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2026 CONFERENCE PROGRAMS:

R&D

- Next-Generation Battery Research
- AI for Energy Storage
- Lithium-ion Battery Development & Commercialization
- Battery Recycling

MANUFACTURING

- High-Performance Battery Manufacturing
- Global Supply Chain for Battery Raw Materials
- Battery Manufacturing Production
- Battery Engineering

APPLICATIONS

- Advances in Automotive Battery Applications
- Large-Scale Energy Storage
- Battery Power for Consumer Electronics
- Battery Technologies for Military Applications

ENGINEERING

- Battery Safety
- AI for Energy Storage
- Battery Engineering
- Battery Manufacturing Production

PLENARY KEYNOTES:



LFP Cells Are Boring—Why Should I Care?

Jeff Dahn, FRSC, PhD, Dalhousie University



Delivering Advanced Battery Technologies for EV Range and Value

George Cintra, Director, Battery R&D, General Motors



Today's EV Reality and the Path Forward

Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution



Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth

Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.



New Science Frontiers in Battery Technologies

Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago



Navigating the Global EV Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big Data Requirements

Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation

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PLENARY KEYNOTE PROGRAM

3:50 pm Chairperson's Remarks

Craig Wohlers, General Manager, Cambridge EnerTech

3:55 pm LFP Cells Are Boring—Why Should I Care?

Jeff Dahn, FRSC, PhD, Professor of Physics and Atmospheric Science & NSERC/Tesla Canada Industrial Research Chair, Dalhousie University



LFP Li-ion cells are now the most common cells in energy storage products and EVs. They are inexpensive and since they are relatively safe, they can be made in large-Ah-capacity cells, reducing cost and complexity in battery modules and packs. Even though they are not "sexy," boring old LFP will dominate in many applications for years to come. However, the high-temperature lifetime of LFP cells is poor, which means they require temperature control in many applications to attain an acceptable lifetime. I will explain why the high-temperature lifetime is poor and discuss some strategies to improve it. I will explain how to make LFP cells exciting, including strategies to dramatically increase their energy density.

4:15 pm Delivering Advanced Battery Technologies for EV Range and Value

George Cintra, Director, Battery R&D, General Motors



General Motors is building an electrification powerhouse, having launched a dozen EVs into the market, ranging from the Equinox EV to the Cadillac Escalade IQ. General Motors is pioneering next-generation battery and manufacturing technologies, such as prismatic cells with LMR cathodes. Mr. Cintra will provide an update on GM's battery research & development activities, tools and innovations to deliver longer range, lower costs, and faster charging batteries for EV customers.

4:35 pm Today's EV Reality and the Path Forward

Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution



LG Energy Solution is the leading lithium-ion battery manufacturer, working with the top OEMs globally in transforming the automobile industry. The market for EVs is expanding rapidly, driven by both consumer demand and regulatory incentives. In North America, there are unprecedented levels of investment to support EVs, by both OEMs and battery manufacturers. This presentation will discuss market growth projections, announced expansion plans, and the challenges ahead.

4:55 pm Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth

Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.



Panasonic Energy has been at the forefront of battery technology development, driving the growth of BEVs and AI. To meet increasing market demand, we are expanding our production capacity in North America and strengthening strategic partnerships. These initiatives will contribute both to the realization of a sustainable society and to our business growth. This presentation will highlight the innovative activities within our battery business from a technological perspective.

5:15 New Science Frontiers in Battery Technologies

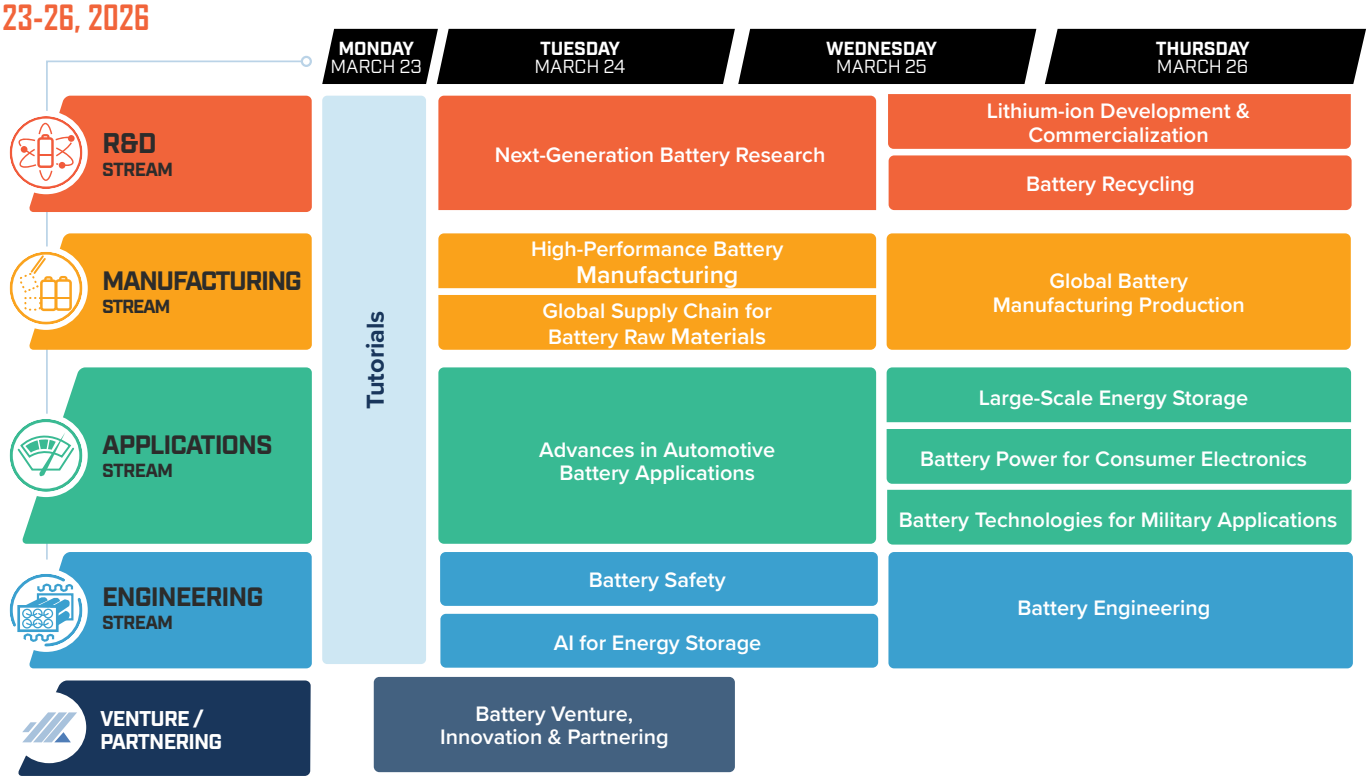
Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago



In this talk, I will discuss a few new perspectives for energy storage materials including new solvation architecture designs for liquid electrolytes and new superionic conductors in soft or hard materials. With recent advances in photon and electron characterization tools and computational methods, we can explore ionic mobility, charge transfer and ion matter interactions in electrochemical system in operando.

2026 Conference Programs:

March 23-26, 2026



INTERACTIVE TUTORIALS*

MONDAY, MARCH 23 8:30-10:00 AM

TUT1: Cathode Active Materials: The Strategic Core of Performance, Cost and Sustainability

Instructor:

Tom Van Bellinghen, Founder, Lithink

TUT2: In-Depth Analysis of the Chinese xEV Battery Industry

Instructor:

Shmuel De-Leon, CEO, Shmuel De-Leon Energy Ltd.

TUT3: Economics of Battery Material Development & Manufacturing

Instructor:

Thomas D. Gregory, Owner and Consultant, Borealis Technology Solutions LLC

MONDAY, MARCH 23 10:30 AM-12:00 PM

TUT4: Virtual Analysis of Cell Aging and Cell Behaviors for the Selection and Development of Long-Life Cells

Instructor:

Luke Hu, Co-Founder & GM, Global Business, Electroder Ltd.

TUT5: Critical Minerals and Battery Supply Chain: Challenges, Geopolitics and Sustainable Solutions

Instructor:

Kimberly Berman, Independent Consultant, Pivot Research

TUT6: Understanding the Future of Battery Cell Cost & Assessing the Economic Feasibility of Emerging Technologies

Instructor:

Varnika Agarwal, Senior Research Analyst, Benchmark Mineral Intelligence

MONDAY, MARCH 23 1:30-3:00 PM

TUT7: Improving the Energy Density of Batteries with Silicon-Based Anodes

Instructor:

Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.

TUT8: Li-ion Cell Design and Manufacturing

Instructor:

James Kaschmitter, CEO, SpectraPower LLC

TUT9: Predictive Analytics and AI in Inventory Optimization, Demand Planning and Forecasting

Instructor:

David Steven Jacoby, Managing Director, Energy Consulting, Boston Strategies International

MONDAY, MARCH 23 3:15-4:45 PM

TUT10: Latest Regulatory and Legislative Developments on the Safe Transport, Storage, Collection and Recycling of Lithium Batteries

Instructor:

Marcus Boolish, Policy Advisor, Wiley Rein LLP, PRBA Rechargeable Battery Association

TUT11: Solid-State Batteries

Instructor:

Venkataraman Thangadurai, PhD, Chair, Energy & Faraday Institution; Adjunct Professor, School of Chemistry, University of St. Andrews

TUT12: Technology Innovation in the Chinese Battery Industry

Instructor:

Mark Lu, PhD, Senior Industrial Analyst, Industrial Economics & Knowledge Center, Industrial Technology Research Institute

*All Access Registration or separate registration required for Tutorials

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R&D STREAM

Next-Generation Battery Research

Powering Higher Performance and Energy Density through Electrochemical Engineering

MONDAY, MARCH 23

7:00 am Registration Open and Morning Coffee

4:45 pm Close of Day

TUESDAY, MARCH 24

7:00 am Registration Open and Morning Coffee

8:05 Organizer's Remarks
Mary Ann Brown, Executive Director, Conferences, Cambridge EnerTech Institute

ELECTROLYTE DESIGN: POWERING BATTERY INNOVATION

8:10 Chairperson's Remarks
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.



8:15 FEATURED PRESENTATION: Electrolyte and Interphase Design for High-Performance Lithium-ion Batteries
Arumugam Manthiram, PhD, George T. and Gladys H. Abell Endowed Chair of Engineering, Mechanical Engineering, University of Texas at Austin
Lithium-ion batteries have become embedded in our modern-day life, but there is an appetite to enhance the fast charging, safety, and wide-temperature-operation capabilities, while maintaining high energy density. Electrolytes play a dominant role in these performance parameters. This presentation will focus on the design and development of electrolytes with optimal interphase chemistry to achieve the goals, with an in-depth fundamental understanding aided by advanced characterization methodologies.

8:45 Building Better Electrolytes for TWh Scale
Gustavo Hobold, PhD, CTO, Elementium Materials
Carbonate-based electrolytes struggle to meet performance requirements of emerging electrode materials (Si, high Ni, high voltage, Mn-rich, Na-ion). Most alternatives fail to meet scalability requisites for mass-market applications and remain an R&D exercise, such that industry continues to rely on carbonates. Here we present new electrolytes that solve long-withstanding performance issues with legacy electrolytes, while being scalable to TWh capacity, and thus helping enable a new generation of battery technology.

9:15 Deciphering the Dynamic Nature of the Solid-Electrolyte Interphase in Lithium-Metal Batteries
Wurigumula Bao, PhD, Project Scientist, PME, University of Chicago
Lithium metal batteries (LMBs) offer exceptional energy density but face fast degradation from lithium loss. Time-resolved analysis reveals that fast charging accelerates solvent-driven SEI thickening and inactive Li° buildup, rapidly reducing active Li and heightening safety risks. Slow charging with fast discharging instead yields a stable, salt-derived SEI and better Li utilization. These findings uncover coupled SEI–Li° evolution governed by interfacial kinetics, guiding optimized cycling for durable, safe LMBs.

9:45 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing

CATHODE DESIGN: POWERING BATTERY PERFORMANCE

10:25 Chemo-Mechanics in Solid-State Cathodes
Kelsey Hatzell, PhD, Associate Professor, Andlinger Center for Energy and the Environment, Princeton University
All solid-state batteries could potentially address the safety and driving range requirements necessary for widespread adoption of electric vehicles. New insight into the governing physics that occur at intrinsic and extrinsic interfaces are critical for developing engineering strategies for the next generation of energy dense batteries. In this talk I discuss opportunities for tracking phenomena and mechanisms in all solid state batteries in-situ using advanced synchrotron techniques.

10:50 Smart Sulphur Cathodes
Venkataraman Thangadurai, PhD, Chair, Energy & Faraday Institution; Adjunct Professor, School of Chemistry, University of St. Andrews
Sulphur electrodes have been considered the next-generation electrodes for higher-energy-density Li-metal batteries due to their high specific capacity compared to conventional transition-metal-based cathodes. In this talk, we report a novel design of sulphur electrodes with minimal polysulphide issues and improved cycle life.

11:15 Next-Generation High Energy and Sustainable Cathode Materials
Tongchao Liu, PhD, Chemist, Chemical Sciences and Engineering Division, Argonne National Laboratory
We introduce two new cathode innovations that overcome long-standing trade-offs in high-energy lithium-ion batteries. A Ni-rich dual-gradient design enables stable cycling up to 4.7 V without capacity decay, and a low-Ni (<0.6) integrated structure delivers Ni-rich-level capacity with superior durability and sustainability. These new architectures open the door to high energy density, advancing sustainable, high-performance cathodes for next-generation lithium-ion batteries.

11:40 Disordered Rocksalt Cathode Materials: A Promising Material for Next-Generation Lithium-ion Batteries
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.
Development of advanced US-patented cathode materials is critical to establishing next-generation domestic battery materials. Wildcat will highlight breakthrough performance of high energy, low cost, and cobalt-and nickel-free Disordered Rocksalt (DRX) cathodes. Wildcat has significantly improved performance in cycle life, voltage fade, and resistance growth while maintaining high energy density. The material has also been demonstrated with roll to roll coating and multi-layer pouch cells.

12:05 pm EV to ESS: Rethinking Battery Pack Development, Validation, and Power Electronics for Stationary Storage
Don Wright, VP, Product Engineering, Unico
Automotive OEMs are expanding battery development beyond EVs into stationary energy storage for the grid and data centers, signaling a shift to multi-market battery platforms. This talk explains why EV-to-ESS is not a simple pack reuse, highlighting differences in duty cycles, environments, validation, and safety requirements. We compare EV and ESS development approaches and show how flexible power electronics enable voltage-agnostic, scalable storage architectures.

12:30 Networking Luncheon

1:15 Dessert Break in the Exhibit Hall with Poster Viewing

MATERIAL DESIGN AND CONSISTENCY: POWERING BATTERY RELIABILITY

1:45 Chairperson's Remarks
Kevin L. Gering, PhD, Distinguished Staff Scientist, Energy Storage Technologies, Idaho National Laboratory

1:50 Multiscale Degradation Understood Using Cryogenic Electron Microscopy: Gas, Transition Metal Dissolution, Dead Lithium, and Separator Deformation
Katherine Jungjohann, PhD, Group Manager, Microscopy, Imaging, and Characterization for Renewables, National Renewable Energy Laboratory (NREL)
Lithium-ion transport in cathodes depends on interfacial properties of the cathode electrolyte interface (CEI), at around 10 nm the composition/thickness highly impact impendence while protecting against parasitic reactions. CEI characterization in structure, composition, and bonding were completed using multiscale cryogenic electron microscopy. Millimeter-scale cross-sections through intact coin cell batteries and nanoscale mapping were used to visualize degradation in electrodes such as particle cracking, gas evolution, dead lithium, and torn separators.

2:20 Physics-Based Modeling Platform to Predict Battery Power Envelopes over Aging
Kevin L. Gering, PhD, Distinguished Staff Scientist, Energy Storage Technologies, Idaho National Laboratory
Achievable power is central to battery state of health (SOH), encompassing capacity and conductance losses. However, testing multiple power conditions during battery aging involves considerable extra expense. Addressing this, INL created the Smart Pulse Diagnostic Tool. Based on analysis of a simple, single, short pulse per cell, a wealth of power behavior (power envelopes) is predicted over a wide range of cycling conditions, accounting for temperature affects from joule heating.

2:50 How the Evolving Nanocarbon Supply Chain Will Impact the Battery Industry
Conor O'Brien, PhD, Principal Technology Analyst, Analyst Team, IDTechEx
Advanced nanocarbons such as carbon nanotubes and graphene can play a key role in improving energy storage technologies, enhancing energy density, charge rates, and cycle life in both lithium-ion and next-generation batteries. IDTechEx has covered the nanocarbon market for 15 years, and this talk will discuss historic trends in nanocarbon supply chains, current bottle necks and a future outlook based on continuously increasing production capacity.

3:20 Refreshment Break in the Exhibit Hall with Poster Viewing

PLENARY KEYNOTE

3:50 Shep Wolsky Battery Innovator of the Year Award Presentation and Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech



3:55 LFP Cells Are Boring—Why Should I Care?
Jeff Dahn, FRSC, PhD, Professor of Physics and Atmospheric Science & NSERC/Tesla Canada Industrial Research Chair, Dalhousie University
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George Cintra, Director, Battery R&D, General Motors
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4:35 Today's EV Reality and the Path Forward
Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution
LG Energy Solution is the leading lithium-ion battery manufacturer, working with the top OEMs globally in transforming the automobile industry. The market for EVs is expanding rapidly, driven by both consumer demand and regulatory incentives. In North America, there are unprecedented levels of investment to support EVs, by both OEMs and battery manufacturers. This presentation will discuss market growth projections, announced expansion plans, and the challenges ahead.



4:55 Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth
Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.
Panasonic Energy has been at the forefront of battery technology development, driving the growth of BEVs and AI. To meet increasing market demand, we are expanding our production capacity in North America and strengthening strategic partnerships. These initiatives will contribute both to the realization of a sustainable society and to our business growth. This presentation will highlight the innovative activities within our battery business from a technological perspective.



5:15 New Science Frontiers in Battery Technologies
Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago
In this talk, I will discuss a few new perspectives for energy storage materials including new solvation architecture designs for liquid electrolytes and new superionic conductors in soft or hard materials. With recent advances in photon and electron characterization tools and computational methods, we can explore ionic mobility, charge transfer and ion matter interactions in electrochemical system in operando.

5:35 Reception in the Exhibit Hall with Poster Viewing

6:35 Close of Day

WEDNESDAY, MARCH 25

7:30 am Registration Open and Morning Coffee

EMERGING ELECTROCHEMISTRIES: DRIVING BATTERY INNOVATION

8:25 Chairperson's Remarks
Amy C. Marschilok, PhD, Professor, Materials Science & Chemical Engineering, SUNY Stony Brook

8:30 Advanced X-Ray Characterization of Aqueous Metal Batteries
Johanna Nelson Weker, PhD, Lead Scientist, SLAC National Accelerator Laboratory

Synchrotron-based X-rays enable multiscale characterization of materials with sensitivity to microstructure, chemistry, and morphology. At the Stanford Synchrotron Radiation Lightsource, we have a suite of X-ray tools for operando battery research. We are applying these to zinc-based aqueous batteries for grid-scale energy storage. We are directly tracking degradation phenomena such as dendrite growth and hydrogen evolution through X-ray microscopy to identify underlying failure mechanisms and inform strategies to enhance performance.

9:00 Operando Acoustic Analysis of Formation Parameter Coupling in Lithium-Metal Batteries
Daniel A. Steingart, PhD, Stanley Thompson Professor, Chemical Metallurgy & Chair, Earth & Environmental Engineering, Columbia University

Batteries redistribute mass within a fixed volume to operate, producing measurable acoustic signatures. We have developed ultrasonic time-of-flight methods to non-destructively determine state of charge, state of health, lithium plating, and gas generation across chemistries. We also examine lithium metal internal short circuits, finding dendrite resistances far exceed cell resistance — too resistive alone to trigger thermal runaway. Understanding the actual mechanisms behind failure is essential for designing safer cells.

9:30 Accelerating Domestic Cathode Development and Manufacturing
Wyatt Olson, Director, Tech Program Management, 6K Inc.

Removing reliance on foreign cathode materials requires rapid development and domestic production of next-generation formulations. 6K's UniMelt® platform enables this through PCAM-free, flexible, and low-cost synthesis of oxide cathode materials such as single crystal NMC 721 and 811. This talk showcases how the UniMelt® process accelerates formulation development, enables real-time customization, compresses time-to-market, and produces at scale — keeping both innovation and manufacturing in America.

9:45 100% Silicon Anodes Using a Fully NATO Supply Chain: 3rd Party Demonstrated 1000Wh/L Li-ion Cells Leveraging Industrial Manufacturing PECVD Equipment and Conventional Cell Production Lines
Rob Anstey, CEO, GDI Inc.

GDI leverages an existing US/EU mineral feedstock and precursor supply chain to manufacture 100% silicon anodes. Cells using this 100% silicon anode have achieved 1000Wh/l energy density in 3rd party verified pouch cell designs with existing cell manufacturers. The key to direct integration with existing cell building equipment is to remove the need for external pressure and novel cell designs by managing the expansion and contraction of the silicon anode layer. Thereby preventing foil deformation, delamination, or requiring external steel compression plates by removing all binders and powders. Cell data and scale up plans will be shared.

10:15 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

11:05 High-Entropy and Disordered Materials and Electrodes: Progress and Opportunities for Next-Generation Batteries
Amy C. Marschilok, PhD, Professor, Materials Science & Chemical Engineering, SUNY Stony Brook

Entropy and disorder are typically viewed as negative factors in rocking-chair (de)intercalation-based lithium ion battery systems. However, entropy and disorder can be harnessed for significant benefit in beyond lithium-ion batteries utilizing new materials and energy storage modalities, as will be highlighted in this presentation.

