

Agenda

10th Electrochemical Power Sources R&D Symposium August 20 – 23, 2007 Williamsburg, VA

Monday, August 20, 2007

9:00 AM **Registration**

1:00 PM **Opening Remarks**

Overviews Organization and Battery Programs

Navy

1:15 PM Dr. Michele Anderson, ONR
1:45 PM Dr. Patricia Smith, NSWC, Carderock Division
2:10 PM John Inman, NSWC, Crane
2:35 PM Bill Johnson, NAVAIR

3:00 PM **Break**

3:20 PM Dr. Jennifer Irving, NAVAIR WD

Army

3:40 PM Dr. Terrill Atwater, CERDEC
4:00 PM Dr. Sol Gilman, ARL

Air Force

4:20 PM Dr. John Erbacher

NASA

4:40 PM Dr. Richard Baldwin, NASA Glenn Research Center

DOE

5:00 PM Dr. James Barnes

5:20 PM **Adjourn**

6:30 PM **Reception**

Agenda

Tuesday, August 21, 2007

- 8:00 AM **Registration**
- 8:25 AM **Opening Remarks**
- 8:30 AM **Nano-Engineered Anode Materials For Rapid Recharge High Energy Density Lithium-ion Batteries**
Dr. Joe Gnanaraj
- 8:55 AM **Novel Transition Metal Oxide Anode for High Rate Lithium Ion Battery**
Dr. Lin Feng Li, Quan Fan
- 9:20 AM **Effect of Carbon on the Electronic Conductivity and Discharge Capacity of LiCoPO₄**
J. Wolfenstine, J. Read and J. L. Allen
- 9:45 AM **Chemistry and Structure of Sony's Nexelion Li-ion Electrode Materials**
J. Wolfenstine, J. L. Allen, J. Read and D. Foster
- 10:10 AM **Break**
- 10:30 AM **Performance Evaluation of the Sony Nexlion Battery**
D. Foster, J. Wolfenstine, J Read and J. Allen.
- 10:55 AM **Investigations into Asymmetric Environments (The Adverse Impact of Hot Spots on Lithium Ion Battery Packs)**
T. Atwater, A. Pellegrino and A. DeAnni
- 11:20 AM **Development of Advanced Li-Ion Materials for Aerospace Applications**
R. Bugga, M. C. Smart, W. West and J. Whitacre
- 11:45 PM **Lunch**
- 1:30 PM **Overview of Li-ion Cell and Battery Testing at the Jet Propulsion Laboratory**
M. C. Smart, R. Bugga, and L. D. Whitcanack
- 1:55 PM **Lithium Iron Phosphate Cell Performance Evaluations for Lunar Extravehicular Activities**
Concha M. Reid and Thomas B. Miller
- 2:20 PM **Thermal Characterization of Lithium-ion Cells**
D. L. Britton, W. R. Bennett, and T. B. Miller
- 2:45 PM **Anode Materials for Rapid Recharge High Energy Density Lithium Ion Batteries**
Dr. Jun Nable, Dr. Lucian Vatamanu
- 3:10 PM **Break**
- 3:30 PM **Development of Prismatic Li-Ion Cells for Unmanned Aircraft**
Teymur Guseynov, William R Johnson, Mark Hurley, Bridget Deveney, and Stanley Naing
- 3:55 PM **Large Size Li-Ion Cells Based on LiFePO₄ Cathode Material**
Bridget Deveney
- 4:20 PM **Structural Lithium-Ion Battery**
Aron Newman
- 4:45 PM **Safe Rechargeable Batteries for Electric Vehicle Applications**
Charlie Xu, Mike Hammond, Chris Silkowski, Mike Wixom and Suresh Mani
- 5:10 PM **Adjourn**

