The Future Will Be Driven by Vehicle Electrification

16th INTERNATIONAL

aabc europe

advanced automotive battery conference

18 - 21 MAY 2026

MAINZ, GERMANY

2026 CONFERENCE PROGRAMS

PRE-CONFERENCE TUTORIALS:
MONDAY 18 MAY

LARGE-SCALE SYMPOSIUM:
MONDAY 18 MAY

Join a global audience

of battery technologists from leading automotive OEMs and their key suppliers for a must-attend 4 days exploring development trends and breakthrough technologies.

TUESDAY & WEDNESDAY | 19-20 MAY

- CHEMISTRY - PART 1
- HEAVY DUTY
- RECYCLING
- ENGINEERING
- MANUFACTURING
- xEV BATTERY APPLICATIONS

WEDNESDAY & THURSDAY | 20-21 MAY

- CHEMISTRY - PART 2
- xEV BATTERY TECHNOLOGY
- RAW MATERIALS
- AI FOR ENERGY STORAGE
- MANUFACTURING PRODUCTION

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TOP REASONS TO ATTEND

» Learn first-hand about the technical and business directions from major automakers currently active in the European market

» Hear key global market outlook data on the forecasted consumption trends for China, Japan, Korea, Europe, and the United States

» Meet leading energy storage technologists from all automakers active in the European market

» Discuss fast-charging solutions coming to the market to support electrification goals for the coming decade

» Get an in-depth international overview of the industry including current trends, competitive analysis, and examination of the key players and their strategies for market growth

» Discover the latest technological advancements in high specific energy batteries with long cycle life and low cost

» See how key players are overcoming challenges to commercialisation for the specialty EV battery market while assessing consumer demand and competing technologies

» Understand the many facets of the international battery raw materials market, including advances in mining and processing with an emphasis on sourcing and cost control strategies by manufacturers

» Network at the largest international gathering of advanced energy storage technology developers and integrators in Europe

FEEDBACK FROM PREVIOUS EVENTS

"People show what will be the future, but it's also dealing with practical questions, it's not just a dream."

- Muriel Desaeger, PhD, Toyota Motor Europe

"We see experts from the car companies, the battery suppliers, and the system integrators. The presentations are of excellent quality."

- Eckhard Karden, PhD, formerly Ford Research Center

"The annual visit of AABC is a must for any developer or scientist working on battery technologies for automotive applications."

- Arnold Lamm, PhD, e-Technologies GmbH, formerly Daimler AG

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18 MAY 2026 | MAINZ, GERMANY

TUTORIALS*

*All Access or separate registration required

MONDAY 18 MAY 10:00-11:30

TUT1: Battery Safety and Abuse Tolerance
Instructor:
Shmuel De-Leon, CEO, Shmuel De-Leon Energy Ltd.

TUT2: Cathode Active Materials: The Strategic Core of Performance, Cost, and Sustainability
Instructor:
Tom Van Bellinghen, Founder, Lithink

TUT3: Technology Innovation in The Chinese Battery Industry
Instructor:
Mark Lu, PhD, Senior Industrial Analyst, Industrial Economics & Knowledge Center, Industrial Technology Research Institute

MONDAY 18 MAY 13:00-14:30

TUT4: Solid-State Batteries
Instructor:
Felix H. Richter, PhD, Junior Research Group Leader, Center for Materials Research, Justus-Liebig-University Gießen

TUT5: Battery Recycling: Market and Methods
Instructor:
Steve Sloop, PhD, President, OnTo Technology LLC

TUT6: Improving the Energy Density of Batteries with Silicon-Based Anodes
Instructor:
Dee Strand, PhD, CSO, R&D, Wildcat Discovery Technologies, Inc.

TUT7: The Rechargeable Battery Market: Value Chain and Main Trends
Instructors:
Christophe Pillot, PhD, Director, Avicenne Energy
Fabrice Renard, Senior Advisor, Avicenne Energy

MONDAY 18 MAY 15:00-16:30

TUT8: Cell and Pack Design for xEVs
Instructor:
Kevin Konecky, Vice President, Battery Systems Engineering, Spiro

TUT9: Global EV Market Demand: In-Depth Insights, Future Projections and the Impact on the Battery Supply Chain
Instructors:
Nicolas Meilhan, Senior Advisor, EV-volumes
Rob Price, Senior Global Key Account Manager, EV Volumes

TUT10: AI for Battery Applications
Instructor:
Tal Sholklapper, PhD, CEO & Co-Founder, Voltaiq

TUT11: Critical Minerals and Battery Supply Chains: Challenges, Geopolitics and Sustainable Solutions
Instructor:
Kimberly Berman, Independent Consultant, Pivot Research

FEEDBACK FROM PREVIOUS EVENTS

"Must-attend conference if you are working on batteries for automotive electrification. It tells us always the latest and hottest topics, worldwide trends, and is a good networking opportunity."

