Sunday, October 1, 2017

I01D—Polymer Electrolyte Fuel Cells 17 (PEFC 17) - Catalyst Activity/Durability for Hydrogen(-Reformate) Acidic Fuel Cells

Abst# 1508 Engineering Metal-Organic Framework-Derived PGM-Free Catalysts for Oxygen Reduction in Acidic Media by Gang Wu, University at Buffalo, the State University of New York

L02—Photocatalysts, Photoelectrochemical Cells and Solar Fuels 8

Abst# 1840 Solar Photoelectrochemical Water Purification by Ryan Cruse, Northeastern University; Michael Sullivan, Northeastern University; Eugene Smotkin, Northeastern University

Monday, October 2, 2017

A04—Li-ion Batteries

Abst# 228 In-Depth Investigation of Process-Structure-Property Relationship in the Cathode Materials for Li Ion Batteries by Qi Liu, Argonne National Laboratory; Jian Xie, Indiana University Purdue University Indianapolis; Yang Ren, Advanced Photon Source, Argonne National Laboratory; Wenquan Lu, Argonne National Laboratory

B01—Carbon Nanostructures: From Fundamental Studies to Applications and Devices

Abst# 638 Ion Dynamics and Electrosorption in Carbon Electrodes with Bimodal Porosities and Heterogeneous Interfaces by Boris Dyatkin, U.S. Naval Research Laboratory; Yu Zhang, Vanderbilt University; Naresh Osti, Oak Ridge National Laboratory; Hsiu-Wen Wang, Oak Ridge National Laboratory; Eugene Mamontov, Oak Ridge National Laboratory; Peter Cummings, Vanderbilt University; Yury Gogotsi, Drexel University

Abst# 641 3D-Carbon Hybrid Nanostructure Formation Using Zeolite Template by Carolina Rojas, Dept. of Chemistry, University of Puerto Rico, USA; Neida Santa Cruz, Universidad de Puerto Rico

C04—Coatings and Inhibitors

Abst# 779 Enhanced Corrosion Mitigation of TiO_2 Coated Stainless Steels Under UV Illumination by Kamalasekaran Sathasivam, National Tsing Hua University, Hsinchu 300,Taiwan; Tsung-Kuang Yeh, National Tsing Hua University; Mei-Ya Wang, National Tsing Hua University

Abst# 786 *(Invited)* Anticorrosive Polymer Nanocomposites Coating by Huige Wei, Tianjin University of Science and Technology; Jiang Guo, University of Tennessee Knoxville; Huayun Du, University of Tennessee; Qian Shao, Shandong University of Science and Technology

D01—Semiconductors, Dielectrics, and Metals for Nanoelectronics 15: In Memory of Samares Kar

Abst# 825 Enhancement of Switching Property of Perpendicular- Magnetic Tunnel Junctions Using Single MgO Based $Co_2Fe_6B_2$ Double Free Layer Structure by Kei Kondo, SUMCO corporation; Kei Kondo, Hanyang University; Julie Lee, Hanyang University; dong-Gi Lee, Hanyang University; Jea-Gun Park, Hanyang University

H03—Gallium Nitride and Silicon Carbide Power Technologies 7

Abst# 1319 *(Invited)* Fabrication of AlGaN/InGaN/GaN Quantum Wires for Electronic and Optoelectronic Applications by Mike Leszczynski, TopGaN Lasers; Mike Leszczynski, Institute of High Pressure Physics; Marcin Sarzynski, TopGaN Lasers; Marcin Sarzynski, Institute of High Pressure Physics; Ewa Grzanka, TopGaN Lasers; Ewa Grzanka, Institute of High Pressure Physics; Robert Czernecki, TopGaN Lasers; Robert Czernecki, Institute of High Pressure Physics; Jul

J01—Luminescence and Display Materials: Fundamentals and Applications

Abst# 1761 Enhanced Understanding of Persistent Luminescence in Submicron Particles of $SrAl_2O_4:Eu^{2+},Dy^{3+}$ by Erin Finley, University of Houston; Angelica Cobb, University of Houston; Adheesha Danthanarayana, University of Houston; Heather Goux, University of Houston; Richard Willson, University of Houston; Jakoah Brgoch, University of Houston

L07—Computational Electrochemistry

Abst# 2016 Oxygen Reduction Reaction Catalytic Sites on Carbon-CoatedÂ Fe_3C Catalyst by Mateusz Reda, Technical University of Denmark; Heine Hansen, Technical University of Denmark; Tejs Vegge, Technical University of Denmark

