structural Behavior of Ruthenium Oxide in the Presence of Hydrogen
D. Guay and C. Chabanier

3058 Hydrogen, Oxygen, and Methanol Reactions on Mono- and Submonolayers of Pd and Pt on Au(111)
H. Wolfschmidt and U. Stimming

3059 Pt Single Crystals Modified by Rhodium for Ethanol Electrooxidation
M. Silva, G. Tremilliosi-Filho, E. Herrero and J. feliu

3060 Sum Frequency Generation Studies on Molecular Structure at Electrochemical Interfaces Related to Electrocatalysis
H. Noguchi, T. Ishimaru, T. Okada and K. Uosaki

3061 Two Types of Platinum Dissolution in Acid Media: An Electrochemical Nanogravimetric Study
G. Inzelt, B. Berkes and Á. Kriston

3062 A New Method to Measure Electrosorption Valency and Packing Densities of Self-Assembled Thiolipid Monolayers
J. Leitch, J. Kunze, T. Laredo, I. Burgess and J. Lipkowski

3063 Impedance Oscillations and Negative Differential Resistance: Spatiotemporal Oscillations in L-Arginine-Molybdate
C. Krishnan and M. Garnett

3064 Simultaneous Viscoelastic and Color Reflectance Changes during the Prussian Blue Electrochemical Reduction
J. Agrisuelas, C. Gabrielli, J. García-Jareño, D. Giménez-Romero, H. Perrot and F. Vicente

3065 The Role of Ion Size in Assessing Weak Ionic Specific Adsorption at the Polarizable Electrode / Aqueous Solution Interface
W. Fawcett

3066 A Comparative Study of Electrochemical Techniques in Investigating the Adsorption Behavior of Fibrinogen on Platinum
S. Roscoe and S. Omanovic

3067 Aqueous Redox Potentials Found to Be Inversely Proportional to the Bohr Radius
R. Heyrovska

3068 Self-assembly Monolayer of Poly-3-hexylthiophene on an Iodine-Modified Au(111) Surface
S. Liu and Y. Lee

3069 A Voltammetric Study on the Electroadsorption Characteristics of Thiophene and Its Derivatives on Smooth Platinum Electrode
I. Becerik

I3 - Physical and Analytical Electrochemistry in Ionic Liquids

Physical and Analytical Electrochemistry

3076 The Diffuse Double Layer in an Ionic Liquid for an Unrestricted Electrolyte
W. Fawcett and P. Ryan

3077 Electrical Double Layer Structure in Room-Temperature Ionic Liquids
M. Alam, M. Islam, T. Okajima and T. Ohsaka

3078 Scanning Electron Microscope Observation of Concentration Profile in Ionic Liquid Caused by Electrochemical Reactions
S. Kuwabata, K. Kondo and T. Tsuda

3079 Ion Mobility of 1-Ethyl-3-methylimidazolium Tetrafluoroborate and 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)amide Ionic Liquids
T. Umecky, Y. Saito and H. Matsumoto

3080 Toward the Exploitation of the Ionic Liquids Based Electrochemical Technologies: Mass Transport Issues
A. Lavacchi, U. Bardi, C. Borri, S. Caporali, A. Fossati and I. Perissi

3081 Molecular Dynamics Simulations of Ionic Liquids and Ionic Liquid-Solvent Mixtures
O. Borodin

3082 Relationship Between Ordered Structure and Coordination Structure for Binary Ionic Liquids Systems
M. Mizuhata, T. Minowa and S. Deki

3083 Melting Behavior and Ionic Conductivity in Hydrophobic Ionic Liquid-Based Electrolytes
M. Kunze, G. Appetecchi, S. Jeong, A. Balducci, M. Schönhoff, M. Winter and S. Passerini

3084 Physicochemical Properties of Protic Ionic Liquids as Electrolyte for Non-humidified Intermediate Temperature Fuel Cell
T. Yasuda, A. Ogawa, M. Kanno and M. Watanabe