- Masato Origuchi, Automotive Cells Company, formerly Renault

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LARGE-SCALE BATTERY ENERGY STORAGE SYSTEMS

Innovations in Safe, Efficient, and Scalable Energy Storage

MONDAY 18 MAY

7:00 Registration and Morning Coffee

7:50 Organiser's Remarks
Sarah Stockwell, PhD, Conference Producer, Cambridge EnerTech

7:55 Chairperson's Remarks
Matthias Vetter, PhD, Energy Storage Chief Expert, Huawei Nuremberg Research Center

BESS BATTERY INTELLIGENCE

8:00 Spiking Neural Networks: A Game-Changer for Battery Reliability and Performance
Slimane Arbaoui, PhD Student, Université de Strasbourg
Tedjani Mesbahi, PhD, Full Professor, ICube-CNRS Laboratory, INSA Strasbourg, France
The growth of electric mobility and stationary energy storage increases demand for accurate, real-time battery State-of-X (SOX) estimation, including SOC, SOH, and RUL. These metrics are vital for safety, usable energy, and cost reduction, especially for widely adopted LFP batteries. While conventional ML models are accurate, their complexity limits BMS deployment. This work explores lightweight spiking neural networks, enabling low-power, low-latency SOX estimation for EV and grid-scale energy storage.

8:30 Immediate Remaining Capacity Estimation of Heterogeneous Second-Life Battery Energy Storage System via Deep Generative Transfer Learning
Shengyu Tao, Ph.D., Researcher, Energy Systems and Optimal Controls, Department of Electrical Engineering, Chalmers University of Technology
Assessing the remaining capacity of retired lithium-ion batteries is essential for unlocking their second-life potential. However, this process is hindered by data scarcity and heterogeneity. This work proposed a deep generative transfer learning that can synthesise realistic pulse voltage response data and align heterogeneous domains without historical records. The approach achieves high accuracy with minimal field data, outperforming existing methods. It offers a scalable pathway toward sustainable battery repurposing.

NON-LFP CHEMISTRIES

9:00 Designing Long-Life, Grid-Scale Sodium-ion Cells: Translating NFPP/HC Chemistry into Manufacturable BESS Platforms
Brandon Kelly, PhD, Chief Scientist, Peak Energy
This presentation outlines Peak Energy's cell-level development approach for NFPP/HC sodium-ion batteries for grid-scale energy storage. Performance data from large-format cells are used to highlight cycling behaviour, calendar-life considerations, and safety-relevant characteristics. The discussion focuses on how cell-level tradeoffs and operating strategies support scalable, long-life sodium-ion solutions for bankable battery energy storage systems.

9:30 Networking Coffee Break

10:00 European Cell Manufacturing for BESS: NMC Production and Long-Term Plan for Li-S
Ratnakumar Bugga, PhD, Senior Fellow, Lyten
Lyten has been developing lithium-sulfur (Li-S) battery technology since 2018, and, following the recent acquisition of the former Northvolt assets, has expanded into giga-scale cell production.

LARGE-SCALE ENERGY-STORAGE DEPLOYMENT



10:30 Battery-Enabled Flexibility and Stability for Power Grids with Large Shares of Renewables
Matthias Vetter, PhD, Energy Storage Chief Expert, Huawei Nuremberg Research Center
Renewable shares in Europe's grids keep rising; Germany has reached ~60%, with most generation from volatile wind and solar. Further growth needs large-scale flexible assets integrated into the grid, and batteries are suitable for nearly all such tasks. The transition also shifts operation toward safe grids dominated by power-electronic assets, where storage with grid-forming inverters is key. This presentation overviews market developments and technology solutions for flexibility and grid stability.

11:00 Considerations in Grid-Scale Energy Storage Deployment
Andrew Pimm, PhD, Head of Modelling & Simulations, Envision Energy
BESS deployment is surging globally, and as ancillary services markets saturate, the industry is shifting towards longer-duration systems. This transition raises new challenges in areas such as acoustic performance and degradation modelling, and demands warranty frameworks that keep pace. This talk draws on Envision's work in noise mitigation and performance warranty design to explore how the BESS industry is developing the tools and commercial structures needed for a maturing market.

11:30 Session Break - Lunch on Your Own

BESS SAFETY

12:55 Chairperson's Remarks
Sam Jaffe, Vice President, Business Development and Product, Mana Battery

13:00 Enhancing Battery Safety in BESS Applications: Direction-Injection Fire Suppression in an Integrated Mitigation Strategy
Mark Ellis, Senior Vice President, Head of Battery (BESS) Technology, Volvo Energy
Thermal runaway is a defining safety concern for BESS applications. Reliably interrupting the exothermic chain reaction to mitigate low-frequency, high-severity events is a critical objective. Minimising the likelihood of costly battery damage or lost availability from unintentional deployment is a key related performance goal. This work describes the successful design and validation of a direct-injection fire-suppression system using a novel agent that achieves both safety and performance targets.

