Sunday, May 29, 2016

A02—Future and Present Advanced Lithium Batteries and Beyond Ã¢Â€Â“ a Symposium in the Honor of Prof. Bruno Scrosati

Abst# 238 In Situ Measurements of Solid Electrolyte Interphase Evolution on Silicon Electrodes by Insun Yoon, Brown University; Daniel Abraham, Argonne National Laboratory; Brett Lucht, University of Rhode Island; Allan Bower, School of Engineering, Brown University; Pradeep Guduru, Brown University

Monday, May 30, 2016

A01—Joint General Session: Batteries and Energy Storage -and- Fuel Cells, Electrolytes, and Energy

Abst# 30 In Situ Measurement of the Surface Lithiation of Metal Oxide Thin Films at Elevated Potentials by Timothy Fister, Argonne National Laboratory; Jae Jin Kim, Argonne National Laboratory; Guennady Evmenenko, Northwestern University; Donald Buchholz, Northwestern University; Xiao Chen, Northwestern University; Michael Bedzyk, Northwestern University; Fernando Castro, Northwestern University; Jinsong Wu, Northwestern University; Vinayak Dra

A02—Future and Present Advanced Lithium Batteries and Beyond Ã¢Â€Â“ a Symposium in the Honor of Prof. Bruno Scrosati

Abst# 245 Lithium Sulfide Nanocrystals Synthesized By an Energy-Efficient Process for Advanced Rechargeable Batteries by Xuemin Li, Colorado School of Mines; Chunmei Ban, National Renewable Energy Laboratory; Colin Wolden, Colorado School of Mines; Yongan Yang, Colorado School of Mines

A04—Battery Modeling and Computation

Abst# 401 Graphite Phase Behavior during Lithium (de)Intercalation by Raymond Smith, Massachusetts Institute of Technology; Yinsheng Guo, Department of Chemistry, Columbia University; Zhonghua Yu, Columbia University; Dmitri Efetov, Columbia University; Jungpu Wang, Columbia University; Philip Kim, Harvard University; Louis Brus, Columbia University; Martin Bazant, Massachusetts Institute of Technology

A05—Electrochemistry and Batteries for Safe and Low-cost Energy Storage

Abst# 455 (Invited) Impacts of Environmental Stress Factors on Li-Ion Battery Safety Margins by Thomas Barrera, The Boeing Co.; Glen Brown, The Boeing Co.

B07—Inorganic/Organic Nanohybrids for Energy Conversion

Abst# 813 (Invited) Cost-Effective Anthryl Dyes for Dye-Sensitized Cells Under Dim Light by Ching-Yao Lin, National Chi Nan University

D04—Plasma and Thermal Processes for Materials Modification, Synthesis and Processing

Abst# 1062 (Invited) Microwave Plasmas Applied for Synthesis of Free-Standing Carbon Nanostructures at Atmospheric Pressure Conditions by Elena Tatarova, IPFN, Instituto Superior Tecnico, UL; Julio Henriques, IPFN, Instituto Superior Tecnico, UL; Ana Dias, IPFN, Instituto Superior Tecnico, UL; Miroslav Abrashev, Faculty of Physics, Sofia University; Nenad Bundaleski, University of Belgrade; Edgar Felizardo, IPFN, Instituto Superior Tecnico, UL

H01—Wide Bandgap Semiconductor Materials and Devices 17

Abst# 1222 Electrochemical Characterization of Surface States at the GaN/Electrolyte Interface by Andrea Winnerl, Walter Schottky Institut, TUM; Jose Garrido, Catalan Institute of Nanoscience and Nanotechnology; Martin Stutzmann, Walter Schottky Institut, TUM

K01—12th Manual M. Baizer Memorial Symposium on Organic Electrochemistry

Abst# 1592 Anodic Oxidation of Nitrotriarylamines and Its Implications for Electrocatalysis by Albert Fry, Wesleyan University; Zachary Hillman, Wesleyan University; Anthony Davis, Wesleyan University

Tuesday, May 31, 2016

A02—Future and Present Advanced Lithium Batteries and Beyond Ã¢Â€Â“ a Symposium in the Honor of Prof. Bruno Scrosati

Abst# 272 Direct Visualization of the in-Plane and out-of-Plane Electrostatic Competition in P2 Type $Na_{2/3}TMO_2$ by Danna Qian, University of California San Diego; Joon Kyo Seo, University of California San Diego; Jing Xu, University of California San Diego; Karren More, Oak Ridge National Laboratory; Miaofang Chi, Oak Ridge National Laboratory; Ying Meng, University of California, San Diego

