



Lithium Ion VIII

June 2-4, 2015 • Oak Ridge, TN

Tuesday, June 2, 2015

7:00 AM – 8:40 AM		BREAKFAST / REGISTRATION
8:40 AM – 8:50 AM		Sreekanth Pannala, Oak Ridge National Laboratory and Jason Zhang, Pacific Northwest National Laboratory <u>Welcome Remarks</u>
8:50 AM – 9:25 AM	Session 1: Emerging Energy Storage Systems-I Chair: Sreekanth Pannala	Tien Duong, DOE / EERE / VTO <u>Beyond Li-ion Battery Research in Advanced Battery Materials Research Program</u>
9:25 AM – 10:00 AM		Hector Abruna, Cornell University <u>Novel Materials, Architectures and Operando Methods in Electrical Energy Storage</u>
10:00 AM – 10:30 AM		MORNING BREAK
10:30 AM – 11:00 AM		Chris Johnson, Argonne National Laboratory <u>Energy Storage Using Na-Ion Batteries</u>
11:00 AM – 11:30 AM	Session 2: Emerging Energy Storage Systems-II Chair: Jason Zhang	Esther Takeuchi, Stony Brook, SUNY <u>Insights into Battery Function Gained Through Probing Electrode Reactivity</u>
11:30 AM – 12:00 PM		Jun Liu, Pacific Northwest National Laboratory <u>Progress in Na batteries, K batteries and Li-S redox flow batteries</u>
12:00 PM – 1:30 PM	LUNCH	Thematic Group Discussions and 1st Day Speaker Tables
1:30 PM – 2:00 PM		Yang-Kook Sun, Hanyang University, South Korea <u>Advanced Na[Ni_{0.25}Fe_{0.5}Mn_{0.25}]O₂/C-Fe₃O₄ Sodium-Ion Batteries Using EMS Electrolyte for Energy Storage</u>
2:00 PM – 2:30 PM	Session 3: Na batteries Chair: Jagjit Nanda	Gabriel Veith, Oak Ridge National Laboratory <u>Na, It's not another Li-ion talk</u>
2:30 PM – 3:00 PM		Yuhao, Lu, Sharp Laboratories of America <u>Sodium-ion Batteries for Grid Energy Storage</u>
3:00 PM – 3:30 PM		AFTERNOON BREAK
3:30 PM – 4:00 PM		Phillip Stevens, Electricite de France <u>Aqueous rechargeable lithium-air batteries: breakthroughs and difficulties</u>
4:00 PM – 4:30 PM	Session 4: Li air batteries Chair: Winfried Wilcke	Nagaphani Aetukuri, IBM <u>Solid-State Li-Ion Conducting Membranes for Lithium Air Batteries</u>
4:30 PM – 5:00 PM		Haoshen Zhou, National Institute of Advanced Industrial Science and Technology, Japan <u>Development of Lithium Air Battery Based on Non-aqueous or Solid State Electrolyte</u>