13:30 How UL9540A Large-Scale Fire Test Influences Large BESS Safety Worldwide
Thomas Fedderau, Senior Product Manager, EIA, UL International Germany
UL9540A is established as the leading fire-safety standard in the US, influencing the upcoming harmonized EU standards under Article 12 of the EU Battery Regulation. Revision 5 has now been published as a draft and is expected to take effect in 2026. The new revision introduces major changes, particularly in the Large Scale Fire Test. Additionally, a specialized variant for residential applications is available under UL9540B.

14:30 Networking Coffee Break

BESS MARKETS AND APPLICATIONS

15:00 Energy Storage In-field Lifetime for 25 years? How BMS Can Support Such Claims

Wenzel Prochazka, PhD, Senior Product Manager, Electrification Systems, NXP Semiconductors Austria

NXP's BESS 1500V reference design supports maximizing battery longevity by combining multiple technologies not only as begin-of-life datasheet specifications. High precision voltage measurements qualified for >20 years, backed with a safety certified system layout, Cybersecurity and combined with cost effective end-of-life passive or active balancing capability maximizing State of Health.

15:30 ESS North America Overview and Forecast

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

This presentation will explore the size and growth of the US stationary energy storage market. A special focus will be on datacenter battery usage and deployment.

16:00 AI, Data Centres, and the Energy Challenge: The Role of BESS in Powering the Future

Shivangee Chauhan, Research Analyst, Benchmark Mineral Intelligence

As AI continues to advance and integrate into everyday applications, energy consumption is expected to surge. This talk will explore how Battery Energy Storage Systems (BESS) can support the rapid expansion of data centres, ensuring reliability, efficiency, and sustainability. We will discuss the benefits of behind-the-meter (BTM) storage, examining how onsite battery solutions help data centres manage peak loads, reduce costs, and enhance resiliency.

16:30 Close of Symposium

LITHIUM BATTERY CHEMISTRY — PART 1

Advancements in Lithium-ion and Beyond

MONDAY 18 MAY

7:00 Registration and Morning Coffee

TUESDAY 19 MAY

7:30 Registration and Morning Coffee

MARKET OVERVIEW

8:30 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

8:35 Chairperson's Remarks
Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster

8:40 Evolving Prospects for Battery Chemicals: Correcting Forecasts in a Changing European Landscape
Hauke Simon, PhD, Director Strategy, EY Parthenon
Just a few years ago, Europe's battery ambitions seemed limitless. Capacity projections surged ahead of reality, in some cases projecting volumes beyond realistic European demand. Today, the picture looks different. Demand growth is recalibrating, cost pressure is intensifying, and scaling-up has proven more complex than anticipated. This talk cuts through outdated forecasts and examines what the new European reality means for strategy, investment decisions, and competitive positioning in battery chemicals.

9:10 Advanced & Beyond Lithium-ion Technologies for Mobility Applications
Patrick Bernard, PhD, Director, Research, SAFT
Saft is developing new Li-ion products reflecting current market needs in mobility applications: LTO cell for heavy cycling, phosphate-based technologies LFP, LMFP for safety critical. Next generation materials will allow the development of future generations of Li-ion batteries: Lithium vanadium fluoro-phosphates cathodes, Si rich anodes, and niobium oxide-based anodes. Beyond advanced Li-ion batteries, Saft develops in parallel solid state technologies following polymers and sulfides pathways.

9:40 Challenges in Future Cell Chemistry for Sports-Car Application
Nicolò Minafra, PhD, Cell Design and Process Specialist, Ferrari

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

IMPROVED CELL CHEMISTRY

10:55 Presentation to be Announced

11:25 High-Capacity Negative Electrodes
Egbert Figgemeier, PhD, Senior Manager, IEK 12, Helmholtz Institute Muenster
Replacing carbon-based materials with silicon in negative electrodes for lithium-ion-batteries promises a boost of capacity and is therefore a major R&D topic. Nevertheless, widespread commercial automotive applications with silicon-modified anodes are still at the horizon, but not a commercial fact. Issues regarding volume variations, particle disintegration, and electrolyte consumption are hurdles still to overcome. The presentation will summarise latest efforts and prospects with regard to commercialisation of silicon-based anodes.

11:55 Design and Application of Fast Charging Strategies for Lithium-ion Batteries STROPOWER
Steven Liu, Sales Director, Stropower
The popularization of electric vehicles is an inevitable trend in the future. How to achieve rapid charging has become the primary concern for users. How to shorten the charging time to a level comparable to refueling is the ultimate challenge faced by the entire industry, and "fast charging" is the core engine of this revolution. So, how far are we from "freedom of charging"? China Stropower Company has accumulated rich testing experience over the past 10 years. This article will share with you the design concept and multiple case applications of fast charging tests.