3085 Wettability Effects on Macroporous MnO_2 Electrodes by Hydrophobic or Hydrophilic Ionic Liquids
T. Benedetti, V. Gonçales, D. Petri, S. Córdoba de Torresi and R. Torresi

3086 Chromium(III) Complex Salts for Ionic Liquid Based Electrolytes
W. Pitner and M. Piepenhagen

3087 An Excellent Approach for the Removal of Water from Ionic Liquids
M. Islam, T. Okajima, D. Zhang, S. Kojima and T. Ohsaka

3088 Protons: Affinity and Reduction in Ionic Liquids
K. Johnson and G. Driver

3089 QSAR Modeling of the Solubility of an HD Simulant in Ionic Liquids
T. Sutto, T. Duncan and T. Wong

3090 Sensing with Room Temperature Ionic Liquids
M. Josowicz, A. Jonke and J. Janata

3091 Oxidative Chemistry with Ionic Liquids
T. Duncan and T. Sutto

3092 Electrode Kinetics of Some Redox Couples in Amide-Type Ionic Liquids
Y. Katayama, N. Tachikawa, T. Migita and T. Miura

3093 Voltammetric Studies of the Electrochemical Kinetics of Cobaltocenium/Cobaltocene ($Cc^{+/0}$) Redox Couple in the Ionic Liquids [C_4mim][PF_6] and [C_4mim][NTf_2]
K. Schmut, B. Gollas and A. Whitehead

3094 Electrochemical Modification of Surface Electrode in Classic and Redox Ionic Liquids
J. Ghilane, O. Fontaine, P. Martin, J. Lacroix and H. Randriamahazaka

3070 Cu-Zn Alloy Metallization Through Reduction-Diffusion Method Using Ionic Liquid Bath at Medium-Low Temperatures
K. Yanase, K. Murase, T. Ichii and H. Sugimura

3071 Electrohemical Behavior of Molten Imidazole with Strong Acids
V. Bandur, Q. Li and N. Bjerrum

3072 Thermophysical Properties of Binary Aliphatic Quaternary Ammonium Ionic Liquids: $TMPAFSA_xTFSA_{1-x}$(II)
M. Mizuhata, N. Kunikata and S. Deki

3073 Reduction Products of Niobium(V) in Ionic Liquid 1-Butyl-1-methylpyrrolidinium Chloride - $NbCl_5$
E. Lomako and O. Babushkina

3074 Electrochemical and Spectroscopic Behavior of TiF_4 in 1-Butyl-2,3-methylimidazolium Tetrafluoroborate
O. Babushkina and Y. Andriyko

3075 Influence of Chemical Composition on Conductivity, Viscosity, and Electrochemical Behavior of Carboxilate-Based Ionic Liquids
E. Cuara Diaz, R. ortega borges and G. Trejo Cordova

3095 A Study of Zinc Electrodeposition from Zinc Chloride: Choline Chloride: Ethylene Glycol
M. Pölzer, A. Whitehead and B. Gollas

3096 Electrodeposition of Gadolinium in Dimethylsulfoxide, and Ethyldimethylbutylammonium Bis(trifluoromethylsulfonyl)imide
L. Monzon, Z. Diao and J. Coey

3097 Spectroscopy of Refractory Metals in Ionic Liquids and Its Application to the Understanding of the Mechanism of Electrochemical Reduction
O. Babushkina

3098 Electrodeposition of Aluminum from Ionic Liquids: Effect of 1,10-Phenantroline
S. Caporali, A. Lavacchi, I. Perissi and U. Bardi

3099 Surface Characterization of High Purity Metals of Silver and Nickel Electropolished with an Ionic Liquid
T. Abdel-Fattah and J. Loftis

3100 Polyazulene, C_{60}, and Polyazulene/C_{60} Composite Films in Room Temperature Ionic Liquids
A. Osterholm, C. Kvarnström and A. Ivaska