Abst# 278 Investigation of Structural Dynamics in Lithium Layered Oxide Positive Electrodes Via Coherent Diffraction Imaging by Sunny Hy, University of California San Diego; Andrej Singer, University of California San Diego Department of Physics; James Wingert, University of California San Diego Department of Physics; Haodong Liu, University of California, San Diego; Andrew Ulvestad, Argonne National Laboratory Materials science division; Ross Harder, Argonne Natio

Abst# 285 Transport Properties and SEI Stability of $Na_2Ti_3O_7$ electrodes for Na-Ion Batteries: An EIS Study by Maider Zarrabeitia, CICenergiGUNE; Francesco Nobili, University of Camerino; Miguel ÃƒÂngel MuÃƒÂ±oz MÃƒÂ¡rquez, CIC energiGUNE; TeÃƒÂ³filo Rojo, University of the Basque Country; Montse Casas-Cabanas, CIC energiGUNE

Abst# 287 The Redox Processes in Lithium Batteries : Beyond the Oxidation State Formalism by Guy Ouvrard, Institut des MatÃƒÂ©riaux Jean Rouxel - UMR 6502 CNRS; Alexandre Pradon, Institut des MatÃƒÂ©riaux Jean Rouxel - UMR 6502 CNRS; Maria Caldes, Insitut des Materiaux Jean Rouxel - UMR6502 CNRS; Florent Boucher, Institut des MatÃƒÂ©riaux Jean Rouxel, UMR 6502, CNRS

Abst# 294 Synthesis and Identification of Al-Based Ultrathin Films on Well-Defined Oxide Nanocrystals for Li-Ion Batteries by Linhua Hu, University of Illinois at Chicago; Jordi Cabana, JCESR at University of Illinois at Chicago

B02—Carbon Nanostructures in Medicine and Biology

Abst# 616 Antibacterial Mechanisms of Nano-Graphene Oxide By Measuring Membrane Interactions by Sarah Robb, Carnegie Mellon University; Maxwell Li, Carnegie Mellon University; Kris Dahl, Carnegie Mellon University; Mohammad Islam, Carnegie Mellon University

B08—Porphyrins, Phthalocyanines, and Supramolecular Assemblies

Abst# 822 (Invited) The Reactivity and Mechanistic Studies of Group 14 Corrole Complexes by Xuefeng Fu, Peking University

I03—Hydrogen and Oxygen Evolution Catalysis for Water Electrolysis 2

Abst# 1445 Hydrogen Production Using Different Graphene/Au@TiO_2Ã‚Â Composites Under Visible and Ultraviolet Light by Abniel MachÃƒÂn, Universidad del Turabo; Francisco MÃƒÂ¡rquez, Universidad del Turabo

L01—Physical and Analytical Electrochemistry, Electrocatalysis, and Photoelectrochemistry General Session

Abst# 1656 Voltammetric Study and Electrodeposition of Zinc from Room Temperature Ionic Liquid 1-Butyl-1-Methylpyrrolidinium Bis((trifluoromethyl)Sulfonyl)Imide by Po-Yu Chen, Kaohsiung Medical University; Yu-Sheng Wang, Kaohsiung Medical University

L02—Electrocatalysis 8

Abst# 1722 Surfactant-Assisted Electrodeposition of Mn Oxides As Promising ORR/Oer

Bifunctional Non-PGM Electrocatalysts: Factorial Design Study of the Electrodeposition Parameters by Pooya Hosseini Benhangi, The University of British Columbia

L06—Ionic Liquids as Electrolytes

Abst# 1868 (Invited) How Spatial Heterogeneities Affect Dynamics of Ionic Liquids by Soham Roy, Max-Planck-Institute for Polymer Research; Zhuan-ping Zheng, Max-Planck-Institute for Polymer Research; Mischa Bonn, Max-Planck-Institute for Polymer Research; Johannes Hunger, Max-Planck-Institute for Polymer Research

Z01—General Society Student Poster Session

Abst# 2055 Signal Amplification of a Universal Four-Way Junction Based Nucleic Acid Sensor through Modification of Electrochemical Technique Parameters by Dawn Mills, University of Central Florida; Karin Chumbimuni-Torres, University of Central Florida

Abst# 2074 Optimization of Zinc Sensing Membranes to be Used in Ion-Selective Electrodes for the Determination of Zinc Ion Concentration for Agricultural Applications by Wynstona Louis, University of Central Florida; Courtney Hulce, University of Central Florida; Swadeshmukul Santra, University of Central Florida; Karin Chumbimuni-Torres, University of Central Florida