11:35 Novel Vanadium-Oxide Anode Technology for High-Performance Lithium-ion Batteries
Haodong Liu, PhD, Co-Founder and CTO, Tyfast Energy Corp.; Activate Fellow, Lawrence Berkeley National Laboratory

Tyfast is advancing lithium-ion batteries for heavy-duty, mining, construction, and defense applications with a proprietary vanadium oxide anode. Our cells deliver ultra-fast charging (<6 minutes to 80% SOC), long life (>10,000 cycles), and reliable performance under extreme conditions, including −60 °C operation, zero-volt stability, and high-rate discharge above 45 C. We are also developing next-generation vanadium oxide anodes to enable higher energy density cells, broadening the impact of this technology.

12:05 pm Data Management and AI for Next-Generation Battery Materials Development
Jacob Mohin, Director, Solutions Engineering, Albert Invent Corp.

Optimizing battery electrolytes is a high-dimensional problem: performance depends on solvent blends, salt choices, additive selections, and processing parameters, yet the data underpinning these decisions is typically scattered across spreadsheets, paper notebooks, and disconnected instruments. This talk demonstrates how a structured, AI-native R&D data platform (Albert OS) transforms electrolyte development from data archaeology into systematic optimization. Using a dataset of 1,269 ionic conductivity measurements spanning 207 formulations and 5 lithium salts, curated from 19 published studies, we show how automated data ingestion, exploratory analysis, and no-code machine learning can identify the compositional and molecular-level features that govern conductivity.

12:35 Networking Luncheon *(Sponsorship Opportunity Available)*

1:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

1:50 Close of Conference Track

WEDNESDAY, MARCH 25

12:35 pm Registration Open

12:35 Interactive Roundtables and Networking Luncheon
(Sponsorship Opportunity Available)

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

MARKET DEMAND FOR RECYCLING

1:50 Chairperson's Remarks
Steve Sloop, PhD, President, OnTo Technology LLC



1:55 FEATURED PRESENTATION: Lithium-ion Battery Recycling: Science & Technology Challenges and Opportunities
Ilias Belharouak, PhD, Section Head, Electrification and Energy Infrastructure Division, Oak Ridge National Laboratory
Lithium-ion battery recycling is essential to address economic and environmental challenges. We demonstrate a polyol-metallurgical process that upgrades polycrystalline cathodes into single-crystal forms through controlled co-precipitation and re-synthesis using citric acid and ethylene glycol. The method achieves efficient leaching, uniform particle morphology, and pristine LiNi0.6Co0.2Mn0.2O2 regeneration, offering a scalable pathway for closed-loop recycling and next-generation cathode synthesis.

2:25 From Global Risk to Local Value: Unlocking Domestic Critical Mineral Potential
Eric Gratz, PhD, Co-Founder & CTO, Ascend Elements
Global supply chain volatility and geopolitical risk have made access to critical battery materials a strategic priority. This presentation highlights how domestic, circular manufacturing can convert these risks into long-term local value. Ascend Elements will present its lithium extraction technology that recovers lithium carbonate from black mass, along with its Hydro-to-Cathode platform, enabling low-carbon pCAM production. The talk also examines the growing shift from EV demand toward energy storage systems.

2:55 Resilient synthetic graphite supply in North America and Europe
Vianode
Stefan Bergold, Chief Commercial Officer, Vianode

3:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

3:55 Where Stewardship Meets Safety: The Evolving Landscape of Battery Collection in the United States
Eric Frederickson, Vice President of Operations, The Battery Network
Battery EPR is rapidly taking hold across the US, narrowing the gap with Europe's long-standing producer responsibility systems. As fires and rising logistics costs challenge the waste industry, safe and scalable packaging is becoming the cornerstone of effective stewardship. In this session, Call2Recycle's Eric Frederickson will share insights into state legislation, operational challenges, and the packaging innovations that are making next-generation battery collection programs both cost-efficient and resilient.

4:25 Advancing Data Transparency in Battery Recycling and Reuse
Antoni Tong, PhD, CEO, Smartville
Smartville has developed an integrated platform that enables the efficient assessment, trading, and repurposing of used EV batteries for second-life applications. Combining its proprietary Periscope diagnostic tool and Battery-connect repurposing solution, Smartville helps recyclers, fleet operators, and energy developers to address retired EV batteries. This presentation will highlight the technology, data workflows, and real-world use cases that drive Smartville's mission to extend battery life, reduce waste, and unlock new value.

4:55 Opportunities and Challenges for Closed Loop within North America
Aki Fujita, Principal, Arthur D. Little
Currently, the North American recycling supply chain is not a complete closed loop within the region, and the challenges include: (1) "leakage" of black mass to Asia, (2) economies of scale sufficient to ensure profitability, and (3) lack of pCAM factories. This presentation will discuss the challenges and business opportunities for establishing a closed loop supply chain within North America in the future.

5:30 Volta Foundation Battery Social*
VF | VOLTA FOUNDATION
Join Volta Foundation for an Battery Social at International Battery Seminar & Exhibit in Orlando!
Connect with fellow battery professionals, exchange ideas, build valuable relationships, and stay ahead in the rapidly evolving battery industry as the Volta Foundation Battery Social is the perfect place to engage with the brightest minds in the industry.
*separate registration required, please click here for details: https://learn.volta.foundation/ibse-2026

8:30 Close of Day

THURSDAY, MARCH 26

INTERACTIVE LEADERSHIP BREAKFAST

7:25 am 7:25 AM - Powering Impact: An Interactive Session on Technology, Market Strategy, and Execution in the Battery Economy









Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
The session will center on three practical dimensions: how to position technical concepts in terms of customer value and cost-performance; how to communicate with credibility to executives, investors, and commercial partners; and how project leadership translates vision into milestones that matter.

Panelists:
Marianne Meins, CTO & Executive Vice President, Emerging Technologies, Curtis Stout
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.
Celina Mikolajczak, Advisor to the Battery Industry
Lucy Li, Technical Program Manager, Cell, Peak Energy; Program

Manager, Women in Batteries, Volta Foundation
Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC
Mykela DeLuca, PhD, Program Dir, Battery Business Directory, Volta Foundation

8:00 Registration Open and Morning Coffee

9:00 Coffee Break in the Exhibit Hall

10:00 Battery Booth Crawl with Bagels in the Exhibit Hall with Last Chance for Poster Viewing

10:40 Chairperson's Remarks
Eric Frederickson, Vice President of Operations, The Battery Network

MARKET DEMAND FOR RECYCLING

10:45 North America's Recycling Industry: Pricing Dynamics, Emerging Intermediates, and Capacity Developments
Frederick Bloomfield, Senior Analyst, Benchmark Mineral Intelligence
2025 was a dynamic year for North America's recycling landscape as several recyclers entered the market, whilst others encountered major hurdles. Whilst significant progress is being made towards domestic refining of black mass, with some players establishing promising footholds, the majority of material is still being exported to Asia. Capacity developments, emerging recycled intermediates, pricing as well as possible regulatory changes will be discussed throughout this presentation.

RECYCLING METHODS

11:15 Industrializing Direct Recycling in the US Marketplace
Steve Sloop, PhD, President, OnTo Technology LLC
Mobile Battery Deactivation improves safety and cost for end-of-life lithium-ion logistics. With patent and regulatory milestones achieved, deactivation is poised for commercialization. Along with Direct Recycling, these technologies make feasible the cost positive recovery of most any lithium-ion material. Finally, the presentation will update progress on fluorspar recovery from PFAS, PFAS free battery design, and battery rejuvenation for large batteries.

11:45 ReCell Center: Advances in Battery-Recycling Technologies
Jessica Durham Macholz, PhD, Critical Materials Program Lead, Applied Materials Division, Argonne National Laboratory
The ReCell Center, funded by the Department of Energy—Vehicle Technologies Office, has continued to pursue the advancement of lithium-ion battery recycling technologies. This presentation will cover some of the exciting new technologies that have been developed in ReCell and the deployment of the pilot scale recycling facility at Argonne National Laboratory.

12:15 pm Enjoy Lunch on Your Own

RECYCLING METHODS

1:10 Chairperson's Remarks
Jessica Durham Macholz, PhD, Critical Materials Program Lead, Applied Materials Division, Argonne National Laboratory

1:15 Process Water from Lithium-ion Battery Recycling: Current Trends of Characterization
Sascha Nowak, PhD, Head of Analytics & Environmental, Electrochemical Energy Technology, University of Münster
Water-using recycling processes—such as wet crushing and electrohydraulic fragmentation—generate large amounts of contaminated process water, resulting in increased costs for the disposal of hazardous waste and safety guidelines. To improve wastewater management, safety, and sustainability of water-assisted recycling processes, comprehensive knowledge of the battery components in the water are required. Analytical techniques can play an important role during these processes, including wet shredding processes, wastewater management, and analytical techniques.

1:45 Environmental Controls for Lithium-ion Battery Recycling from Black Mass to Downstream Hydromet Processes
Barry Perlmutter, President, Perlmutter & Idea Development (P&ID) LLC
Lithium-ion battery recyclers and Hydromet processors can think like recyclers but must act like chemical plants. This is especially true for environmental emissions. Each plant handles solids emissions (dust such as ferrous, non-ferrous metals and plastics), liquid emissions (wastewater, electrolyte and solvents), and gaseous emissions of volatile organic compounds (VOCs) and acid gases (hydrofluoric acid). This presentation examines the source of the emissions and then discusses possible control approaches.

2:15 Graphite-Anode Recycling: An Environmentally Friendly Approach to Supply-Chain Localization
Rakan Ashour, PhD, Technology Program Manager, Orbia Fluor & Energy Materials
Graphite is the critical anode material for lithium-ion batteries and a cornerstone of the global energy transition. Orbia Fluor & Energy Materials has pioneered advanced regeneration processes that transform waste graphite from battery recycling into high-performance, battery-grade anode materials. Regenerated graphite has demonstrated equivalent performance to leading commercial anode materials. Importantly, its application extends beyond batteries to other automotive components such as lightweight materials, conductive additives, and brake systems.

SECOND-LIFE

2:45 Retirement Planning for Electric-Vehicle Batteries: Why Lithium-Iron-Phosphate Batteries Have Greater Second-Life Potential than Nickel-Cobalt Batteries
Anna Cobb, PhD Candidate, Engineering & Public Policy, Carnegie Mellon University
In this work, we assess the technoeconomics of repurposing electric vehicle batteries for use in second-life battery energy storage systems and compare the economics of second life to recycling. We find that second life is economically favorable to recycling for LFP batteries, but that recycling is favorable to second life for NCA batteries. For NMC batteries, the battery's first life, second-life application, and other factors determine the economically optimal pathway.

3:15 Transition to Closing Plenary

CLOSING PLENARY PANEL DISCUSSION

3:30 Navigating the Global Battery Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big-Data Requirements






Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
In this plenary closing discussion, we are ending the conference with a thought-provoking and insightful panel of experts led by Christina Lampe-Onnerud to help us think through: where is the US battery market going in the aftermath of the Big Beautiful Bill and how is this different in Europe and Asia? How do we as an industry navigate these uncertain times?

Panelists:
Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC
John Warner, DM, Chief Customer Officer, American Battery Solutions
Michael Liu, Director, Research & Insights, Volta Foundation

4:30 Close of Conference

Lithium-ion Battery Development & Commercialization

Bridging the Gap between Benchtop Research and Industrial Development

WEDNESDAY, MARCH 25

12:35 pm Registration Open

12:35 Interactive Roundtables and Networking Luncheon
(Sponsorship Opportunity Available)

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

TRANSFORMING BENCHTOP RESEARCH TO COMMERCIAL SUCCESS

1:50 Chairperson's Remarks
Toby Bond, PhD, Senior Scientist, Industrial Science Division, Canadian Light Source

1:55 High-Energy, Transition-Metal-Free Batteries Enabled by a Layered Organic Cathode
Harish Banda, PhD, CEO, Daqus Energy Inc.

Inorganic cathodes face challenges of cost, supply risk, and environmental impact, underscoring the need for new chemistries. This talk introduces TAQ-a crystalline, all-organic cathode material that eliminates reliance on critical metals while delivering high energy density, long cycle life, and safety across multiple metal-ion systems. The presentation will also outline Daqus Energy's efforts to commercialize this next-generation battery technology.

2:25 Commercializing Lithium-Metal Battery Technology for Electric-Vehicle Applications
Matthew Genovese, Director, Full Cell Development, QuantumScape

The next generation of energy storage is being driven by breakthrough solid-state battery technology that overcomes the fundamental limitations of conventional lithium-ion batteries, enabling longer range, faster charging, and enhanced safety through advanced ceramic separator technology. The current challenge facing those developing this technology is commercialization at a global scale to meet the massive global battery demand. This presentation addresses the unique commercialization strategies to bring this technology to market.

2:55 Advancing Quality Control and Lifetime Prediction with Ultra-High Precision Coulometry NOVONIX
Stephen Glazier, Director of Cell Technology, NOVONIX

Traditional cell testing equipment cannot capture subtle, critical, differences in electrochemistry and cell quality which slows the progress of battery development and manufacturing scale-up, leading to long development and qualification timelines and high scrap rates. Ultra-High Precision Coulometry (UHPC) resolves differences sub-ppm levels, enabling earlier insights and more reliable data. This talk presents real experiments and large-scale case studies demonstrating the value of UHPC in lifetime prediction and manufacturing quality control.

3:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

3:50 Breaking Limits in Solid-State: Scalable Micro-Batteries for the Next Generation of Electronics
Nojan Aliahmad, PhD, Manager, Battery Technology, Ensurge Micropower

Ensurge Micropower is advancing high volumetric energy density (VED) anodeless all-solid-state lithium micro-batteries built on ultra-thin stainless steel foil, delivering compact form factors, rapid charging, and high pulse discharge for wearables, hearables, and IoT applications. These SMT-compatible micro-batteries leverage unique packaging and stacking technology. This work highlights progress from research to manufacturing through innovations in materials engineering, roll-to-roll processing, and multilayer stacking for reliable, high-performance production.

4:15 Maximizing High-Silicon Anode Performance AnteoTech
Manuel Wieser, CTO, Advanced Battery Technologies, AnteoTech Ltd.

Binders and additives, though a small part of anode compositions, play a crucial role in achieving a long cycle life. This is especially vital for silicon-containing anodes, where materials like SiOx, Si/C, or Si are employed to enhance storage capacity. Evolving binder chemistries and innovative structural additives, such as Anteo X, aim to minimize inactive materials, pushing silicon anodes forward with significant cycle improvements.

4:30 How to Prevent Cathode Microcracking: Advanced X-Ray Studies of Polycrystalline vs. Single-Crystal NMC after Years of Cycling
Toby Bond, PhD, Senior Scientist, Industrial Science Division, Canadian Light Source

Cathode microcracking is a significant problem, especially for Ni-rich NMC and NCA that are commonly used in automotive cells. We need ways to assess the effectiveness of strategies that prevent microcracking—ideally using non-destructive methods. In this work, we use *in-situ* x-ray imaging and diffraction to characterize how microcracking affects the microstructure and function of commercial cells that have been cycled for years.

4:55 PANEL DISCUSSION: We Have to Do the Work: Fostering Battery Innovation *and* Execution
Moderator: Celina Mikolajczak, Advisor to the Battery Industry

The battery industry is experiencing supercharged growth despite shifting political and funding dynamics. This panel of experts examines our industry's future addressing emerging electrochemistries, growth prospects, key challenges, and achievable milestones for the near and long term.Join this panel of experts as they explore:

- What are the next steps?
- Where is the funding?
- Why collaboration is critical?

Panelists:

Mei Cai, PhD, Senior Director, Battery Engineering, Fluence

Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC

Johanna Nelson Weker, PhD, Lead Scientist, SLAC National Accelerator Laboratory

Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.

5:30 Volta Foundation Battery Social* VF VOLTA FOUNDATION

Join Volta Foundation for an Battery Social at International Battery Seminar & Exhibit in Orlando! Connect with fellow battery professionals, exchange ideas, build valuable relationships, and stay ahead in the rapidly evolving battery industry as the Volta Foundation Battery Social is the perfect place to engage with the brightest minds in the industry.
*separate registration required, please click here for details: https://learn.volta.foundation/ibse-2026

8:30 Close of Day

THURSDAY, MARCH 26

7:00 am Registration Open and Morning Coffee

INTERACTIVE LEADERSHIP BREAKFAST

7:25 7:25 AM - Powering Impact: An Interactive Session on Technology, Market Strategy, and Execution in the Battery Economy



Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
The session will center on three practical dimensions: how to position technical concepts in terms of customer value and cost-performance; how to communicate with credibility to executives, investors, and commercial partners; and how project leadership translates vision into milestones that matter.

Panelists:
Marianne Meins, CTO & Executive Vice President, Emerging Technologies, Curtis Stout
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.
Celina Mikolajczak, Advisor to the Battery Industry
Lucy Li, Technical Program Manager, Cell, Peak Energy; Program Manager, Women in Batteries, Volta Foundation
Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC
Mykela DeLuca, PhD, Program Dir, Battery Business Directory, Volta Foundation

8:00 Registration Open and Morning Coffee

PURPOSE-DRIVEN ELECTROCHEMISTRY: FROM LAB TO MARKET

8:25 Chairperson's Remarks
Jay Whitacre, PhD, CEO/CTO, Stratus Materials; Full Professor, Materials Science and Engineering, Carnegie Mellon University

8:30 Recent Advances in Degradation Mechanism Research and Sample Development for All-Solid-State Batteries
maxell Within, the Future
Genyo Kaneko, Chief Engineer, Energy Products OEM Battery Group, Maxell Corporation of America
Maxell is advancing the development and commercialization of all-solid-state batteries, with emphasis on high safety, reliable performance, and wide operating temperature ranges. Through continuous technological innovation, Maxell has established a strong presence in the competitive solid-state battery field. This talk presents recent findings on degradation mechanisms and introduces newly released all-solid-state batteries samples, representing a meaningful step toward practical deployment.

9:00 Nanocomposite Electrolyte and Cathode Development for All-Solid-State Lithium Battery Applications
Yuepeng Zhang, PhD, Group Leader, Nanocomposite Materials and Membrane Manufacturing, Argonne National Laboratory
Progress in all-solid-state lithium batteries (ASSBs) is constrained by the challenge of developing high-energy-density cathodes and solid electrolytes (SEs) that are both highly conductive and electrochemically stable against lithium metal anodes and high-voltage cathodes. We report the synthesis of ceramic–polymer composite SEs with high ionic conductivity using industrially compatible roll-to-roll manufacturing and rapid photonic processing. Integration with composite cathodes and the resulting cell performance will be presented.

9:00 Coffee Break in the Exhibit Hall

9:30 Scalable and low-cost metallurgical Silicon anodes for lithium-ion batteries
Coreshell
Jonathan Tan, CEO, Coreshell Technologies
Learn how Coreshell is enabling the replacement of graphite with a low-cost, high-performance silicon material. The presentation will also showcase the company's latest material and cell performance results.

10:00 Battery Booth Crawl with Bagels in the Exhibit Hall with Last Chance for Poster Viewing

10:45 Commercializing Future-Generation Lithium Batteries with Molecule-Engineered Liquid Electrolytes
Salil Soman, Vice President, Feon Energy
Future-generation lithium batteries are expected to conquer multiple frontiers, including increased energy density, faster charging, greater safety, and lower cost. While several new active materials continue to achieve higher levels of technology maturity and readiness, there are no commercially available electrolytes that are tailored for these systems. Feon pioneers a novel pharma-inspired approach to developing and tailoring new molecules and electrolyte formulations to unlock breakthrough performances.

11:15 High-Energy Density, Co-Free LMR Batteries with over 1000 Cycles
Jay Whitacre, PhD, CEO/CTO, Stratus Materials; Full Professor, Materials Science and Engineering, Carnegie Mellon University
LMR cathode active materials historically exhibit persistent voltage and capacity fade, and typically require tailored electrolytes that are functional at high potentials. Stratus Materials has developed a scaled a low-cost processing route that locks in an exceptionally stable entropic crystallographic state in cobalt-free LXMO. Data will be disclosed that shows LXMO-based large-format cells (20Ah and larger) can have energies of over 700 Wh/l, and cycle-life stability of over 2000 cycles.

11:45 Silicon in Action: Silicon-Dominant Cells in Consumer Electronics and Drone Applications
E-MAGY on with silicon
Arindam Haldar, E-magy
Vanesa Ruiz, E magy
The demand for high-energy-density lithium-ion batteries in portable electronics and electric aviation has spurred the development of silicon-dominant anode technology, offering up to 10 times the capacity of graphite. This presentation discusses how these anodes improve volumetric and gravimetric energy density in weight-sensitive and space-limited applications. We will present performance data from ongoing projects, including cycle life, rate capability, and energy density results from prototype cells for consumer electronics and drones, highlighting the path toward commercial adoption.

12:15 pm Enjoy Lunch on Your Own

ADVANCING TECHNOLOGICAL PROCESSES FOR MANUFACTURING

1:10 Chairperson's Remarks
William Fitzhugh, PhD, Co-Founder & CEO, Adden Energy

1:15 Technological Progress in Lithium-Metal Anode Manufacturing via Low-Cost Rolling Process

Changkeun Back, PhD, CEO, NEBA Corporation

Ultra-thin lithium metal foils are essential for achieving high-energy density in lithium rechargeable batteries. However, current manufacturing methods are hindered by high cost and low productivity, resulting in an expensive and limited supply chain. The processing technology using a conventional rolling process has been considerably developed, and we will discuss it as a viable path for low-cost commercial production.

