

Conference Agenda

**Paid
Conference**

Keynotes – Open to All

Monday, September 10: Pre-Conference Workshops

	BRONZE BALLROOM	SILVER BALLROOM
9:30 am – 12:30 pm	Battery Materials Overview	Designing an Electric Vehicle to Go the Distance
2:00 pm – 5:00 pm	Batteries to Support Critical Power Grids	Battery Safety Training

Tuesday, September 11: Keynote (Free to All)

	CRYSTAL BALLROOM	
9:00 am – 9:45 am	KEYNOTE (FREE TO ALL)	Pivotal Innovation in Energy Storage Donald R. Sadoway, John F. Elliott Professor of Materials Chemistry, Massachusetts Institute of Technology

Wednesday, September 12: Keynote (Free to All)

	CRYSTAL BALLROOM	
9:45 am – 10:30 am	KEYNOTE (FREE TO ALL)	Driving Toward the Tipping Point in EV Adoption Chelsea Sexton, Electric Vehicle Advocate & Advisor

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 Passes start from just \$695 – visit the conference registration area to collect your pass today.

Tuesday, September 11: Conference (Paid)

CRYSTAL BALLROOM			
9:00 am – 9:45 am	KEYNOTE (FREE TO ALL)	Pivotal Innovation in Energy Storage Donald R. Sadoway, John F. Elliott Professor of Materials Chemistry, Massachusetts Institute of Technology	
10:15 am – 10:45 am	Event Chairman's Welcome Address		
10:45 am – 11:35 am	Leaders' Roundtable: Examining Battery Market Drivers		
11:35 am – 12:30 pm	Leaders' Roundtable: Delivering on Vehicle Electrification		
	ADVANCED BATTERY TECHNOLOGIES		ELECTRIC & HYBRID VEHICLE TECHNOLOGIES
	CRYSTAL BALLROOM	ONYX BALLROOM	OPAL GARNET BALLROOM
2:00 pm – 3:30 pm	Next Generation Materials <ul style="list-style-type: none"> • Unlimit Energy • Tunable Syntheses of Advanced Silicon Anodes Using Cyclohexasilane • Moving Beyond Theory: Is High Capacity Silicon Metal Commercially Viable? If So How & When? • Lightweight Non-metallic Electrode Substrate (LESS) • Enabling Solid-State Batteries Through Polymer Innovation 	The Intersection of Electrification & Other Disruptive Technologies	EV Regulations & Timeline Rollout <ul style="list-style-type: none"> • How the Light-Duty Vehicle Market is Poised for a Massive All-Electric Retrofit • EVs and Hybrids in a New Mobility Future • Energy & Efficiency Analysis of Electric Vehicles: Results Out of Real-Drive Tests
3:45 pm – 5:15 pm	New Battery Technologies & Chemistries: Increased Power, Longer Life Cycle, Greater Density & Reduced Manufacturing Costs <ul style="list-style-type: none"> • Prussian Blue Batteries for High Power, Long Cycle Life Energy Storage • Increasing Energy Density in xEV Battery Packs • Introducing New Breakthrough Nanomaterial Solutions for High Silicon Content Cells • Reduce Electrode Manufacturing Costs: Transition From Batch to Continuous Production • Electrolyte: Technology & Market Trends 	Batteries for Medical & Personal Electronic Devices	Advances in Electric Power Control <ul style="list-style-type: none"> • Battery Pack Design & Controls for E-Mobility • Contactors for Today's Low Impedance Cells • Silicon Carbide Power Semiconductors for Electric Vehicle Traction Drives is Getting Closer to a Reality

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Wednesday, September 12: Conference (Paid)