Abst# 2020 *(Invited)* Macroscopic Models of Ion-Nafion Interations: Influence of Counter Ion Density on Network Morphology by Keith Promislow, Michigan State University; Brian Wetton, University of British Columba

Tuesday, October 3, 2017

A04—Li-ion Batteries

Abst# 242 In-Situ and First Principles Characterization of Alpha-Manganese Oxide (MnO_2) by Denise Ford, Duke University; Denise Ford, Argonne National Laboratory; Zhenzhen Yang, Argonne National Laboratory; Joong Sun Park, Argonne National Laboratory; Lynn Trahey, Argonne National Laboratory; Yang Ren, Advanced Photon Source, Argonne National Laboratory; Soojeong Kim, Argonne National Laboratory; Hacksung Kim, Northwestern Unive

Abst# 255 Using Electrochemical Impedance Spectroscopy and Equivalent Circuit Modeling to Analyze Capacity Fade in Lithium-Ion Batteries Due to Pulse Charging by Dhevathi Rajan Rajagopalan Kannan, Florida A&M University - Florida State University; Latarence Butts, FAMU-FSU College of Engineering; Mark Weatherspoon, Florida A&M University - Florida State University; Pedro Moss, Florida A&M University - Florida State University

A05—Battery Materials: Beyond Li-Ion

Abst# 432 A Comparison of Thiospinel Mg Battery Cathode Materials: $Mg_xTi_2S_4$ and $Mg_xZr_2S_4$ by Patrick Bonnick, University of Waterloo; Xiaoqi Sun, University of Waterloo; Lauren Blanc, University of Waterloo; Linda Nazar, University of Waterloo

B01—Carbon Nanostructures: From Fundamental Studies to Applications and Devices

Abst# 667 Flexible Polyaniline/Reduced Graphene Oxide/Carbon Fibers Composites Applied As Electrodes for Supercapacitors by Dalva Almeida, Instituto Nacional de Pesquisas Espaciais; Andre Sardinha, Instituto Nacional de Pesquisas Espaciais; Neidenei Ferreira, Instituto Nacional de Pesquisas Espaciais

C02—Light Alloys 5

Abst# 709 A New Perspective on the Kinetics of Atmospheric Aluminium Pitting Corrosion by Antony Trueman, Corrosion Prognostics

C04—Coatings and Inhibitors

Abst# 788 Anodizing with Simultaneous Silanization for Hidrophobicity Enhancement and Corrosion Protection of Aluminum Alloys by Pedro Atz Dick, Universidade Federal do Rio Grande do Sul; Yesenia RÃ¡tiva Melo, Universidade Federal do Rio Grande do Sul; Thiago Vignoli Machado, Universidade Federal do Rio Grande do Sul; Micheli Cipolatto da Rosa, Universidade Federal do Rio Grande do Sul; LuÃs Frederico Dick, Universidade Federal do Rio Grande do Sul

Abst# 792 Malic-Sulfuric Acid Anodizing ofÂ AA 2024 Compared to Other Dicarboxilic-Sulfuric Acid Anodizing Processes by LuÃs Frederico Dick, Universidade Federal do Rio Grande do Sul; Gerhard KnÃ¶rnschild, Universidade Federal do Rio Grande do Sul; Pedro Atz Dick, Universidade Federal do Rio Grande do Sul; Thiago Vignoli Machado,

Universidade Federal do Rio Grande do Sul

Abst# 793 A Novel Inhibitor for L921A Alloy Steel in a 3.5 % NaCl Solution by Xingyue Yong, Beijing University of Chemical Technology; Zhenglin Chen, Beijing University of Chemical Technology; Lin Zhou, Beijing University of Chemical Technology; Lin Jiang, Beijing University of Chemical Technology; Rihui Chen, Beijing University of Chemical Technology

D01—Semiconductors, Dielectrics, and Metals for Nanoelectronics 15: In Memory of Samares Kar

Abst# 828 *(Invited)* Modifying Silicon/Dielectric & Silicon/Metal Interfaces Using Sub-2 Nm Pt Nanoparticles by Shubhra Gangopadhyay, University of Missouri-Columbia; Somik Mukherjee, University of Missouri; Haisheng Zheng, University of Missouri; Keshab Gangopadhyay, University of Missouri-Columbia

E01—Fundamentals of Electrochemical Growth from UPD to Microstructures 4

Abst# 908 Electrodeposition of Nickel on Titanium in Aqueous Acidic Electrolytes by Mats Jensen, Norwegian University of Science and Technology; Geir Martin Haarberg, Norwegian University of Science and Technology; Frode Seland, Norwegian University of Science and Technology; Svein Sunde, Norwegian University of Science and Technology; Arne Petter Ratvik, SINTEF Materials and Chemistry

