

AABC 08 ♦ LLIBTA 08 ♦ UCAP-08

Advanced Automotive Battery and Ultracapacitor Conference

Large Lithium-Ion Battery Technology and Application Symposium

Large UltraCAPacitor Technology and Applications Symposium

POSTER PRESENTATIONS

May 13 to 15, 2008

Tampa Convention Center, Tampa, Florida

Produced by

Advanced Automotive Batteries

POSTER PRESENTATIONS

Advances in Lithium-Ion Battery Materials

The presenters of the following Posters will also make short oral presentations during the first panel session of the LLIBTA symposium.

1. **StabiLife™ Electrolyte Salts: Improving Battery Thermal Stability in High Power Batteries**
Bill Casteel, *Lead Research Scientist*, Air Products and Chemicals, Inc.
2. **Boron-Based Lewis Acids as Additives in LiF Based Electrolytes and Their potential to be Used in High Voltage Lithium-ion Batteries**
Xiao-Qing Yang, *Scientist*, Brookhaven National Laboratory
3. **Long-term Cycling of Lithium-polymer Electrolyte Batteries Containing Ionic Liquids**
Stefano Passerini, *Institute of Physical Chemistry*, Westfälische Wilhelms-Universität, Germany
4. **Stability Improvement of Lithium Manganese Spinel for High-power Batteries**
Hideaki Sadamura, *Head of R&D for cathode materials*, Toda Kogyo Corp.
5. **Advances in Li-Ion Cathodes for HEV: Lithium Manganese Phosphate**
James Miners, *Chief Operating Officer*, High Power Lithium SA
6. **Precursor Particle Engineering for Improved Cathode Performance**
Archit Lal, *Materials Scientist*, Primet Precision Materials, Inc.
7. **Development of Surface Modified Carbon Anode Material for High-power Lithium-Ion Battery**
Tatsuya Nishida, *Responsible for R&D of Anode Materials*, Hitachi Chemical Co.
8. **The Application of Vapor Grown Carbon Fiber (VGCF™) to Lithium-Ion Battery Technology**
Chiaki Sotowa, *Manager, Fine Carbon Department, Inorganics Sector*, Showa Denko K. K.
9. **Advanced Anode Material for High Performance Li-Ion Batteries**
Bharat Chahar, *Ph.D., Manager*, CPreme™ Energy Storage Materials
10. **Thermal and Electrochemical Behaviors of Lithium Vanadium Oxide Anode for Li-Ion Batteries**
Sung-Soo Kim, *Principal Engineer in Advanced Battery Development*, Energy LAB., Samsung SDI

11. **Innovative inorganic-blended separator for higher-performance lithium-ion Hybrid/EV batteries**
Hiroshi Hatayama, *R&D Engineer*, Asahi Kasei Chemical Co.
12. **ExxonMobil Coextrusion Separator Technology Platform for HEV/EV LIB**
Patrick Brant, *Chief Polymer Scientist*, ExxonMobil Chemical Company

Design and Performance of Lithium-Ion Batteries in High-Power Applications

The presenters of the following Posters will also make short oral presentations during the third panel session of the LLIBTA symposium.

13. **Nano-Li₄Ti₅O₁₂-based HEV Batteries**
Vesco Manev, *Director R&D, Power and Energy Systems*, Altair Nanotechnologies, Inc.
14. **Long Life and High Energy Density Power Battery for HEV and PHEV Application**
Jeon Oh, *Leader of HEVB Project*, SK Energy
15. **Quallion Matrix Power Module System**
Hisashi Tsukamoto, *CEO and CTO*, Quallion LLC
16. **High Performance Light Electric Vehicle: a Challenge for Designing Li-Ion Battery Systems**
Valerio Conte, *Business Unit Monitoring, Energy and Drive Technologies*, Arsenal Research

Advances in Carbon/Carbon Ultracapacitor Materials and Cell Design

The presenters of the following Posters will also make short oral presentations during the first panel session of the UCAP symposium.

17. **Next Generation of APCT Ultracapacitors: High Performance, Low Cost, Safety**
Yuriy Maletin, *Chief Technical Officer*, APowerCap Technologies, LLC
18. **Functional Electrolytes for Non-aqueous EDLC's**
Martin Payne, *Technology Manager*, The Ferro Corporation