3101 Electropolymerization of Poly(3,4-ethylenedioxythiophene) in Different Room and Air Stable Ionic Liquids
A. Ispas, A. Bund and I. Efimov

3102 Electrooxidative Polymerization of Poly(3-hexylthiophene) in Air and Water Stable Ionic Liquids: Scanning Conductive Force Microscopy and Electrochemical Properties
S. Ahmad, R. Berger, J. Gutman and H. Butt

3103 Room Temperature Ionic Liquids in Functionalization of Carbon Nanotubes and in Synthesis of Conducting Polymers
Z. Wang, D. Wei, A. Ivaska and C. Kvarnström

3104 Electroanalytical Chemistry in Polymer-RTIL Composite with an In Situ Electrochemical SEM System
T. Tsuda, Y. Sato and S. Kuwabata

J1 - Sensors, Actuators, and Microsystems General Session

Sensor

3105 Smart Sensor Systems for Aerospace and Biomedical Applications
G. Hunter, J. Xu, B. Ward, D. Makel, P. Dutta, C. Liu and R. Dweik

3106 Miniaturization of a Nanostructure Engineered Sensor Array to a Stamp Size for Chemical Detection
Y. Lu and J. Li

3107 Integration of Miniature, Ultrasensitive Chemical Sensors in Microfluidic Devices
S. Anastasova, A. Radu, F. Benito Lopez, J. Bobacka, A. Lewenstam and D. Diamond

3108 The JPL ENose: Results of a Six Month Monitoring Period on the International Space Station
M. Ryan, M. Homer, A. Shevade, L. Lara, A. Kisor, K. Manatt, H. Zhou and S. Gluck

3109 Simultaneous Detection of Salmonella and Bacillus Anthracis Spores Using Wireless Magnetoelastic Biosensors
S. Huang, Z. Cheng and B. Chin

3110 Quantum Dot-Based Sensors for Proteins
H. Xu, Z. Aguilar and A. Wang

3111 Quantum Dot-Based Sensors for Proteins
Z. Aguilar, H. Xu and A. Wang

3112 Cell Uptake of Nanoparticles
H. Xu, Z. Aguilar, H. Wei and A. Wang

3113 Novel Solid Electrolyte Type Ammonia Gas Sensor Based on Trivalent Aluminum Ion Conducting Solids
N. Imanaka, T. Nagai and S. Tamura

3114 Effect of YSZ Sintering Conditions on Mixed Potential Sensor Performance
P. Sekhar, M. Nelson, R. Mukundan, E. Brosha and F. Garzon

3115 Phase Field Model of a Solid Electrolyte Gas Sensor
W. Gathright, M. Jensen and D. Lewis

3116 A Study of the Gas Response of a Mixed, Fe_2O_3-$Fe_2(MoO_4)_3$, Oxide to Low Concentrations of H_2S in Air
U. Kersen and L. Holappa

3117 Gas Sensing Property of ITO/SnO_2 Heterostructure Deposited by RF Magnetron Sputter
M. Yang and S. Hong

3118 Gas Sensing Properties of SnO_2 Synthesized by Flame Spray Pyrolysis
H. Kim and S. Hong

3119 Synthesis, Characterization, and Application of Glassy Polymeric Carbon as Caffeic Acid Sensor
L. Da Silva, N. Stradiotto and H. Oliveira

3120 Investigation of Pt/β-Ga_2O_3/GaN Hydrogen Sensor Diodes
J. Yan, T. Lee and C. Lee

3121 Polybithiophene: A Humidity Sensor
O. Herrera, D. Wilkinson and W. Merida

3122 Method and Automatic System for Nondestructive Determination of Physical - Chemical Properties of Powdered Materials
V. Redko, E. Shembel, D. Meshri and V. Khandetskyy