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Wednesday, June 3, 2015

7:00 AM – 8:00 AM		BREAKFAST / REGISTRATION
8:00 AM – 8:30 AM		Yi Cui, Stanford University <u>Materials Design to Enable Lithium metal, Sulfur and Polysulfide Batteries</u>
8:30 AM – 9:00 AM	Session 5: Li-S batteries Chair: Ray Bair	Mei Cai, General Motors <u>Li-S Batteries for Electric Vehicle Application: Opportunities and Challenges</u>
9:00 AM – 9:30 AM		Shengshui Zhang, ARL <u>Sulfurized carbon as high performance cathode material of lithium/sulfur batteries</u>
9:30 AM – 10:00 AM		Arumugam Manthiram, University of Texas - Austin <u>Lithium-sulfur batteries: challenges and prospects</u>
10:00 AM – 10:30 AM		MORNING BREAK
10:30 AM – 11:00 AM	Session 6: Emerging energy storage systems III Chair: Chunmei Ban	Yongsheng Hu, Institute of Physics, Chinese Academy of Science <u>Recent research progress on room-temperature sodium-ion batteries from IoP-CAS</u>
11:00 AM – 11:30 AM		Jaephil Cho, UNIST, South Korea <u>Perspective of Rechargeable Zn-Air Batteries</u>
11:30 AM – 12:00 PM		Yiyi Wu, Ohio State University <u>Rechargeable K-Air Battery: Addressing Oxygen Reduction/Evolution through Single-Electron Redox Reaction</u>
12:00 PM – 1:30 PM	LUNCH	Thematic Group Discussions and 2nd Day Speaker Tables
1:30 PM – 2:00 PM		Gary Yang, Uni-Energy Tech <u>From Molecules to MWs-Commercialization of New Generation Vanadium Redox Flow Battery</u>
2:00 PM – 2:30 PM	Session 7: Stationary Energy Storage Systems Chairs: Venkat Srinivasan & Gao Liu	Travis M. Anderson, Sandia National Laboratory <u>Ionic Liquid Flow Batteries</u>
2:30 PM – 3:00 PM		Sri R. Narayan, University of Southern California <u>Grid energy storage</u>
3:00 PM – 3:30 PM		Jerry Neubauer, National Renewable Energy Laboratory <u>Towards the development of liquid organic redox systems for energy storage</u>
3:30 PM – 7:30 PM		Poster session and best student poster award Reception Starts at 5:30 PM



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Thursday, June 4, 2015

7:00 AM – 8:00 AM		BREAKFAST / REGISTRATION
8:00 AM – 8:30 AM		Thom Mason, Director, Oak Ridge National Laboratory <u>Welcome and ORNL Overview</u>
8:30 AM – 9:00 AM		Cody Friesen, Arizona State University <u>Ionic Liquid electrolyte for energy storage</u>
9:00 AM – 9:30 AM	Session 8: Electrolytes for energy storage systems Chair: Nancy Dudney	Kang Xu, ARL <u>NElectrolytes and Interphases Beyond the Horizon of Li Ion</u>
9:30 AM – 10:00 AM		Atsuo Yamada, The University of Tokyo <u>Superconcentrated Electrolytes</u>
10:00 AM – 10:30 AM		MORNING BREAK
10:30 AM – 11:00 AM	Session 9: Modeling on Energy storage materials Chair: Jack Wells	Venkat Srinivasan, Lawrence Berkeley National Laboratory <u>Understanding limitations in the Li-S system using macro-modeling and experimentation</u>
11:00 AM – 11:30 AM		Larry Curtis, ANL <u>New insights into the role of lithium superoxide in lithium-oxygen batteries</u>
11:30 AM – 12:00 PM		Paul Kent, Oak Ridge National Laboratory <u>Energy storage properties of MXenes</u>
12:00 PM – 1:30 PM	LUNCH	Thematic Group Discussions and 3rd Day Speaker Tables
1:30 PM – 2:00 PM	Session 10: In situ Characterization of energy storage materials Chair: Larry Curtis	Clare Grey, Cambridge <u>NMR Beyond Li: Studies of Lithium-Air, Na and Mg batteries</u>
2:00 PM – 2:30 PM		Chongmin Wang, Pacific Northwest National Laboratory <u>Direct multi-scale probing of structural and chemical evolution of energy storage materials</u>
2:30 PM – 3:00 PM		Ashfia Huq, Spallation Neutron Source, Oak Ridge, National Laboratory <u>Following the 'Light Atoms' in Energy Storage Devices Using Neutron Powder Diffraction</u>
3:00 PM – 5:30 PM	ORNL Tours	Tour of ORNL Facilities: 1) Battery Manufacturing Facility and Manufacturing Demonstration Facility - Claus Daniel 2) Center for Nanophase Materials - Ray Unocic 3) Spallation Neutron Source - Ashfia Huq 4) Super Computing: Titan and Everest Computational Facility - Jack Wells and Sreekanth Pannala