	ADVANCED BATTERY TECHNOLOGIES		ELECTRIC & HYBRID VEHICLE TECHNOLOGIES
	CRYSTAL BALLROOM	ONYX BALLROOM	OPAL GARNET BALLROOM
8:30 am – 9:30 am	Lithium-ion Batteries Most Critical Raw Material: Lithium, Cobalt, Nickel & Graphite	Rapid Growth, New Applications, Developments & Market Dynamic in Automotive Batteries	The Electrification of Commercial Transportation <ul style="list-style-type: none"> The Electrification of Commercial Transportation Fuel Cell Hybrid Electric Delivery Truck: Real World Experience
9:45 am – 10:30 am	KEYNOTE (FREE TO ALL) Driving Toward the Tipping Point in EV Adoption Chelsea Sexton, Electric Vehicle Advocate & Advisor		CRYSTAL BALLROOM
11:00 am – 12:30 pm	Battery Chemistry Safety in R&D & Consumer Use <ul style="list-style-type: none"> Opportunities & Challenges for Mega-Scale Lithium-ion Battery Recycling Application of a Safety Case Methodology to Thermal Propagation Mitigation Evolving Carbon Fiber Solutions for Thermal Management & Safety Transportation Safety: SAE G-27 AS6413 Performance-based Packaging Standard for Lithium Batteries as Cargo on Aircraft Battery Module Encapsulation Techniques for Fire Prevention & Crash Performance 	Advancements in Lead Battery Technologies	Construction & Large Vehicles <ul style="list-style-type: none"> Electric & Hybrid Drive Prospects in Commercial Vehicle & Off-road Applications Commercial Vehicle Requirements for the Most Promising Use Cases of all Electric Heavy-duty Trucks Electric Drivetrain for Heavy Duty Trucks & Buses
2:00 pm – 3:30 pm	Lithium-Ion Advances: Slurries, Fluorinated Materials & Self-discharge Measurement <ul style="list-style-type: none"> Latest Advances in Continuous Processing of LIB Slurries Fluorinated Materials to Help Improve Performance in Lithium-ion Batteries New Method to Measure Self-Discharge of Lithium-ion Cells Lithium-ion Battery Material Benchmarking: Why So Challenging? Single-Active-Material Silicon Anodes for Reducing Barriers to EV Adoption 	Charging & Charging Infrastructure	New EV Technologies <ul style="list-style-type: none"> Impact of New Disruptive Technologies in the Automotive Industry A High Performance, High Efficiency Hybrid Concept Economic & Technological Trade-offs of Rare Earth in Electrified Vehicles Using Materials Engineering to Mitigate the Impact of Thermal Runaway



Complimentary Internet

Complimentary wi-fi is available throughout the venue.

Username: battery18 **Password:** detroit18

Wednesday, September 12: Conference (Paid) Cont'd

	ADVANCED BATTERY TECHNOLOGIES		ELECTRIC & HYBRID VEHICLE TECHNOLOGIES
	CRYSTAL BALLROOM	ONYX BALLROOM	OPAL GARNET BALLROOM
3:45 pm – 4:25 pm	New Concepts in Battery Development <ul style="list-style-type: none"> Multifunctional Energy Storage Composites: Structurally-Integrated Batteries for Lightweight Automotive Applications Conformal All Solid State Battery for Electrification of Land, Space & Marine Vehicles Dynamic Cell Impedance Calculation for Precision SOC/SOH Using Neural Networks Tradeoffs in Fast Charging of NCA Cells 	Battery Management Systems (BMS): Procurement, Specifications, Manufacturability & Next-Gen BMS Architectures	Driving the Development Cycle <ul style="list-style-type: none"> Minimizing the Development Cycle of the Powertrain/Vehicle Hybridization/Electrification Configurations EV Battery Cell Interconnect System Optimization & Thermal Analysis of an EV Drive
4:30 pm – 5:15 pm		Simulation & Machine Learning to Advance Battery Design <ul style="list-style-type: none"> Using Computed Tomography to Help Accelerate the Development of Batteries Simulation & Machine Learning to Advance Battery Design How Simulation is Used to Design an xEV Battery Pack System 	New Developments in Component Technologies & Electric Motor Design <ul style="list-style-type: none"> High Resolution Multispectral Rapid Impedance for In-Situ Diagnostics GaN in Automotive: Progress & Prospects Analysis of Concurring Stator Winding Characteristics & Their Production Features