E03—Electrochemical Science and Engineering on the Path from Discovery to Product

Abst# 948 Manufacture of Copper Foils for the Current Collector of Lithium-Ion Batteries By Electrochemical Deposition by Chun-Cheng Lin, National Tsing Hua Univesity; Chi-Chang Hu, National Tsing Hua University

F02—Electrochemical Separations

Abst# 1022 *(Invited)* PBI Membrane Development for Fuel Cells and Electrochemical Separations by Andrew Pingitore, University of South Carolina; Guoqing Qian, University of South Carolina; Taylor Garrick, General Motors; Cody Wilkins, University of South Carolina; John Weidner, University of South Carolina; Brian Benicewicz, University of South Carolina

G01—15th International Symposium on Semiconductor Cleaning Science and Technology (SCST 15)

Abst# 1075 Nanometric Particles Removal during Photoresist Stripping by Adeline Lallart, STMicroelectronics; Philippe Garnier, STMicroelectronics; Christian Pizzetti, Technic France; Elise Lorenceau, CNRS; Alain Cartellier, CNRS; Elisabeth Charlaix, CNRS

H03—Gallium Nitride and Silicon Carbide Power Technologies 7

Abst# 1325 (Invited) Growth, Defects and Doping of 3C-SiC on Hexagonal Polytypes by Rositsa Yakimova, Linkoping University; Ivan Ivanov, Linkoping University; Lasse Vines, University of Oslo; Margareta Linnarsson, KTH Royal Institute of Technology; Andreas GÃ¤llstrÃ¶m, Linkoping University; Filippo Giannazzo, CNR-IMM; Fabrizio Roccaforte, CNR-IMM; Peter Wellmann, University of Erlangen; Mikael SyvÃ¤jÃ¤rvi, Linkoping Universit

I01B—Polymer Electrolyte Fuel Cells 17 (PEFC 17) - Fuel Cell Systems, Stack/BOP Design, Gas Processing

Abst# 1447 Conflicting Roles of Nitrogen Doping in Carbon Nanotubes As Anode and Cathode Catalyst Support for Direct Methanol Fuel Cells by Lin Gan, Graduate School at Shenzhen, Tsinghua University; Hongda Du, Graduate School at Shenzhen, Tsinghua University; Ruitao Lv, Tsinghua University; Jia Li, Graduate School at Shenzhen, Tsinghua University

I01D—Polymer Electrolyte Fuel Cells 17 (PEFC 17) - Catalyst Activity/Durability for Hydrogen(-Reformate) Acidic Fuel Cells

Abst# 1516 Multiscale Computational Framework for Discovery of Active, Durable and Non-Precious Electrocatalysts for Fuel Cell Systems by Byungchan Han, Yonsei University; Choa Kwon, Yonsei University; Jeemin Hwang, Yonsei University

J01—Luminescence and Display Materials: Fundamentals and Applications

Abst# 1764 TransparentÂ Ce,Sm:TAG Luminescent Ceramics for High Power Blue Laser Driven Lightning and Display Technologies by Mustafa Balci, University College of Southeast Norway (USN); Fan Chen, University College of Southeast Norway (USN); Ahmet Cunbul, University College Southeast Norway (USN); Oyvind Svensen, BARCO; Muhammad Akram, University College of Southeast Norway (USN); Xuyuan Chen, IMS, University College of Southeast Norway

L01—Physical and Analytical Electrochemistry General Session

Abst# 1804 Analysis of Cerium Oxide Doped Anti-Corrosion Coatings By Scanning Electrochemical Microscopy and Electrochemical Impedance Spectroscopy by Jules Murphy, U.S. Naval Academy; Fred Lancaster, Naval Air Systems Command, Aerospace Materials Division; R. Calhoun, U.S. Naval Academy

L06—Fundamental Aspects of Electrochemical Conversion of Carbon Dioxide

Abst# 1977 *(Invited)* Electronic-Level Insight on CO_2 Reduction Reaction by Adam Lewera, University of Warsaw, Department of Chemistry; Maciej Gorzkowski, University of Warsaw, Department of Chemistry; Rafal Jurczakowski, University of Warsaw, Department of Chemistry; Pawel Kulesza, University of Warsaw, Department of

Chemistry

Abst# 1982 *(Invited)* Silicon Nanowires Photocathodes Combined with Mn-Based Molecular Complex Catalysts for the Efficient Light-Driven Electrocatalytic Reduction of CO_2 to CO by Bruno Fabre, UniversitÃ© de Rennes 1, France; Sylvie Chardon, UniversitÃ© Grenoble Alpes, France; Encarnacion Torralba-Penalver, Univ. Paris-Est, France

