Beyond Lithium Ion XI, Double Tree by Hilton
July 24-26, 2018
Agenda
Website: beyondlithiumion.org

7:30 AM	**Registration | Breakfast**	
8:30 AM	Welcome (10 mins)	**Dionne Hernandez-Lugo**, NASA
		Chunmei Ban, NREL
8:40 AM	NASA Glenn Executive Welcome	**Janet Kavandi**, Director, NASA Glenn Research Center
Session I: Keynote Speakers (Chair: Dionne Hernandez-Lugo)		
9:00 AM	TBD	**Sanjiv Malhotra**, DOE
9:30 AM	Advanced Batteries for Electrified Aircraft and Space Exploration	**Ajay Misra**, NASA Glenn Research Center
Session II: Emerging Opportunities for Non-Lithium Metal Anodes (Chair: Jun Liu)		
10:00 AM	Zn electrochemistry and Zn batteries	**Huilin Pan**, PNNL
10:30 AM	Understanding the Aluminum Intercalation and the Chemistry of Al Electrolytes	**Juchen Guo**, UC Riverside
11:00 AM	Rechargeable Superoxide Batteries	**Yiying Wu**, Ohio State University
11:30 AM	Superconcentrated NaFSI based ionic electrolytes; Na+ ion transport and remarkable cycling and device stability	**Patrick C. Howlett**, Deakin University
12:00 PM	***Lunch (1 hour)***	
Session III: Recent Development in Lithium Metal Anode (Chair: Huilin Pan)		
1:00 PM	Pathways for High-Energy-Density Rechargeable Lithium Metal Batteries	**Jun Liu**, PNNL
1:30 PM	Ceramic-Polymer Hybrid Membrane and Solid-State Electrolyte for Li-Metal Battery	**Young-Hye Na**, IBM
2:00 PM	Challenges Facing Lithium Metal Anode in Li-O2 and Li-S Batteries	**Jun Lu**, Argonne National Laboratory
2:30 PM	Novel approaches for stabilizing the lithium-metal anodes	**Jun-Tao Li**, Xiamen University
3:00 PM	**Break (30 mins)**	
3:30 PM	Suppressing Lithium Dendrites in Li-S Batteries	**Vilas G. Pol**, Purdue University
Session IV: Material and Cell Design for Microbatteries (Chair: Young-Hye Na)		
4:00 PM	Performance modeling and design of ultra-high power microbatteries	**James Pikul**, University of Pennsylvania
4:30 PM	3D Electrochemical Thin Layers for Electrical Energy Storage: Fast Electrochemistry and Electrode Protection	**Sang Bok Lee**, University of Maryland
5:00 PM	Selection of Battery Chemistry and Charging Algorithm for IOT Devices	**Naoki Matsumura**, Intel Corporation
5:30 PM	***Break (30 mins)***	
6:00pm	**Poster and Reception**	

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Day 2 – July 25, 2018		
7:30 AM	Registration | Breakfast	
Session V: New Frontiers of Metal Anode Batteries: Lithium-O2, Organic redox batteries (Chair: Ray Bair)		
8:30 AM	Bending Dendrites and Oxygen to our Will for Advanced Metal-Air Systems	**Thomas Zawodzinski**, ORNL-University of Tennessee
9:00 AM	Materials Development for Aqueous Organic Redox Flow Batteries	**Xiaoliang Wei**, Indiana University and Purdue University.
9:30 AM	Selenium impregnated monolithic carbons as free-standing cathodes for high volumetric energy lithium and sodium metal batteries	**David Mitlin**, Clarkson University
10:00 AM	High Capacity Lithium-Air Batteries Enabled by Dry-Pressed Holey Graphene Air Cathodes	**Yi Lin,** NASA Langley Research Center
10:30 AM	***Break (30 mins)***	
Session VI: Interfacial Stability of Li Metal Solid Electrolyte (Chair: Dionne Hernandez-Lugo)		
11:00 AM	Investigation of Solid Polymer Nanocomposite Electrolyte to Mitigate Li Metal/Electrolyte interface and to Enable Li-metal Safely Cycling	**James Wu**, NASA Glenn Research Center
11:30 AM	Engineering lithium metal surface to enable long-term cycling with carbonate-based electrolytes	**Bin Li**, Wildcat
12:00 PM	First Principles Analysis of Interfacial Stability of Solid-State Electrolytes at the Lithium-Metal Anode Surface	**Perla Balbuena**, Texas A&M University
12:30 PM	***Lunch (1 hour)***	
Session VII: Enabling Diagnostics for Electrochemical Storage Systems (Chair: Chunmei Ban)		
1:30 PM	Investigation of the interface and processes of lithium batteries by developing in-situ/operando spectroscopic methods	**Shi-Gang Sun**, Xiamen University
2:00 PM	Recent liquid state and solid state NMR investigations of BLI electrolytes	**Steven Greenbaum**, City University of NY
2:30 PM	In operando diagnostics as a pathway to mechanistic understanding of SEI electrochemistry	**Steve Decaluwe**, Colorado School of Mines
3:00 PM	***Break (30 mins)***	
Session VIII: Batteries for Electrified Aircrafts (Chair: Winfried Wilcke)		
3:30 PM	X-57 Maxwell Battery from requirements to design	**Dionne Hernandez-Lugo**, NASA GRC
4:00 PM	Structural Energy Storage development	**Patricia Loyselle,** NASA GRC
4:30 PM	Electrically Powered Aircraft Will Transform Transportation	**Brien Seeley,** Sustainability Aviation
5:00 PM	***Break (45 mins)***	
5:45 PM	Everyone on board the bus for Dinner. Dinner will be over the Goodtime III more information following the link Goodtime III information	

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Day 3 – July 26, 2018		
7:00 AM	Registration | Breakfast	
Session IX: New Battery Architectures, Design and Manufacturing (Chair: Jagjit Nanda)		
8:00 AM	Electrode structuring and processing challenges of advanced lithium secondary batteries with ultra-high energy densities	**David Wood**, Oak Ridge National Laboratory
8:30 AM	TBD	**Amy Prieto**, Colorado State University
9:00 AM	High Energy Density Electrodeposited Li and Na-ion Battery Electrodes	**Paul Braun**, University of Illinois at Urbana-Champaign
9:30 AM	***Break (30 mins)***	
Session X: Commercialization of Beyond Lithium-ion Technologies (Chair: Gao Liu)		
10:00 AM	From Molecules to MWs: Commercialization of New Generation Vanadium Redox Flow Batteries	**Gary Yang**, UE Technologies
10:30 AM	Technical challenges and strategies for high-energy lithium-sulfur batteries	**Mei Cai,** General Motors
11:00 AM	Next Generation High Energy Rechargeable Zinc-Air Batteries	**Zhongwei Chen,** University of Waterloo
11:30 AM	Advanced Silicon Anode-Based Cells Developed Under NASA's Advanced Energy Storage Systems Project	**Brianne DeMattia,** NASA GRC, **Ionel Stefan**, Amprius, Inc.
12:00 PM	**Lunch (1 hour)**	
NASA Glenn Research Center Tours		
1:00pm – Every on board the bus for NASA GRC lab tour. NASA Glenn Research Center		
1:30 pm – Pick badges @ NASA GRC		
Tours: Visit our website for information on tours facilities-		
After the tour transportation is provided back to the Hotel.		