



Battery Seminar 2024

Jul. 16, 2024: Day 1 – Battery Training Tutorials

8:00 am – 5:00 pm	Registration Open
8:00 am – 8:25 am	Breakfast with Networking Sponsored by AMERICAN BATTERY SOLUTIONS
8:25 am – 8:30 am	Welcome Note
8:30 am – 9:30 am	<p>Tutorial A: Design Principles for Interface Reaction in All-Solid-State Batteries Associate Professor Xin Li, Ph.D. – Harvard University</p> <p>The unique fundamental mechanism that dominates interface reaction in a solid-state battery becomes the design opportunity to unlock many breakthrough performances beyond commercial Li-ion batteries. The talk discusses how electrochemical interface reactions are locally coupled with mechanical and transport properties to dictate battery performance, giving opportunities to design electrolyte and electrode coating materials for advanced battery performance.</p>
9:30 am – 10:30 am	<p>Tutorial B: What Can Cryo-EM Teach Us About Lithium-Metal Anodes? Assistant Professor Yuzhang Li, Ph.D. – University of California, Los Angeles (UCLA)</p> <p>One of the most important yet unanswered questions in battery research still remains: what are the structures and chemistries present across liquid-solid battery interfaces and how do they evolve with time? This tutorial will discuss innovative cryo-EM techniques that can resolve these sensitive liquid-solid interfaces and correlate them with battery performance. We'll explore a thin film vitrification method to preserve the sensitive battery interfaces in their native liquid electrolyte environments for high resolution imaging and spectroscopy.</p>
10:30 am – 11:00 am	Coffee with Networking Sponsored by MACCOR
11:00 am – 12:00 pm	<p>Tutorial C: Routes to Higher Energy Density Intercalation Cathodes Assistant Professor Kent Griffith and Ethan Alter – University of California San Diego</p> <p>Increasing the energy density of lithium-ion cathode materials requires charging to higher voltage and/or pulling more lithium out of the crystal structures. As each cathode family trends toward higher energy—olivine LFP to LMFP; higher Ni content in layered NMC; spinel LMO to LNMO — the cycle life and, often, safety characteristics are degraded. This tutorial will describe trends in lithium-ion battery cathode materials, failure modes, and strategies to stabilize high-energy cathodes.</p>
12:00 pm – 1:30 pm	Lunch with Networking Sponsored by BLUE CURRENT
1:30 pm – 2:30 pm	<p>Tutorial D: Rising From the Ashes – How Cell Qualification Emerges from Failure Analysis John McGann and Keith Beers – Exponent</p> <p>Properly setting up your cell qualification and monitoring programs can be the difference between a great product and a punchline in the news. Exponent will discuss its approach and experience with failure analysis of lithium-ion cells and how it has shaped our unique view of cell quality analysis.</p>
2:30 pm – 3:30 pm	<p>Tutorial E: Transformational Electrification of Planes, Trains and Ships Halle Cheeseman – US Dept. of Energy (ARPA-E)</p> <p>EVs are in the bag, trucks are on the way and while there is still so much work to do we have electrochemical solutions that deliver emission free road transportation. What about other vehicles such as Planes, Trains and Ships and indeed heavy duty-construction or agricultural equipment. Unlike cars, that spend 95% of the time doing nothing, these vehicles, vessels and aircraft are work horses often working over 16 hours a day and for more than 20 years. Can we develop electrochemical solutions for these vehicular monsters? In this presentation Dr. Cheeseman will explore the requirements, the challenges and technical strategies for tackling these energy hungry applications. Example of projects designed to address the need will be included.</p>
3:30 pm – 4:00 pm	Coffee with Networking Sponsored by MACCOR
4:00 pm – 5:00 pm	<p>Tutorial F: Putting the Pieces Together – How the Battery Value Chain Can Be Built Ken Hoffman – McKinsey & Company</p> <p>The value chain for batteries includes critical metals, chemicals, and whole host of materials. The question remains, how do raw material and specialty product providers work together with OEM's and cell producers providing cutting edge products at the lowest costs as quickly as possible. We will explore the success stories we have experienced as well as the challenges faced.</p>
5:00 pm – 5:30 pm	Wrap-Up (Summary & Conclusions)

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Chairperson: Dr. John Warner – Chief Customer Officer at American Battery Solutions

Jul. 17, 2024: Day 2 – Energy Storage Systems in eMobility Applications

8:00 am – 6:00 pm	Registration Open
8:00 am – 8:30 am	Breakfast with Networking Sponsored by AMERICAN BATTERY SOLUTIONS
8:30 am – 9:00 am	Solid-State Batteries – Finally! Adrian Tylim – Blue Solutions
9:00 am – 9:30 am	Understanding the Fundamental Kinetics of LMR for EV Applications Chansun Park – Ford
9:30 am – 10:00 am	EV Batteries at Low Temperatures – Reviewing the Science Tobias Glossmann – Mercedes-Benz R&D North America
10:00 am – 10:30 am	Coffee with Networking
10:30 am – 11:00 am	Enabling Clean Aviation Robin Amisse – H55
11:00 am – 11:30 am	The Future of Regional Air Mobility Ian Villa – Whisper Aero
11:30 am – 12:00 pm	Making Li-S Batteries a Commercial Reality Arjun Mendiratta – Lyten
12:00 pm – 1:30 pm	Lunch with Networking Sponsored by VOLTAIQ
1:30 pm – 2:00 pm	The "Not So Secret" Behind Solid-State Batteries – Lithium Metal Alex Yu – Factorial Energy
2:00 pm – 2:30 pm	AI-Driven Advances in Battery Science, Manufacturing, and Safety Qichao Hu – SES AI
2:30 pm – 3:00 pm	Redefining the Role of the Separator in Battery Evolution Brian Sisk – Sepion Technologies
3:00 pm – 3:30 pm	Coffee with Networking
3:30 pm – 4:00 pm	High-Performance Silicon Anodes for the EV Market Kara Evanoff – Sila Nanotechnologies
4:00 pm – 4:30 pm	Updates in Lithium-Metal Battery Development Chris Dekmezian – QuantumScope
4:30 pm – 5:00 pm	Performance, Sustainability, and Safety From a Fully Dry Silicon Battery Jessica Golden – Blue Current
5:00 pm – 5:30 pm	Electrochemical Analysis to Accelerate Factory Scale-Up Blake Hawley – Voltaiq
5:30 pm – 7:30 pm	Exponent Cocktail Reception with Industry Networking Enjoy some light appetizers and beverages while networking with industry peers and subject matter experts from Exponent – a proud sponsor of this cocktail reception.