12:25 Networking Luncheon *(Sponsorship Opportunity Available)*

13:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

SODIUM ION

13:50 Chairperson's Remarks
Egbert Figgemeier, PhD, Senior Manager, IEK 12, Helmholtz Institute Muenster

13:55 Sodium-ion Batteries in Automotive Applications: A New Technology for Hybridisation
Asmae El Mejdoubi, PhD, Chief Product Officer, TIAMAT
This presentation will highlight the performance characteristics of NVPF-HC sodium-ion cells, developed specifically to meet the demands of the high power battery market. These cells demonstrate competitive energy density, excellent power capability, and robust cycling behaviour, making them ideal for hybrid automotive applications. This comprehensive overview aims to position sodium-ion as a credible and strategic technology in the evolving landscape of automotive electrification.

14:25 Design of Sustainable and Recyclable Electrolytes for Lithium-ion and Sodium-ion Batteries
Andrea Balducci, PhD, Professor Applied Electrochemistry, Center for Energy & Environmental Chemistry, Friedrich Schiller University Jena
In this work we report about the design of novel bio-derived and low-fluorinated electrolytes, based on the solvents Tetraethoxyglyoxal (TEG) and ?-valelolactone (GVL) displaying good transport properties, high safety, high sustainability, and a low price. In addition, we will present a water-based recycling process that allows the recovery and reuse of these electrolytes.

14:55 Binder Design Strategy for Next-Generation LIBs-Interfacial Stabilization in Aqueous LFP Cathodes and High-Si Anodes ENEOS Materials Corporation
Stella Deheryan, Application Manager, ENEOS Materials Europe Belgium
ENEOS Materials Corporation is a manufacturer of binder materials for lithium-ion battery and has a large variety of binder products. This presentation highlights a binder design strategy for next-generation batteries, enabling robust interfacial stabilization in aqueous LFP cathodes and high-Si anodes. The advanced binders deliver strong adhesion, high flexibility, and suppression of side reactions, resulting in improved electrode integrity and cycle performance, and reduced gas generation.

15:25 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

LITHIUM SULFUR

15:55 Lithium-Sulfur Batteries: Progress in Cycle Life, Rate Capability, and Specific Energy through Solid-Solid Conversion Chemistry
Holger Althues, PhD, Head, Chemical Surface Technology Group, Fraunhofer Institute for Material & Beam Technology
Sulfidic solid-state electrolytes enable the efficient solid-solid conversion of sulfur and suppress any polysulfide diffusion in solid-state Li-S cells. Further, high-energy Li-S cells were built and evaluated utilising a semi-solid concept. Based on those results, the talk will cover recent progress in materials, processes, and cell design for solid-state Li-S batteries.

16:25 A Strategy for Building High-Cycle Life Lithium/Sulfur Batteries
Steven Visco, PhD, CEO & CTO, PolyPlus Battery
PolyPlus Battery Company has developed a unique Li-ion/sulfur battery technology based on the combination of inexpensive aqueous polysulfide positive electrodes with graphite or silicon negative electrodes. We have demonstrated that the waste product H2S can be converted to aqueous Li2S at very low cost and this lithiated

aqueous cathode can be used with conventional Li-ion anodes with the introduction of a ceramic membrane (LATP) to produce high-cycle life batteries.

CATHODES

16:55 Why Nickel Based Cathodes Will Continue to Dominate and Regain Market Share from LFP
Kenan Sahin, President & Founder, CAMX Power
As cost pressures intensified, LFP gained EV market share reaching about 40–50%, rest primarily NMC. Some predict LFP will dominate in the coming years. We expect NMC to regain market share: 1) Earlier NMC contained about 20% cobalt, a scarce and geopolitically sensitive metal. Today, 5% cobalt NMC is in production; 2) Nickel and cobalt in NMC can be recovered and recycled, not so with LFP; 3) NMC variant LMR has reached cost parity with LFP on a per-kWh basis with lower weight and volume; 4) Markets for drones, robotics, small watercraft and aircraft, and light-duty vehicles favor high energy density and low weight, key advantages of NMC; about 90% of LFP production is in China, creating supply-chain risk. LFP manufacturing elsewhere would require significant investment and time. These factors will be examined, including LMR versus LFP cost, as predictors of market share.

17:25 Networking Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

18:30 Close of Day

WEDNESDAY 20 MAY

8:00 Registration and Morning Coffee

SILICON ANODE

8:25 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

8:30 Chairperson's Remarks
Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster

8:35 Leveraging Domestic Supply Chains for 100% Silicon Anodes for Dual-Use Cell Architectures Achieving 1000Wh/L
Rob Anstey, GDI Inc.
GDI uses existing US/EU mineral feedstocks, components, and precursor supply chains to manufacture its 100% silicon anodes. This will ensure that the Li-ion cells would achieve US NDAA FEOC compliance and NATO defense needs. 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 by managing the expansion and contraction of the silicon anode layer to remove the need for external pressure and novel cell designs . Thereby preventing foil deformation, delamination, or requiring external steel compression plates. Manufacturing is more streamlined as well, by removing all wet coating, mixing, binders, and powders. These cell architectures are also capable of very high C-rates both charge and discharge as a result of optimization and the very th*in silico*n layer, that can store >3,000mAh/g at >6mAh/cm2 areal capacity.