Z06—Modeling: From Elucidation of Physical Phenomena to Applications in Design

Abst# 2191 First Principles Computational Study of Active and Stable Electrocatalysts for Oxygen Reduxtion and Evolution Reactions by Byungchan Han, Yonsei University; Seunghyo Noh, Tokyo Institute of Technology; Jeemin Hwang, Yonsei University

Wednesday, June 1, 2016

A01—Joint General Session: Batteries and Energy Storage -and- Fuel Cells, Electrolytes, and Energy

Abst# 89 Designing Sandwich Structured Cu/SnCu/Cu Film and Its Use As Negative Electrode for Lithium Ion Batteries by Burcin Bilici, Istanbul Technical University; Deniz Polat, Istanbul Technical University; Ozgul Keles, Istanbul Technical University

Abst# 143 Evaporation Rate Effect on the Sicu Helical Shaped Thin FilmsÃ¢Â„Â¢ Morphologies and Their Uses As Anodes for Rechargeable Libs by Deniz Polat, Istanbul Technical University; Ozgul Keles, Istanbul Technical University

A04—Battery Modeling and Computation

Abst# 449 GC-MS Headspace and Comparative Computational Studies in the Formation and Follow-up Reactions of Nucleophiles in Li-Ion Battery Electrolytes by Stephen Burkhardt, DuPont Central Research and Development; Mark Roelofs, DuPont Central Research and Development; Edward Davis, DuPont Central Research and Development; Ivan Milas, DuPont Central Research and Development

A05—Electrochemistry and Batteries for Safe and Low-cost Energy Storage

Abst# 531 Aqueous Ion Intercalation in Hydrous Oxides by William Lo, North Carolina State University; Ruocun Wang, North Carolina State University; Veronica Augustyn, North Carolina State University

Abst# 533 Thin Film Li-Ion Microbatteries Using Self-Supported Titania Nanotubes by Thierry Djenizian, Aix-Marseille University

B01—Carbon Nanostructures for Energy Conversion

Abst# 579 Tuning Single-Walled Carbon Nanotube (SWCNT) Membrane Interactions by Alessandra Antonucci, ÃƒÂ‰cole Polytechnique FÃƒÂ©dÃƒÂ©rale de Lausanne; Nils Schuergers, ÃƒÂ‰cole Polytechnique FÃƒÂ©dÃƒÂ©rale de Lausanne; Ardemis Boghossian, ÃƒÂ‰cole Polytechnique FÃƒÂ©dÃƒÂ©rale de Lausanne

B05—Fullerenes - Chemical Functionalization, Electron Transfer, and Theory

Abst# 725 (Invited) Photoinduced Charge Transfer Reactions and Excited State Properties in Triphenylamine C_{60} Donor-Acceptor Conjugates by Miquel SolÃƒÂ , Universitat de Girona; Juan Pablo MartÃƒÂnez, Universitat de Girona; SÃƒÂlvia Osuna, Universitat de Girona; Alexander Voityuk, Universitat de Girona

B08—Porphyrins, Phthalocyanines, and Supramolecular Assemblies

Abst# 856 (Invited) Bodipy Dyes for Solar Energy Conversion by Hongshan He, Eastern Illinois University; Hafsah Klfout, Eastern Illinois University; Mahmoud Elkhalifa, Eastern Illinois University; Adam Stewart, Eastern Illinois University

D02—Chemical Mechanical Polishing 14

Abst# 1037 A Novel Light Scattering Analysis Method for Monitoring Undiluted CMP Slurry by Michael Fury, Vantage Technology Corporation; Michael Klein, Vantage Technology Corporation; Phil Burlison, Vantage Technology Corporation; Ray Wakefield, Vantage Technology Corporation

H01—Wide Bandgap Semiconductor Materials and Devices 17

Abst# 1252 Optical and Electric Properties of Cu-Doped ZnO Films Grown on MgO (100)

Substrate by Ming-Yuan Ho, National Sun Yat-Sen University; Meng Chieh Wen, National Sun Yat-Sen University; Liuwen Chang, National Sun Yat-Sen University; Mitch Chou, National Sun Yat-Sen University

Abst# 1258 TiO_2 Nanoparticles Synthesis from a Ti Alloy Foil By Electrochemical Method in Aqueous Electrolyte by David Ortega-DÃƒÂaz, CIDETEQ; Dennys Fernandez, CIDETEQ; Ernesto Pelaez-Abellan, Universidad de La Habana

I02—Ionic and Mixed Conducting Ceramics 10

Abst# 1393 First-Principles Investigation of the Surface Reactivity and Electronic Property of Dopant-Promoted $SrTiO_3$ Catalysts for SOFC Anode Application by Hyung Chul Ham, Korea Institute of Science and Technology (KIST); Hee Su Kim, Korea institute of science and technology; Sung-Pil Yoon, Korea Institute of Science and Technology (KIST); Jonghee Han, Korea Institute of Science and Technology (KIST); Suk Woo Nam, Korea Institute of Science and Technology (KIST)