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Jul. 18, 2024: Day 3 – Energy Storage Systems in Stationary Grid Applications

8:00 am – 5:00 pm	Registration Open
8:00 am – 8:30 am	Breakfast with Networking Sponsored by AMERICAN BATTERY SOLUTIONS
8:30 am – 9:00 am	Why Unlocking Superior EV Charger Performance Starts with Software and Service Pat Hayes – ABB
9:00 am – 9:30 am	Enablement of Electrified Freight with High Power Charging Sean Ackley – Einride
9:30 am – 10:00 am	Commercial Fleet Charging Infrastructure and Public/Private Hubs Andy Manos – Prologis Mobility
10:00 am – 10:30 am	Coffee with Networking
10:30 am – 11:00 am	Challenges with DCFC Standards vs. Light EVs Ronald Rojeski – Zero Motorcycles
11:00 am – 11:30 am	Toward the Electrified and Carbon Neutral Future Kiyotaka Kawashima – American Honda Motor Company
11:30 am – 12:00 pm	Designing For The Ideal Charging Experience Naren Nagarajan – Lucid Motors
12:00 pm – 1:30 pm	Lunch with Networking Sponsored by VOLTAIQ
1:30 pm – 2:00 pm	Fostering EV Charging Infrastructure Innovation Nicholas Fiore – San Diego Gas & Electric
2:00 pm – 2:30 pm	Battery Charging and Offboard Thermal Management for Electric Aerial Ridesharing Paul Guerra – Joby Aviation
2:30 pm – 3:00 pm	Latest Trends in Residential HEMS – PCS, NEM3.0 and Bidirectional Chargers Mohammad Alkuran – Enphase Energy
3:00 pm – 3:30 pm	Coffee with Networking
3:30 pm – 4:00 pm	The Fast-Moving Energy Storage Landscape Kevin Fok – LG Energy Solution
4:00 pm – 4:30 pm	BESS Applications, Cell Types and SOC Estimation for Grid-Scale Deployment Blake Rector – Powin
4:30 pm – 5:00 pm	Reduce System Complexity with Chip-on-Cell Battery Monitoring Carlton Brown – Dukosi
5:00 pm – 5:15 pm	Closing Comments / End of Seminar

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Register Online: [PlugVolt Battery Seminar 2024 Online Registration Form](#)

Location – Battery Seminar 2024

Holiday Inn San Jose – Silicon Valley
1350 North 1st Street
San Jose, CA 95112 USA
Tel.: (001) 408-453-6200

Pricing

January 1, 2024	Registration Opens
January 1, 2024 – May 11, 2024	Early Bird: \$999/day, \$1299/2 days or \$1499/3 days
May 12, 2024 – July 06, 2024	Regular: \$1099/day, \$1399/2 days or \$1699/3 days
July 07, 2024 – July 18, 2024	Late: \$1199/day, \$1499/2 days or \$1799/3 days

- 10% group discount for 3+ attendees from the same corporation/institution (all attendees must register and pay at the same time)
- 25% discount for attendees from a government agency (a valid government ID is required)
- 25% discount for attendees from an academic institution (a valid academic institution ID is required)
- Contact us for additional attractive group discounts for parties of 5+ people attending from the same corporation/institution

PlugVolt® discounted room rate is available at the Holiday Inn San Jose – Silicon Valley until July 01, 2024, following which rooms may not be available and/or available at the prevailing rate. Reservations can be made directly at:

[PlugVolt Battery Seminar 2024 Hotel Bookings](#)

Program Outline

This seminar will provide an entire day of in-depth technical tutorials on solid-state batteries, next-gen anodes and cathodes, battery diagnostics, failure modes and best design practices for cell engineering, securing North American supply chain for gigafactories, etc.

These presentations will be accompanied by complementary industry updates offered by subject matter experts from major multinational OEMs, Tier 1 suppliers and battery manufacturers. Topics will cover several existing battery chemistries and their application to stationary/grid storage and e-mobility, along with recent advances in some Li Ion technologies, challenges in bringing these batteries to volume production, and any specific performance requirements driven by such applications.

The seminar will also host an evening reception sponsored by Exponent where attendees will have plenty of opportunities for industry networking, ask questions to Exponent's subject matter experts on commonly seen end-of-life mechanisms from detailed teardown analysis, and discuss some best design practices for batteries.

Questions?

Contact JC Soman at 1-877-PLUGVOLT or juratesoman@plugvolt.com for more details, or visit our website www.plugvolt.com or www.batteryseminars.com

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