Thursday, September 13: Conference (Paid)

	ADVANCED BATTERY TECHNOLOGIES		ELECTRIC & HYBRID VEHICLE TECHNOLOGIES
	CRYSTAL BALLROOM	ONYX BALLROOM	OPAL GARNET BALLROOM
8:30 am – 9:30 am	Lithium-ion: New Technologies for Modeling, Manufacturing & Recycling <ul style="list-style-type: none"> Integrating Novel Cathode Conductor & Alternative Foam Substrate Into Lithium-ion Battery Manufacturing for Electric Vehicles & Grid Storage Modeling Stress & Deformation in Lithium-ion Batteries With Si Anode Comparison of Lithium-ion Battery Recycling Processes Using the ReCell Model 	The Role of IP in Protecting Early-stage Development and Commercialization	Can the Commodity Price Bubble Disrupt the On-going Lithium-ion Battery Cost Reduction?

Thursday, September 13: Conference (Paid) Cont'd

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	CRYSTAL BALLROOM	ONYX BALLROOM	OPAL GARNET BALLROOM
9:30 am – 10:30 am	<p>Going Beyond Lithium</p> <ul style="list-style-type: none"> Emerging Chemistries: Fundamental Challenges Alternative Chemistries: Sodium Next Generation Zinc Batteries 	<p>Flow Battery Innovations for Power Grid Technologies</p>	<p>Microgrids for Electric Bus & Truck Fleet Operations</p>
11:00 am – 11:45 am	<p>Thermal Management: Materials, Packaging & Performance</p> <ul style="list-style-type: none"> Cooling & Packaging Batteries for Electric Vehicles Silicone vs. Urethane: Choosing Dispensed Materials for Thermal Battery Cooling Comparison of Gap Pads & Gap Fillers for Thermal Management of EVs New Means of Suppressing Thermal Runaway in Packaging & Enclosures Utilizing Battery Pack Thermal Analysis to Minimize Cell/Pack Degradation 	<p>Boosting Battery Performance Through Thermal Management</p> <ul style="list-style-type: none"> Enhancing Thermal Stability & Performance of Lithium-ion Batteries Using Latent Heat Storage (LHS) Technology The Building Blocks of Thermal Interface Materials for Automotive Power Conversion & Storage Systems Under Pressure: Protecting Battery Enclosures with Passive Dual-Stage Venting 	<p>48V for Mild Hybrids & Beyond</p> <ul style="list-style-type: none"> Do 48V Powertrains Make Sense for the North American Market? DC Arc Suppression in 48V & HV Systems Is There One Solution for Batteries Supporting 48V Mild Hybrids?
11:45 am – 12:30 pm		<p>Connecting & Smart Sizing Battery Manufacturing Plants</p> <ul style="list-style-type: none"> Achieving A Connected Battery Plant: How Advanced Manufacturing Helps Scale Production, Improve Genealogy Tracking & Create Agility In Your Process Smart Size Battery Factory for Lithium-ion Cell Manufacturing 	
2:00 pm – 3:30 pm	<p>Improving Safety & Efficiency of Battery Recycling & Repurposing Through Academic Industry Partnership</p>	<p>Improving Battery Manufacturing Processes & Meeting Environmental Restrictions</p> <ul style="list-style-type: none"> Continuous Manufacturing Processes for High Volume Battery Materials New Processes & Lasers for Battery Welding Applications New Approaches to Cathode Manufacturing to Meet New Environmental Restrictions Industrial Laser Processing of Battery Related Subcomponents The Next Era in Lithium-Ion Batteries Begins Today With Nano-Coatings 	<p>New Charging Technologies</p> <ul style="list-style-type: none"> Fueling Electric Transportation & Energy Use with the Existing Grid Spurring Heavy-Duty Electric Vehicle Adoption through Advances in Wireless Charging Design Methodologies for Class-8 Vocational Electric/Hybrid Vehicle Battery Packs