1:45 Quantitative Understanding of Moisture Stability in Sulfide Solid Electrolytes for Scalable Manufacturing

Chengcheng Fang, PhD, Assistant Professor, Chemical Engineering & Materials Science, Michigan State University

Sulfide solid-state electrolytes offer high ionic conductivity but are considered moisture-sensitive, hindering scalable processing. Using Na3PS4 (NPS) as a model, we developed a controlled-humidity glovebox (1–50% RH) to quantify moisture tolerance, and found NPS maintains recoverable conductivity and stable cycling below a surprisingly high critical humidity threshold. These results define a practical process window and provide guidelines for cost-effective manufacturing of high-performance solid-state batteries beyond ultra-dry conditions.

2:15 Novel Low-Cost Silicon Anodes Ready for Commercialization in EV Application

Marcel Neubert, PhD, Co-Founder & CTO, NorcSi GmbH

A purely physical roll-to-roll process enables scalable fabrication of stable silicon anodes for lithium-ion batteries. Through direct silicon deposition and ultra-short, high-intensity flashing, low-grade silicon is transformed into a defect-engineered, locally passivated structure. These semiconductor-derived effects stabilize the silicon network, mitigating mechanical and chemical degradation during cycling. The result is a cost-efficient, durable anode concept that bridges semiconductor material control with industrial battery manufacturing for next-generation high-energy-density cells.

2:45 From Glovebox to Roll-to-Roll: Scaling All-Solid-State Lithium-Metal Batteries

William Fitzhugh, PhD, Co-Founder & CEO, Adden Energy

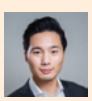
All-solid-state lithium-metal batteries promise step-change improvements in energy density, but scalable manufacturing of lithium-metal anodes has remained a key bottleneck. This talk traces the transition from glovebox-based prototyping to roll-to-roll production, highlighting advances in lithium-anode handling, assembly, and integration under dry-room conditions. These innovations enable high-throughput production of lithium-metal batteries using processes increasingly compatible with existing lithium-ion manufacturing lines.

3:15 Transition to Closing Plenary

CLOSING PLENARY PANEL DISCUSSION

3:30 Navigating the Global Battery Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big-Data Requirements



Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation

In this plenary closing discussion, we are ending the conference with a thought-provoking and insightful panel of experts led by Christina Lampe-Onnerud to help us think through: where is the US battery market going in the aftermath of the Big Beautiful Bill and how is this different in Europe and Asia? How do we as an industry navigate these uncertain times?

Panelists:
Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC
John Warner, DM, Chief Customer Officer, American Battery Solutions
Michael Liu, Director, Research & Insights, Volta Foundation

4:30 Close of Conference

High-Performance Battery Manufacturing

Global Production of Safe, Efficient, Higher Energy Density Batteries

MONDAY, MARCH 23

7:00 am Registration Open and Morning Coffee

4:45 pm Close of Day

TUESDAY, MARCH 24

7:00 am Registration Open and Morning Coffee

8:05 Organizer's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

ADVANCES IN CELL MANUFACTURING

8:10 Chairperson's Remarks
Rory McNulty, Senior Technology & Market Analyst, Anaphite

8:15 U.S. NMC Pouch Cell Manufacturing for Drones: Performance Tradeoffs and Supply Chain Resilience
Brendan Skelly, Technical Sales Manager at EGI Battery
Jeff Helm

As Group 1 and Group 2 drone demand grows, battery form factor and supply chain security are increasingly decisive. This presentation compares cylindrical and pouch lithium-ion cells for small UAS platforms, examining performance, integration, and scalability tradeoffs. EGI Battery will outline its U.S.-based NMC pouch cell manufacturing efforts, supply chain constraints, and how domestic production supports SAE standardization while reducing reliance on foreign entities of concern.

8:45 Dispersion & Milling for Energy Storage Development & Manufacturing
Jonathan Bain, Business Line Manager, BYK Gardner

Highly efficient dissolvers, bead mills, and basket mills are designed for the challenges of battery slurry development. In this presentation, we'll review the milling and dispersing requirements, processes, and best practices. High-performance dispersing and milling equipment are required for optimum performance of battery slurries.

9:15 Safety of Solid-State Batteries (SSB) and Batteries (LSB), the Mechanisms and the Role of Separators
John Zhang, PhD, CTO/CSO, Polypore International

The presentation will outline prevention methodologies developed across the industry and highlight the most effective engineering solution—ceramic-coated separators (CCS)—which suppress short-circuit propagation and have fundamentally advanced real-world battery safety. The nail test failures (Internal Shorts fire/explosion) of various SOLID STATE BATTERIES will be presented and discussed.

9:45 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing

10:30 Dense Energy Empower the future
Yun Zhu, Cell Product Engineer, Central Research Institute, EVE Energy Co., Ltd.

With the rapid development of AI, higher requirements are placed on lithium batteries. Higher energy density, output power, lighter weight, smaller size, and diverse forms represent next-gen upgrades for AI-era lithium batteries. This presentation focuses on two cutting-edge technologies from our company: solutions based on silicon-carbon and lithium metal materials.
Our optimized silicon anode design with high-voltage LCO cathodes reduces charging time by 80%, increases energy density by over 16%, and improves lifespan by >16%. Compared to silicon-carbon, lithium metal anodes boost energy density by 50%. We achieved a critical breakthrough: at 0.5C charge / 1C discharge, our lithium metal batteries' cycle life improved by 30%.
Finally, we envision that combining all-solid-state and shaped batteries is the ideal Dense Energy solution. Our company is developing these technologies for applications in humanoid robots and brain-computer interfaces, driving industry progress.

11:00 Toward a Standardized Protocol for Lithium-Metal Quality Assessment in Batteries
Wurigumula Bao, PhD, Project Scientist, PME, University of Chicago

Lithium-metal battery performance is closely tied to lithium-foil quality, yet no industry-wide standards exist to evaluate or compare it. We present a unified assessment framework that integrates structural, chemical, and electrochemical analyses to link lithium-metal properties with cycling behavior. Benchmarking foils from multiple suppliers highlights the key factors governing anode performance and provides practical metrology to ensure consistent, high-quality lithium-metal supply for next-generation batteries.

11:30 Scaling AM Batteries' Powder to Electrode Dry Coating Technology
Hieu Duong, PhD, Chief Manufacturing Officer, AM Batteries

Current battery electrode manufacturing is complex, expensive, and dirty. This presentation will highlight the industrialization progress of AMB's Powder to Electrode dry coating technology and how it will deliver performance benefits and superior economics. This session is particularly relevant for OEMs, battery manufacturers, investors, and newcomers in the battery ecosystem, and all those seeking to establish or scale battery production while reducing costs and environmental impact.

12:00 pm Hi-Performace & Innovative Tabless Cylindrical Li-ion Batteries for Extreme Application (such as eVTOL, BBU and -40°C Hi-power Devices)
Andrew Liang, PhD., Sales & Marketing VP, Reliance Energy Tech.

The relentless pursuit of superior power output, faster charging, and higher energy density for next-generation applications has driven continuous innovation in lithium-ion battery material, structure, and process design. Here, the innovative cylindrical and tabless cell structure can significantly improve cell power density and fast-charging capability without sacrificing high energy density. Since 2025, Reliance Energy has become the world's first lithium-ion battery manufacturer to achieve the mass production of 21700 RS50 and RS60 tabless cells. These cells have superior performance compared to the benchmark products in the market, including 80A continuous discharge and 15A fast-charge capability, 280 - 300Wh/kg cell specific energy, 730 - 830Wh/L cell energy density, as well as -40℃ 0.2C discharge with 80% capacity retention.

12:30 Networking Luncheon

1:15 Dessert Break in the Exhibit Hall with Poster Viewing

ADVANCES IN CELL MANUFACTURING

1:45 Chairperson's Remarks
Jonathan Bain, Business Line Manager, BYK Gardner

1:50 **Honeywell CFX: PFAS & Fluorinated Waste Destruction for Li-Ion Batteries**

Shawn Tanagho, Senior Offering Manager, CFX, Honeywell Separation & Purification Solutions, Honeywell

Rapid growth of lithium ion battery manufacturing and recycling is increasing PFAS and fluorinated waste, elevating regulatory risk, disposal cost, and liability.
Honeywell CFX™ enables on site destruction of gaseous, liquid, and solid fluorinated wastes across the battery value chain. Operating up to 1,400 °C, CFX™ breaks carbon–fluorine bonds, converting PFAS into stable inorganic salts with zero liquid discharge and less off site handling.

2:20 **The History and the Resurgence of LFP**

Joseph Fisher, Chief Commercial Officer, Princeton NuEnergy

This presentation, will explore the foundational R&D breakthroughs and patent disputes that shaped LFP development. In addition, understanding how China has emerged as the global leader and why LFP is experiencing a strategic resurgence, will be presented. Also, attendees will gain insights into the evolving role of LFP and it's potential across future applications.

2:40 **Cutting Cost and CO_2 in BEV Batteries with Dry Coating**

Rory McNulty, Senior Technology & Market Analyst, Anaphite

To meet global demand for low-cost BEVs, battery manufacturing must change. Conventional wet coating electrode production is capital and energy intensive, and costly. Dry battery electrode production techniques can reduce cell production costs by up to 40%, however, performance and scalability are hindered by cumbersome dry mixing. Anaphite's DCP technology solves these difficulties, creating flowable, homogeneous composite electrode powders with engineered particle interactions, enabling improved coating speeds and cell yields.

3:00 **Enabling High-Energy Lithium-Ion Battery Cells through Fully Aqueous Electrode Processing**

Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.

The replacement of N-methyl-2-pyrrolidone (NMP) in lithium-ion battery cell manufacturing is a key step toward more sustainable and cost-effective production. In this work, we present the development of a high-energy lithium-ion battery cell fabricated using fully aqueous slurries for both cathode and anode electrodes.

3:20 **Refreshment Break in the Exhibit Hall with Poster Viewing**

PLENARY KEYNOTE

3:50 **Shep Wolsky Battery Innovator of the Year Award Presentation and Chairperson's Remarks**

Craig Wohlers, General Manager, Cambridge EnerTech



3:55 **LFP Cells Are Boring—Why Should I Care?**

Jeff Dahn, FRSC, PhD, Professor of Physics and Atmospheric Science & NSERC/Tesla Canada Industrial Research Chair, Dalhousie University

LFP Li-ion cells are now the most common cells in energy-storage products and EVs. They are inexpensive and since they are relatively safe, they can be made in large-Ah-capacity cells, reducing cost and complexity in battery modules and packs. I will explain how to make LFP cells exciting, including strategies to dramatically increase their energy density.



4:15 **Delivering Advanced Battery Technologies for EV Range and Value**

George Cintra, Director, Battery R&D, General Motors

General Motors is building an electrification powerhouse, having launched a dozen EVs into the market, ranging from the Equinox EV to the Cadillac Escalade IQ. General Motors is pioneering next-generation battery and manufacturing technologies, such as prismatic cells with LMR cathodes. Mr. Cintra will provide an update on GM's battery research & development activities and innovations to deliver longer range, lower costs, and faster-charging batteries for EV customers.



4:35 **Today's EV Reality and the Path Forward**

Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution

LG Energy Solution is the leading lithium-ion battery manufacturer, working with the top OEMs globally in transforming the automobile industry. The market for EVs is expanding rapidly, driven by both consumer demand and regulatory incentives. In North America, there are unprecedented levels of investment to support EVs, by both OEMs and battery manufacturers. This presentation will discuss market growth projections, announced expansion plans, and the challenges ahead.



4:55 **Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth**

Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.

Panasonic Energy has been at the forefront of battery technology development, driving the growth of BEVs and AI. To meet increasing market demand, we are expanding our production capacity in North America and strengthening strategic partnerships. These initiatives will contribute both to the realization of a sustainable society and to our business growth. This presentation will highlight the innovative activities within our battery business from a technological perspective.



5:15 **New Science Frontiers in Battery Technologies**

Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago

In this talk, I will discuss a few new perspectives for energy storage materials including new solvation architecture designs for liquid electrolytes and new superionic conductors in soft or hard materials. With recent advances in photon and electron characterization tools and computational methods, we can explore ionic mobility, charge transfer and ion matter interactions in electrochemical system in operando.

5:35 **Reception in the Exhibit Hall with Poster Viewing**

6:35 **Close of Day**

WEDNESDAY, MARCH 25

7:30 am **Registration Open and Morning Coffee**

ADVANCES IN CELL MANUFACTURING

7:55 **Chairperson's Remarks**

Sam Jaffe, Vice President, Business Development and Product, Mana Battery

8:00 Presentation to be Announced

8:30 The Path Forward to Cost Reduction in Manufacturing

Sam Jaffe, Vice President, Business Development and Product, Mana Battery

This talk will review the different stages (electrode manufacturing, cell assembly, and cell formation) and steps (up to nineteen, ranging from mixing to coating to calendaring to electrolyte filling and OCV testing) and will explore approaches to reducing both capex and opex costs in each.

9:00 Introducing the OpenCell Project

Adrian Yao, Founder & Team Lead, STEER, Stanford University

Stanford's STEER is launching a new platform called the OpenCell Project, aimed at scaling up commercial benchmarking efforts in a decentralized manner to better inform state-of-the-art innovation trends. At the heart of OpenCell is a new, snappy cell design tool capable of designing commercially relevant form factors using half-cell curves, but the true power of OpenCell comes from the database of digital twins. Both will be demoed in this talk.

9:30 Battery Projects—Strategies for (Profitable) Success

Mark Bellino, Global Director, Battery Materials and Cells, Hatch Ltd.

In this presentation, Hatch reviews various strategies to setup an investment for a greater chance of success. Building on Hatch's 2025 presentation theme, which reviewed the various challenges and solutions faced during project delivery in the Battery Space. This presentation focuses on achieving profitable operation and addresses the project cash flow.

10:00 IonPort Fiber-Based Separators for Secondary Batteries & Solid-State—The Hidden Key to Today's & Tomorrow's Battery Breakthroughs

Alexander Onz, Technical Program Manager IonPort Separators, Delfort

Sometimes underestimated but essential, Delfort's IonPort separators set new standards in efficient cell manufacturing and performance. With exceptional wettability, unmatched thermal stability, and precisely engineered pore structures, IonPort boosts charge/discharge rates, extends battery life, and ensures safety at a competitive price. Suitable for LIB, SIB, AZIB, and solid-state batteries, including the IonPort NX series for polymer, sulfide, and oxide electrolytes. These solutions enable efficient electrolyte film formation while minimizing resistance, setting new standards in performance.
Follow us on Wednesday 10 AM or visit our booth 935 for more insights!

10:15 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

GLOBAL MARKET OPPORTUNITIES IN BATTERY MANUFACTURING

11:05 PANEL DISCUSSION: Dry Battery Electrode (DBE) Manufacturing is Inevitable: Adopt or Fall Behind

Moderator: Lie Shi, CEO, AM Batteries

This panel will explore the latest advances, anticipated future, and overriding advantages of DBE that make industry-wide adoption an inevitability. This panel will ground the discussion in both technology and market realities and cognizant of macroeconomic and geopolitical trends.

Panelists:

Bonne Eggleston, PhD, Vice President, Tesla 4680, Tesla

Ramin Amin-Sanayei, PhD, Senior Principal Scientist, Battery Group, Arkema

Sam Burrow, CTO, Anaphite

Mike Easson, Analyst, Research, Polar Asset Management Partners

12:05 pm Thriving OEE Excellence in Electrode Coating and Calendering

Daniel Eggerath, Managing Director, Jagenberg Converting Solutions GmbH

Achieving high Overall Equipment Effectiveness (OEE) in electrode coating and calendering requires excellence in automation, mechanical engineering, and deep process understanding. This presentation highlights how performance-driven equipment design and in-house development of all key process components—including slot die and slurry delivery systems, drying technology, calendering, and automation—enable robust and efficient electrode manufacturing. A profound understanding of the coating and calendering process, combined with advanced measurement and sensor technologies, allows precise process control and stable operating windows. As a result, commissioning times are significantly reduced, operator training can be completed rapidly, and production runs with minimal scrap and consistently high product quality, forming the basis for sustainable OEE excellence.

12:35 Networking Luncheon *(Sponsorship Opportunity Available)*

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

1:50 Close of Conference Track

Global Supply Chain for Battery Raw Materials

Balancing Supply, Demand, and Costs for Battery Materials

MONDAY, MARCH 23

7:00 am Registration Open and Morning Coffee

4:45 pm Close of Day

TUESDAY, MARCH 24

7:00 am Registration Open and Morning Coffee

8:05 Organizer's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

MARKET DEMAND FOR BATTERY RAW MATERIALS

8:10 Chairperson's Remarks
Jacob Jonker, Executive General Manager, Syrah Resources

8:15 Progress Toward Solving North America's Graphite Anode Materials Supply Shortage.
Jacob Jonker, Executive General Manager, Syrah Resources
After a decade of commitment and perseverance, Syrah has delivered the first US based mass production facility for EV Lithium-ion Battery materials. The group continues to deliver on its vertical integration strategy, leveraging the Balama Graphite Operation in Mozambique—the world's largest natural flake graphite deposit and production facility. In the session, we provide updates on trade-flow dynamics, policy, market conditions, and Syrah's role supporting diversification.

8:45 Design-to-Cost Mn-Rich Cathode Active Materials for Mass-Market EVs
Rohan Gokhale, PhD, Applied Technology Manager, Umicore Rechargeable Battery Materials
This presentation will provide an overview of the development of sustainable layered Mn-rich cathodes (HLM) materials for the high-performance and low-cost segment of the electric vehicle market.

9:15 Australia as an Energy Storage Powerhouse
Adam Best, Principal Research Scientist, CSIRO Manufacturing
We will describe the increasing challenge of discovering and processing primary mineral supplies, and the importance of secondary resources. Lastly, we will demonstrate Australia's capability to operate the world's longest (transmission) network with 100% renewable energy as a proposed renewable energy powerhouse.

9:45 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing

10:30 Transport in the Global Battery Supply Chain: A Data-Driven Assessment of Costs and Emissions
Jesper Frost Thomsen, PhD Candidate, Institute of Business Chemistry, University of Muenster
Using a holistic view of the battery supply chain, this study examines the impact of transportation and identifies key parameters for accurately assessing transport costs and emissions. Material, process, and transport parameters are introduced to highlight their magnitude and influence on costs and emissions. Case studies for North American and European cell and EV module manufacturers compare the importance of transportation within the supply chain.

11:00 Lithium Developments, Carbon Accounting, and Outlook to 2040
Austin Devaney, North American Director, International Lithium Association
The presentation by the International Lithium Association (ILiA) will explore challenges and potential solutions to some of the key global issues in the lithium industry, including efforts to coordinate carbon and water footprinting techniques and regionalization and friendshoring in the value chain. In addition, the role of the ISO in the lithium industry and the risks posed by misinformation will be discussed.



11:30 FEATURED PRESENTATION: Commercializing the Lithium Metal Battery and Reinventing the US Supply Chain
Emilie Bodoin, Founder & CEO, Pure Lithium
Pure Lithium is a Chicago based lithium metal battery company pioneering a vertically integrated Brine-to-Battery process that combines lithium extraction and anode production. Winner of the 2025 ACS Green Chemistry Challenge, their Gen 1 technology pairs lithium metal with LFP, delivering an unprecedented 5,500 cycles, while a Gen 2 vanadium chemistry delivers 400+ Wh/kg. PL is scaling U.S. production without graphite, nickel, or cobalt, eliminating reliance on China.

12:00 pm Charge Fast & High Energy Density LFP Batteries: Zwitterion-driven SEI and Thick-Electrode Wetting Promoter
Chong Mao, Dean of Research Institute, R&D, Zhuhai Smoothway Electronic Materials Co., Ltd.
Super-fast charging and thick-electrode design are closely coupled challenges in LFP batteries. This talk presents a two-part chemistry–architecture strategy for LFP||graphite cells. Part I introduces a zwitterionic electrolyte additive that reshapes Li^+ solvation toward anion-driven polar SEI. The resulting interphase lowers desolvation energy of Li^+ and charge-transfer barriers, mitigates lithium-plating risk, and enables 6C fast charging. Part II presents a novel electrolyte wetting promoter incorporated into the LFP cathode that establishes electrolyte diffusion channels, increases electrolyte wetting ability, shortens wetting time, and unlocks the performance of dense and thick LFP electrodes.

12:15 MESOLION® and Si-rich Carbon Composites – Synergies in Lithium-ion Batteries for UAV Applications
Michael Spahr, VP Innovations CDAM, R&D, Rain Carbon Inc
Lithium-ion batteries for multi-use unmanned aerial vehicle (UAV) applications must combine high gravimetric and volumetric energy density with excellent high-rate charge and discharge capability to enable extended flight times and high-power operation. While nano-silicon-rich carbon composites offer substantially increased specific capacity, they often exhibit limited rate performance and accelerated capacity fade during cycling due to volume expansion and electrode instability. This presentation demonstrates how these challenges can be mitigated by incorporating MESOLION® mesophase graphite as a co-active component *in silico*n-rich negative electrodes. Designed for ultrahigh-power applications, MESOLION® provides a structurally robust graphite framework that supports improved rate capability, reduced polarization, and enhanced cycling stability, enabling more durable high-performance anode formulations for demanding UAV duty cycles.

12:30 Networking Luncheon

1:15 Dessert Break in the Exhibit Hall with Poster Viewing

MARKET DEMAND FOR BATTERY RAW MATERIALS

1:45 Chairperson's Remarks
Brian Barnett, PhD, CTO, Nyobolt

1:50 FIRESIDE CHAT: Developments in the Lithium-ion Battery Industry from the Lithium Chemicals' Perspective
Ashish Patki, Director, Market Intelligence, Rio Tinto
Various demand drivers for lithium-ion batteries have shown peculiar trends. To look forward, the lithium-ion battery supply chain should look back at these trends, particularly the breadth of applications on the one hand, and the variables impacting supply of lithium chemicals on the other hand.