9:05 Ultra-High-Power Round Li-ion Cell Design for High-Performance Applications
Verena Drews, PhD, Head of Product Development & Engineering, V4SMART GmbH & Co. KG
Conventional round lithium-ion cells suffer from high temperature increase due to high internal resistance and, therefore, cannot provide the actual available performance. Hence, V4SMART develops and produces lithium-ion cells in Germany with a new mechanical cell design in combination with unique electrode and electrolyte recipes to enable new high-power applications.

9:35 Tailoring of Layered Electrode Materials by Doping and Co-Intercalation for Na-ion Batteries
Philipp Adelhelm, PhD, Professor, Institute of Chemistry, Humboldt-University Berlin

SOLID STATE AND PERFORMANCE

10:05 Latest Technical Advancements and Applications in Li-Metal-Polymer Based Solid-State Batteries
Sofia Perticarari, Electrochemistry Innovations Manager, Electrochemistry Innovations, Blue Solutions
Dominique Vinet, Project Manager - Battery Systems, BLUE SOLUTIONS
As a pioneer in lithium-metal batteries, Blue Solutions will present recent performances and validation results of its lithium metal polymer electrolyte-based cells. The contribution will cover electrochemical progress demonstrated through both laboratory testing and real-world conditions. Particular attention will be given to safety, including key automotive abuse tests results and no-propagation behavior, reflecting the approach taken by Blue Solutions to balance energy density and safety.

10:35 Silicon in Action: Silicon-Dominant Cells in Consumer Electronics and Drone Applications
Marco Spreafico, Chief Product Officer, Product, E magy
The demand for high energy density lithium-ion batteries in portable electronics and electric aviation has driven the development of silicon-dominant anode technology, which offers up to 10 times the theoretical capacity of conventional graphite. This presentation explores how silicon-dominant anodes enable significant improvements in volumetric and gravimetric energy density for weight-sensitive and space-limited applications. We will showcase performance data from ongoing development projects, including cycle life, rate capability, and energy density results from prototype cells designed for consumer electronics and drone applications. These results demonstrate the practical pathway toward commercial adoption of silicon-dominant anodes in next-generation lithium-ion batteries

11:05 Coffee Break in the Exhibit Hall with Poster Viewing *(sponsorship Opportunity Available)*

CATHODES

11:50 Enabling High-Performance Cathodes
Kristaps Janovics, Sales, Cabot Corp
Cabot's battery materials are critical components of lithium-ion batteries, enabling improved conductivity at the lowest loadings and reliability for next generation batteries. We will present advancements in Cabot's carbon materials and dispersions that enable enhanced performance across lithium ion and emerging battery chemistries. Additionally, we will highlight conductive dispersions, new developments for cathodes, including LITX conductive carbons for the growing battery energy storage system market.

12:20 Olivine Cathode Materials
Chirranjeevi Balaji Gopal, PhD, CTO & Co-Founder, Mitra Chem
LMFP-based cathode materials have been heralded as the next-generation of olivine-based cathode beyond LFP. Yet there are several key technological challenges to be solved ahead of their commercial deployment. This talk will discuss the design trade-offs needed to achieve high-capacity, high-stability LMFP cathode materials, methodologies to gain a mechanistic understanding of synthesis, and electrochemical performance in cells.

12:50 Innovative Materials for high performance separators
Francois Beaume, PhD, Technical Lead on Separator Coating Arkema
The separator plays a pivotal role in battery systems, directly influencing safety, performance, and manufacturing efficiency. Arkema will present its latest advancements in materials designed to enhance separator functionality : innovative adhesive solutions tailored for ceramic coating layers and breakthroughs in "sticky separator" technologies enabling efficient battery assembly at room temperature.

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

14:40 Close of Track

EV TECHNOLOGY FOR HEAVY-DUTY APPLICATIONS

Exploring Innovation in HEV Batteries and Infrastructure

MONDAY 18 MAY

7:00 Registration and Morning Coffee

TUESDAY 19 MAY

7:30 Registration and Morning Coffee

INDUSTRY TRENDS

8:30 Organiser's Remarks
Sarah Stockwell, PhD, Conference Producer, Cambridge EnerTech

8:35 Chairperson's Remarks
Tom Maull, Principal Product Manager—Innovation, Elysia Battery Intelligence

8:40 Battery Trends and Technology Choices for Medium- and Heavy-Duty Electrification
Ali Adim, Manager, Head of Battery Research, Mobility, S&P Global

This session explores the electrification of medium- and heavy-duty vehicles, highlighting battery chemistry forecasts, supply-chain trends, and technology choices for different applications using the latest MHCV battery forecast at S&P Global Mobility. It also examines how standardisation of modules and packs can reduce costs and accelerate adoption, providing delegates with a clear view of the key drivers shaping the commercial-vehicle battery landscape.