Abst# 1983 *(Invited)* Photo-Electrochemical CO_2 Reduction on Composite Metal and Metal-Oxide Cathodes by Jan Augustynski, University of Warsaw; Renata Solarska, University of Warsaw

M02—Practical Implementation and Commercialization of Sensors 2

Abst# 2131 Long Term Performance of Amperometric Gas Sensors Outside the Lab by Michael Carter, KWJ Engineering, Inc; Melvin Findlay, KWJ Engineering, Inc.; Joseph Stetter, SPEC Sensors, LLC; Lloyd Ploense, KWJ Engineering, Inc.; Bennett Meulendyk, KWJ Engineering, Inc.; Vinay Patel, KWJ Engineering, Inc.; Gavin O'Toole, KWJ Engineering, Inc.; William Escobar, KWJ Engineering, Inc.

Z01—General Student Poster Session

Abst# 2202 Reduction in Diameters of Copper Nanowires Due to Low Energy Hydrogen Ions Beam Irradiation-Induced Sputtering Phenomenon by Shehla Honey, UNESCO-UNISA & IThemba LABS South Africa; Shehla Honey, Centre of Excellence in Solid State Physics; Madhuku Morgan, iThemba LABS, National Research Foundation; Ishaq Ahmad, National Center for Physics; Ishaq Ahmad, UNESCO-UNISA Africa Chair in Nanosciences; Malik Maaza, iThemba Labs, Somerset West 7129, South Africa; Malik M

Abst# 2209 Effects of Particle Size and Substrate Charge on Alkaline Hydroelectrocatalysis by Jennifer Gallup, Drexel University; Maureen Tang, Stanford University

Abst# 2213 Analysis of Cell Life and Performance of Molten Carbonate Fuel Cells with Li-Na and Li-K Carbonate Electrolytes by Ki-jeong Lee, Hanbat National University; Yu-Jeong Kim, Hanbat National University; Choong-Gon Lee, Hanbat National University

Z03—Energy-Water Nexus

Abst# 2276 Treatment of Acid Mine Drainage from an Abandoned Coal Mine in a Mcirobial Fuel Cell by Jia Liu, Southern Illinois University Carbondale

Abst# 2281 Evaluating the Potential for Hydrogen Production with Donnan-Driven Multi-Ion Exchange Membrane Based Systems by Mohammadreza Nazemi, George W. Woodruff School of Mechanical Engineering; Avery Agles, Georgia Institute of

Technology; Kelsey Dobson, Georgia Institute of Technology; Marta Hatzell, Georgia Institute of Techology

Wednesday, October 4, 2017

A02—Battery Characterization: Symposium in Honor of Frank McLarnon

Abst# 154 Superior Shelf Life and Moisture Tolerance of ALD-Coated Cathode Materials As Important Aspect of ALD-Based Improvements of Li-Ion Cell Cycle Life by Maithri Venkat, XALT Energy, LLC; Kevin Dahlberg, XALT Energy, LLC; David King, PneumatiCoat Technologies; Harry Meyer, Oak Ridge National Laboratory; Rose Ruther, Oak Ridge National Laboratory; David Wood, Oak Ridge National Laboratory; Lisa Stevenson, XALT Energy, LLC; Dennis Townsend, XALT Energy, LLC

Abst# 161 Lithium Growth Mechanism at High Current Densities by Peter Lindner, Robert Bosch GmbH; Harald Bauer, Robert Bosch GmbH; Juergen Hackenberg, Robert Bosch GmbH; Winfrid Ziemlich, Robert Bosch GmbH

Abst# 165 Electrochemical Cells for Operando Time-of-Flight Neutron Diffraction Study of Li/Na-Ion Electrode Materials by Ivan Bobrikov, Joint Institute for Nuclear Research; Olga Ivanshina, Lomonosov Moscow State University; Olga Ivanshina, Joint Institute for Nuclear Research; Sergey Sumnikov, Joint Institute for Nuclear Research; Natalia Samoylova, Joint Institute for Nuclear Research; Anatoly Balagurov, Joint Institute for Nuclear Research

A04—Li-ion Batteries

Abst# 291 Graphene and Disulfide-Based Framework As a Transition Metal-Free Electrode Material for Li-Ion Battery by Young Geun Yoo, Seoul National University; Soomin Park, Seoul National University; Seongjun Bae, Seoul National University; Jongseok Park, Seoul National University; Inho Nam, Seoul National University; Su Young Lee, Seoul National University; Yong Kim, Seoul National University; Jongheop Yi, Seoul National University