Interviewed By:
Brian Barnett, PhD, CTO, Nyobolt

GLOBAL PERSPECTIVES ON BATTERY RAW MATERIALS SUPPLY

2:20 The Implications of Tariffs on the North American Battery Supply Chain
Kimberly Berman, Independent Consultant, Pivot Research
The high dependency on China and Chinese companies for key material inputs, especially in today's geopolitical environment, will continue to constrain EV adoption in the US market regardless of chemistry. Critical minerals policy won't remedy this situation as abnormal supply conditions continue to depress commodity prices and increase production risk. This talk will tie the headlines to the challenges currently plaguing battery supply chains.

2:50 The Unintended Consequences of AI and its Massive Impact on the Battery Value Stream
Ken Hoffman, Founder & CEO, Traubenbach
The world has gone nuts over AI. Trillions are being spent as quickly as possible to build out AI infrastructure. The downside is that AI, in addition to cryptocurrencies, consumes massive amounts of power, destabilizing the grid. Already, we have seen in the Iberian Peninsula widespread blackouts early in 2025 due to AI, and more such catastrophic events are likely to occur. The answer is batteries, and we will discuss.

3:20 Refreshment Break in the Exhibit Hall with Poster Viewing

PLENARY KEYNOTE

3:50 Shep Wolsky Battery Innovator of the Year Award Presentation and Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech



3:55 LFP Cells Are Boring—Why Should I Care?
Jeff Dahn, FRSC, PhD, Professor of Physics and Atmospheric Science & NSERC/Tesla Canada Industrial Research Chair, Dalhousie University
LFP Li-ion cells are now the most common cells in energy-storage products and EVs. They are inexpensive and since they are relatively safe, they can be made in large-Ah-capacity cells, reducing cost and complexity in battery modules and packs. I will explain how to make LFP cells exciting, including strategies to dramatically increase their energy density.



4:15 Delivering Advanced Battery Technologies for EV Range and Value
George Cintra, Director, Battery R&D, General Motors
General Motors is building an electrification powerhouse, having launched a dozen EVs into the market, ranging from the Equinox EV to the Cadillac Escalade IQ. General Motors is pioneering next-generation battery and manufacturing technologies, such as prismatic cells with LMR cathodes. Mr. Cintra will provide an update on GM's battery research & development activities and innovations to deliver longer range, lower costs, and faster-charging batteries for EV customers.



4:35 Today's EV Reality and the Path Forward
Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution
LG Energy Solution is the leading lithium-ion battery manufacturer, working with the top OEMs globally in transforming the automobile industry. The market for EVs is expanding rapidly, driven by both consumer demand and regulatory incentives. In North America, there are unprecedented levels of investment to support EVs, by both OEMs and battery manufacturers. This presentation will discuss market growth projections, announced expansion plans, and the challenges ahead.



4:55 Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth
Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.
Panasonic Energy has been at the forefront of battery technology development, driving the growth of BEVs and AI. To meet increasing market demand, we are expanding our production capacity in North America and strengthening strategic partnerships. These initiatives will contribute both to the realization of a sustainable society and to our business growth. This presentation will highlight the innovative activities within our battery business from a technological perspective.



5:15 New Science Frontiers in Battery Technologies
Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago
In this talk, I will discuss a few new perspectives for energy storage materials including new solvation architecture designs for liquid electrolytes and new superionic conductors in soft or hard materials. With recent advances in photon and electron characterization tools and computational methods, we can explore ionic mobility, charge transfer and ion matter interactions in electrochemical system in operando.

5:35 Reception in the Exhibit Hall with Poster Viewing

6:35 Close of Day

WEDNESDAY, MARCH 25

7:30 am Registration Open and Morning Coffee

GLOBAL PERSPECTIVES ON BATTERY RAW MATERIALS SUPPLY

8:55 Chairperson's Remarks

Rohan Gokhale, PhD, Applied Technology Manager, Umicore Rechargeable Battery Materials

9:00 Electric Vehicle Battery Supply Chain and Carbon Footprint Implications

Michael Wang, PhD, Group Center Director & Distinguished Fellow, Systems Assessment Center, Argonne National Laboratory

Critical minerals, materials, and components of electric vehicle batteries are produced in different global regions and shipped to EV applications in different countries. The global nature of the EV battery supply chain affects the carbon intensities, as well as the economics, of batteries. Argonne National Laboratory has been simulating global battery production with its R&D GREET model. This presentation will cover variations in the carbon intensities of the global battery supply chain.

9:30 AEROXIDE Fumed Metal Oxides for Improved Battery Performance

Victor Lifton, Tech Dir, Tech Market, Evonik Industries AG

The presentation will focus on the most recent developments in the area of fumed metal oxides to increase the performance, life-time, and safety of the Li-ion battery. We will expand on the concept of CAM dry coating using special additives presented last year and focus on the performance improvements of the LFP cathode material by doping with fumed titania additive.

10:15 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

11:05 Lithium Industry in Europe, the US, and Canada: Mining and Refining Landscape

Lukasz Bednarski, Principal Analyst, S&P Global

In recent years, Europe and the United States have prioritized independence in critical minerals supply chains, especially for batteries and electric vehicles. This emphasis on developing raw and refined lithium supplies is vital to governmental agendas. Our discussion will highlight the complexities outlined in our report and present forecasts for these regions.

11:25 Graphite and Anode Materials Supply Risks and Mitigation Paths

Urvi Mehta, Senior Research Associate, Energy Storage, Lux Research

Graphite remains the at-risk anode material due to several factors: its disproportionate dependence on Chinese supply, increasing regulatory pressures related to environmental sustainability, and escalating demand from the EV sector, all of which contribute to heightened price volatility and supply chain vulnerabilities. This presentation assesses the exposure levels between natural and synthetic graphite, examines the implications of recent policies, and discusses alternative anode chemistries, such as a silicon-doped anode material.

11:45 The Role of Supply Chain in Delivering Cost-Competitive Batteries

Max Reid, Head of Battery Technology and Costs, CRU Group

This presentation explains how batteries can be manufactured outside China cost-effectively through strategies in supply chain and technologies. It will examine the relationship between battery manufacturers and suppliers and how it affects costs and prices, and look at the imperative to invest in the upstream and midstream, and the nuances and difficulties of doing so

12:05 pm Activating U.S. Anode Capacity now. Local Supply without compromise on Cost or Performance.

Sophie Dik, Head of Sales, Sales, CarbonX

The global battery–graphite value chain is being reshaped by electrification, geopolitics, and the urgent need for localized, resilient, and cost-effective supply. For U.S. battery makers and OEMs, rapidly scaling domestic anode capacity without compromising performance or economics is now a strategic priority. This presentation explores how novel carbon anode materials enable fast activation of U.S. anode production, supported by new performance data and a scalable pathway to resilient local supply without trade-offs.

12:35 Networking Luncheon *(Sponsorship Opportunity Available)*

1:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

1:50 Close of Conference Track

Global Battery Manufacturing Production

Maximizing Production Efficiency & Quality to Deliver on Global Demand

WEDNESDAY, MARCH 25

12:35 pm Registration Open

12:35 Interactive Roundtables and Networking Luncheon
(Sponsorship Opportunity Available)

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

SCALING GLOBAL BATTERY PRODUCTION

1:50 Chairperson's Remarks
Alejandro Franco, PhD, Professor, Université de Picardie Jules Verne



1:55 KEYNOTE PRESENTATION: Reducing the Cost of Batteries by Properly Apportioning the Risk of Failure
Celina Mikolajczak, Advisor to the Battery Industry
When considering the cost of batteries, we seldom consider the costs associated with warranty failures, particularly those related to thermal runaway failures that have driven major recalls. Economic analysis and review of available technology indicates that it should be possible to drop total battery pack costs, and vehicle total cost of ownership, by apportioning the responsibility for preventing thermal runaway between cell maker and OEM.

2:25 Train Faster and Ramp Faster—How VR Unlocks Next-Gen Workforce Development
Hailong Ning, PhD, Co-Founder & CEO, VTA Technology
As battery demand surges, the industry faces a workforce skills gap that traditional training cannot fill. This talk examines the transformative role of Virtual Reality (VR) in bridging this divide. We will discuss how immersive simulation tackles the unique challenges of battery manufacturing. Learn how leading manufacturers are leveraging VR to accelerate onboarding, reduce material waste, and standardize best practices across global facilities.

2:55 Integrated Thermal Processing & Analytical Solutions for Next-Generation Battery Anodes
Austin Shaw, Carbolite Area Sales Manager, Sales, Verder Scientific Inc
Jay Schild, Microtrac Area Sales Manager, Sales & Marketing, Verder Scientific, Inc
Vacuum and continuous furnace systems are essential for the pyrolysis and graphitization of battery anode materials. This presentation explores high-temperature graphite vacuum chamber furnaces, hot-walled retort furnaces, and continuous thermal processing solutions for advanced material treatment. Analytical techniques for precise characterization of particle size, morphology, and surface area will be discussed, as these parameters critically influence electrode performance and cycle life.

3:10 Better, Faster, Cleaner: Redefining Performance with the World's Fastest Electrode Platform
Rajan Kumar, CEO & Founder, Ateios
Electrode manufacturing is the critical lever for the globe to deploy over 100 TWh of battery storage by 2040 to power the systems that connect, move, and defend society. While cell chemistry advances, solvent-based coating and thermal drying remain energy-intensive and capital-intensive, and are increasingly constrained by PFAS regulations. Throughput, not materials innovation, is now limiting global expansion. This presentation presents an update to RaiCure™, an electron-curable, PFAS-free electrode platform that enables 5X faster roll-to-roll production while strengthening adhesion and supporting higher energy density across LCO, LFP, and NMC chemistries.

3:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

3:55 Battery Report 2025: A Bird's-Eye View of Battery Manufacturing
Michael Liu, Director, Research & Insights, Volta Foundation
We will walk through the most consequential developments shaping the global manufacturing landscape- from commissioning milestones and capacity swings to the emergence of new regional hubs. The session will highlight the technologies making meaningful progress in deployment, including advances in LFP manufacturing optimization, dry-electrode scaling, and early semi-solid-state production line activity.

4:15 BATT Coalition Advocacy for a Robust Domestic Battery Materials Supply Chain
David Howell, Vice President, Strategic Marketing Innovations (SMI)
The Battery Advocacy for Technology and Transformation (BATT) Coalition is a voice for the US battery materials manufacturers working to grow the upstream materials supply from extraction, synthesis, and processing. BATT advocates for legislative and federal policy that will promote market incentives and trade policies to support industry growth. This presentation will highlight the Federal policy landscape and Administration actions that support coalition objectives and the gaps that remain.

4:35 Impacts of AI on the Battery Industry—How Can AI Revolutionize Battery Development and Industrialization?
Simon Buderath, Strategy & Technology Consulting, P3 USA
AI is transforming our daily work and the battery industry is no exception. In R&D, it can predict new materials and combinations and can also optimize cell and battery designs. In production, it can drive efficiency through predictive maintenance and real-time control. Vertical integration will be key to success, providing end-to-end data access and ownership.

4:55 Analysis of Manufacturing Technology Progress of Chinese xEV Batteries in 2026
Mark Lu, PhD, Senior Industrial Analyst, Industrial Economics & Knowledge Center, Industrial Technology Research Institute
Chinese xEV battery manufacturing technology has developed special battery production technologies for solid-state batteries, new materials, and fast-charging batteries for the targets of reducing costs and energy consumption. Solid-state battery production has gradually derived from thermal composite and *in situ* solidification, as well as active-material composite solid-state electrolyte technologies. Fast-charging batteries put more effort to lamination accuracy, speed, and multi-tab design. This report will briefly analyze the latest developments.

5:30 Volta Foundation Battery Social*
Join Volta Foundation for an Battery Social at International Battery Seminar & Exhibit in Orlando!
Connect with fellow battery professionals, exchange ideas, build valuable relationships, and stay ahead in the rapidly evolving battery industry as the Volta Foundation Battery Social is the perfect place to engage with the brightest minds in the industry.
*separate registration required, please click here for details: https://learn.volta.foundation/ibse-2026

8:30 Close of Day

THURSDAY, MARCH 26

INTERACTIVE LEADERSHIP BREAKFAST

7:25 am 7:25 AM - Powering Impact: An Interactive Session on Technology, Market Strategy, and Execution in the Battery Economy



Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
The session will center on three practical dimensions: how to position technical concepts in terms of customer value and cost-performance; how to communicate with credibility to executives, investors, and commercial partners; and how project leadership translates vision into milestones that matter.

Panelists:
Marianne Meins, CTO & Executive Vice President, Emerging Technologies, Curtis Stout
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.
Celina Mikolajczak, Advisor to the Battery Industry
Lucy Li, Technical Program Manager, Cell, Peak Energy; Program Manager, Women in Batteries, Volta Foundation
Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC
Mykela DeLuca, PhD, Program Dir, Battery Business Directory, Volta Foundation

8:00 Registration Open and Morning Coffee

INNOVATION IN R&D FOR MANUFACTURING

8:25 Chairperson's Remarks
Simon Buderath, Strategy & Technology Consulting, P3 USA

8:30 Coperion—Your Battery Process Partner for Powder and Continuous Dry Electrode Processing
Sudarshan Banger, Industry Mgr, Coperion Corp

In the realm of dry battery electrode manufacturing, key considerations include the selection of active materials, scaling processes from pilot to gigafactory levels, and critical steps such as weighing, mixing, and extrusion. Coperion provides an extensive portfolio of equipment and system solutions that support each phase of battery production. Leveraging years of experience and technical expertise, Coperion offers tailored solutions to meet specific client requirements, backed by dedicated test centers that demonstrate performance and reliability. The focus is on illustrating a range of process solutions for dry battery electrodes, emphasizing vital technologies like feeding, conveying, mixing, milling, dust collection, extrusion, and thermal drying-each designed to optimize efficiency and consistency in battery manufacturing.

9:00 Improvement of Quality and Productivity through Equipment Approach in Battery Manufacturing
Roy Osada, GX3, Kanematsu KGK Corp.

Kanematsu KGK Corporation, a Japan-based trading company specializing in battery manufacturing equipment, provides integrated solutions that cover the entire battery production process. Through collaboration with Japan's leading equipment manufacturers, Kanematsu KGK offers unique function for battery production lines. Among the many excellent facilities available, for today I would like to introduce high-precision homogenizer system that enable uniform slurry preparation and process stability, battery performance improvement by electrode surface treatment system and sophisticated rolling mill that enables improved productivity of dry electrodes.

9:00 Coffee Break in the Exhibit Hall

9:30 Dry Coating Precursor Design: Solving dry electrode coating manufacturability challenges and unlocking cost and performance improvements
Sam Burrow, CTO, Executive Team, Anaphite

Dry electrode coating technology is an exciting manufacturing innovation that could enable major savings across factory footprint & capex, energy cost, and embedded
CO_2.
In this presentation, we will outline the challenges with getting dry coating processes to work at scale. We will showcase some of Anaphite's work on Dry Coating Precursors (DCP®), engineered powders designed to feed dry coating machines to make high performance electrodes at high speed and yield. We'll present case studies with dry coated 90% Ni NMC and Gen 4 (2.6 g/cc) LFP electrodes.

10:00 Battery Booth Crawl with Bagels in the Exhibit Hall with Last Chance for Poster Viewing

10:45 Beyond the Pack: Scaling Battery Manufacturing for Resilience, Innovation, and Circularity
John Warner, DM, Chief Customer Officer, American Battery Solutions

This presentation explores how battery pack manufacturing is evolving to meet the demands of resilience, innovation, and circularity. Dr. John Warner examines supply chain localization, advances in automation and AI, and the integration of sustainable practices such as recycling and second-life applications. Attendees will gain insights into strategies for building flexible, future-proof manufacturing ecosystems, navigating policy changes, and driving industry collaboration to support the global transition to electrified transportation.

11:05 From Academic Battery Manufacturing Modeling to Industrial Impact: Introducing the Startup Aikemics
Alejandro Franco, PhD, Professor, Université de Picardie Jules Verne

Building on 12 years of academic research, I will introduce Aikemics, a startup that develops predictive computational models for battery manufacturing. Our software integrates physics-based simulations and hybrid AI to assist decision-making from electrode to full-cell assembly. This lecture highlights our unique approach and the transition from academic pilot-line validation to providing scalable industrial solutions.

11:25 Next Generation of Advanced Wet Electrode Slurry Processing
Kai Baer, PhD, Managing Director & President, adphos Innovative Technologies GmbH

BearLITE-processing is patented wet slurry drying technology which enables defined, inline controlled processing within seconds, up to 90% energy reduction, and is CO2-free and a fraction of today's convection dryer investment costs.

12:15 pm Enjoy Lunch on Your Own

SCALING BATTERY MANUFACTURING

1:10 Chairperson's Remarks

Kai Baer, PhD, Managing Director & President, adphos Innovative Technologies GmbH

1:15 University Pilot Lines: Where Battery Ideas Become Scalable, Market-Ready Technologies

Greg Less, Director, University of Michigan Battery Lab

William Mustain, PhD, Director, Carolina Institute for Battery Innovation, University of South Carolina

University-operated pilot lines can be key partners in bridging the gap between research and manufacturing—helping companies to scale battery innovations from concept to commercial viability, and supporting validation for OEMs, tier-ones, and agencies. In 2025, UM opened an expanded facility and USC will be fully operational in 2026. This talk will focus on existing and future capabilities, including formats, chemistries, etc.

1:45 Visualizing and Contextualizing Data to Rapidly Assess Process Adjustments for Battery Manufacturing and Material Refining

Stephanie Van Kirk, Industry Leader, Battery, Rockwell Automation

This talk presents data visualization and contextualization tools that enable rapid assessment of process changes in battery manufacturing and material refining.

2:15 Beyond Gigafactories: Unlocking Value in Niche and Performance Programs

James Hoxey, Director, Monkscroft Advisory, Ltd.

The battery industry has been fixated on gigafactories, but high-value applications in aerospace, defence, and performance automotive require a different approach. This talk will show how niche programs not only deliver solutions where scale players cannot, but also act as innovation engines and sovereign supply proof points that shape the wider industry.

BRIDGING THE TALENT GAP

2:45 Battery Workforce Trends & Insights

Matt Anders, Founder & Lead Recruiter, VoltForce

The US battery industry is at a crossroads. Recent closures and delays show that capital alone isn't enough—people are the true bottleneck. This session explores current workforce realities, why talent remains the biggest challenge, and what must change to ensure competitiveness. Attendees will gain a clear view of the skills, strategies, and priorities needed to build a sustainable US battery ecosystem.

3:15 Transition to Closing Plenary

CLOSING PLENARY PANEL DISCUSSION

3:30 Navigating the Global Battery Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big-Data Requirements






Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation

In this plenary closing discussion, we are ending the conference with a thought-provoking and insightful panel of experts led by Christina Lampe-Onnerud to help us think through: where is the US battery market going in the aftermath of the Big Beautiful Bill and how is this different in Europe and Asia? How do we as an industry navigate these uncertain times?

Panelists:
Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC
John Warner, DM, Chief Customer Officer, American Battery Solutions
Michael Liu, Director, Research & Insights, Volta Foundation

4:30 Close of Conference

Advances in Automotive Battery Applications

Optimizing High-Performance Batteries for EVs

MONDAY, MARCH 23

7:00 am Registration Open and Morning Coffee

4:45 pm Close of Day

TUESDAY, MARCH 24

7:00 am Registration Open and Morning Coffee

8:05 Organizer's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

OEM APPLICATION-DRIVEN DEVELOPMENT

8:10 Chairperson's Remarks
Kevin Konecky, Vice President, Battery Systems Engineering, Spiro

8:15 Voltage-Based Degradation Behavior of NMC-Gr/SiO Cells for SOH-SOC Prediction and Operation Control
Bharat Gattu, Senior Researcher, Technology Planning & Research, Nissan Tech Center North America

SOC/SOH prediction is essential for optimizing the LIB usage and operation using onboard controls. However, with the advances and changes in cell material chemistry, the prediction models develop new issues due to additional phenomenon and reactions which evolve. NMC-Gr/SiO cells were tested at different voltage and SOC ranges and a degradation mapping was developed. Gradual degradation behavior and unusual degradation behavior studied using data analysis and cell internal resistance mapping.

8:45 In a Mission to Democratize Decarbonized Mobility: Critical Role of Battery Chemistry
Mohamed Taggougui, Expert Leader, Battery Cell, Ampere, part of the Renault Group

It is imperative to reduce the cost of the chemistry to make EV accessible to everyone in Europe. At Ampere, we have a plan to reduce the battery cost by 40%. In this talk I will share with you at high level what we are doing at Ampere, from a battery chemistry perspective, to reduce the cost of electric cars.

9:15 Solid-State Battery Commercialization: Status and Challenges
Alvaro Masias, Supervisor, Cell Technology Research, Ford Motor Company

Solid state batteries garner a large amount of attention as the future of next-generation battery chemistries and as a result it can be difficult to separate hype from reality in this important technology. This talk will discuss the status of solid state battery commercialization, important challenges remaining, and technology needs from an automotive OEM perspective.

9:45 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing

10:30 Accelerating Battery Cell Innovation Through Conductive and Dielectric Coating Expertise
Janel Ruhlman, Senior Application Engineer, Battery Applications, Henkel - Madison Heights, MI

As electric vehicle (EV) demand evolves amid changing market dynamics, battery manufacturers are reimagining how to scale innovation efficiently and sustainably. Henkel's conductive and dielectric coating labs at its Global Center of Excellence in Madison Heights, Michigan, offer application expertise and advanced testing to support these goals. This session highlights how Henkel's coating technologies enhance conductivity, insulation, thermal management, reliability, and scalable manufacturability.

11:00 The Role of Structure in Advanced Battery Materials and Applications
Tobias Glossmann, Principal Systems Engineer, HV Battery Research and Test Lab, Mercedes-Benz Research and Development North America

As advanced materials enable more efficient applications, understanding their structure is paramount. However, the detailed structure of battery materials, for example, often remains unclear despite commercial success. This talk will address key issues related to electrolytes, interfaces, electrodes, and active materials. It will emphasize the need to leverage structural insights to achieve high performance at a lower cost.