CHEMISTRY FOR HEAVY-DUTY APPLICATIONS

9:10 LMFP-NMC-Blend Chemistry for Commercial-Vehicle Application: Understanding of Lithiation and Delithiation Mechanisms
Dragoljub Vrankovic, PhD, Manager, Team Cell Technology, Daimler Truck

Battery-electric trucks can be the future backbone of the transport industry—combining maximum energy efficiency with good flexibility. Daimler Truck AG has proven with a number of projects and products on a global scale how capable these electric trucks can be. This presentation will investigate the special needs of batteries and cells for commercial vehicles with a special focus on the lithiation and delithiation mechanisms in LMFP-NMC blends.

9:40 Battery-Chemistry Considerations for Heavy-Duty Trucks
John Forgie, PhD, Electrochemistry Senior Manager, Accelera by Cummins

Heavy-duty truck BEV battery requirements continue to drive both technological advancements and refinement in the balance of performance parameters. Primary considerations include cost, cycle life, safety, fast charge capability, power, and energy densities. The choice of cathode and anode cell chemistry and cell cooling strategy is crucial in achieving performance optimized battery packs. At Accelera, we are investigating the different options to understand trade-offs and opportunities.

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

CHEMISTRY FOR HEAVY-DUTY APPLICATIONS *[CONT.]*

10:55 From Northvolt Roots to Scania Integration: Engineering a Next Generation Industrial Battery Platform
Chris Wiak, CTO, Scania Industrial Batteries

Scania Industrial Batteries transforms Northvolt's industrial legacy into a unified platform delivering rugged, modular, software enhanced energy systems for demanding off road applications. This session explores how the carve out accelerates electrification in demanding industrial segments, enhances product resilience, and enables end to end solutions, positioning Scania as a leader in heavy duty electrification.

APPLICATION-DRIVEN DEVELOPMENT

11:25 Implementation of Fast-Charge Batteries for Heavy-Duty Applications
Brian Barnett, PhD, CTO, Nyobolt

Batteries capable of fast charge hold great interest for electrification of multiple heavy-duty applications. These require many charge–discharge cycles, often high-discharge power, and limited trade-off of energy density. Fast charge supports higher uptime and work rates. Nyobolt is working with partners in robotics, mining, and construction to implement batteries capable of 5–10-minute full SOC charging, high cycle life, and acceptable thermal attributes. Technology and implementation efforts are described.

11:55 Engineering the Safest HeavyDuty Battery Packs: NextGen LFP & NMC Without Compromise IMPACT
Bartek Kras, Vice President, IMPACT Clean Power Technology

Heavy-duty vehicle electrification faces conflicting demands: low cost per kWh, higher energy density, 15-year lifetime, and uncompromised safety. Impact addresses this with two European-manufactured battery platforms: standardized ultra-low-cost LFP packs using next-generation blade cells with 4,000+ cycles, and high-energy semi-solid NMC packs exceeding 200 Wh/kg at pack level. Design trade-offs and competitiveness are discussed.

12:25 Networking Luncheon *(Sponsorship Opportunity Available)*

13:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

13:50 Chairperson's Remarks
John Forgie, PhD, Electrochemistry Senior Manager, Accelera by Cummins

13:55 BEV Systems for Underground Mining Applications
Tuulia Ahlman, MSc, BEV Business Development Manager, Sandvik

Battery-electric heavy-duty vehicles face very different challenges in a mining environment compared to on-road BEVs. This talk will give an overview of typical duty cycles that actual, deployed underground mining BEV fleets see, how a vehicle-battery-charger system is optimised for this type of application, and what are OEMs looking for in emerging battery technology to enable the next horizon of improvements.

14:25 Electrifying the (Almost) Impossible: Battery System Architecture Development to Unlock Zero-Emission Mining
Allan Paterson, PhD, Head, Battery Development, Fortescue ZERO

Electrifying ultra-heavy mining equipment was long considered beyond practical reach. This presentation explains how Fortescue leverages advances in battery chemistry, pack architecture, thermal, structural, and control design to redefine zero-emission heavy industry. Lessons from motorsport and high-performance electrification inform solutions for multi-megawatt duty cycles, harsh environments, and fleet-scale optimisation, highlighting the architectural innovations needed to shift from diesel dependence to fully electric mine sites across global mining operations worldwide.

14:55 Advancing Battery Development for Commercial Vehicles
Verena Loefqvist Klass, PhD, Unit Head Cell R&D Sweden, TRATON AB

Commercial vehicle batteries face demanding requirements, including high energy throughput, multi pack configurations, and robust thermal strategies. This presentation shares insights from recent Traton battery research; we highlight methods for deriving battery insights from field data, accelerating development through efficient test analysis and making use of hybrid models - illustrating a path towards durable, cost efficient battery systems for commercial vehicles."

15:25 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

15:55 From City Buses to Long-Range Trucks – Battery Development in Practice
Hanna Bryngelsson, PhD, Vice President Technology Strategy and Planning, Volvo Group
This presentation gives insight into Volvo Group's approach to developing battery-electric heavy-duty vehicles, based on 30+ years' experience in electrification of buses, trucks and construction equipment.The session describes how battery systems have evolved, and how learnings from different vehicle segments have influenced battery design, integration and system choices for heavy duty use. It will also highlight the key differences in battery requirements for passenger cars versus heavy duty vehicles.