Abst# 317 Surface-Modified $Li_4Ti_5O_{12}$ for High Stability and Rate Performance Anode Materials by Guijun Yang, KOREATECH; Ji Hoon Kang, KOREATECH; Jin Kyeong Kang, KOREATECH; Jong Won Park, KOREATECH; Yongju Jung, KOREATECH

Abst# 332 A Prognostic and Filtering Analysis Technique for Estimating Battery Remaining Useful Life by Larry Morris, Department of Electrical and Computer Engineering; Mark Weatherspoon, Florida A&M University - Florida State University

Abst# 351 ALD Al_2O_3 Coated TiO_2 Nanotube Layers As Anodes for Lithium Ion Batteries by

Hanna Sopha, University of Pardubice; Girish Salian, AIX-MARSEILLE UNIVERSITY; Raul Zazpe, University of Pardubice; Jan Prikryl, University of Pardubice; Ludek Hromadko, University of Pardubice; Thierry Djenizian, Ecole Nationale Superieure des Mines de Saint-Etienne; Jan Macak, University of Pardubice

Abst# 359 Mitigation of Failure Propagation in Multi-Cell Lithium Ion Batteries by Loraine Torres-Castro, Sandia National Laboratories; Joshua Lamb, Sandia National Laboratories; Leigh Anna Steele, Sandia National Laboratories; Genaro Quintana, Sandia National Laboratories; Christopher Grosso, Sandia National Laboratories; June Stanley, Sandia National Laboratories

Abst# 377 Thermodynamic Investigation of Selected Compositions in the $LiNiO_2$-$LiMnO_2$-$LiCoO_2$ System As Lithium Ion Battery Cathode Materials by Maryam Masoumi, Karlsruhe Institute of Technology, IAM-AWP; Damian Cupid, Karlsruhe Institute of Technology, IAM-AWP; Hans Seifert, Karlsruhe Institute of Technology, IAM-AWP

Abst# 380 Mechanisms of Degradation and Necessity of ALD Coatings for High Voltage NMC532, NMC622, and NMC811 Li-Ion Cells by Kevin Dahlberg, XALT Energy, LLC; James Trevey, Forge Nano; David King, PneumatiCoat Technologies; Lamuel David, Oak Ridge National Laboratory; Rose Ruther, Oak Ridge National Laboratory; David Wood, University of Tennessee; Lisa Stevenson, XALT Energy, LLC; Dennis Townsend, XALT Energy, LLC

Abst# 381 Cycling Porous Silicon with Lithium Iron Phosphate for High Performance Li-Ion Batteries by Farren Song, Rice University; Abirami Dhanabalan, Group14 Technologies; Mohan Karulkar, Ford Motor Company; Sibani Biswal, Rice University

Abst# 388 Improvement of Specific Capacitance in Lithium Ion Batteries By Mesoporous Carbon Hybrid Nanostructures by Valerio Dorvilien, Dept. of Physics, University of Puerto Rico, San Juan, USA; Carolina Rojas, Dept. of Chemistry, University of Puerto Rico, USA; Neida Santa Cruz, Universidad de Puerto Rico; Monica LopezdeVictoria, Dept. of Physics, University of Puerto Rico, San Juan, USA; Kevin Rivera, Dept. of Chemistry, University of Puerto Rico, USA

Abst# 406 The Influence of Surface Morphology of Copper Foils on the Efficiency of Lithium Ion Batteries by Chih-Han Yen, National Chung Hsing University; Wei-Ping Dow, National Chung Hsing University

A05—Battery Materials: Beyond Li-Ion

Abst# 487 An Optimized PVC-Based Soft Carbon As the Negative Electrode of Sodium-Ion Batteries by Brahim Orayech, CIC Energigune; Damien Saurel, CIC energiGUNE

Abst# 505 Concomitant Intercalation Behavior of Li-Mg Dual Cations into Mo_6S_8 by Hongyi Li,

Tohoku University; Shunsuke Yagi, the University of Tokyo; Tetsu Ichitsubo, Tohoku University

Abst# 530 Zirconia Support for the Stabilization of Discharged Product of Lithium-Oxygen Battery by Seongjun Bae, Seoul National University; Young Geun Yoo, Seoul National University; Jongseok Park, Seoul National University; Soomin Park, Seoul National University; Inho Nam, Seoul National University; Hyeon don Song, Seoul National University; Jeong Woo Han, University of Seoul; Jongheop Yi, Seoul National University