3123 Shielding and Transmission of an Electromagnetic Wave (~ GHz) by an "On" or "Off" of a Visible Light Using Flexible CdS Films
S. Hur, J. Ahn, N. Seong, G. Kim and S. Yoon

3124 Magnetic Properties of Electrodeposited Cobalt-Nickel Thin Films from Acidic Baths Containing Glycine
O. Ergeneman, K. Sivaraman, E. Pellicer, M. Baro, A. Hirt, A. Teleki, S. Pane i Vidal and B. Nelson

3125 Catalytic Properties of Ternary Alloys Continuous Gradient - High Throughput Screening Macroscope - CG-HTSM
W. Moritz, A. Tausche, G. Cherkaschinin, R. Molajew, T. Wirth, W. Unger and S. Linke

3126 Thermoelectric and Piezoresistive Properties of Nanocomposites Based on Oxide Semiconductors
O. Gregory, X. Chen and G. Fralick

3127 Structural and Electrical Properties of CrSi Thin Film Resistors with a High Resistance
K. Park, S. Hur, J. Ahn and S. Yoon

3128 Surface Functionalization by Monolayers of Thiophene-Based Linear π-Conjugated Systems
P. Blanchard, K. Tran, S. Karpe, Q. Bricaud, M. Hardouin, M. Oçafrain, J. Roncali, S. Lenfant, K. Smaali, S. Godey and D. Vuillaume

3129 Study of Thermosensitive Hydrogels for Microfluidic Flow Control
J. Kurnia, E. Birgersson and A. Mujumdar

3130 Fabrication of Metal Nanowire Electrode and Its Catalytic and Sensing Performances
S. Cherevko, X. Xing and C. Chung

3131 Growth of Epitaxial SnO_2 Thin Films on Various TiO_2 Substrates for Gas Sensing Applications
D. Kim, S. Hong, S. Lee and M. Kim

3132 Preliminary Studies on the Electrodeposition of Cobalt-Yttrium from Baths Containing Glycine
S. Pane i Vidal, O. Ergeneman, K. Sivaraman, E. Pellicer, M. Baro and B. Nelson

3133 Fabrication of High Aspect Ratio SU-8 Structures Using UV Lithography and Megasonic-Enhanced Development
D. Figura and J. Bartel

3134 Blocking Nonspecific Uptake of Engineered Nanomaterials
Z. Aguilar, H. Xu and A. Wang

3135 Simulation of Biofunctionalized Surface Layers Using Monte Carlo Algorithm
A. Bulyha, C. Heitzinger and N. Mauser

3136 FTIR-ATR Spectroscopic Study of the Water Uptake of Silicon Rubber Based Ion-Selective Membranes and Preparation of Potentiometric Calcium-Selective Solid-Contact Ion-Selective Electrodes with Low Water Uptake and Detection Limit
T. Lindfors, F. Sundfors, L. Höfler and R. Gyurcsányi

3137 FTIR-ATR Study of Water Uptake and Diffusion through Ion-Selective Membranes Based on Polyacrylates
F. Sundfors, T. Lindfors, L. Höfler and R. Gyurcsányi

3138 Bottom Up Approach for Potentiometric Ion Sensing: From Inorganic to Hybrid Organic/Inorganic Materials
N. Dormoy, P. Rouge, M. Benazza, A. Dassonville, C. Guery, P. Sonnet and E. Baudrin

3139 Development of Sensing System of Endocrine Disrupting Chemicals Based on Interaction with a Model of Cell Membrane
Y. Nakane and I. Kubo

3140 CO_2 Detection in Nanostructured $CoSb_2O_6$ Prepared by a Nonaqueous Colloidal Method
C. Michel, A. Martínez, J. Morán and A. Chávez-Chávez

3141 The Grain Size Influence on Boron Doped Diamond Sensitivity for Electrochemical Reduction of Nitrate
J. Matsushima, A. Azevedo, M. Baldan and N. Ferreira