11:30 Materials Progress and Needs for Advanced Battery Technologies
Rana Mohtadi, PhD, Senior Principal Scientist, Materials Research, Toyota Research Institute of North America

Solid-state electrolyte SSE materials hold the key to enabling highly efficient solid-state battery technologies. Thus, the demonstration of SSEs capable of meeting the performance metrics demanded is of paramount importance. Herein, we will provide an update related to progresses being made in the area of SSE material development.

12:00 pm USABC Battery Development Program Overview
Meng Jiang, PhD, Staff Researcher, R&D, General Motors Company

The United States Advanced Battery Consortium LLC (USABC), a subsidiary of USCAR, is a collaborative research organization comprised of technical personnel from Ford, General Motors, and Stellantis. USABC has been pursuing advanced energy storage technologies for electrified vehicles for over 30 years. This talk will highlight recent updates to USABC's long term battery development targets and provide an overview of expected upcoming funding opportunities for US-based battery suppliers.

12:30 Networking Luncheon

1:15 Dessert Break in the Exhibit Hall with Poster Viewing

OEM APPLICATION-DRIVEN DEVELOPMENT

1:45 Chairperson's Remarks
Tobias Glossmann, Principal Systems Engineer, HV Battery Research and Test Lab, Mercedes-Benz Research and Development North America



1:50 FEATURED PRESENTATION: Beyond LFP for EV: Where We Might be Going
Oliver Gross, MASc, Senior Fellow—Electrified Energy Technology, Stellantis

Lithium iron phosphate (LFP) offers safety, longevity, and cost benefits for EV batteries, yet faces constraints in energy density, rate performance, and supply chain accessibility, currently compensated by use of Ni-dominant cathode chemistries. This talk presents low-cost strategies to enhance LFP for automotive use, including material and system-level innovations. It also explores emerging alternatives—lithium-sulfur (Li-S) and sodium-ion (Na-ion)—that promise scalable, sustainable energy storage solutions for next-generation EV platforms.

ADVANCED BATTERY R&D FOR AUTOMOTIVE APPLICATIONS

2:20 Solid-State Batteries Unplugged: Mapping the Future and Tackling Today's Challenges
Varnika Agarwal, Senior Research Analyst, Benchmark Mineral Intelligence
The battery market saw a deployment of around 1.7 TWh in 2025. Battery evolution is occurring in many different directions, with each avenue viewed as 'the next big thing.' Developments include advancements in LFP chemistry with LMFP, the use of silicon anodes, sodium ion or the emergence of ultra-fast charging technologies. However, solid-state batteries have gained interest for over a decade now.The session will look to address several key questions.

2:40 Industrializing Solid-State Batteries: Ensurge's Roadmap to Market Leadership
Asma Sharafi, Chief Technology Office, Ensurge MicroPower
This session will explore Ensurge's roadmap for industrializing solid-state technology—integrating material science, advanced cell engineering, and high-volume manufacturing to move from concept to commercialization. We will discuss how to build a repeatable business model, secure external validation, and drive adoption across global markets. Ensurge is not just innovating battery chemistry; we are creating scalable solutions that redefine energy storage and set the stage for a future powered by solid-state technology.

3:00 Advanced Battery Modeling and Data Analysis
Javier Gazzarri, PhD, Consulting Application Engineer, Application Engineering, MathWorks
This talk focuses on two new functionalities in the MathWorks ecosystem - battery electrochemical modeling and impedance spectroscopy data analysis. The former extends the capabilities of Simulink with physics-based models like P2D and SPM, enabling advanced BMS features such as anode overpotential virtual sensing for fast charging without Li plating. The latter applies MATLAB optimization functionality to generalize the workflow of EIS spectra fitting.

3:20 Refreshment Break in the Exhibit Hall with Poster Viewing

PLENARY KEYNOTE

3:50 Shep Wolsky Battery Innovator of the Year Award Presentation and Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech



3:55 LFP Cells Are Boring—Why Should I Care?
Jeff Dahn, FRSC, PhD, Professor of Physics and Atmospheric Science & NSERC/Tesla Canada Industrial Research Chair, Dalhousie University
LFP Li-ion cells are now the most common cells in energy-storage products and EVs. They are inexpensive and since they are relatively safe, they can be made in large-Ah-capacity cells, reducing cost and complexity in battery modules and packs. I will explain how to make LFP cells exciting, including strategies to dramatically increase their energy density.



4:15 Delivering Advanced Battery Technologies for EV Range and Value
George Cintra, Director, Battery R&D, General Motors
General Motors is building an electrification powerhouse, having launched a dozen EVs into the market, ranging from the Equinox EV to the Cadillac Escalade IQ. General Motors is pioneering next-generation battery and manufacturing technologies, such as prismatic cells with LMR cathodes. Mr. Cintra will provide an update on GM's battery research & development activities and innovations to deliver longer range, lower costs, and faster-charging batteries for EV customers.



4:35 Today's EV Reality and the Path Forward
Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution
LG Energy Solution is the leading lithium-ion battery manufacturer, working with the top OEMs globally in transforming the automobile industry. The market for EVs is expanding rapidly, driven by both consumer demand and regulatory incentives. In North America, there are unprecedented levels of investment to support EVs, by both OEMs and battery manufacturers. This presentation will discuss market growth projections, announced expansion plans, and the challenges ahead.



4:55 Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth
Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.
Panasonic Energy has been at the forefront of battery technology development, driving the growth of BEVs and AI. To meet increasing market demand, we are expanding our production capacity in North America and strengthening strategic partnerships. These initiatives will contribute both to the realization of a sustainable society and to our business growth. This presentation will highlight the innovative activities within our battery business from a technological perspective.



5:15 New Science Frontiers in Battery Technologies
Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago
In this talk, I will discuss a few new perspectives for energy storage materials including new solvation architecture designs for liquid electrolytes and new superionic conductors in soft or hard materials. With recent advances in photon and electron characterization tools and computational methods, we can explore ionic mobility, charge transfer and ion matter interactions in electrochemical system in operando.

5:35 Reception in the Exhibit Hall with Poster Viewing

6:35 Close of Day

WEDNESDAY, MARCH 25

7:30 am Registration Open and Morning Coffee

ADVANCED BATTERY R&D FOR AUTOMOTIVE APPLICATIONS

7:55 Chairperson's Remarks
Michael Sanders, Senior Advisor, Energy, Avicenne Energy

8:00 OEM Battery Strategy: Competing when Traditional Approaches No Longer Work VOLTAIQ
Tal Sholklapper, CEO & Co Founder, Voltaiq Inc.
OEMs today are squeezed from all sides: shifting EV policies, China's

cost dominance, and a flood of cheap cells driving reliability issues. To compete, OEMs can't afford slow, traditional serial development—continuous, agile, parallelized processes and hyper-efficient supply chains are now table stakes. Meanwhile, advanced analytics and AI promise big results, but mostly fail to deliver ROI. This talk will show how the right data foundations deliver real production wins to lower costs, manage risk, and accelerate product release cycles with analytics that actually work.

8:30 Insights into Gas Generation in Battery Cells during Thermal Abuse

Vamakshi Yadav, Researcher, General Motors

Gas detection during thermal runaway in lithium-ion batteries offers a promising method for early detection and safety assessment. Although heat-generating reactions have been extensively studied using techniques like accelerating rate calorimetry (ARC) and differential scanning calorimetry (DSC), correlating these reactions with gas emissions remains challenging. This talk will focus on real-time analysis of gas species generated within battery cells leading up to thermal runaway.

9:00 Current Industry Trends in Performance and Opportunities in Next-Generation Battery Systems

Kevin Konecky, Vice President, Battery Systems Engineering, Spiro

Battery systems have evolved into complex assemblies where the battery cell, while central, is only part of a larger integrated architecture. Battery systems incorporate mechanical structure, thermal management, and advanced BMS, requiring robust integration to deliver safety, reliability, and performance. This presentation will discuss how each subsystem contributes to the overall battery system performance. We will examine current trends, emerging trends, technological advancements, and opportunities for innovation in next-generation systems.

9:30 Scaling Ultra-Thin Lithium Metal Films for Next-Generation Automotive Batteries

ELEVATED MATERIALS

Subra Herle, CTO, Elevated Materials

Ultra-thin lithium metal films enable higher energy density batteries but have been difficult to manufacture at scale. Elevated Materials' vacuum-deposited, in-situ passivated lithium films provide improved surface quality and uniformity, enabling scalable lithium metal and prelithiated anode architectures for next-generation automotive batteries, defense, drones, and consumer applications.

9:45 baSiC to ASIC: Industrializing ASIC-Driven Multilevel Batteries for Series Production

PULSETRAIN

Niclas Lehnert, CEO, Pulsetrain GmbH

Pulsetrain is pioneering the next generation of powertrains. We're launching our next major milestone on the roadmap to an automotive-grade ASIC—enabling safer low-voltage states, higher efficiency, built-in redundancy, and longer battery life, while reducing system complexity for charging and traction across multiple mobility use cases.

10:00 The Next Generation Unmanned Battery Testing Solution

SINEXCEL-RE

KEZHEN LIU, Product Manager, Product Development , SHENZHEN SINEXCEL RE EQUIPMENT CO LTD

The battery testing solution has upgraded laboratory testing to be unmanned, intelligent and efficient through an intelligent test management system, a logistics dispatch system and distributed charge-discharge machines. Compared with traditional equipment, the unmanned testing solution increases OEE from 70% to 95%, reduces equipment cable cost by 30%, cuts power module configuration cost by 25%, decreases plant area by 70%, saves electric energy by more than 30% and reduces manpower by 70%.

10:15 Coffee Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

11:05 Silicon-Anode Platform Integration Achieving Enhanced Power and Capability

amprius

Ionel Stefan, CTO, R&D, Amprius Technologies

Amprius Technologies delivers the industry's most advanced silicon-anode lithium-ion batteries, achieving energy and power levels previously unattainable with conventional graphite cells. The company's SiCore® platform combines ultra-high-energy designs reaching 450 Wh/kg with balanced high-power variants delivering 300 Wh/kg at 10C, enabling unmatched versatility across demanding applications. These cells pair breakthrough energy density with fast-charge capability, and high cycle life, unlocking new possibilities for aerospace, defense, and high-performance mobility systems. Supporting our growing customer base by leveraging our gigawatt-scale manufacturing partners around the globe, Amprius is redefining the boundaries of energy density, mission endurance, and system efficiency for next-generation power solutions.

11:35 PANEL DISCUSSION: What you see is all there is? Better decisions start with Batemo Insights!

BATEMO UNDERSTANDING BATTERIES

Michael Schoenleber, Co Founder & CTO, Batemo GmbH

Decision-making often suffers from a limited view of the market - what you see is all there is.
Batemo Insights expands that view by providing a comprehensive, cross-segment overview of the global battery cell landscape. The platform reveals technologies, trends, competitors, and design concepts that remain invisible when focusing only on one's own market segment. By broadening perspective beyond internal experience and familiar suppliers, Batemo Insights enables faster technology scouting, stronger strategic positioning, and more informed decisions about where the battery market is heading.
Better decisions begin with seeing more - Better decisions start with Batemo Insights!

11:50 Turning Solid State Hype into Automotive Reality

Factorial

Alex Yu, CTO, Factorial Energy

The EV battery industry is entering a new phase where chemistry breakthroughs and commercialization advance together. Factorial Energy's proprietary solid-state batteries are proven with top-tier OEMs in lab and on-road. This talk highlights how Factorial is simultaneously advancing technology and scaling manufacturing to meet stringent automotive requirements including validated performance, safety testing, OEM milestones, and production readiness, showing how engineering rigor and manufacturing discipline are accelerating the path to high-volume deployment.

12:05 pm The Rechargeable Battery Market 2026-2035, Significant Changes in North America in Applications and Emerging Technology

Michael Sanders, Senior Advisor, Energy, Avicenne Energy

Avicenne Energy will be presenting the major changes in electrification in ever expanding applications that will drive broader demand than just EV and emerging technologies that are becoming more available. Presentation will be focused on North America, but also highlight how the regions value chain is structured vs. other regions. Forecasts will cover both global and North America perspectives.

12:35 Networking Luncheon *(Sponsorship Opportunity Available)*

1:20 **Dessert Break in the Exhibit Hall with Poster Viewing**
(Sponsorship Opportunity Available)

1:50 **Close of Conference Track**

WEDNESDAY, MARCH 25

12:35 pm Registration Open

12:35 Interactive Roundtables and Networking Luncheon
(Sponsorship Opportunity Available)

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

EXPLORING CHEMISTRIES FOR EVOLVING AND INCREASING ENERGY-STORAGE NEEDS

1:50 Chairperson's Remarks
Brandon Kelly, PhD, Chief Scientist, Peak Energy

1:55 Revolutionizing Battery Technology with Aluminum: Clean, Efficient Energy Storage with No Thermal Runaway
Gunjan Agarwal, CEO, Zenthos Energy

Zenthos Energy is building pioneering energy solutions that enable a low-cost and sustainable supply chain by utilizing aluminum-based chemistries. In addition to being an abundant resource, Aluminum offers superior performance attributes that cannot be delivered by rare earth minerals. Zenthos has performed rigorous third-party validation proving that its batteries do not incur thermal runaway. This enables an unprecedented combination of performance, safety, and integrity, redefining battery innovation across applications.

2:25 From Pilot to Grid: Delivering Reliability, Safety, and Speed with Sodium-ion
Brandon Kelly, PhD, Chief Scientist, Peak Energy

Peak Energy's sodium-ion systems are transitioning from pilot validation to grid deployment, demonstrating a new benchmark for reliability, safety, and deployment speed. This talk will share insights from early MWh-scale installations, highlighting how simplified architecture and stable chemistry enable rapid, low-risk deployment for utility-scale storage. Sodium-ion's proven field performance positions it as a scalable, dependable solution to meet accelerating global electricity demand.

2:55 LFP vs. NCA in AI Data Center BBUs: Aligning Cell Chemistries with Performance Priorities TENPOWER
Kiyokazu Oiyama, Vice President, CEO Office, Tenpower Malaysia Sdn. Bhd.

The rapid scaling of high-density AI clusters is pushing the limits of power density and thermal management for data center BBUs. Within constrained rack footprints, system design dictates a critical engineering trade-off in cell chemistry: leveraging LFP for superior safety margins and lifespan, or NCA to maximize volumetric energy density and transient power delivery. To address these demands, Tenpower has engineered Tabless 21700 cylindrical cells optimized for high-power backup, advancing both LFP and NCA pathways. This presentation will share comparative empirical data of these two chemistries built on an identical Tabless architecture. The technical content will center on three core cell-level dimensions: Ultimate Safety Design, Instantaneous High-Power Response, and Ultra-Long Calendar Life. By detailing these test results, the session will provide engineering teams with quantifiable metrics to support cell selection based on specific system-level priorities.

3:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

3:55 Electrolyte Innovation to Unlock High-Performance Aqueous Energy Storage
Emily Dickens, CCO, Octet Scientific

Aqueous batteries are a leading candidate for safe, low-cost, long-duration energy storage, but their performance is hindered by parasitic reactions, plating instabilities, and electrolyte degradation. Octet Scientific develops advanced electrolyte additives that improve round-trip efficiency, battery capacity, and enable more reliable battery cycling. Case studies in zinc–air, zinc–bromine, and near-neutral zinc systems demonstrate how electrolyte innovation can accelerate the commercialization of grid-scale aqueous storage.

4:25 Low-Cost Organic Electrolytes for Next-Generation Flow Batteries
Meisam Bahari, PhD, CTO, Quino Energy

Flow batteries have proven reliable and scalable, yet their broader adoption has been constrained by expensive, conventional vanadium electrolytes. Quino Energy's innovative organic electrolyte matches vanadium's performance, safety, and lifetime at less than one-third the cost, enabled by a zero-waste, continuous-flow manufacturing process supporting rapid global scale-up. Its distinctive chemistry is compatible with carbon steel tanks, cutting system cost, installation time, and footprint to roughly one-third that of lithium-ion batteries.

4:55 PANEL DISCUSSION: We Have to Do the Work: Fostering Battery Innovation *and* Execution
Moderator: Celina Mikolajczak, Advisor to the Battery Industry

The battery industry is experiencing supercharged growth despite shifting political and funding dynamics. This panel of experts examines our industry's future addressing emerging electrochemistries, growth prospects, key challenges, and achievable milestones for the near and long term.Join this panel of experts as they explore:

- What are the next steps?
- Where is the funding?
- Why collaboration is critical?

Panelists:

Mei Cai, PhD, Senior Director, Battery Engineering, Fluence

Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC

Johanna Nelson Weker, PhD, Lead Scientist, SLAC National Accelerator Laboratory

Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.

5:30 Volta Foundation Battery Social*
VF | VOLTA FOUNDATION
Join Volta Foundation for an Battery Social at International Battery Seminar & Exhibit in Orlando!
Connect with fellow battery professionals, exchange ideas, build valuable relationships, and stay ahead in the rapidly evolving battery industry as the Volta Foundation Battery Social is the perfect place to engage with the brightest minds in the industry.
*separate registration required, please click here for details: https://learn.volta.foundation/ibse-2026

8:30 Close of Day

THURSDAY, MARCH 26

INTERACTIVE LEADERSHIP BREAKFAST

7:25 am 7:25 AM - Powering Impact: An Interactive Session on Technology, Market Strategy, and Execution in the Battery Economy



Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
The session will center on three practical dimensions: how to position technical concepts in terms of customer value and cost-performance; how to communicate with credibility to executives, investors, and commercial partners; and how project leadership translates vision into milestones that matter.

Panelists:
Marianne Meins, CTO & Executive Vice President, Emerging Technologies, Curtis Stout
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.
Celina Mikolajczak, Advisor to the Battery Industry
Lucy Li, Technical Program Manager, Cell, Peak Energy; Program Manager, Women in Batteries, Volta Foundation
Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC
Mykela DeLuca, PhD, Program Dir, Battery Business Directory, Volta Foundation

8:00 Registration Open and Morning Coffee

DEPLOYING HIGH-CAPACITY BATTERY-STORAGE SYSTEMS: DATA CENTERS

8:55 Chairperson's Remarks
Christina Peabody, Hardware Engineer, Google Inc.

9:00 Maximizing Grid-Scale Battery Investments with Power Electronics
John Glassmire, Vice President of Digital Enablement and Transformation, Hitachi Energy
Power electronics, despite being a relatively new technology in the grid, are revolutionizing the transition to an electrified energy ecosystem and creating new investment opportunities. When combined with cutting-edge controls, they unlock the frontiers of grid-scale battery investments, including DC-coupled solar-batteries driving efficiency and faster interconnection, enabling large-load interconnections to expedite data center, e-mobility, and industrial electrification. This practical talk will demystify power electronics, helping you make stronger BESS investments.

9:00 Coffee Break in the Exhibit Hall

9:30 Cost-Effective and Energy-Efficient Megawatt Medium-Voltage Power Conversion for AI Data Centers and EV Fast Charging Stations
Chris Mi, PhD, Fellow, IEEE & SAE; Distinguished Professor, San Diego State University
This presentation explores novel megawatt-scale EV fast-charging stations powered directly from medium-voltage grid based on Loosely-Coupled Resonant Solid-State Transformers without the need for low-frequency transformers. The approach aims to reduce energy loss by 70%, footprint & weight by 50%, and cost by 25% compared to existing SST. It enables flexible and modular deployment and achieves more reliable operation in EV fast-charging stations, AI data-centers, and large-scale MWh energy storage systems.

10:00 Battery Booth Crawl with Bagels in the Exhibit Hall with Last Chance for Poster Viewing

10:45 Battery System Design for Hyperscale AI/ML Datacenters
Christina Peabody, Hardware Engineer, Google Inc.
Advanced, high-power batteries are key to datacenter power backup systems. Li-ion batteries are a common choice for datacenter energy storage systems, due to their versatility and significant power density and longevity benefits. This talk will discuss hyperscale datacenter power management challenges presented by the proliferation of AI/ML. Specifically, we will address how to incorporate batteries at different levels of the power system for optimal power management and system reliability.

11:15 Bridging Instant Power Supply and Long-Duration Storage
Ian Rock, Founder & CTO, TerraFlow Energy
This session addresses the critical gap between fast-response UPS and long-duration energy storage. We will explore engineering solutions for continuous power buffering, achieving sub-5ms response and 10-hour-plus endurance for critical applications. The talk will compare lithium, flow, and alternative chemistries, analyzing degradation, serviceability, and Total Cost of Ownership (TCO). Use cases from data centers and utilities will highlight pathways to redefine resilience across sectors.

11:45 Enjoy Lunch on Your Own

DEPLOYING HIGH-CAPACITY BATTERY-STORAGE SYSTEMS

1:10 pm Chairperson's Remarks
Mei Cai, PhD, Senior Director, Battery Engineering, Fluence

1:15 Jacksonville Battery Gigafactory in Florida: How a Fully Integrated Delivery Model Creates Value for BESS Solutions
Gerardo Rebollar, Director of Strategy, Marketing, and Transformation, Saft
Saft presents its flexible BESS roadmap, highlighting the strategic setup of the Jacksonville Gigafactory. We will explore how a fully integrated delivery model—from battery manufacturing to full system integration—drives long-term value and sustainability for BESS applications. Attendees will gain insights into system design for 20-year lifespans, integration guidelines for successful deployment, and real-world examples. Discover how innovation, scale, and integration converge to unlock performance and economic benefits in energy storage.