A06—Advanced Manufacturing Methods for Energy Storage Devices

Abst# 589 Highly Deformable Energy Storage Device with Invereted Endoskeletal Construction by Jongseok Park, Seoul National University; Inho Nam, Stanford University; Soomin Park, University of California, Berkeley; Seongjun Bae, Seoul National University; Young Geun Yoo, Seoul National University; Sung Jerng, Seoul National University; Ha Umh, Seoul National University; Jongheop Yi, Seoul National University

A07—Fast Electrochemical Processes and Devices

Abst# 625 *(Invited)* GrapheneÂ NanostructureÂ By Molten SaltÂ Process for Supercapacitor Applications by Hyun-Kyung Kim, University of Cambridge; R Kumar, University of Cambridge; Derek John Fray, University of Cambridge

C03—State-of-the-Art Surface Analytical Techniques in Corrosion 3: In Honor of Hugh Isaacs

Abst# 752 The Mixed Potential Model for the Passive State and Hydrogen Evolution Reaction of AA2098-T851 by Digby Macdonald, University of California at Berkeley; Elmira Ghanbari, University of California at Berkeley; Alireza Saatchi, University of California at Berkeley

Abst# 754 Redefining the Electrochemical Kinetics of Redox Reactions on Passive Metals by Digby Macdonald, University of California at Berkeley

Abst# 756 The Electrochemistry & Corrosion of Zn-Al-Mg Alloys: Quantifying the Contribution of Elemental Components and Individual Phases with Atomic Emission Spectroelectrochemistry by Kevin Ogle, Chimie-ParisTech, CNRS, Paris Sciences et Lettres; Junsoo Han, Chimie-ParisTech, CNRS, Paris Sciences et Lettres

Abst# 758 Formation Mechanism of Alumina Nanotubes By Anodization of Aluminum Alloy by Sachiko Ono, Kogakuin University; Hideki Hashimoto, Kogakuin University; Hidetaka Asoh, Kogakuin University

D02—Photovoltaics for the 21st Century 13

Abst# 871 Manipulation on Crystallization of Perovskite Thin-films during Blade Coating Fabrication in Air by Jing Li, Xiamen University; Yichuan Lin, Xiamen University; Jun Yin, Xiamen University; Nanfeng Zheng, Xiamen University

E01—Fundamentals of Electrochemical Growth from UPD to Microstructures 4

Abst# 938 1D Core-Shell Nanostructures Formed By Electrodeposition of Metals and Metalloids in Anodic TiO_2 Nanotubes by Damian Kowalski, University of Warsaw; Damian Kowalski, Hokkaido University

G05—Oxide Memristors

Abst# 1210 *In Operando* Characterization of Pt-TaO_x-Ta Bipolar Vacancy Change Memories by Robin Jacobs-Gedrim, Sandia National Labs; Paul Kotula, Sandia National Laboratories; William Mook, Sandia National Labs; Robert Bondi, AMD; Lisa Lowery, Sandia National Labs; Ronald Goeke, Sandia National Labs; Carl Smith, Sandia National Labs; David Hughart, Sandia National Labs; Conrad James, Sandia National Labs; Matthew Marinella, San

Abst# 1221 Anodic Oxides As Electrolytes for Resistive Switching Devices by Andrea Zaffora, UniversitÃ di Palermo; Francesco Di Quarto, UniversitÃ di Palermo; Ilia Valov, Research Centre Juelich; Monica Santamaria, UniversitÃ di Palermo

H02—Low-Dimensional Nanoscale Electronic and Photonic Devices 10

Abst# 1311 *(Invited)* Welding of Nickel Nanowires By Ions Beam Irradiation: From Small to Large Scale by Shehla Honey, UNESCO-UNISA & IThemba LABS South Africa; Shehla Honey, Centre of Excellence in Solid State Physics; Ishaq Ahmad, National Centre for Physics; Shahzad Naseem, Centre of Excellence in Solid State Physics; Maaza Malik, iThemba Labs, Somerset West 7129, South Africa; Kennedy John, GNS Science, Lower Hutt, New Zealand

H03—Gallium Nitride and Silicon Carbide Power Technologies 7

Abst# 1343 *(Invited)* UVPL Imaging of 4H-SiC Wafers Along the Device Processing Chain by Birgit Kallinger, Fraunhofer IISB; Daniel Kaminzky, Fraunhofer IISB; Francis Edokam, Fraunhofer IISB; Patrick Berwian, Fraunhofer IISB; Jochen Friedrich, Fraunhofer IISB; Johannes SchÃ¶ck, Fraunhofer IISB; Anton Bauer, Fraunhofer IISB