3142 Express Diagnostics of Bovine Leucosis Using Biosensor on the Basis of Nanostructured Silicon
Y. Sytnyk, Y. Shumovsky, M. Melnichenko, M. Starodub and O. Shmyryeva

3143 Electrodeposited Pt-Ni Alloy Electrode for Amperometric Determination of Ascorbic Acid
Y. Weng and Y. Hsiao

3144 Development of a Nucleic Acid Biosensor for the Electrochemical Detection of Salmonella
M. Diaz, A. Rosado, J. del Pilar, E. Vega and A. Guadalupe

3145 Development of Biosensory Sponge Consisting of CNT-DNA Nanowires
C. Lee, S. Lee, K. Cho and J. Shim

3146 Hydrogen Sensor Using Reflectance Change of Switchable Mirror Thin Film
K. Yoshimura, K. Nomura, T. Kanai, S. Nakabayashi, K. Harada and N. Uchiyama

3147 Rapid Screening of Multicomponent Electrocatalysts for the Hydrogen Oxidation by Scanning Electrochemical Microscopy
Y. Weng and C. Hsieh

3148 Diffusion Polysiloxane Membrane to Extend the Linearity of Amperometric Glucose Sensors Integrated with Silicon Technologie
I. Burdallo, C. Jiménez Jorquera and A. Baldi

3149 Fabrication and Application of Ag-In-S Ternary Metal Sulfide Thin Film for Hydrogen Ion-Sensitive Extended-Gate FETs
Y. Chiang, K. Zeng, C. Chang, Y. Ji and J. Chen

3150 Electrochemical Investigation of Porous Silicon/Gold System in Biological Electrolyte
M. Simion, I. Kleps, M. Miu, M. Danila and A. Bragaru

3151 Nitrogen Dioxide Solid-State Electrochemical Sensor with Ionic Liquid-Polymer Composite
M. Nadherna, F. Opekar and J. Reiter

3152 Electrochemical Reduction of 4-Nitrophenol at Modified Electrodes Based on Organic Polymer Films
C. Lete, M. Marin, N. Totir and M. Badea

3153 Label-Free Electrochemical Sensing Based on Electrostatic Interactions between Thrombin and a Positively Charged Redox Marker
A. De Rache and C. Buess-Herman

3154 Antireflective Subwavelength Structures on 4H-SiC for UV Photodetectors
Y. Hirabayashi, M. Yasui, K. Sakurazawa, S. Kaneko and K. Akiyama

3155 Characterization of SiO_2 /PTFE as Selective Membrane for Hydrogen Gas Detectors
L. Gonçalves, S. dos Santos Filho and N. Morimoto

3156 Fabrication of Near-Infrared Sensor by Using Polyaniline Conducting Polymer Thin Film
D. Bang, J. Yang, S. Haam and K. Yoo

3157 Highly NO_2 Gas Responsive SnO_2/ZnO Nanofibers-Based Chemosensor
T. Zyung, J. Moon, J. Park, S. Kim and S. Lee

3158 Electrical Current Suppression of Pd-Doped Nanowire Network Due to Hydrogen Adsorption
B. Kim, S. Oh, H. Jeong, H. Yu, Y. Yun, Y. Kim, W. Kim and J. Lee

3159 The Dependence of Cathodic Pretreatment on H-Terminated Diamond Surface for Different Doping Levels
M. Baldan, F. Decker, A. Azevedo, J. Matsushima and N. Ferreira

3160 Sensitive and Selective Chemical Q-DLTS Sensor Based on Metal/DLC/SiO_2/p-Si Structure
V. Polyakov, A. Rukovishnikov, A. Krikunov, L. Avdeeva and B. Druz

3161 Porous SiO_2 and TiO_2 Thin Films with Gold and NiO Nanoparticles for Optically Based Gas Sensors
M. Post, A. Martucci, E. Della Gaspera and D. Buso

J2 - Impedance Techniques: Diagnostics and Sensing Applications

Sensor / Physical and Analytical Electrochemistry / Corrosion / Industrial Electrochemistry and Electrochemical Engineering