1:45 Optimizing BESS Batteries: Key Performance and Design Criteria
Mei Cai, PhD, Senior Director, Battery Engineering, Fluence
Battery Energy Storage Systems (BESS) play a crucial role in integrating renewable energy sources and stabilizing power grids. This presentation focuses on the essential performance and design requirements for BESS batteries, highlighting factors such as energy density, cycle life, thermal management, and safety. We will discuss how optimizing these criteria can enhance the efficiency, reliability, and cost-effectiveness of BESS, ultimately supporting a sustainable energy future.

2:15 BESS Cybersecurity and Supply Chain Security

Joseph O'Connor, Director, ESS Solutions, Engineering, Nuvation Energy

As energy storage grows, security and resilience are as critical as performance. For utility-scale BESS, North American components and in-house test systems strengthen grid reliability and independence. For behind-the-meter projects, robust physical and cyber protections ensure uptime, safe integration, and data security.

2:45 Thermal Barrier Stability under Mechanical Load: Strategies for Safer, Higher-Density Battery Modules

Steven R Aubuchon, PhD, Marketing Development Lead, Electronics, WL Gore & Associates Inc

As BESS modules experience increasing compressive loads, traditional thermal barriers may lose thickness and thermal resistance, reducing their effectiveness in slowing thermal runaway propagation. This presentation reviews how compressive stress influences insulation performance and shares laboratory and field test results for a novel, thin, compression-stable thermal barrier. Findings illustrate how a durable thermal resistance under load can support safer, higher-density BESS module designs and improved propagation mitigation strategies.

3:15 Transition to Closing Plenary

CLOSING PLENARY PANEL DISCUSSION

3:30 Navigating the Global Battery Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big-Data Requirements






Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation

In this plenary closing discussion, we are ending the conference with a thought-provoking and insightful panel of experts led by Christina Lampe-Onnerud to help us think through: where is the US battery market going in the aftermath of the Big Beautiful Bill and how is this different in Europe and Asia? How do we as an industry navigate these uncertain times?

Panelists:
Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC
John Warner, DM, Chief Customer Officer, American Battery Solutions
Michael Liu, Director, Research & Insights, Volta Foundation

4:30 Close of Conference

WEDNESDAY, MARCH 25

12:35 pm Registration Open

12:35 Interactive Roundtables and Networking Luncheon
(Sponsorship Opportunity Available)

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

ADVANCED RESEARCH AND DEVELOPMENT

1:50 Chairperson's Remarks
John Wozniak, PhD, President, Energy Storage and Power Consulting Inc.

1:55 Advances in Fuel Gauge with Onboard EIS Measurement and Adaptive Algorithms: Addressing Challenges *in Silicon*-Containing Anodes and Battery Health Monitoring
Tao Cheng, PhD, Senior Battery Algorithm Expert, MicroPower Chip Research & Dev Institute, Guangdong MicroPower Chip Technology Co Ltd.
This presentation introduces the practical implementation of Electrochemical Impedance Spectroscopy into fuel gauge ICs. This approach enables in-situ monitoring of battery interface integrity and impedance through internal excitation signals and response measurement in real-time. Combined with our adaptive algorithm specifically designed for silicon-containing anodes, this solution provides more accurate tracking of State-of-Charge and State-of-Health throughout battery lifetime, delivering reliable runtime estimation and safety management for consumer electronics.

2:25 Supporting OCV Drift of Si-Anode Cells in State-of-Charge and State-of-Health Indication Algorithms
Yevgen Barsukov, PhD, Head, Algorithm Development, Battery Power Systems, Texas Instruments, Inc.
State-of-charge indication relies on correlation of open circuit voltage with depth of discharge (DOD). Established chemistries have a stable OCV vs. DOD relationship over the age of the battery. However, new chemistries with higher energy density but less stable OCV are appearing. One example is Si-anode, with larger capacity, but rapid change of cells' OCV. We will discuss the TI solution for this issue and analyze its accuracy.

2:55 Binder-Free Electrodes Enabling Performance Gains in Li-ion Battery
Sean Brahim, R&D Manager, Energy Storage Devices, YTC America, Inc.
YTCA has developed binder-free anodes and cathodes containing carbon nanotube (CNT) in lieu of polymer binder as electrodes for Li-ion batteries (LiBs). Our proprietary processing of CNT into viscous organic or water-based slurry without surfactant or dispersant eliminates the need for organic binder and carbon black additives in both anode and cathode electrodes. YTCA's binder-free electrode technology has also been demonstrated to be chemistry agnostic. LiB cells with YTCA's binder-free electrode technology consistently exhibit superior high-rate capability and improved lifetime cycling performance compared to LiB cells with polymer binder. These performance gains are highlighted using the LTO|NMC electrode combination in pouch cells. Compared to the conventional cell with binder, binder-free LTO|NMC cells charge ~10x faster at 10C rate, retains 2x higher capacity under high current discharge, and operates to > 8,000 cycles at 1C rate with ~ 2x longer cycle lifetime.

3:10 Cycle Life: Real-World Usage vs Accelerated Testing
Ken Matsubayashi, Sr Application Engineer, Application Engineering, ENOVIX Corp
Cycle life is a battery performance metric that is more complicated than it may first appear, especially for silicon-anodes. Accelerated charge/discharge protocols fail to reflect how batteries are actually used in real products.
This presentation compares real-world smartphone usage patterns with commonly applied industry cycle life test protocols. We will examine how accelerated methods originally developed for graphite anodes can misrepresent the behavior of silicon-anode cells.

3:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

OEM-DRIVEN DEVELOPMENT

3:55 Some Thoughts on Battery Quality
Bruce Miller, Principal Engineer, Regulatory Compliance, Dell EMC
This presentation explores the concept of lifelong quality, highlighting key industry trends and their implications in today's marketplace. It emphasizes the importance of a holistic design approach that integrates product development and manufacturing from the outset. Through a series of illustrative hypothetical scenarios, the session will examine common challenges and practical strategies for achieving enduring product excellence.

4:25 Battery Development for AI Glasses
Karthik Kadirvel, PhD, Director, Battery Engineering, Meta Platforms
This presentation explores innovative battery designs tailored for augmented reality glasses. We examine the unique power demands and spatial constraints of these devices, proposing solutions that enhance energy efficiency, reduce weight, and extend operational lifespan. By integrating advanced materials and smart battery management systems, our research aims to improve user experience and device performance in immersive applications, paving the way for future developments in augmented technologies.

4:55 Batteries for Medical Devices
Marissa Carey, PhD, Senior Manager, Research & Technology, Medtronic
Battery technology is a critical enabler of medical devices spanning implantable, wearable, and external systems. This presentation explores how differing use conditions and therapy requirements drive battery chemistry selection, system design, and modeling approaches to deliver safe, reliable, and patient-centric power solutions across in-the-body, on-the-body, and for-the-body applications.

5:30 Volta Foundation Battery Social*
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8:30 Close of Day

THURSDAY, MARCH 26

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Mykela DeLuca, PhD, Program Dir, Battery Business Directory, Volta Foundation

8:00 Registration Open and Morning Coffee

OEM-DRIVEN DEVELOPMENT (CONT.)

8:25 Chairperson's Remarks
Bruce Miller, Principal Engineer, Regulatory Compliance, Dell EMC

8:30 Powering Innovation: G2CFx for BLE-Enabled Leadless Pacemakers, ICMs, and Beyond
Joseph Lehnes, PhD, Principal Scientist, Integer
This presentation focuses on G2CFx, Integer's next-generation primary battery technology designed for implantable medical devices. G2CFx delivers improved longevity and higher rate capability, enabling BLE communication while supporting flexible geometries such as cylindrical and complex 3D designs. Applications include leadless pacemakers, ICMs, smart orthopedics, and implantable glucose monitors. Long-term characterization data will be shared, highlighting performance advantages for advanced medical solutions.

9:00 Optimizing Tab Architecture for Enabling High Power in Consumer Batteries
April Yun Li, PhD, Cell Engineer, Battery Development Team, Microsoft Corp.
AI-enabled consumer electronics demand higher power from batteries. Microsoft and industry partners studied how tab architecture impacts power delivery and thermal performance in pouch cells. Optimized tab designs reduce impedance and heat without altering cell chemistry. Results show that strategic tab configurations enhance peak power output while minimally affecting energy density or cycle life, advancing cooler, more efficient batteries tailored for high-performance applications.

9:00 Coffee Break in the Exhibit Hall

9:30 The Pure Silicon Anode Roll: Scaling 100% Silicon for the Next Generation of Devices
Tim Aanhane, Business Development, LeydenJar
As consumer electronics shift toward "AI-on-device" and sleek wearables, traditional graphite batteries have hit their volumetric limit. LeydenJar introduces Silyte, a 100% silicon anode foil grown via PECVD to reach 1350 Wh/L (nominal, stack).
By using nano-structured columns to manage swelling, Silyte offers:
• OEMs: 40% smaller battery footprints for more sensors and AI processing.
• Manufacturers: 10x thinner anodes compatible with existing roll-to-roll production.

10:00 Battery Booth Crawl with Bagels in the Exhibit Hall with Last Chance for Poster Viewing

AI FOR CONSUMER APPLICATIONS

10:45 AI-Based Smart-Charging Algorithm for Next-Generation Li-ion Batteries
Naoki Matsumura, Principal Engineer, Intel
Li-ion batteries are widely used but degrade quickly with always full and fast charging. Current adaptive charging, which adjusts charge level and speed based on "if-then" scenarios, can prolong battery longevity if user behavior aligns with these scenarios. This session introduces context-based charging, which employs machine learning and deep learning to customize charging to individual usage patterns, extending longevity further. The session also covers implementation and application to future batteries.

11:15 Dismantling Battery Data Silos: Preparing for AI Learning through Context-Rich Datasets
Phil Hamilton, Senior Manager of Battery Characterization, Microsoft
Maximizing the impact of battery test data requires a thoughtful metadata architecture that enables AI learning and agents for a robust, centralized, curated, and democratized data source. Through practical approaches to organizing and enriching battery-related datasets, this presentation discusses the Surface Battery Development Characterization Lab methods to mitigate "garbage in, garbage out" pitfalls and support the notion that all data can be useful within the appropriate context.

12:15 pm Enjoy Lunch on Your Own

ADVANCING PERFORMANCE AND COMPETITIVENESS

1:10 Chairperson's Remarks
Laura McCalla, PhD, Senior Principal Scientist, Battery Research & Technology, Medtronic

1:15 Can U.S. Battery Manufacturing Compete with Asia?
John Wozniak, PhD, President, Energy Storage and Power Consulting Inc.
Domestic battery pack and cell production in the U.S. have filled primarily

niche roles over the past 25 years. Concern over tariffs and geopolitical instability has resurrected interest in establishing high-volume battery manufacturing in the U.S. This presentation will discuss the future of battery manufacturing in the U.S. given the significant hurdles that must be overcome.

1:45 **Beyond Outdoor Power Equipment Performance: Battery Compliance and Producer Responsibilities**

Brandon Martin, Vice President, Battery & Electric Products & Industry Affairs, Outdoor Power Equipment Institute

A harmonized approach, across the U.S., is the goal by the Environmental Protection Agency for rechargeable battery extended producer responsibilities as they prepare a 2026 congressional report on "Battery Collection Best Practices and Battery Labeling Guidelines." OPEI, an international trade association, remains engaged and represents more than 100 manufacturers and their suppliers of gas and electric-powered outdoor power and transport equipment, with domestic yearly shipments of nearly 40 million products.

3:15 **Transition to Closing Plenary**

CLOSING PLENARY PANEL DISCUSSION

3:30 **Navigating the Global Battery Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big-Data Requirements**






Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation

In this plenary closing discussion, we are ending the conference with a thought-provoking and insightful panel of experts led by Christina Lampe-Onnerud to help us think through: where is the US battery market going in the aftermath of the Big Beautiful Bill and how is this different in Europe and Asia? How do we as an industry navigate these uncertain times?

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4:30 **Close of Conference**

Battery Technologies for Military and Aerospace Applications

Powering Defense and Aerospace Innovation with Energy Solutions Built for Extreme Conditions

WEDNESDAY, MARCH 25

12:35 pm Registration Open

12:35 Interactive Roundtables and Networking Luncheon
(Sponsorship Opportunity Available)

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

APPLICATION-DRIVEN DEVELOPMENT

1:50 Chairperson's Remarks
Tyler Andrews, Vice President Business Development, Echion Technologies Ltd.

1:55 Battery Standardization for Unmanned Systems
Lisa King, Director, Advanced Battery Strategy, LEAP Manufacturing
Developing standardized battery systems for uncrewed aerial vehicles (UAVs) is essential to enable interoperability, safety, and scalability across civilian and defense applications. This presentation explores the creation of unified battery standards for dual-use UAVs, highlighting how standardization fosters reliability and lifecycle efficiency while driving aggregated demand for high-performance pouch cells. Harmonized specifications can unlock cost reductions, enhance supply resilience, and accelerate adoption across both commercial and military UAV sectors.

2:25 Which Battery Technologies Will Lead the Defense and Aerospace Markets in 2026
Moshiel Biton, PhD, CEO, Addionics
As defense and aerospace systems demand higher power, faster charging, and greater reliability, leading battery technologies in 2026 will be defined by more than chemistry alone, integrating intelligent design, AI-driven optimization, and advanced architecture. One-size-fits-all batteries are no longer sufficient. This new era of application-specific energy storage enables optimization around mission needs. This talk examines emerging technologies, highlighting 3D Porous Current Collectors as a scalable, chemistry-agnostic architecture for applications.

2:55 Custom Electrolyte Manufacturing in the USA
Carl Thoemmes, Business Development Director, Orbia
This presentation will explore recent progress in electrolyte raw materials, advanced formulations, and scalable manufacturing solutions in the USA supporting advanced defense applications and their often-extreme use-case requirements.

3:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

3:55 Domestic Manufacturing of Lithium-ion Battery Cells and Packs for UAS Applications: Challenges and Opportunities
Tan Nguyen, PhD, Battery Cell Plant Director, Engineering, Packet Digital
Establishing a domestic lithium-ion battery cell factory is a complex endeavor, particularly for Uncrewed Aircraft System (UAS) applications that demand various cell formats, extreme performance, and specialized chemistries. This presentation outlines key considerations—including capital investment, regulatory compliance, facility design, equipment selection, technology scale-up, and customer acquisition. We will also highlight Packet Digital's factory-building progress and cell-testing results from its U.S.-based high-performance pouch-cell manufacturing initiative.

4:25 Battery Chemistry Developments for Military and Aerospace Applications
Xilin Chen, PhD, Senior Scientist, SAFT SA
This presentation explores how advances in battery technology are transforming aerospace and related industries. Covering high-energy-density chemistries, safety and thermal management, and system integration, it highlights how these innovations enable lighter, more efficient, and sustainable power solutions. Attendees will gain insight into selecting and optimizing battery technologies to meet the demanding performance and reliability needs of aerospace and beyond.

4:55 Extending Mission Endurance: Silicon-Anode Batteries for Next-Generation Aviation and Defense
Ionel C. Stefan, PhD, CTO, Amprius, Inc.
Amprius Technologies is powering a new era of aviation and defense performance with silicon-anode batteries delivering record energy and power density. Reaching up to 450 Wh/kg and 10C discharge, Amprius cells extend mission range and endurance by 50–100%, recharge rapidly, and sustain high output under extreme conditions. From uncrewed aircraft to electric propulsion, Amprius enables greater payloads, longer missions, and faster readiness for next-generation aerospace and defense systems.

5:30 Volta Foundation Battery Social*
Join Volta Foundation for an Battery Social at International Battery Seminar & Exhibit in Orlando! Connect with fellow battery professionals, exchange ideas, build valuable relationships, and stay ahead in the rapidly evolving battery industry as the Volta Foundation Battery Social is the perfect place to engage with the brightest minds in the industry.
*separate registration required, please click here for details: https://learn.volta.foundation/ibse-2026

8:30 Close of Day

THURSDAY, MARCH 26

INTERACTIVE LEADERSHIP BREAKFAST

7:25 am 7:25 AM - Powering Impact: An Interactive Session on Technology, Market Strategy, and Execution in the Battery Economy



Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
The session will center on three practical dimensions: how to position technical concepts in terms of customer value and cost-performance; how to communicate with credibility to executives, investors, and commercial partners; and how project leadership translates vision into milestones that matter.

Panelists:
Marianne Meins, CTO & Executive Vice President, Emerging Technologies, Curtis Stout
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.
Celina Mikolajczak, Advisor to the Battery Industry
Lucy Li, Technical Program Manager, Cell, Peak Energy; Program

Manager, Women in Batteries, Volta Foundation
Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC
Mykela DeLuca, PhD, Program Dir, Battery Business Directory, Volta Foundation

8:00 Registration Open and Morning Coffee

APPLICATION-DRIVEN DEVELOPMENT (CONT.)

8:25 Chairperson's Remarks

Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC

8:30 Mission Critical Energy: Creating Resilient and High-Performance Systems Utilizing Novel Battery Technology

Tyler Andrews, Vice President Business Development, Echion Technologies Ltd.

Explore the evolution of mission-critical energy solutions, leveraging novel battery technology to enhance the survivability and performance of next-gen defense systems, including hybrid vehicle powertrains and directed-energy applications. This forum focuses on high TRL solutions that can be implemented into current development projects and operated reliably across all global theaters. These advancements improve survivability through reduced noise, minimized heat signatures, and enhanced power redundancy, offering strategic advantages in contested environments.

9:00 Integration of Batteries and Power Management Electronics for Next Generation More-Electric-Aircraft (MEA)

Roger Brewer, Technical Fellow, Lockheed Martin Corp.

This presentation will highlight integration aspects that influence, and challenge, even the most advanced batteries. Topics of relevance include temperature variations within aircraft compartments in combination with MEA loads that impose stress on batteries. Also discussed will be influences such as high voltage and temperature ranges imposed on components forming battery regulating electronics ("Battery As A System"). Capacitors as surge power support at temperature extremes will be orally discussed.

9:00 Coffee Break in the Exhibit Hall

9:30 Army In-House Munitions Power Source Prototyping and Testing Capabilities

Giuseppe Di Benedetto, PhD, Power Team Lead / Chemical Engineer, U.S. Army DEVCOM Armaments Center

Department of War missile and munition fuzing continues to advance to meet current and future system requirements, including extreme environments while maintaining high reliability. Advanced fuze and munition power sources are critical for increased system performance. The U.S. Army DEVCOM Armaments Center provides leading laboratory, prototyping, and testing capabilities to develop next-generation munition power sources, integrating novel materials and evaluating prototypes under representative gun-launch conditions to mature technologies further.

10:00 Battery Booth Crawl with Bagels in the Exhibit Hall with Last Chance for Poster Viewing

10:45 Design Principles for Flexible Batteries for Wearable Applications

Candace K. Chan, PhD, Professor, Materials Science & Engineering, Arizona State University

As demand for flexible, lightweight wearable electronics grows, development of robust, flexible lithium-ion batteries is essential. We conducted a systematic study of failure modes in conventional and flexible batteries under repeated mechanical deformation, focusing on key components like current collectors, electrodes, interconnections, and packaging. Our research elucidates how repeated flexing impacts battery reliability and identifies mitigation strategies for enhancing the performance and durability of high energy density, wearable power sources.

11:05 Scalable "Liquid-to-Solid" Phase Change Electrolytes Enable Ruggedized, Energy-Dense Batteries

David Mackanic, PhD, Co-Founder and CEO, Anthro Energy

Anthro Proteus is a new class of injectable phase change electrolytes that allows for the production of high-performance batteries while using existing manufacturing processes. The liquid-to-solid phase transition stabilizes high-energy-density silicon anodes by forming an elastic binder network and improves cell ruggedness, mechanical strength, and safety. This presentation details the performance advantages of cells fabricated using Anthro Proteus in DoD relevant cell chassis and test conditions.

11:25 Infinity Technology: Safe and Long-Lasting Li-Ion Batteries for Defense

Trevor Grant, Director, Research, Electrovaya

Electrification of defense and heavy-duty applications demands battery technologies that deliver exceptional safety, stability, and longevity under extreme conditions. Electrovaya's Infinity Technology leverages proprietary ceramic separator design to resist thermal runaway and enhance mechanical, electrical, and thermal resilience compared with conventional lithium-ion systems. With over eight years of continuous field data and more than 30,000 batteries deployed, Infinity batteries demonstrate remarkable real-world reliability and cycle life. Electrovaya's North American-based manufacturing further strengthens supply chain resilience and supports defense-relevant quality and regulatory compliance. This proven combination of advanced safety, durability, and domestic production makes Infinity Technology a compelling solution for safe, long-lasting Li-ion power in defense applications.

11:45 US-Made Lithium-ion Battery Cells with US-Dominant Supply Chain for Military Applications

Barbara Hughes, Vice President of Energy Storage, Forge Nano

As global supply chains shift and regulatory pressures increase, the U.S. military requires high-performance, domestically sourced battery solutions. This presentation highlights the development of U.S.-made lithium-ion cells with a predominantly domestic supply chain, designed to meet demanding defense requirements.
Forge Nano's Atomic Armor™ technology uses atomic-scale coatings to enhance battery materials, improving energy density, cycle life, safety, and performance in extreme environments . The session will also explore the path to fully U.S.-sourced cells, addressing supply chain traceability, scalability, and compliance with national security mandates.
Attendees will gain insight into how advanced materials innovation is enabling more resilient and secure battery technologies for military applications.

12:15 pm Enjoy Lunch on Your Own

1:10 Chairperson's Remarks

Carl Thoemmes, Business Deveopment Director, Orbia Fluor & Energy Materials

1:15 Starship: Next Generation of Battery Systems Applications

Denis Trofimov, Senior Avionics and Power Systems Engineer, SpaceX

The Starship Launch Vehicle is the next generation of super heavy launch vehicles, standing in a class of power and capabilities all its own. It also features a brand new topology of CONOPs, where the battery system

becomes the backbone. In this presentation, we present the overall concept of the Starship electrical thrust vector control and the SpaceX approach to delivering a rapidly reusable, human-rated launch vehicle.