Poster Sessions Only

Lithium-Ion Battery Technology

19. **Inhomogeneous Temperature and Current Distribution in Lithium-Ion Batteries—
Analysis Based on a Coupled Thermo-Electrical Simulation Model**
Julia Kowal, Electrochemical Energy Conversion and Storage Systems Group, Institute for
Power Electronics and Electrical Drives, RWTH Aachen University
20. **High-Power Lithium Rechargeable Battery Application for ALEEES NCO Cathode
Material**
Sharon Su, Advanced Lithium Electrochemistry Co.
21. **Integration of Lithium-Ion Battery in Photovoltaic Applications: Impedance
Characterization and Electric Equivalent Circuit Modeling**
Arnaud Delaille, CEA / INES-RDI, Savoie Technolac, France
22. **Commercial Lithium-Ion Cells for HEV/PHEV Applications**
Mark Shoesmith, E-One Moli Energy (Canada) Ltd.
23. **InvenTek Rolled-Ribbon Lithium-Ion Battery Developments**
Thomas Kaun, InvenTek Corporation
24. **Battery Performance of Mitsubishi Power Graphite (MPG) for HEV Applications**
Hidekazu Miyagi, Mitsubishi Chemical Group Science and Technology Research Center
25. **Comparison of the Bulk Structural Stability of Hard Carbon with Soft Carbon as an
Anode Active Material of Lithium-Ion Battery Using XRD Method**
Hirokazu Murata, Research Center, Kureha Corporation
26. **Getting More Capacity out of Fe-based Cathodes for HEV-battery Applications** Josh
Thomas, The Ångström Advanced Battery Centre, Department of Materials Chemistry,
Uppsala University, Sweden
27. **Application of High Molecular Weight PVDF in Lithium Iron Phosphate Battery**
Rosemary Heinze, Arkema, Inc.
28. **Phosphates as Next Generation Materials for Lithium-Ion Batteries**
Titus Faulkner, Valence Technology, Inc.
29. **A Novel 3-Dimensional Oxide Nanofilm Cathode for Hybrid Ultracapacitor and Li-Ion
Battery Applications**
Fraser Seymour, Ionova Technologies

30. **Lifetime Performance of $\text{Li}_x\text{Ni}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ / Graphite High-Power Batteries for Power-Assist HEV Applications**
Göran Lindbergh, School of Chemical Science and Engineering, Department of Chemical Engineering and Technology, Applied Electrochemistry, Sweden

Energy-Storage Technology for Hybrid Electric Vehicles

31. **Energy Storage Activities in the Swedish Hybrid Vehicle Center**
Göran Lindbergh, School of Chemical Science and Engineering, Department of Chemical Engineering and Technology, Applied Electrochemistry, Sweden
32. **Commitment by PUES and Tokyo R&D in the Supply of Li-Ion Battery Pack**
Nobuhito Ohnuma, Tokyo R&D Co.
33. **Performance of Electrochemical Systems for HEV or EV Application During Fast Current Steps**
Ralf Bengler, Institute of Electric Power Engineering (IEEE), Clausthal University of Technology
34. **Battery Development and the Role of Application Relevant Testing; Can Li-Ion Learn from other Battery History?**
Erik Spek, ThinkCoulombic, Inc.

Battery Technology for Plug-In Vehicles

35. **Traction Battery for Application in a Hybrid Sprinter with Plug-In Technology**
Annette LaCroix, VAN/ESA, Daimler AG
36. **High-Power Performance of LiFePO_4 -based Batteries for PHEV Applications**
Chi-Su Kim, EIG Ltd., Korea
37. **Advanced Battery Management Systems for Plug-In Electrical Vehicles**
D. Danilov, Eurandom, Eindhoven University of Technology, The Netherlands

Ultracapacitor Technology

38. **Development of Ultracapacitor: Using Hybrid Electrode System**
Ha-Young Lee, LS Cable

39. **Synthesis of Nanoporous Carbon with Controlled Pore Size Distribution for Ultracapacitor Application**
Ramakrishnan Rajagopalan, Materials Research Institute, Pennsylvania State University

Other

40. **Behaviour of NiMH Batteries for Electric Vehicles under Different Charging Rates at Different Temperatures**
J. C. Viera, University of Oviedo, Spain
41. **Thermal Analysis of Automotive Batteries in Conjunction with the Center for Advanced Vehicle Electronics (CAVE)**
Kevin Siniard, Auburn University
42. **Recycling Advanced Batteries**
Steven E. Sloop, OnTo Technology LLC
43. **The Limits of the Extension of Hybrid Fuel Efficiency**
Robert O'Brien, University of Victoria, BC, Canada
44. **Introduction to SK Enpass**
Jungmoon Sung, SK Energy Institute of Technology
45. **PowerGenix**
Joe Carcone, PowerGenix
46. **Dispersion of Cathode Electrode Materials by T.K. FILMICS Mixer**
Kent Naka, Primix
47. **Special Metal for High-Power Battery Packs and Connections**
Lichun Leigh Chen, Technical Materials, Inc.