3162 Electroacoustic Impedance Measurements: Principle and Applications
C. Gabrielli and H. Perrot

3182 EIS Characterization of Ni/Zn and Ni-Co/Zn Stainles Steel Based Electrodeposits for the Hydrogen Evolution Reaction
I. Harraiz-Cardona, E. Ortega, V. Pérez-Herranz, R. Beneito and A. Merlos

J4 - Physics and Chemistry of Luminescence Materials, W. M. Yen Memorial Symposium

Luminescence and Display Materials

3183 High Pressure Study of Localized States Related to Lanthanide Ions in Solids
M. Grinberg

3184 VUV Sensitization of Mn^{2+} and Eu^{3+} Emission by Tb^{3+} Ions in Wide Bandgap Oxides
V. Mikhailik

3185 Comparing Ce^{3+}, Pr^{3+}, and Bi^{3+} Luminescence in the Scandate Perovskites
A. Setlur and U. Happek

3186 Search for Phosphors for Use in Displays and Lightings Using Heuristics-Based Combinatorial Materials Science
K. Sohn and A. Kumar Sharma

3187 Modeling of Optical Properties of 3d and 4f Ions
M. Brik

3188 On the Luminescence of Octahedrally Coordinated Eu^{2+} in $CsCaF_3$
U. Happek, M. Aycibin, A. Srivastava, H. Comanzo and S. Camardello

3189 Luminescence Spectroscopy and Dynamics of Pr-Doped YPO_4
J. Collins, M. Bettinelli and B. Di Bartolo

3190 Pr
A. Meijerink, C. Ronda and A. Srivastava

3191 Investigation of Electronic Excitations of Pure and Ce Doped $12CaO•7Al_2O_3$ Using Luminescence Spectroscopy
M. Kirm, T. Avarmaa, V. Denks, E. Feldbach, K. Kunnus, P. Liblik, A. Maaroos and E. Tõldsepp

3192 Synthesis of Multicomponent Sulfide Phosphors from Uniform Precursors Prepared by Solution Methods
V. Petrykin, K. Ohara, Y. Suzuki, S. Tezuka and M. Kakihana

3193 Defect Structure in Rare Earth Persistent Luminescence Materials
J. Holsa, T. Laamanen and M. Lastusaari

3194 Electron Transfer between RE^{3+} Ions in Oxide Hosts: Experiments and Initial Quantitative Analysis
A. Setlur and J. Shiang

3195 High Temperature Afterglow Phosphors
T. Juestel, D. Dacyl, C. Ronda and A. Meijerink

3196 Red-Orange Emission from Eu^{2+} Doped $Ca_2ZnSi_2O_7$ and Photoreduction of Eu^{2+} with UV Irradiation
M. Hirano, H. Kamioka and H. Hosono

3197 Light Emission in Three-Dimensional Si/SiGe Nanostructures: Physics and Applications
L. Tsybeskov

3198 Size-Dependent Quantum Efficiency of Luminescence in Self Assembled Germanium Nanocrystals
D. Lockwood, N. Rowell, I. Berbezier and A. Ronda

3199 Synthesis and Characterization of $Zn_2SiO_4:Mn^{2+}$ Nanophosphors Prepared from Different Zn Source in Liquid Precursor by Flame Spray Pyrolysis
J. Lee, A. Khanna, M. Oh, M. Ranade and R. Singh

3200 Optical Properties of Cr(III) Doped YAG Nanoceramics
W. Strek, P. Gluchowski, A. Lukowiak, D. Hreniak and W. Lojkowski

3201 Structural and Optical Properties of Electropolymerized Poly(para-phenylene)vinylene Films on Si and Porous Si
T. Djenizian, B. Gelloz, F. Dumur and N. Koshida