Agenda

Wednesday, August 22, 2007

- 8:00 AM **Registration**
- 8:25 AM **Opening Remarks**
- 8:30 AM **High Power, High Energy Batteries- From First Principle Study to Commercial Batteries**
Arnold Stux, Michelle Johannes, Karen Swider Lyons, NRL
- 8:55 AM **A Very High Energy Density Rechargeable Lithium Battery Chemistry**
Stephan Cordova, Scott Preston, Za Johnson, Rod LaFollette, Jeff Hayden, Glenn Amatucci, ElectroEnergies, Inc.
- 9:20 AM **Safety Evaluations of High Voltage/High Rate Li/SO₂ Electrochemical Power Sources**
Rebecca Smith, Julie Banner, NAVSEA Warfare Ctr, Carderock Division
- 9:45 AM **Status of Wound Li/CFx Cell Development**
Richard Mank, Spectrum Brands
- 10:10 AM **Break**
- 10:30 AM **Bismuth Doped MnO₂ for Rechargeable Lithium Electrochemical Systems**
Terrill Atwater and Arek Suszko, U.S. Army RDECOM, CERDEC
- 10:55 AM **Thin Film Lithium Carbon Mono-Fluoride Cell Development**
Mike Parrot, Joe Wells, EaglePicher Technologies
- 11:20 AM **High Capacitance Carbons for Electrochemical Double Layer Capacitors**
Dr. Patricia Smith, NAVSEA Warfare Ctr, Carderock Division
- 11:45 PM **Lunch**
- 1:30 PM **Operating and Cycle Life Performance of Asymmetric PbO₂/H₂SO₄/C Capacitors**
Dr. John Miller, JME, Inc.
- 1:55 PM **Design and Synthesis of Multifunctional Carbon Nanostructures for Power Source Applications**
Dr. Jeffrey Long, NRL
- 2:20 PM **Gravimetric Determination Water Crossover Across Electrolyte Membranes In A Direct Methanol Fuel Cell Stack**
Rongzhong Jiand and Deryn Chu , U.S. Army Research Lab
- 2:45 PM **Desulfurization of Logistics Fuel Reformate for Fuel Cell Application**
Charles Rong and Deryn Chu, U.S. Army Research Lab
- 3:10 PM **Break**
- 3:30 PM **Laminar Flow Fuel Cell**
Anthony R. Atti, Jeff Harrison, Larry Markoski, INI Power Systems, Inc.
- 3:55 PM **Sub-Kilowatt Fuel Cell Systems for Practical Applications**
Dr. Paul Osenar, Protonex
- 4:20 PM **Low Oxygen Fuel Cell Power System for Undersea Vehicles**
Patricia Irving and Jeff Pickles, Innovatek, Inc.
- 4:45 PM **Solid Oxide Fuel Cell for Undersea Naval Applications**
Dr. Alan Burke, NUWC, Division Newport
- 5:10 PM **Adjourn**

Agenda

Thursday, August 23, 2007

- 8:00 AM **Registration**
- 8:25 AM **Opening Remarks**
- 8:30 AM **Portable JP-8 Fuel Cell Generator**
Patricia Irving and Jeff Pickles, , Innovatek, Inc.
- 8:55 AM **Design of Perovskites For Oxygen Reduction in Alkaline Solution**
Dr. Yang Shao Horn, MIT
- 9:20 AM **MicroSun Technologies Lithium-Ion Battery Development**
Peter Tamburrino., MicroSun Technologies, Inc.
- 9:45 AM **Reduced Temperature Thermal Batteries**
Scott B. Preston, David F. Pickett, Za Johnson, Ronald A. Guidotti, John S. Wilkes
ElectroEnergy, Inc.
- 10:10 AM **Break**
- 10:30 AM **Intelligent Battery Charging Technology**
Bill Johnson, NAVAIR
- 10:55 AM **Development of a New Battery Type (The Half 90)**
Arek Suszko and Anthony Pellegrino, U.S. Army RDECOM, CERDEC
- 11:20 AM **The Recovery Process for Field NiMH Cells and Batteries**
Ronald Thompson and Terrill Atwater, U.S. Army RDECOM, CERDEC
- 11:45 AM **Break**
- 12:00 PM **Nickel Cadmium Battery Separator Improvement**
Bill Johnson, NAVAIR
- 12:20 PM **Recent Developments with the Bipolar Nickel Metal Hydride Aircraft Battery**
Robert Plivelich*, James Landi, John Dailey, Michael Nyce, ElectroEnergy, Inc.
- 12:45 PM **Adjourn**