I01F—Polymer Electrolyte Fuel Cells 17 (PEFC 17) - Polymer-Electrolyte Electrolysis

Abst# 1652 Hollow Iridium-Based Catalysts for the Oxygen Evolution Reaction in Proton Exchange Membrane Water Electrolyzers by Jennifer Peron, CNRS - ITODYS, University Paris Diderot; Marco Faustini, CNRS - LCMCP, Sorbonne UniversitÃ©s, UPMC; Marion Giraud, CNRS - ITODYS, University Paris Diderot; Jacques RoziÃ¨re, CNRS - ICGM -

AIME - University of Montpellier; Deborah Jones, CNRS - ICGM - AIME - University of Montpellier; CÃ©dric BoissiÃ¨re, CNRS - LCMCP, Sorbonne U

I02—Ionic and Mixed Conducting Ceramics 11 (IMCC 11)

Abst# 1726 Electrochemical Study of $(La_{0.6}Sr_{0.4})_{0.99}CoO_{3-\hat{I}'}$Â Thin Film Microelectrodes by Kosova Kreka, DTU Energy, Technical University of Denmark; Karin Hansen, DTU Energy, Technical University of Denmark; Torben Jacobsen, DTU Chemistry, Technical University of Denmark; Kion Norrman, DTU Energy, Technical University of Denmark; Christodoulos Chatzichristodoulou, DTU Energy, Technical University of Denmark; Mogens Mogensen, Te

L01—Physical and Analytical Electrochemistry General Session

Abst# 1822 Electroless Platinum Deposition for in Situ Spectroelectrochemistry by Eric Gobrogge, U.S. Army Research Laboratory; Xiaoming Ren, U.S.Army Research Laboratory; Cynthia Lundgren, U.S. Army Research Laboratory

Abst# 1824 Effect of Anion Choice on Conducting Polymer Crystallinity by Judith F Rubinson, Georgetown University

Abst# 1827 Porous TiO_2 /BDD/CF Ternary Composite Applied on Brilhant Green Dye Electrochemical Oxidation by Lania Pereira, Instituto Nacional de Pesquisas Espaciais; Andrea Couto, Instituto Nacional de Pesquisas Espaciais; Neidenei Ferreira, Instituto Nacional de Pesquisas Espaciais

Abst# 1828 Electrochemical Oxidation of Methane on Metal Catalysts by Hamed Ataee-Esfahani, Georgetown University; Dejun Chen, Georgetown University; YuYe Tong, Department of Chemistry, Georgetown University

L02—Photocatalysts, Photoelectrochemical Cells and Solar Fuels 8

Abst# 1898 Fabrication of Cu_3BiS_3 Photocathode for Photoelectrochemical Hydrogen Evolution by Sunao Kamimura, Kyushu Institute of Technology

L03—Physical and Analytical Electrochemistry of Ionic Liquids 6

Abst# 1932 *Ab Initio* Studies of Ultrathin Ionic Liquid Films on Au (111) Surface by Mingjie Liu, Brookhaven National Laboratory; Wattaka Sitaputra, Brookhaven National Laboratory; Dario Stacchiola, Brookhaven National Laboratory; James Wishart, Brookhaven National Laboratory; Feng Wang, Brookhaven National Lab; Jerzy Sadowski, Brookhaven National Laboratory; Qin Wu, Brookhaven National laboratory

L06—Fundamental Aspects of Electrochemical Conversion of Carbon Dioxide

Abst# 2004 Analyzing the Electrochemically Catalytic Activity of Edge-Isolated MoS2 Monolayer by Xiangye Liu, Columbia Univeristy; Baichang Li, Columbia University; Qianhui Qin, Columbia University; Emile Mottadecastro, Columbia University; James Hone, Columbia University; Daniel Esposito, Columbia University

Z02—Nanotechnology General Session

Abst# 2236 Oxidation State Measurements of Cerium Dioxide Nanoparticles:Â Selecting Measurement Parameters and in Situ Observations by Aaron Johnston-Peck, National Institute of Standards and Technology

Abst# 2257 The Influence of Various Fluencies of Copper Ions (Cu+) on Optical and Electrical Properties of Silver Nanowires (Ag-NWs) Thin Films for Photovoltaic Applications by Shehla Honey, UNESCO-UNISA & IThemba LABS South Africa; Shehla Honey, Centre of Excellence in Solid State Physics; Ishaq Ahmad, National Centre for Physics; Shakeel Khan, Department of Materials Engineering, PIEAS; Naveed Z., National Center for Physics; Shahzad Naseem, Centre of Excellence in Solid State Physics; Malik Maaza, iThemba Labs