3202 Tuning Photoluminescence Properties of Alkaline-Earth Oxide Nanoparticles by Site-Selective Functionalization and Doping
P. Sushko, K. McKenna, A. Shluger and O. Diwald

3203 Emission Quench of ZnS-$AgInS_2$ Semiconductor Nanocrystals and Its Application to Biosensors
T. Uematsu, S. Taniguchi, T. Doi, T. Torimoto and S. Kuwabata

3204 Recrystallization Behavior of $Y_{0.95}P_{0.70}V_{0.50}O_4:Eu_{0.1}$ Nanophosphor Particles after KOH Solution Treatment
A. Dulda, D. Jo, L. Pu, M. Takaki and D. Yoon

3205 Photoluminescence Properties of Nanophosphors Modified by Planetary Ball Mill
J. Shin, S. Choi, S. Hong, S. Kwon, S. Seo and H. Kim

3226 Luminescent Materials for LED Applications
J. Meyer, P. Schmidt, A. Tücks, W. Mayr, B. Schreinemacher, H. Schreinemacher, V. Weiler, H. Bechtel, M. Heidemann, D. Wiechert, P. Huppertz, H. Ohland, O. Shchekin and M. Krames

3227 Partial Nitridation of $Sr_3Al_{10}SiO_{20}$:Eu and Its Effect on Photoluminescence Properties
H. Matsuo, M. Mikami, H. Yamamoto, H. Imura, K. Uheda and N. Kijima

3228 Structure and Luminescence of Rare Earth-Doped Silicon Oxides Studied Through XANES and XEOL
T. Roschuk, P. Wilson, J. Li, K. Dunn, J. Wojcik, A. Knights and P. Mascher

3229 Preparation of High-Luminance $SrGa_2S_4$:Eu Thin Film Phosphors by Laser Annealing
Y. Nakanishi, T. Yamasaki, T. Seino, H. Kominami and K. Hara

3230 A Step Forward Towards Smart White Lighting: Combination of Glass Phosphor and Blue LEDs
L. Andrade, S. Lima, A. Novatski, A. Steimacher, A. Neto, A. Bento, M. Baesso, Y. Guyot and G. Boulon

3231 A New Yellow Phosphor $La_3Si_6N_{11}:Ce^{3+}$ for White LEDs
N. Kijima, T. Seto and N. Hirosaki

3232 Luminescent and Optical Ceramics
M. Raukas, D. Eisert, M. Hannah, J. Kelso, A. Linkov, M. Stough, G. Wei, R. Wirth, Y. Zheng and N. Zink

3233 Luminescence and X-Ray Diffraction Studies of Rare Earth Doped Silica Sol-Gel Glass
K. Hoffman, H. Alazar, D. Boye and A. Silversmith

3234 $Lu_3Al_5O_{12}$: A Versatile Host for Single Crystal Scintillators
M. Nikl

3235 Luminescence of Ce^{3+} in YI_3
A. Srivastava, H. Comanzo, S. Camardello, M. Aycibin and U. Happek

3236 Evaluation of Laser Potentialities from Concentration Quenching Analysis in Yb^{3+}-Doped Cubic Crystals
G. Boulon, Y. Guyot and A. Yoshikawa

3237 Photoluminescence Study of Diffusion and Reactions of ^{18}O-Labeled Interstitial Oxygen Molecules in Amorphous SiO_2
K. Kajihara, T. Miura, H. Kamioka, M. Hirano, L. Skuja and H. Hosono

3238 New Scintillator Materials Based on LuAG:Ce^{3+} Co-Doped with Tb^{3+} or Pr^{3+}
J. Gondek, T. Jüstel, A. Meijerink and C. Ronda

3239 Advances in Solid-State Laser Materials
G. Huber

3206 Measurement of Silicon Nanoparticle Concentration Using Quartz Crystal Microgravimetry
V. Reipa and J. Choi

3207 The Luminescence Properties and $Ce^{3+} \rightarrow Tb^{3+}$ Energy Transfer of $Ca_3Y_2(Si_3O_9)_2$
Y. Chiu, W. Liu, Y. Yeh, S. Jang and T. Chen