16:25 Innovating Battery Systems for Emerging Heavy-Duty Needs
Sebastian Kratzer, Senior Manager, Architect Battery Pack & System, TRATON R&D GmbH
The TRATON Common Battery Platform enables a unified and scalable battery architecture across Scania and MAN for both trucks and buses. This presentation provides insights into the technical design foundations, cross brand modularization strategy, and industrialization approach behind the platform. It also covers key R&D aspects of the cell technology, pack design, BMS, and validation.

17:25 Networking Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

18:30 Close of Day

WEDNESDAY 20 MAY

8:00 Registration and Morning Coffee

APPLICATION-DRIVEN DEVELOPMENT *(CONT.)*

8:55 Organiser's Remarks
Sarah Stockwell, PhD, Conference Producer, Cambridge EnerTech

9:00 Chairperson's Remarks
Brian Barnett, PhD, CTO, Nyobolt

9:05 Synergy between Heavy Duty and Motorsports
Ben Ouzman-Taylor, Lead Project Engineer, Powertrain, RML Grp
Heavy duty necessarily involves high powers to move large masses. Therefore, great opportunity exists to transfer technology to/from motorsports applications. Here, an analysis of the common aspects and the unique challenges is presented.

9:35 Haul More Tonnes: Leveraging Software-Defined Vehicles and Ecosystems in Electrified Mining
Tom Maull, Principal Product Manager—Innovation, Elysia Battery Intelligence
Electrifying haulage pushes batteries to their limits: heat, dust, ultra-fast charging, and near-zero downtime. This talk shows how software-defined vehicles, paired with the Elysia embedded-and-cloud ecosystem, close the loop between onboard control and fleet insights for safe performance at-scale. Using targeted telematics, diagnostics/prognostics, and degradation-aware simulation, operators optimise assignments while protecting weaker packs and extracting more from stronger ones: improving range, charge time, lifetime, and total cost of ownership.

10:05 Optimizing Li-ion Battery Compression for Heavy-Duty Vehicle Applications
Inigo Gandiaga, Senior Researcher, Energy Storage and Management, Ikerlan
This presentation will provide an overview of our recent research on the role of mechanical compression in Li-ion battery performance and durability. It will focus on how controlled pressure influences degradation and reliability, highlighting key considerations for meeting the demanding operational and battery-pack integration requirements of heavy-duty applications.

11:05 Coffee Break in the Exhibit Hall with Poster Viewing
(sponsorship Opportunity Available)

11:50 From Concept to Reality: Development, Validation, and Manufacturing of LMFP Commercial-Vehicle-Specific Battery Cells
Philip Stephenson, PhD, General Manager, PACCAR Technical Center
Development and validation of commercial-vehicle battery cells requires detailed understanding of the expected system design and use cases for the cells, in the context of battery packs, pack systems, and full vehicles. This presentation will cover requirements, definition, and design for commercial-vehicle-specific battery cells, discuss challenges and approaches toward development and validation of cells, and provide a progress update on new LMFP-based cell testing.

12:20 Immersion Cooled Battery Technology: Improving Battery Dynamics and Efficiency
Felix Kaehlert, Vice President Operations, LION Smart
LION Smart develops and distributes intelligent battery solutions including modules, packs, BESS containers and immersion cooling. This technology enhances thermal management by submerging cells in dielectric fluid, improving efficiency and performance. Combined with high-speed BMS and EIS, it ensures safety & high power. Proven in sports cars and commercial vehicles, it has been validated for PHEVs and megawatt charging, demonstrating reliable performance.

12:50 Market Adoption & Thermal Propagation Management Systems of High-Voltage Batteries
Dirk Bolz, Ingenious e-Brain
The commercial vehicle segment is at a critical inflection point in high-voltage battery adoption, with chemistry selection, cell format choices, and thermal safety strategies increasingly defining competitive positioning. Ingenious e-Brain will walk through the current market landscape, key trends, dominant cell formats, and the strategic exceptions that reveal how supply chain legacies and partnerships shape OEM decisions, alongside a forward look at the evolving technology ecosystem, emerging business models, and new revenue streams. On the technology side, thermal propagation remains the central safety and engineering challenge, driving the most intense R&D activity across the industry today from materials and cell chemistry through to pack architecture and system-level containment as the sector works to close the gap between laboratory advances and large-scale commercial vehicle deployment.

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

14:40 Close of Track

MONDAY 18 MAY

7:00 Registration and Morning Coffee

TUESDAY 19 MAY

7:30 Registration and Morning Coffee

MARKET DEMAND AND SUPPLY-CHAIN DYNAMICS

8:30 Organiser's Remarks
Sarah Stockwell, PhD, Conference Producer, Cambridge EnerTech

8:35 Chairperson's Remarks
Steve Sloop, PhD, President, OnTo Technology LLC

8:40 Global Battery-Recycling Market Dynamics
Beatrice Browning, PhD, Battery Recycling Technology Lead, Benchmark Mineral Intelligence
In 2025, the global battery-recycling market faced a pivotal regulatory shift. Europe and India moved to restrict black mass exports, while China legalised its import. These changes reshaped prices, trade flows, regional technologies, and commercial structures. This presentation outlines Benchmark's view of today's recycling landscape and examines how regulation, investment, and supply chains are expected to influence market evolution through 2026, and the years beyond, globally and strategically.