I05—Heterogeneous Functional Materials for Energy Conversion and Storage

Abst# 1553 Low Potential Asymmetrical Functionalization of Conductive Micro- and Nanowires By Closed Bipolar Electrochemistry by Paolo Ugo, University Ca' Foscari of Venice; Michael Ongaro, University Ca' Foscari of Venice; Arianna Gambirasi, IENI-CNR Padua

L01—Physical and Analytical Electrochemistry, Electrocatalysis, and Photoelectrochemistry General Session

Abst# 1662 Voltammetric Sensor for the Determination of Diabetes Rrisk Biomarkers, 8-Hydroxydeoxyguanosine and 8-Hydroxyguanine by Rajendra Goyal, IIT Roorkee; Pankaj Gupta, IIT Roorkee

Z06—Modeling: From Elucidation of Physical Phenomena to Applications in Design

Abst# 2223 Additional Voltage Loss to Explain an Equilibration Process in Response to a Change in the Anode Gas Using Sm-Doped Ceria Electrolytes by Tomofumi Miyashita, Miyashita Clinic

Thursday, June 2, 2016

A01—Joint General Session: Batteries and Energy Storage -and- Fuel Cells, Electrolytes, and Energy

Abst# 216 Printable 3-D Carbon Architectures for Li/S Rechargeable Batteries by Marco Bolloli, CEA, LITEN, F-38054 Grenoble, France; Maxime SchrÃƒÂ¶der, CEA, LITEN, F-

38054 Grenoble, France; Eric Mayousse, CEA, LITEN, F-38054 Grenoble, France; RÃƒÂ©mi Vincent, CEA, LITEN, F-38054 Grenoble, France; CÃƒÂ©line Barchasz, CEA, LITEN, F-38054 Grenoble, France; Benoit Chavillon, CEA, LITEN, F-38054 Grenoble, France

A02—Future and Present Advanced Lithium Batteries and Beyond Ã¢Â€Â“ a Symposium in the Honor of Prof. Bruno Scrosati

Abst# 359 On the Key Role of the Carbon Conductive Additive on the Performance of Si-Based Electrodes with High Areal Capacities by Zouina Karkar, INRS-EMT; CNRS-IMN; Driss Mazouzi, CNRS-IMN; Cuauhtemoc Reale Hernandez, INRS-EMT; Dominique Guyomard, CNRS-IMN; Lionel RouÃƒÂ©, INRS-EMT; Bernard Lestriez, CNRS-IMN

Abst# 360 Silicon Nanoparticles Coated in Carbon By Scalable Laser Pyrolysis for Li-Ion Alloy Anodes - Control, Performance, and Optimization by John Alper, CEA Saclay DSM/IRAMIS/NIMBE/LEDNA; Florent Boismain, CEA Saclay DSM/IRAMIS/NIMBE/LEDNA; Julien Sourice, CEA Saclay DSM/IRAMIS/NIMBE, UMR 3685; Willy Porcher, DRT/LITEN/DEHT/SRGE/LRC; CÃƒÂ©cile Reynaud, CEA Saclay DSM/IRAMIS/NIMBE/LEDNA; CÃƒÂ©dric Haon, Univ. Grenoble Alpes; Nathalie Herlin, CEA Saclay DSM/IRAMIS/NIMBE, UMR 3685

I02—Ionic and Mixed Conducting Ceramics 10

Abst# 1404 Use of Patterned Metal Anodes for Studying Hydrogen Electrochemical Oxidation Reaction in Proton-Conducting SOFCs by Shichen Sun, Florida International University; Osama Awadallah, Florida International University; Zhe Cheng, Florida International University

L02—Electrocatalysis 8

Abst# 1778 Kinetic Study of the Oxygen Reduction Reaction on Alpha-$Ni(OH)_2$ and Alpha-$Ni(OH)_2$ Supported on Graphene Oxide by Elaheh Farjami, Dynosense Corporation; L. Jay Deiner, NYC College of Technology, CUNY

L07—Renewable Fuels via Artificial Photosynthesis or Electrolysis

Abst# 1947 Bipolar Electrodeposition: A Wireless Method for Deposition of Electrocatalysts Onto Semiconducting Particles by William Gaieck, University of California, Irvine; Kevin Tkacz, University of California, Irvine; Houman Yaghoubi, University of California, Irvine; Shane Ardo, University of California, Irvine