Z04—The Brain and Electrochemistry

Abst# 2320 Automated and High-Throughput Reactive Accelerated Aging System to Evaluate Performance of Neural Implants by Matthew Street, US FDA; Ryan Caldwell, University of Utah; David Warren, University of Utah; Loren Rieth, University of Utah; Loren Rieth, Blackrock Microsystems; Pavel Takmakov, US FDA

Thursday, October 5, 2017

A01—Battery and Energy Technology Joint General Session

Abst# 116 ALD-Coated Graphite Anode Materials for Improved Cycle Life, Calendar Life, and Safety of Li-Ion Cells by Kevin Dahlberg, XALT Energy, LLC; James Trevey, Forge Nano; Arrelaine Dameron, Forge Nano; Harry Meyer, Oak Ridge National Laboratory; Rose Ruther, Oak Ridge National Laboratory; David Wood, University of Tennessee; Lisa Stevenson, XALT Energy, LLC; Dennis Townsend, XALT Energy, LLC

Abst# 119 An Experimental Analysis on the Impacts of Current Pulsing with Varying Current Amplitudes on Lithium-Ion Cells by Dhevathi Rajan Rajagopalan Kannan, Florida A&M University - Florida State University; Mark Weatherspoon, Florida A&M University - Florida State University; Pedro Moss, Florida A&M University - Florida State University

A02—Battery Characterization: Symposium in Honor of Frank McLarnon

Abst# 173 Li-Ion Cell with Reference Electrode by Yang Ming, Ford Motor Company; OuJung Kwon, Ford Motor Company

A03—Battery Student Slam 2

Abst# 192 Endogenous Biomaterials for Implantable Energy Storage by Craig Milroy, University of Texas, Austin

A04—Li-ion Batteries

Abst# 412 Improved Electrochemical Performance of an All Solid-State Microbattery By Electrodeposition of Polymer Electrolyte into the Nanostructured Electrodes by Girish Salian, AIX-MARSEILLE UNIVERSITY; Chrystelle Lebouin, AIX-MARSEILLE UNIVERSITY; Thierry Djenizian, Ecole Nationale Superieure des Mines de Saint-Etienne

Abst# 417 Liquid Exfoliation of Interlayer Spacing-Tunable 2D Vanadium Oxide Nanosheets: High Capacity and Rate Handling Li-Ion Battery Cathodes by Chuanfang (John) Zhang, CRANN, School of Chemistry, Trinity College Dublin

Abst# 429 Porosity Controlled $TiNb_2O_7$ Nanotubes As High Power Anode Materials for Li-Ion Batteries by Donghyeok Shin, Hanyang University; Jiseok Kwon, Hanyang University; Hyunjung Park, Hanyang University; Taeseup Song, Yeungnam University; Ungyu Paik, WCU Department of Energy Engineering, Hanyang University

A05—Battery Materials: Beyond Li-Ion

Abst# 553 Ultrathin and Conformal Metal Oxides By Atomic Layer Deposition As Coatings for Lithium Metal Batteries by Lin Chen, Argonne National Laboratory; Lin Chen, Joint Center for Energy Storage Research; Jeffrey Elam, Argonne National Laboratory; Jeffrey Elam, Joint Center for Energy Storage Research

I01F—Polymer Electrolyte Fuel Cells 17 (PEFC 17) - Polymer-Electrolyte Electrolysis

Abst# 1668 On the Effect of the Flow Field Plateâ€™s Geometry on the Polymer Electrolyte Membrane Water Electrolysis Cellâ€™s Performance by Saher Al Shakhshir, Department of Energy Technology, Aalborg University; SÃ¸ren KÃ¦r, Department of Energy Technology, Aalborg University

I02—Ionic and Mixed Conducting Ceramics 11 (IMCC 11)

Abst# 1737 Simultaneous Function of Gd_2O_3 As Solid Dopant and Sintering Aid for Anode Support Type Solid Oxide Fuel Cells by Chanho Kim, Department of Energy Engineering, Hanyang University; Inyoung Jang, Department of Energy Engineering, Hanyang

University; Sungmin Kim, Departmant of Energy Engineering, Hanyang University; Heesung Yoon, Hanyang University; Ungyu Paik, WCU Department of Energy Engineering, Hanyang University

Z04—The Brain and Electrochemistry

Abst# 2323 *(Invited)* Stretchable Electrochemical Sensor for Inducing and Monitoring Cell Mechanotransduction in Real-Time by Wei-Hua Huang, Wuhan University