

**Wednesday, September 23, 2020**

AM Session	Plenary & Keynote: Zero Emissions & Battery Propulsion Pathways Session Chairs: <b>Jim McCarthy, PhD</b> Chief Engineer <i>Eaton</i> <b>Hank Sullivan</b> Director <i>Tenneco</i>	PM Session	Advanced Battery Materials Session Chairs: <b>Kent Snyder</b> Leader, Energy Storage Development Group <i>Ford</i>
Time		Time	
8:30 am	<b>Innovation in Commercial Vehicle Powertrains for 2024 – 2030 Emissions</b> Mihai Dorobantu, PhD <i>Eaton</i>	1:30 pm	<b>Data Aided Computational Design of Functional Materials for All-Solid-State Batteries</b> Chen Ling, PhD <i>Toyota</i>
9:15 am	<b>Trends in Powertrain Evolution: Legislation and Architecture Developments</b> Louise Arnold, PhD <i>Johnson Matthey</i>	2:00 pm	<b>Advanced electrode coating technology for Li-ion batteries</b> Binsong Li, PhD <i>Navitas Systems</i>
9:45 am	<b>Updating New Regulations in China</b> Reggie Zhan, PhD	2:30 pm	<b>In-situ diagnostics of the couple mechanical and chemical degradation of Li metal batteries</b> Xingcheng Xiao, PhD <i>General Motors</i>
10:00 am	<b>Break</b>		
10:30 am	<b>Fundamental and Application Challenges in Emissions Aftertreatment Components</b> Krishna Kamasamudram, PhD <i>Cummins</i>	3:00 pm	<b>Break</b>
11:00 am	<b>Update on Path to 2027 Emissions</b> Chris Sharp, PhD <i>SwRI</i>	3:15 pm	<b>The Solvating Power of Electrolyte Solvents in Li-ion Batteries</b> Chi-Cheung Su, PhD <i>Argonne National Laboratory</i>
11:30 am	<b>EV Battery Enclosure Overview</b> Warren Parsons <i>General Motors</i>	3:45 pm	<b>Materials and Interfacial Engineering for High-performance All-solid-state Batteries</b> Hao Fang, PhD <i>General Motors</i>
12:00 pm	<b>Next Generation Circuit Protection in Electric Vehicles</b> Kevin Calzada <i>Eaton</i>	4:15 pm	<b>Advanced Nickel Rich Layered Oxide Cathode Materials for Lithium Ion Batteries</b> Zhongwei Chen, PhD <i>University of Waterloo</i>
12:30 pm	<b>Challenging Each Other: Advancing Capabilities and Needs for Battery Cells vs Battery Systems</b> Kent Snyder <i>Ford</i>	4:45 pm	<b>Adjournment</b>
1:00 pm	<b>Session Adjourned &amp; Break</b>		

**Thursday, September 24, 2020**

AM Session	Architectures, Pack & Infrastructure Session Chair: Xingcheng Xiao, PhD Staff Research Scientist <i>General Motors</i>	PM Session	Manufacturing Processes Session Chairs: Mark Boyle, PhD Product Manager, AMADA WELD TECH INC. Teresa Rinker, PhD Senior Researcher, <i>General Motors</i>
Time		Time	
9:00 am	<b>Gen 4 Hybrid and Plug-in Hybrid Architectures at Ford</b> Daniel Kok, PhD <i>Ford</i>	1:15 pm	<b>Automotive Battery Recycling: Driving a New Ecosystem</b> Renata Arsenault <i>Ford</i>
9:30 am	<b>Optimization of Li-Ion Battery Pack Life Cycle for a Class 2a Light Duty Electric Truck</b> Abhijat Mulge, PhD, Xuan Zhou, PhD, Manikya Dwivedi, PhD, Allan Taylor, PhD, Yazid Al-Kraimeen, PhD <i>Kettering University</i> Chen Duan <i>Wayne State University</i>	1:45 pm	<b>Blue Lasers Poised to Enhance Battery and EV Fabrication</b> Jean-Michel Pelaprat, Matt Finuf, Robert Fritz, Mark Zediker <i>NUBURU Inc</i>
10:00 am	<b>Challenges of Lithium Metal Batteries for Automotive Applications</b> Alvaro Masias <i>Ford</i>	2:15 pm	<b>Emerging Manufacturing Technologies and Characterization of Next Generation LIBs Materials</b> Shankar Aryal, PhD <i>Argonne National Laboratory</i>
10:30 am	<b>Project Experiences with Energy Storage: From Potential to Market</b> Kevin Fok <i>LG Chem</i>	2:45 pm	<b>Kilowatt Blue Laser Sources for processing solutions in eMobility</b> Oleg Raykis, Simon W. Britten, Sörn Ocylok, Markus Rütering <i>Laserline GmbH</i>
11:00 am	<b>Break</b>	3:15 pm	<b>Break</b>
11:15 am	<b>An Electro-thermal Coupled Battery Model for a 48V Li-on Battery Pack Using Reduced Order Thermal Model</b> Yufeng Liu, Wei Zhao, PhD, Shawn Zhang <i>A123 Systems LLC</i> Xiao Hu, PhD <i>ANSYS Inc</i>	3:45 pm	<b>Real-time Process Monitoring – the pathway to improved product quality, manufacturing throughput, and traceability</b> Mark L. Boyle, PhD <i>AMADA MIYACHI AMERICA, Inc</i>
11:45 am	<b>Investigation Effect of Pulse Charging on Performance of Li-Ion Batteries</b> Jiahao Liu, Meng Xu Xia Wang, PhD <i>Oakland University</i>	3:15 pm	<b>New Laser Welding Technologies for Battery Manufacturing</b> Marc Auger, PhD, Jean-Philippe Lavoie, PhD <i>Coherent</i>
12:15 pm	<b>Enabling Fast Charging Lithium-Ion Batteries through the Rational Design of 3-D Anode Architectures</b> Kuan-Hung Chen, PhD, Min Ji Namkoong, PhD, S. M. Mortuza, PhD, Saeed Kazemiabnavi, PhD, Chenglin Yang, PhD, Jyoti Mazumder, PhD, Katsuyo Thornton, PhD, Jeff Sakamoto, PhD, Neil Dasgupta, PhD <i>University of Michigan</i>	3:45pm	<b>An Improved Model for Predicting Lithium-plating in a Lithium Ion Battery</b> Zihao Teng, Meng Xu and Xia Wang, PhD <i>Oakland University</i>
12:45 pm	<b>Session Adjourned &amp; Break</b>	4:15 pm	<b>Adjournment</b>