

# Scalable Energy Storage Beyond Li-Ion: Materials Perspectives

Location: Building 5200 Visitor Center, Tennessee Conference Rooms A-B-C, Oak Ridge National Laboratory

Oct. 7-8, 2010

AGENDA – Day 1

Thursday, Oct. 7, 2010

Start time	End time	
7:30 AM	8:00 AM	<b>Continental Breakfast</b>
8:00 AM	8:10 AM	<b>Thom Mason, Oak Ridge National Laboratory Management Welcome</b>
		<b>Opening Remarks</b>
8:10 AM	8:20 AM	<b>Jason Zhang, Pacific Northwest National Laboratory, Jack C. Wells, Oak Ridge National Laboratory, Winfried Wilcke, IBM Research</b>
		<b>Symposium Overview</b>
		<b>Session 1: Perspective on the Future of Energy Storage Research I</b>
		<b>Session Chair: Jason Zhang - Pacific Northwest National Laboratory</b>
8:20 AM	9:10 AM	<b>Stan Whittingham -SUNY-Binghamton</b>
		<b>Energy Storage Materials: Past and Future</b>
9:10 AM	10:00 AM	<b>Tien Duong –U.S. Department of Energy, Office of Vehicle Technologies</b>
		<b>Directions for Energy Storage R&amp;D in the Vehicle Technologies Program</b>
10:00 AM	10:20 AM	<b>Comfort Break</b>
		<b>Session 2: Perspective on the Future of Energy Storage Research II</b>
		<b>Session Chair: Jack C. Wells - Oak Ridge National Laboratory</b>
10:20 AM	11:10 AM	<b>Venkat Srinivasan – Lawrence Berkeley National Laboratory</b>
		<b>Present Research and Future Focus of the Batteries of Advanced Transportation Technologies Program</b>
11:10 AM	12:00 PM	<b>Michael M. Thackeray – Argonne National Laboratory</b>
		<b>Moving Away from Conventional Lithium-ion Battery Electrodes - Recent Materials Developments at Argonne National Laboratory</b>
12:00 PM	1:00 PM	<b>Lunch</b>
		<b>Session 2 (continue): Perspective on the Future of Energy Storage Research</b>
		<b>Session Chair: Jack C. Wells - Oak Ridge National Laboratory</b>
1:00 PM	1:50 PM	<b>Jun Liu – Pacific Northwest National Laboratory</b>
		<b>Materials Chemistry/science for Scalable Energy Storage</b>
		<b>Session 3: Li-air Batteries I</b>
		<b>Session Chair: Alan Luntz – IBM Research</b>
1:50 PM	2:40 PM	<b>Prof. KM Abraham - Northeastern University</b>
		<b>Electrode Processes in the Non-aqueous Lithium- Air Battery</b>
2:40 PM	3:30 PM	<b>Girish Gopalakrishnan/Bryan McCloskey - IBM Research</b>
		<b>Investigating the Electrochemistry of Li-O<sub>2</sub> Battery using DEMS and Surface Characterization Techniques</b>
3:30 PM	3:50 PM	<b>Break</b>

<b>Session 4: Li-air Batteries II</b>		
<b>Session Chair: David Wesolowski - Oak Ridge National Laboratory</b>		
3:50 PM	4:30 PM	<b>Lonnie Johnson - Excellatron Solid State LLC.</b>
<b>The Viability of High Specific Energy Lithium Air Batteries</b>		
4:30 PM	5:10 PM	<b>Fuminori Mizuno – Toyota</b>
<b>Fundamental Study on Rechargeable Reaction of Lithium-oxygen Battery</b>		
5:10 PM	5:50 PM	<b>Yang Shao-Horn - MIT</b>
<b>O2 electrocatalysis for Li-air batteries</b>		
<b>Session 5: Posters</b>		
<b>Session Chair: Larry Curtis – Argonne National Laboratory</b>		
<b>Hors D'oeuvres Served</b>		

## AGENDA – Day 2

Friday, Oct. 8, 2010

<b>Start time</b>	<b>End time</b>	
7:30 AM	8:00 AM	<b>Continental Breakfast</b>
<b>Session 6: Li-Air Batteries III</b>		
<b>Session Chair: Winfried Wilcke, IBM Research</b>		
8:00 AM	8:40 AM	<b>Philippe Stevens - Electricite de France</b>
<b>Rechargeable Aqueous Li-air Battery Development at EDF: Problems, Solutions and Future Challenges</b>		
8:40 AM	9:20 AM	<b>Osamu Yamamoto - Mie University, Japan</b>
<b>Water Stable Lithium Metal Electrode for Lithium-Air Rechargeable Batteries</b>		
9:20 AM	10:00 AM	<b>Yong Yang - Xiamen University, China</b>
<b>High Energy Density Li-Air and Li-CFx Batteries: a reaction mechanism study</b>		
10:00 AM	10:20 AM	<b>Break</b>
<b>Session 7: Alternative Battery Technologies I</b>		
<b>Session Chair: Gao Liu - Lawrence Berkeley National Laboratory</b>		
10:20 AM	11:00 AM	<b>John Affinito - Sion Power</b>
<b>Developing Li-S Chemistry for High Energy Rechargeable Batteries</b>		
11:00 AM	11:40 AM	<b>Nitash Balsara - Lawrence Berkeley National Laboratory</b>
<b>Solid-state Batteries with Lithium Metal Electrodes</b>		
11:40 AM	12:20 PM	<b>Wesley A. Henderson - North Carolina State University</b>
<b>Ionic Liquids, Lithium Salts, Solvents and Water: Phase Behavior and Molecular Interactions</b>		
12:20 PM	1:20 PM	<b>Lunch</b>
12:40 PM	1:10 PM	<b>Lunch talk: Mark Lefebvre - Samsung Electronics</b>
<b>Advanced Li-ion Battery and Beyond at Samsung</b>		
<b>Session 8: Alternative Battery Technologies II</b>		
<b>Session Chair: Ray Bair – Argonne National Laboratory</b>		
1:20 PM	2:00 PM	<b>Sheng Dai – Oak Ridge National Laboratory</b>
<b>Task-specific Ionic Liquids for Energy-related Applications</b>		
2:00 PM	2:40 PM	<b>Sergei V. Kalinin – Oak Ridge National Laboratory</b>
<b>Mapping the Diffusion and Electrochemical Reactivity of Ions in Solids on the Nanoscale</b>		
2:40 PM	3:20 PM	<b>Kousuke Nakajima - Ohara Inc., Japan</b>
<b>Lithium Ion Conductive Glass Ceramics: Properties and Application in Lithium Metal Batteries</b>		
3:20 PM	3:40 PM	<b>Jason Zhang, Jack C. Wells, and Winfried Wilcke</b>
<b>General discussions, conclusion remarks</b>		