Battery Safety Symposium 2016

Held at the 33rd Annual International Battery Seminar & Exhibit 2016

Fort Lauderdale, Florida, USA 24 March 2016

ISBN: 978-1-5108-2254-2

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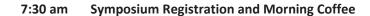
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BATTERY SAFETY

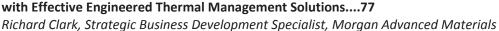
Innovations to Improve Lithium Battery Safety from Cell to Systems



CELL SAFETY, PERFORMANCE AND LIFETIME MANAGEMENT

8:00	Organizer's Opening RemarksN/A Mary Ann Brown, Executive Director, Conferences, Cambridge EnerTech	
8:05	Chairperson's Opening RemarksN/A Judith Jeevarajan, Ph.D., Research Director, Electrochemical Safety, Underwriters Laboratories, Inc.	
8:10	FEATURED PRESENTATION: Li-Ion Battery Safety Technologies and Their Implementation1 Brian Barnett, Ph.D., Vice President, TIAX/CAMX Power	
8:40	All Tests and Standards Are Not Created Equal – Even if They Have the Same Name!22 Cindy Millsaps, President & CEO, Energy Assurance LLC	
9:10	Enhanced Battery Safety by Applying Embedded Photonic Sensors34 Antonio Nedjalkov, DiplIng., Research Associate, Department for Fiber Optical Sensor Systems, Heinrich Hertz Institute, Fraunhofer-Gesellschaft	
9:40	Coffee Break with Poster Viewing	
10:10	Safe Lithium-Ion Battery Designs for Use, Transportation and Second Use49 Judith Jeevarajan, Ph.D., Research Director, Electrochemical Safety, Underwriters Laboratories, Inc.	
10:40	Single-Point Probes for Lithium-Ion Battery Fault Detection and Temperature Monitoring66 Corey T. Love, Ph.D., Materials Research Engineer, Alternative Energy Section, Chemistry Division, U.S. Naval Research Laboratory	

11:10 Addressing the Safety Issues Related to Air Transportation of Lithium-Ion Batteries





11:40 Enjoy Lunch on Your Own

MODELING AND ENGINEERING A SAFE SYSTEM FOR VARIOUS APPLICATIONS

1:20 pm	Chairperson's RemarksN/A
	Brian Barnett, Ph.D., Vice President, TIAX/CAMX Power

1:25 NREL Multiphysics Modeling Tools for Designing Safer Li-Ion Batteries....N/A

Ahmad A. Pesaran, Ph.D., Manager, Energy Storage Group, Transportation and Hydrogen System Center, National Renewable Energy Laboratory (NREL)

1:55 Li-lon Battery Characterization across Space and Time: Imaging Microstructure in 2D, 3D and 4D....N/A

Jeff Gelb, Senior Applications Development Engineer, Carl Zeiss X-ray Microscopy

Effects of Cell Reversal on Li-Ion Batteries....92 E. Joseph Nemanick, Ph.D., Senior Member, Technical Staff, Energy Technology Department, The Aerospace Corporation Refreshment Break with Poster Viewing Experiments and Simulations for Battery Safety....N/A Sergiy Kalnaus, Ph.D., Research Scientist, Computational Engineering and Energy Sciences, Oak Ridge National Laboratory (ORNL) Battery Safety Requires More than Safe Batteries....105

Todd Vanyo, Senior Systems Engineer, Texas Instruments

- 4:30 Mesoscale Implications in Lithium-Ion Battery Thermal Behavior....112
 Chien-Fan Chen, Energy Storage Lead, Energy and Transport Sciences Laboratory, Mechanical Engineering,
 Texas A&M University
- 5:00 Close of Symposium & Close of International Battery Seminar & Exhibit