SAFETY AND QUALITY

1:45 Isolating Cell Internal Shorts with Polymer Current Collectors in Cylindrical Designs > 265 Wh/kg

Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC

Once cylindrical cell designs exceed >265 Wh/kg, we've found that thermally stable separator designs greatly increase the consistency for nail-penetration tolerance. High-speed radiography and post-test CT imaging provide unique insights into the internal short isolation phenomena provided by thermally unstable metallized polymer current collectors.

2:15 Battery Quality Control via High-Throughput CT Scanning

Peter Attia, PhD, Co-Founder & CTO, Glimpse

Battery quality control is critical for aerospace applications, where safety and reliability are paramount. We supported NASA's Starliner program by CT scanning 200 cylindrical cell assemblies. Our automated inspection algorithms measured key battery features, identifying both anode overhang defects and metallic particle contaminants and validating these results with teardowns. Our findings demonstrate the value of high-throughput CT scanning for aerospace qualification workflows, reducing defect escape rates and mitigating safety risks.

2:45 Solid-State Batteries at the Intersection of Defense Electrification and Secure Supply Chains

Factorial

Raimund Koerver, Vice President Business Development, Business Development, Factorial Inc.

This talk will discuss the substantial market opportunity for solid-state batteries in the defense sector, fueled by policies and strategies directed towards military modernization, platform electrification (in particular, drones and batteries), and secure domestic supply chains. Higher energy density, improved safety margins, and high-power performance enable extended range and increased payload. Applications include UAVs such as drones, eVTOLs, and spacecraft, while aligning with emerging U.S. and allied supply-chain and sourcing requirements.

3:15 Transition to Closing Plenary

CLOSING PLENARY PANEL DISCUSSION

3:30 Navigating the Global Battery Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big-Data Requirements






Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation

In this plenary closing discussion, we are ending the conference with a thought-provoking and insightful panel of experts led by Christina Lampe-Onnerud to help us think through: where is the US battery market going in the aftermath of the Big Beautiful Bill and how is this different in Europe and Asia? How do we as an industry navigate these uncertain times?

Panelists:
Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC
John Warner, DM, Chief Customer Officer, American Battery Solutions
Michael Liu, Director, Research & Insights, Volta Foundation

4:30 Close of Conference

MONDAY, MARCH 23

7:00 am Registration Open and Morning Coffee

4:45 pm Close of Day

TUESDAY, MARCH 24

7:00 am Registration Open and Morning Coffee

8:05 Organizer's Remarks
Victoria Mosolgo, Cambridge EnerTech

BATTERY OPTIMIZATION

8:45 Chemical Exposure Risk Management in LFP Battery Manufacturing: Measurement and Mitigation
Christopher Lugo, CIH, CSP, MBA, Staff Industrial Hygienist, EHS, Tesla, Inc.
As battery manufacturing rapidly evolves, comprehensive risk analysis of personnel chemical exposures is imperative for industry longevity. This talk explores Tesla's holistic approach to identifying, quantifying (via standard and novel sampling methods), and mitigating exposures to chemicals in lithium-iron-phosphate (LFP) battery manufacturing. In this presentation, we will discuss design and operational solutions for manufacturers to proactively protect employee health while maintaining regulatory compliance (US) in a high-flux industry.

9:15 Achieving Safe Battery Design Through Digitalization
Thomas Glatz, Senior Tech Specialist Simulation, Advanced Simulation Technologies, AVL List GmbH
A comprehensive digital approach is key to achieving safe battery design, focusing on preventing thermal propagation and achieving a „no flame out" pack design. Through advanced simulation methodologies ranging from 3d-CFD, system-simulation and AI/machine learning driven approaches, combined with rigorous testing at cell, module, and pack levels, AVL ensures that battery systems meet evolving safety regulations and customer expectations.

9:45 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing

10:30 Advancing Battery Safety: Research Innovations at the U.S. Department of Transportation
Erica Wiener, Physical Scientist, R&D & Technology PHH 63, PHMSA
Batteries present unique safety risks throughout their lifecycle—from production, transportation, and use, to end-of-life disposal/recycling. This talk highlights the Office of Hazardous Materials Safety's battery research portfolio at the U.S. Department of Transportation. Our battery-safety research covers safety throughout the lifecycle, investigating safer packaging, risks of new/emerging chemistries, battery-safety monitoring/detection, and end-of-life handling. Additionally, the team pursues applied research on innovative technologies that can enhance battery safety.

11:00 Research Strategy for Batteries
Joshua Lamb, PhD., Manager, Power Sources R&D, Sandia National Laboratories
This talk will detail the recent high-level objectives and capabilities of the battery safety and abuse testing program at Sandia National Laboratories. Sandia's recent efforts in large-scale and system testing will be detailed, as well as new efforts to understand the effectiveness of fire suppressants on battery fires and impacts to first responders. A brief overview of Sandia capabilities will also be provided.

11:30 Global Battery Fleet Management and End-of-Life
Marcel Stieber, Principal Interdisciplinary Systems Engineer, Operations Infrastructure Services, Amazon
Effective battery fleet management is essential for optimizing performance, safety, and lifespan in large global fleets of mobile devices and energy storage. This talk will explore strategies for monitoring battery health, managing end-of-life, and implementing reliable methods for ensuring safe battery operations across millions of devices at Amazon.

12:00 pm Increasing Success and Safety in Battery Testing
Nick DiCeglie, Account Executive, Sales, Associated Environmental Systems
Enhancing safety in battery testing processes is crucial to managing high-density testing in controlled, secure environments. This practice involves creating specialized scenarios that ensure safety measures are prioritized and optimized, helping to protect both equipment and personnel. In certain applications, larger batch testing in safely managed environments may be required. We will guide you through the necessary steps to ensure a safer approach to battery testing.

12:15 SafeCore: A Safety Layer that Addresses Thermal Runaway in Lithium-ion Batteries
Matthew Wang, Vice President, Tech Programs, Amionx
SafeCore is a safety layer that is coated on the current collector in a battery cell that is responsive to current, temperature and/or voltage thresholds being reached. When one or any combination of these threshold is reached, the material either: 1. Causes the conductive pathway to be destroyed, or :2. Creates a high impedance environment. In both cases, thermal runaway if prevented, and the energy from the cell is fully released gradually over time. SafeCore is applied using existing equipment in a battery factory eliminating the need or incremental capital investment or changes to manufacturing techniques.

12:30 Networking Luncheon

1:15 Dessert Break in the Exhibit Hall with Poster Viewing

BATTERY TRANSPORTATION AND REGULATIONS

1:45 Chairperson's Remarks
Erica Wiener, Physical Scientist, R&D & Technology PHH 63, PHMSA

1:50 The Transportation Battery Development Process and Its Interaction with Safety Regulations
Maurice H. Johnson, Product Manager, Batteries & Energy Storage Systems, UL LLC
The presentation will cover the typical battery development process from requirements definition to cell selection and battery-pack design and development and how there can be several key interactions with safety regulations. An overview of safety regulations for the United States will be shared along with an overview of the new FMVSS 305a rule and its new requirements.

2:20 When the Price Is Wrong: The Risks of Free Battery Power Banks
Hernan Sanchez Casalongue, PhD, Principal, Battery and Consumer Electronics, Exponent
With more battery-powered devices in use, power banks have become everyday essentials—and cheap or "free" ones are now common giveaways. However, lower costs often mean lower quality. This talk presents a case study on the safety risks of "free" power banks,

highlighting how reduced quality control can lead to hazards.

2:50 Impact of Aging on Battery Safety and Implications for Diagnostics
Yuliya Preger, PhD, Principal Member of Technical Staff, Energy Storage Technology & Systems, Sandia National Labs
This talk reviews all open literature on the thermal abuse response of aged lithium-ion cells to identify critical changes in their behavior relative to fresh cells. We will also share more recent data from a broad experimental study of aged cell safety across multiple chemistries and safety testing protocols.

3:20 Refreshment Break in the Exhibit Hall with Poster Viewing

PLENARY KEYNOTE

3:50 Shep Wolsky Battery Innovator of the Year Award Presentation and Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech



3:55 LFP Cells Are Boring—Why Should I Care?
Jeff Dahn, FRSC, PhD, Professor of Physics and Atmospheric Science & NSERC/Tesla Canada Industrial Research Chair, Dalhousie University
LFP Li-ion cells are now the most common cells in energy-storage products and EVs. They are inexpensive and since they are relatively safe, they can be made in large-Ah-capacity cells, reducing cost and complexity in battery modules and packs. I will explain how to make LFP cells exciting, including strategies to dramatically increase their energy density.



4:15 Delivering Advanced Battery Technologies for EV Range and Value
George Cintra, Director, Battery R&D, General Motors
General Motors is building an electrification powerhouse, having launched a dozen EVs into the market, ranging from the Equinox EV to the Cadillac Escalade IQ. General Motors is pioneering next-generation battery and manufacturing technologies, such as prismatic cells with LMR cathodes. Mr. Cintra will provide an update on GM's battery research & development activities and innovations to deliver longer range, lower costs, and faster-charging batteries for EV customers.



4:35 Today's EV Reality and the Path Forward
Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution
LG Energy Solution is the leading lithium-ion battery manufacturer, working with the top OEMs globally in transforming the automobile industry. The market for EVs is expanding rapidly, driven by both consumer demand and regulatory incentives. In North America, there are unprecedented levels of investment to support EVs, by both OEMs and battery manufacturers. This presentation will discuss market growth projections, announced expansion plans, and the challenges ahead.



4:55 Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth
Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.
Panasonic Energy has been at the forefront of battery technology development, driving the growth of BEVs and AI. To meet increasing market demand, we are expanding our production capacity in North America and strengthening strategic partnerships. These initiatives will contribute both to the realization of a sustainable society and to our business growth. This presentation will highlight the innovative activities within our battery business from a technological perspective.



5:15 New Science Frontiers in Battery Technologies
Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago
In this talk, I will discuss a few new perspectives for energy storage materials including new solvation architecture designs for liquid electrolytes and new superionic conductors in soft or hard materials. With recent advances in photon and electron characterization tools and computational methods, we can explore ionic mobility, charge transfer and ion matter interactions in electrochemical system in operando.

5:35 Reception in the Exhibit Hall with Poster Viewing

6:35 Close of Day

WEDNESDAY, MARCH 25

7:30 am Registration Open and Morning Coffee

EVALUATING BATTERY SAFETY

7:55 Chairperson's Remarks
Donal Finegan, PhD, Staff Scientist Batteries, Electrified Transport, National Renewable Energy Laboratory

8:00 Advances in The Application of Microcalorimetry to Probe Next Generation Batteries Waters | TA Instruments
Jeremy May, Senior Battery Applications Specialist, Waters - TA Instruments
In-operando isothermal microcalorimetry is a powerful tool for understanding the dynamic chemistry that occurs in a lithium-ion battery. Major applications include fundamental research, thermal and electrochemical stress testing, and commercial cell qualification. Until recently, this technique was unavailable to next generation chemistries, such as lithium-metal and all solid state, due to their requirement of mechanical stack pressure to achieve representative behavior. Advancing these next generation technologies will require a deep understanding of how mechanical pressure impacts the fundamental chemistry and failure mechanisms. This talk will highlight recent advancements in pouch cell calorimetry ampoule design and discuss the application of thermal analysis and operando techniques to advance battery research.

8:30 Performance and Safety Studies of Sodium-ion Commercial and Custom Cells
Judy Jeevarajan, PhD, Vice President and Executive Director, Electrochemical Safety Research Institute, UL Research Institutes
Sodium-ion cells and batteries are gaining traction in the commercial market. ESRI's studies focus on characterizing the performance and safety of cells and batteries of this chemistry. Sodium-ion cells are currently being manufactured with various cathode and anode materials as well as electrolyte compositions and it is imperative to understand how these affect both performance and safety trends of this chemistry.

9:00 Evaluating the Safety of Next-Generation Batteries
Donal Finegan, PhD, Staff Scientist Batteries, Electrified Transport, National Renewable Energy Laboratory

This talk will focus on providing a quantitative understanding of the diverging behaviors of up-and-coming cell technologies including their abuse tolerance and hazards during thermal runaway. The talk will also cover what is still unknown about the behaviors of next-generation cells, and how modeling and experimentation can be combined to accelerate our insight into their behaviors and therefore help us foresee upcoming opportunities and challenges for safe battery-pack designs.

9:30 Closing the Loop: Digital Twin Approaches for Fault Detection, Aging, and Asset Reliability
Nikhil Biju, Staff Engineering, Battery Applications, Electrical Systems, Gamma Technologies Inc. GTI

Battery reliability, safety, and warranty costs remain critical challenges as electrification expands across industries. Conventional battery management systems (BMS) rely primarily on empirical models and threshold-based logic, often reacting only after performance degradation or failure. This talk will showcase how high-fidelity plant models can be used offline or in real-time to identify faults, predict battery aging, and support warranty prediction. It will highlight how digital twins transform battery management from reactive monitoring to proactive prediction.

9:45 Extreme Performance and Intrinsic Safety: Next-Generation High-Power Li-ion Battery Innovations for AI Data Centers, Robotics, and UAVs
Nan Hong Lester Yeh, R&D head, Advanced Battery Technologies, Molicel

As the global landscape shifts toward an era of explosive growth in computing power and automation, battery technology has emerged as the critical energy cornerstone supporting the stability of AI Data Centers and the agility of Robotics and UAVs. Molicel will delve into how electrochemical innovations and systems engineering address the three major challenges of high-power applications: instantaneous high-rate response, extreme safety, and long-term cycle life under dynamic loads.

10:15 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

11:05 The Influence of Separator Design on Polymer Current Collector Safety
Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC

A metallized polymer cathode current collector demonstrated consistent isolation of internal short circuits triggered by a slow, shallow (3mm) radial nail penetration in 5Ah, 21700 cells yielding > 265 Wh/kg. A remarkable consistency (16 no thermal runaways (TR) in 16 attempts) while penetrated at 100% SoC occurred.

11:35 International Code Council Report and Gap Analysis on Lithium-ion Batteries
Michael O'Brian, Managing Partner, Code Concepts Group; Fire Chief, Brighton Area Fire Department

The International Code Council ad-hoc committee was tasked with performing a gap analysis on the impact of lithium-ion batteries and associated codes and standards. Established by the Code Council Board of Directors, the committee identified four major areas. This presentation will review the findings, recommendations, and actions related to how lithium-ion batteries are manufactured, stored, and used in our built environment.

12:05 pm Electrical Insulation Considerations for Next Generation EV Battery Packs
Morgan Priolo, Advance Product Development Specialist, 3M
Brandon Bartling, Battery System Architect, 3M

As electric vehicle battery technologies advance toward higher voltages, greater volumetric utilization, and increasing performance requirements, ensuring robust electrical insulation under extreme conditions has become a critical design priority for OEMs. This presentation provides an updated view of safety regulations and recent thermal runaway observations for both LFP and NMC chemistries. We will outline key electrical insulation challenges in evolving battery pack architectures during thermal runaway events and discuss the resulting implications for electrical insulation performance requirements in next generation EV battery packs. Laboratory evaluation methods used to assess high temperature electrical insulation performance will also be presented.

12:35 Networking Luncheon *(Sponsorship Opportunity Available)*

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

1:50 Close of Conference Track

MONDAY, MARCH 23

7:00 am Registration Open and Morning Coffee

4:45 pm Close of Day

TUESDAY, MARCH 24

7:00 am Registration Open and Morning Coffee

8:05 Organizer's Remarks

R&D FOR AI BATTERY DEVELOPMENT

8:10 Chairperson's Remarks
Eli Leland, PhD, CTO and Co-Founder, Voltaiq

8:15 How Machine Learning Prediction Continues to Accelerate Battery Development
Venkat Viswanathan, Associate Professor, University of Michigan and Co-Founder, Aionics

We will discuss how new computational approaches enabled by high-performance computing and machine learning algorithms are accelerating the traditional materials design and commercialization process for battery materials.

8:45 AI in Battery Technology: From Laboratory Testing to Field Applications
Weihan Li, Junior Professor, RWTH Aachen University

By integrating physics-based models with machine learning, our research is advancing intelligent, data-driven strategies for battery testing and real-world field applications. This talk will offer a unique perspective on how AI and digitalization are shaping the future of energy storage systems, with an emphasis on reliability, performance, and sustainability.

9:15 Characterization and Design of Battery Electrodes with Generative AI
Isaac Squires, CEO, Polaron

The development of next-generation batteries is bottlenecked by slow, manual scientific workflows. While industrial manufacturing is highly automated, materials research remains expert-driven and iterative. This talk will explore how AI can shorten this loop—from automated microstructural characterization and multimodal reconstruction to data-driven design and optimization. Using real industrial case studies, we'll show how Polaron's platform accelerates the path to higher-performing battery materials.

9:45 Grand Opening Refreshment Break in the Exhibit Hall with Poster Viewing

AI FOR BESS

10:30 Battery Intelligence Approach for Large-Scale BESS
Wenjiao Huang, Principal Battery Research Data Scientist, Fluence

This presentation will explore the current state of battery intelligence in large-scale energy storage systems. As transmission-connection energy storage systems regularly top 1 GWh, grids worldwide depend more than ever on reliable performance. Battery intelligence is key: from controls that adapt to state-of-health, to dynamic degradation prediction, to multifaceted balance, and state-of-charge management, to mitigating cyber threats.

11:00 Presentation to be Announced

11:30 Using AI to Maximize BESS Performance and Longevity
Craig Mauel, Manager ESS Services, Saft

Saft is pleased to present the Intensium Sight (I-Sight) technology: a new, powerful hardware and software tool. I-Sight is an AI-powered cloud platform for energy storage system monitoring and optimization. I-Sight integrates with Saft's Battery Management System to deliver real-time analytics and predictive maintenance capability. With seamless integration, digital twin capabilities, and automated performance tracking, I-Sight enhances system availability, safeguards asset economics, and supports scalable, future-proof energy storage architectures.

12:00 pm Accelerating Electrical Interconnections with AI
John Glassmire, Vice President of Digital Enablement and Transformation, Hitachi Energy

Increasing electrification—data centers, e-mobility, and industrial—are straining traditional electric grid access approaches. Growing load and generation interconnection queues drive the need for AI-enabled business models and processes to deliver speed-to-power. From energy hubs that unlock BESS value with optimized multi-asset data techniques, to AI-enabled transmission planning accelerating interconnection queues, this talk will cut through the AI-buzz and provide grounded approaches to solve challenges on both sides of the utility meter.

12:30 Networking Luncheon

1:15 Dessert Break in the Exhibit Hall with Poster Viewing

ADVANCING AI FOR BATTERY APPLICATIONS

1:45 Chairperson's Remarks
Alejandro Franco, PhD, Professor, Université de Picardie Jules Verne

1:50 Battery AI: Hype vs. Reality, and Real-World Use Cases
Eli Leland, PhD, CTO and Co-Founder, Voltaiq

As an MIT study recently highlighted, the hype around AI has failed to materialize measurable returns, with a 95% failure rate. We'll review a range of the battery industry's ambitious claims and aspirations around AI applications, including proof-of-concepts that are failing to deliver. We'll then lay out the data building blocks needed to enable scalable AI. Finally we'll show real-world battery AI delivering measurable returns in production with customers.

2:20 How Rivian Is Using AI to Make EV Charging Smarter
Yash Gupta, Data Scientist, Rivian

Electric vehicles are pivotal for decarbonizing transportation. However, over 70% of EV owners charge immediately after reaching home, missing cheaper, cleaner electricity, even when plugged-in during optimal hours. This represents a significant opportunity for OEMs like Rivian to unlock substantial cost savings and emission reductions at scale. This presentation explores how Rivian leverages AI to transform EVs from grid liabilities into intelligent energy assets benefiting owners, utilities, and the environment.

3:20 Refreshment Break in the Exhibit Hall with Poster Viewing

PLENARY KEYNOTE

3:50 Shep Wolsky Battery Innovator of the Year Award Presentation and Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech



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Jeff Dahn, FRSC, PhD, Professor of Physics and Atmospheric Science & NSERC/Tesla Canada Industrial Research Chair, Dalhousie University
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George Cintra, Director, Battery R&D, General Motors
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Tim DeBastos, Managing Director, North American Battery Development, LG Energy Solution
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4:55 Panasonic Energy: Driving Battery Technology Innovation for Sustainable Growth
Masato Fujikawa, Director, Energy R&D Center, Panasonic Energy Co., Ltd.
Panasonic Energy has been at the forefront of battery technology development, driving the growth of BEVs and AI. To meet increasing market demand, we are expanding our production capacity in North America and strengthening strategic partnerships. These initiatives will contribute both to the realization of a sustainable society and to our business growth. This presentation will highlight the innovative activities within our battery business from a technological perspective.



5:15 New Science Frontiers in Battery Technologies
Shirley Meng, PhD, Director, Energy Storage Research Alliance (ESRA), Argonne National Laboratory; The Liew Family Professor, The University of Chicago
In this talk, I will discuss a few new perspectives for energy storage materials including new solvation architecture designs for liquid electrolytes and new superionic conductors in soft or hard materials. With recent advances in photon and electron characterization tools and computational methods, we can explore ionic mobility, charge transfer and ion matter interactions in electrochemical system in operando.

5:35 Reception in the Exhibit Hall with Poster Viewing

6:35 Close of Day

WEDNESDAY, MARCH 25

7:30 am Registration Open and Morning Coffee

AI FOR BATTERY MANUFACTURING APPLICATIONS

8:55 Chairperson's Remarks
Weihan Li, Junior Professor, RWTH Aachen University

9:00 EECOPower – A Rapid Battery Testing System for Detection of Defective Cells
Saeid Habibi, PhD, Founder & CEO, EECOMOBILITY; Professor of Mechanical Engineering, McMaster University
The automotive industry faces unprecedented recalls tied to lithium-ion batteries in electric and hybrid vehicles, driven by fires, power loss, and starting failures that damage automaker reputations. These incidents often stem from rare manufacturing defects and impurities in individual cells that are difficult to detect during production. EECOMOBILITY's rapid in-line battery test system, EECOPower, enables highly sensitive, fast detection of defective cells, with manufacturing test results presented.