3208 The Effect of Exciton Localization on the Photoluminescence Properties of $In_{0.01}Al_{0.11}Ga_{0.88}N$
S. Hu, Y. Lee, Z. Feng and S. Yang

3209 Improvement of Light Extraction Efficiency in n-ZnO:Ga/i-ZnO/p-Si Heterojunction LED Using Truncated Pyramid Patterned Si Substrates
J. Kim, M. Choi, H. Seo, W. Han, Y. Kim, B. Kong, H. Cho and J. Lee

3210 Synthesis of Green Emitting $(Mg,Zn)Al_2O_4:Mn^{2+}$ Phosphor and Its VUV Characteristics for PDP Applications
B. Han, K. Kim, H. Lee, J. Yoo, E. Heo and J. Yoo

3211 Synthesis of Green Emitting $(Sr,Ba)_3Si_6O_3N_8$ Phosphor and Its Optical Characteristics
H. Lee, K. Kim, S. Choi and J. Yoo

3212 The Effects of Preparation Parameters on the Up-Conversion Properties of $NaYF_4:Yb^{3+}$, Er^{3+} Nanopowders by a Solvothermal Method
E. Lee, J. Kim, J. Lee and Y. Kim

3213 Up-Conversion Properties of $YNbO_4:Yb^{3+}$, Er^{3+}, Tm^{3+} Prepared by a Flux Method
E. Lee and Y. Kim

3214 Luminescent Properties of $SrAl_2O_4:Eu^{2+}$ Epitaxial Thin Films on Sapphire Substrates
J. Lee, S. Lee, S. Hong and Y. Kim

3215 Red Emitting $Sr_2AlSi_3O_{7/2}N_4:Eu^{2+}$ Phosphor for LED Application
K. Kim, H. Lee, S. Choi and J. Yoo

3216 Synthesis and Characterization of Flower-Like Au Doped MoS_2
C. Liang, S. Hu, Y. Chan, S. Wang, K. Tiong and Y. Huang

3217 Annealing Effects on the Luminescence Properties of InAlGaN Film Grown by MOCVD
Y. Lee, S. Hu, W. Lee and Z. Feng

3218 Intelligent Synthetic Reactions of Long Lasting Phosphor Materials $SrAl_2O_4$: Eu, Dy with Microwave Heating
T. Ishigaki, H. Mizushina, N. Arimitsu, K. Nomizu, K. Uematsu, K. Toda and M. Sato

3219 Luminescence Properties of $YAG:Ce^{3+}$ Nanophosphors Prepared by Flame Spray Pyrolysis
J. Lee, S. Gupta, M. Oh, M. Ranade and R. Singh

3220 Luminescence of Octahedrally Coordinated Eu^{2+} in $Rb_2MP_2O_7$ (M = Ca, Sr)
A. Srivastava, H. Comanzo, S. Camardello, M. Aycibin and U. Happek

3221 Synthesis of Gillespite Related Silicate Phosphor for a White LED
M. Inoue, K. Uematsu, T. Ishigaki, K. Toda and M. Sato

3222 Synthesis of β-SrP_2O_6 Phosphor for White LEDs
N. Sato, K. Uematsu, T. Ishigaki, K. Toda and M. Sato

3223 New Red LED Phosphor, Gd_xNbO_{4-y}:Eu
K. Toda, S. Seki, K. Toda, K. Uematsu, T. Ishigaki and M. Sato

3224 Room Temperature Synthesis of Vanadate Phosphors
A. Toda, K. Uematsu, T. Ishigaki, A. Toda and M. Sato

3225 New Pr^{3+}-Doped Phosphate Materials Showing Fast UV Luminescence
K. Ivanovskikh, A. Meijerink, C. Ronda, F. Piccinelli, A. Speghini and M. Bettinelli