9:30 Virtual and Mixed-Reality Platforms for AI-Enhanced Battery Manufacturing
Alejandro Franco, PhD, Professor, Université de Picardie Jules Verne
In this lecture, I will present our research on AI-driven virtual and mixed-reality platforms to enhance decision-making and training for battery manufacturing operators and students. Examples showcase a battery manufacturing metaverse, where geographically dispersed students collaboratively troubleshoot problems, and specific mixed-reality applications for real-time guidance. This work highlights how immersive AI technologies can optimize both operational efficiency and educational outcomes in the battery sector.

10:15 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

11:05 From Molecules to Market: Multiscale Machine Learning and Informatics for Solid-State Electrolyte Design, Integration, and Scale-Up
Amir Taqieddin, PhD, Principal Scientist, Solid Power
The demand for better batteries has outgrown trial and error. This talk shows how Solid Power integrates multiscale machine learning, informatics, and physics-guided surrogates to design efficient solid-state electrolytes, linking atomistic structure to process conditions and cell metrics. We demonstrate ultra-early predictions, intelligent design of experiments, and robust optimization pipelines that speed materials design, streamline cell integration, and improve manufacturing scale-up to deliver a faster, more effective path to market for solid-state electrolytes.

11:35 Scaling AI for Solid-State Battery Manufacturing: From Defect Detection to ML Pipelines
Xiaoyu Wen, Principal Member of Technical Staff, QuantumScape
Next-generation batteries require intelligent, adaptive manufacturing systems to scale ceramic-based architectures and meet demands for high energy density and safety. Innovative developers use AI to optimize processes, enabling high-throughput and predictive analytics. The session will detail how image-based deep learning models detect product defects in ceramic separators. These robust machine learning pipelines are scaled to optimize yields, ensure safety and reliability, and accelerate

defect-free solid-state battery manufacturing.

12:35 pm **Networking Luncheon** *(Sponsorship Opportunity Available)*

1:20 **Dessert Break in the Exhibit Hall with Poster Viewing** *(Sponsorship Opportunity Available)*

1:50 **Close of Conference Track**

WEDNESDAY, MARCH 25

12:35 pm Registration Open

12:35 Interactive Roundtables and Networking Luncheon
(Sponsorship Opportunity Available)

1:20 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

BATTERY SAFETY AND RELIABILITY

1:50 Chairperson's Remarks
Yuandan Li, PhD, Senior Reliability Engineer, Product Integrity Engineering, Google Inc.

1:55 A Unified Machine-Learning Framework for Predicting Energy Yield and Classifying Failure Modes in Battery Thermal Runaway
Simran Kumari, PhD, Senior Research Scientist, Materials Informatics, Nissan
A data-driven framework is introduced for predicting the energy yield and classifying the trigger mechanism of thermal runaway in lithium-ion batteries. The core of this approach is a 2D uniform data augmentation method that corrects for severe data imbalances across multiple feature dimensions simultaneously. A stacked ensemble regressor trained on this balanced data demonstrates high predictive accuracy across all failure modes, providing a valuable tool for designing safer battery systems.

2:25 NVPF Sodium-ion versus NMC and LFP Lithium-ion Batteries in Thermal Runaway: Vent Gas Composition and Thermal Analysis
Christiane Essl, Researcher, Battery Safety, VIRTUAL VEHICLE Research GmbH
In this study, cells with three different cell chemistries—Na3V2(PO4)2F3 (NVPF), LiNi0.6Mn0.2Co0.2O2 (NMC), and LiFePO4 (LFP)—are analyzed in exactly the same setup to compare the hazardous vent gases and their thermal behavior during thermal runaway. Additionally, the influence of different triggers on the failure behavior of NVPF cells is elucidated.

2:55 Redefining Next-Generation Battery V2.0: From Industrial Myth and Tech Paradox to a Producible High-Safety, High-Energy Lithium Battery Platform
Vincent Yang, CEO, ProLogium Technology Co., Ltd.

3:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

3:55 Shifting Left: Agile Battery-Reliability Validation for Fast-Paced Consumer-Electronics Product Development
Yuandan Li, PhD, Senior Reliability Engineer, Product Integrity Engineering, Google Inc.
The fast pace of consumer-electronics development often challenges the validations for lithium-ion batteries, which are long lead-time and critical components. To navigate this constraint, reliability validation needs to be agile. This talk details Google's "shift-left" strategies to expedite battery validation. We will share practical approaches covering three key phases: early mechanical-risk validation; module-system validation correlation; and longevity assessment for intended field life.

4:25 Mathematical Modeling of Thermal Runaway
Ahmed Said, PhD, Engineer, Battery Safety, Lucid Motors
This talk presents mathematical modeling approaches to understand and simulate thermal runaway in lithium-ion batteries, focusing on capturing the complex-heat and mass-transfer processes that drive this critical phenomenon.

4:55 Safety Evaluation of Emerging Solid-State and Sodium-ion Battery Chemistries
Nathan Johnson, PhD, Senior Member of Technical Staff, Sandia National Laboratories
This talk examines safety in sodium-ion and solid-state batteries using a multi-scale approach. By analyzing material behavior and interface interactions, we identify potential failure mechanisms and highlight insights that elucidate safety implications for emerging battery chemistries benchmarked against lithium-ion.

5:30 Volta Foundation Battery Social*
Join Volta Foundation for an Battery Social at International Battery Seminar & Exhibit in Orlando! Connect with fellow battery professionals, exchange ideas, build valuable relationships, and stay ahead in the rapidly evolving battery industry as the Volta Foundation Battery Social is the perfect place to engage with the brightest minds in the industry.
*separate registration required, please click here for details: https://learn.volta.foundation/ibse-2026

8:30 Close of Day

THURSDAY, MARCH 26

INTERACTIVE LEADERSHIP BREAKFAST

7:25 am 7:25 AM - Powering Impact: An Interactive Session on Technology, Market Strategy, and Execution in the Battery Economy



Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
The session will center on three practical dimensions: how to position technical concepts in terms of customer value and cost-performance; how to communicate with credibility to executives, investors, and commercial partners; and how project leadership translates vision into milestones that matter.

Panelists:
Marianne Meins, CTO & Executive Vice President, Emerging Technologies, Curtis Stout
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.
Celina Mikolajczak, Advisor to the Battery Industry
Lucy Li, Technical Program Manager, Cell, Peak Energy; Program Manager, Women in Batteries, Volta Foundation
Paige Johnson, Founder & CEO, Ten-Nine Technologies LLC
Mykela DeLuca, PhD, Program Dir, Battery Business Directory, Volta Foundation

8:00 Registration Open and Morning Coffee

BATTERY-PACK ENGINEERING

8:25 Chairperson's Remarks

Roman Yakobov, Battery Engineering Manager, Electrical Engineering, Plug Power Inc.

8:30 Built to Solve: Engineering the Tools for EV Battery Remanufacturing

EV Battery Solutions

Connor Taylor, Manager, Electrical Engineering, Cox Automotive

Sarah Hake, Manager, Product Operations , Cox Automotive

9:00 Battery Module/Pack Design around Safety

Roman Yakobov, Battery Engineering Manager, Electrical Engineering, Plug Power Inc.

This talk explores key challenges in battery-module design, focusing on thermal malmanagement with high-power cells in confined spaces—particularly in the material-handling sector. Drawing from real-world experience, it covers failure scenarios, design strategies, and novel thermal solutions using both emerging and commercial materials. Attendees will gain actionable insights into how engineering decisions impact thermal behavior across the battery development lifecycle.

9:00 Coffee Break in the Exhibit Hall

9:30 From Microstructure to Pack: A Comprehensive Approach to Battery Simulation

COMSOL

Niloofar Kamyab, Applications Manager, Electrochemistry, COMSOL Inc.

Designing high-performance, durable, and safe batteries requires a detailed understanding of battery technology and the underlying physical processes. Modeling and simulation software help designers look inside the battery in a way that is not possible using physical experiments. In this talk, we will cover the modeling capabilities offered with the COMSOL Multiphysics® software to simulate batteries across different scales, from the microscale to battery packs. We will also discuss the available functionality for modeling a wide range of battery chemistries, including next-generation systems such as solid-state, sodium-ion, and lithium–sulfur batteries, at varying levels of complexity. We'll cover the study of aging and degradation, thermal management, performing virtual characterization tests, and simulating battery behavior under real-world operating conditions.

10:00 Battery Booth Crawl with Bagels in the Exhibit Hall with Last Chance for Poster Viewing

10:45 Three Ways to Compute Lithium-ion Cell Impedance from Physics-Based Models

Gregory L. Plett, PhD, Professor, Electrical & Computer Engineering, University of Colorado, Colorado Springs

The impedance spectrum of a lithium-ion battery cell contains a rich amount of information regarding the cell's physical properties. It can be measured in a straightforward way using electrochemical-impedance spectroscopy (EIS) and the measurements can be regressed against a physics-based model to infer model parameter values. To do so, we must be able to simulate the model quickly and accurately: this talk addresses three approaches to doing so.

11:15 Advanced Control Strategies for Automotive Battery Applications

Scott Trimboli, PhD, Professor, Electrical & Computer Engineering, University of Colorado, Colorado Springs

Battery electric vehicles (BEVs) and hybrid electric vehicles (HEVs) require careful and reliable battery management for safe and efficient operation and energy utilization. A "dual-mode" variant of model predictive control (MPC) has recently shown it can deliver robust performance at low computational cost. This presentation explains this new control approach and shows how it may be employed to improve overall battery utilization in electric vehicles.

11:45 Physics-Based Modeling and PHM Integration for Battery Qualification and Prognostics

Ridgetop Group Inc.

Wyatt Pena, President & COO, Ridgetop Group Inc.

This work presents an integrated PHM framework that couples hardware-in-the-loop cycling with physics-based electrochemical modeling and prognostic analytics. The approach integrates electrolyte transport modeling, path-dependent aging prediction, and state-of-health (SOH) and remaining useful life (RUL) estimation. These capabilities enable quantitative model-to-test correlation, degradation mechanism validation, and predictive verification for advanced cell development and qualification.

12:15 pm Enjoy Lunch on Your Own

THERMAL MANAGEMENT

1:10 Chairperson's Remarks

William Walker, CTO, KULR Technology

1:15 Thermal Management Systems

William Walker, CTO, KULR Technology

KULR Technology Corporation, in collaboration with South 8 Technologies and NASA Johnson Space Center, is developing -60 °C lithium-ion batteries for deep-space and lunar missions under the Texas Space Commission's SEARF program. Using South 8's novel LiGas electrolyte in 18650-M35A and 21700-M52V cells, the project integrates the cells and KULR's kBMS into the KULR ONE Space (K1S) platform, culminating in an 8U CubeSat flight demonstration validating cryogenic, human-rated battery performance.

1:45 Advancing Automotive Battery-Pack Safety with Innovative Venting Units

Michael Harenbrock, PhD, Principal Expert, Engineering Electric Mobility, MANN+HUMMEL GmbH

Vents are crucial for battery pack safety, especially under thermal runaway conditions. As battery-cell chemistry and pack designs evolve, selecting appropriate venting units becomes increasingly important. The presentation provides an overview of regulatory and technological trends influencing vent design and introduces additional features such as gas sensors and hot particle filters.

2:15 Accelerating Battery Controls Development with Maccor, Cell Hardware-in-Loop (HIL) Testing

Victor Gin He Leong, Senior Battery Cell Engineer, Battery Cell Engineering, Lucid Motors Inc.

Mike Sandoval, Vice President Business Development, Maccor, Inc.

As battery controls become more dynamic, cell testing must move

beyond static protocols to adaptive, model-integrated validation. Cell hardware-in-the-loop (HIL) couples real cells with real-time battery and environmental models, widening scenario coverage while reducing physical tests and equipment. We see cell HIL as a cornerstone for digital-twin testing, real-time control co-development, and accelerated learning loops. This talk reviews how our collaboration with Maccor enables advanced control validation at scale.

2:45 **Presentation to be Announced**

3:15 **Transition to Closing Plenary**

CLOSING PLENARY PANEL DISCUSSION

3:30 **Navigating the Global Battery Growth in Harmony with Shifting US Policy, Demanding Energy Security, and Big-Data Requirements**






Moderator: Christina Lampe-Onnerud, PhD, Founder and CEO, Cadenza Innovation
In this plenary closing discussion, we are ending the conference with a thought-provoking and insightful panel of experts led by Christina Lampe-Onnerud to help us think through: where is the US battery market going in the aftermath of the Big Beautiful Bill and how is this different in Europe and Asia? How do we as an industry navigate these uncertain times?

Panelists:
Eric Darcy, PhD, former Battery Technical Discipline Lead, NASA-JSC; Private Consultant, Darcy Batt Consulting, LLC
John Warner, DM, Chief Customer Officer, American Battery Solutions
Michael Liu, Director, Research & Insights, Volta Foundation

4:30 **Close of Conference**

4TH ANNUAL

BATTERY

VENTURE, INNOVATION & PARTNERING

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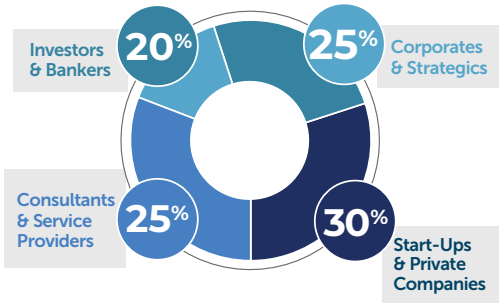
Katherine He
Investor, TDK Ventures



Josh Stiling
Investment Director, Anzu Partners LLC

Attendee Demographics

Connect with a Focused Audience





Features of the Event

- Co-located with the well-established *International Battery Seminar & Exhibit*
- Connect with multiple stakeholders across the entire battery value chain
- A unique opportunity for investors and innovators to understand each other's perspectives
- Panel sessions that are inspiring and highly relevant to investors, startups, and technologists
- Networking breaks and a collaborative atmosphere, facilitating discussions and potential partnerships
- Listen to successful entrepreneurs and venture firms to gain invaluable lessons for future innovators

Preliminary Agenda

Raising the Capital to Commercialize Technology—Fund Deep Tech to Scale
PANEL MODERATOR:
James Frith, Principal, Volta Energy Technologies
PANELISTS:
Jeff Johnson, General Partner, B Capital
Scott Walbrun, Principal, BMW i Ventures
Sidd Bhat, Executive Director, IFM Investors
Amanda Hall, CEO, Summit Nanotech

PANEL DISCUSSION: New Markets for Battery—Needs and Gaps, Let's Think Differently
PANEL MODERATOR:
Kyle Teamey, Managing Partner, Planetary Health, RA Capital
PANELISTS:
Paul Lichty, Co-Founder & CEO, Forge Nano
Curtis Collar, CEO, Nanotech Energy

PANEL DISCUSSION: What is the Future Battery Strategy for the West in the Next Five Years? —Domestic Supply Chain & Beyond
PANEL MODERATOR:
Ken Hoffman, Founder & CEO, Traubenbach
PANELISTS:
Annie Liu, Chief Commercial & Strategy Officer, Mangrove Lithium
David Klanecky, President & CEO, Cirba Solutions
Spencer Huh, CEO, Neo Battery Materials Ltd.

PANEL DISCUSSION: Where Innovation Still Matters: Charting the Future of Western Battery Leadership
PANEL MODERATOR:
Josh Stiling, Investment Director, Anzu Partners
PANELISTS:
Robert L. Galyen, Owner, Galyen Energy, LLC
Celina Mikolajczak, Advisor to the Battery Industry

PANEL DISCUSSION: Manufacturing Scale-Up—Where Startups can Go Big and Win
PANEL MODERATOR:
Eric Rosenblum, Managing Partner, Foothill Ventures
PANELISTS:
Daniel A. Steingart, PhD, Stanley Thompson Professor, Chemical Metallurgy & Chair, Earth & Environmental Engineering, Columbia University
Yan Wang, Professor, WPI, Co-Founder, Ascend Elements and Co-Founder, AM Batteries
Sungkwon Kang, PhD, Director, LG Technology Ventures

PANEL DISCUSSION: Bridging the Gap between GPUs and the Grid - Powering AI Data Centers with Next-Gen Batteries
PANEL MODERATOR:
Katherine He, Investor, TDK Ventures Inc.
PANELISTS:
Cameron Dales, Co-Founder, Peak Energy
Chetan Krishna, Principal and Head of Research and Diligence, Third Derivative
Dan Blondal, Founder & CEO, Nano One Materials

PANEL DISCUSSION: Material Informatics and AI in Battery Discovery: Is the Hype Real Yet? —A Road Map
PANEL MODERATOR:
Anil Achyuta, Partner, Energy Impact Partners
PANELISTS:
Rajesh Swaminathan, Partner, Khosla Ventures
Vivaswath Kumar, CEO, Mitra Chem
Qichao Hu, CEO, SES AI
Preparing for Diligence: Tips and Lessons Learned
Bill Grigos, Patent Attorney, Medler Ferro Woodhouse & Mills

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2025 Sample Attendee List

3M Global Application Specialist, Automotive & Aerospace Solutions	amazon Sr Interdisciplinary Systems Engineer, Operations Technology Infrastructure	Dir Battery Technology	BMW Sr Battery Technology Engineer, Research & New Technologies & Innovations	Chevron GM Emerging Business, Chevron New Energies	DAIMLER TRUCK North America Program Mgr Battery & H2 Fuel Cell, Tech Qualification	DOW Assoc Research Scientist, Engineered Materials Corning Inc, Battery Technology Mgr, Environmental Technologies	DURACELL VP Front End Innovation, R&D	ExxonMobil Sr Market Dev Advisor, Carbon Material Venture	Ferrari Battery Cell Responsible, R&D
Ford Battery Research Engineer, Energy Storage Research	GM Dir of Battery R&D	Google Ford Motor Co, Battery Research Engineer, Energy Storage Research	HYUNDAI Sr Mgr, EV Battery Systems R&D	intel Sr Staff Engineer, Battery	GARMIN Staff Engineer, Electrification	JOHN DEERE Henkel Corp, VP Automotive Electronics & eMobility NAMEX	LG Managing Dir, NA Battery Dev	LUCID Sr Battery Cell EngineerProduct Planning Mgr, Product Electrification Planning & Strategy	Medtronic Principal R&D Engineer, Li ion Battery & Li Metal Battery R&D
Meta Safety Engineer	Microsoft Dir Battery Dev, Battery Technologies	Milwaukee Principal Battery Cell Engineer, Power Tools Technology	Motorola Dir Global Semiconductor & Battery Procurement, Supply Chain Organization	NREL Sr Mechanical Engineer, Vehicle Technology Integration	NISSAN Mgr, Battery R&D	Panasonic Chief Engineer, Energy R&D Center	PORSCHE Team Lead, Predev HV Cell Batteries	SAMSUNG Dir R&D	SHERWIN WILLIAMS Global Market Mgr & Energy & EV Battery, General Industrial
SIEMENS Engagement Mgr Battery Industry, Digital Industries Software	SONY Member, Power Mgmt Technology DevNanoscience Ctr	SPACEX , Sr Supplier Dev Engineer, Starlink Production , Sr Supplier Dev Engineer, Starlink Production	Stanley Black & Decker Battery Cell Dev Engineer, Power Tools Grp Panasonic Corp Energy R&D Ctr, Dir	TESLA Sr Dir	Texas Instruments Head of Algorithm Dev, Battery Power Systems	TOYOTA Sr Engineer Process Mgmt Operations, Battery Cell Mfg Engineering Saab AB, System	—Engineering— Saab AB, System Environmental	Volkswagen Compliance Specialist	







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43RD ANNUAL

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March 23-26, 2026

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Tutorials MONDAY

TUT1: Cathode Active Materials: The Strategic Core of Performance, Cost and Sustainability	TUT7: Improving the Energy Density of Batteries with Silicon-Based Anodes
TUT2: In-Depth Analysis of the Chinese xEV Battery Industry	TUT8: Li-ion Cell Design and Manufacturing
TUT3: Economics of Battery Material Development & Manufacturing	TUT9: Predictive Analytics and AI in Inventory Optimization, Demand Planning and Forecasting
TUT4: Virtual Analysis of Cell Aging and Cell Behaviors for the Selection and Development of Long-Life Cells	TUT10: Latest Regulatory and Legislative Developments on the Safe Transport, Storage, Collection and Recycling of Lithium Batteries
TUT5: Critical Minerals and Battery Supply Chain: Challenges, Geopolitics and Sustainable Solutions	TUT11: Solid-State Batteries
TUT6: Understanding the Future of Battery Cell Cost & Assessing the Economic Feasibility of Emerging Technologies	TUT12: Technology Innovation in the Chinese Battery Industry

Main Seminar Conferences

TUESDAY-WEDNESDAY	WEDNESDAY-THURSDAY
C1A: **Next-Generation Battery Research**	C1B: **Lithium-ion Battery Development & Commercialization**
C2A: **High-Performance Battery Manufacturing**	C2B: **Battery Recycling**
C3A: **Global Supply Chain for Battery Raw Materials**	C5B: **Global Battery Manufacturing Production**
C4A: **Advances in Automotive Battery Applications**	C3B: **Battery Power for Consumer Electronics**
C5A: **Battery Safety**	C4B: **Large-Scale Energy Storage**
C6A: **AI for Engery Storage**	C6B: **Battery Engineering**
	C7B: **Battery Technologies for Military & Aerospace Applications**

VP7A: **Battery Venture, Innovation & Partnering IN PERSON ONLY**

How to Register: **InternationalBatterySeminar.com**

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