9:10 Recycling in an Evolving Battery Landscape – a Ten-year Outlook
Milan Thakore, Principal Analyst - EV & Battery Supply Chain, Market & Strategy, Wood Mackenzie
With battery chemistries, formats and end uses in flux, we examine the impact on the battery recycling market. Raw materials pricing and policy will also be considered to provide an overview of the sector over the next ten years.

9:40 Future Scenarios for the LIB-Recycling Supply Chain
Aki Fujita, Principal, Arthur D. Little
This presentation will discuss a three-dimensional approach for battery-materials reclamation: deactivation, direct recycling, and design. The service of lithium-ion batteries and recycling of their materials is at the forefront of the reestablishment of the global supply chain of critical-materials refining and manufacturing. The industrialisation of this requires innovative processes and design to realise cost and safety demands in the next generation of lithium-ion manufacturing.

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

CIRCULAR ECONOMY

10:55 Driving Circularity: Updates on the EU Legal Framework for EV-Battery Recycling and Their Business Implications
Jan Tytgat, PhD, Director, Government Affairs EU, Umicore
This contribution provides the latest updates on EU rules shaping EV-battery recycling. Key topics include delegated acts on recycling efficiency and material recovery (including end-of-waste and export conditions), recycled content calculation, and carbon footprint reporting. We'll examine how these evolving requirements impact compliance and the business case for recycling, offering insights into obligations and opportunities within the EU's circular economy framework.

11:25 SAE J3327 Electric-Vehicle Battery Traceability Standard: Updates and Pilot-Program Progress
Sze-Sze Ng, Principal Technical Service Scientist, Dow
SAE International has created a standard for a battery traceability record to harmonise US and EU requirements for incentives and regulations. This standard has laid out an information collection framework, accompanied by a guide to supply-chain mapping and material calculations, and verification options. This presentation will address the items covered in the standard as well as the feedback that was received from the pilot program on the standard.

11:55 Building a Scalable Battery Strategy: Repair First Mindset
EV Battery Solutions
Antonia Stephenson, Director of Operations & Finance, Leadership, EV Battery Solutions
Russ Perry, Director of Engineering, EV Battery Solutions
This presentation explores how a repair-first mindset can transform EV battery lifecycle management. It highlights why premature recycling reduces value, and how structured repair processes can lower costs, extend battery life, and retain critical components within the ecosystem. Attendees will gain practical insights into building scalable, circular battery strategies for manufacturers and fleets.

12:25 Networking Luncheon *(Sponsorship Opportunity Available)*

13:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

CIRCULAR ECONOMY *(CONT.)*

14:20 Presentation to be Announced

14:25 Advancing Battery Precycling for Sustainable End-of-Life Management
Charles Stuyck, Business Unit Manager, SORTBAT
This presentation explores precycling—the safe dismantling and preparation of large end-of-life batteries for reuse or recycling. It highlights key processes, safety considerations, and market drivers shaping battery after-life strategies, and discusses how effective precycling supports circular value chains and sustainable-material recovery in a growing global battery ecosystem.

14:55 Increasing Waste Li-Ion Value: Second-Life From a Recycler's Perspective
Arne Seeger, Managing Dir, Stena Metall AB
Second Life supports recyclers by yielding more value compared to recycling if it can be applied. What are the requirements to access this market, what are current EU market prices, why are mostly new batteries going into second life systems? This presentations aims to answer these question.

15:25 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

RECYCLING METHODS

15:55 Post-Treatment Battery Recycling: Technologies, Markets, and the Path to Secure Supply Chains
MJ Choi, Head of Business Development EU, Green Li-ion
This presentation provides post-treatment recycling market insights, examining how post-treatment refining improves supply-chain security while navigating regulatory challenges. It reviews recycling routes for PCAM, MHP, lithium, and graphite, highlighting technical hurdles and quality gaps. Pyrometallurgical, hydrometallurgical, and non-solvent aqueous methods are compared to assess efficiency and sustainability. Finally, it outlines opportunities for next-generation recycling to meet regional minimum recycled-content requirements across evolving global battery supply chains and markets.

16:25 Characterisation of Process Water from Shredding of Lithium-ion Batteries
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.

16:55 Talk Title to be Announced
Elizaveta Kessler, Business Development Manager Power Storage , Market Segment eMobility EU, Henkel KGaA

17:25 Networking Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

18:30 Close of Day

WEDNESDAY 20 MAY

8:00 Registration and Morning Coffee

RECYCLING METHODS *(CONT.)*

8:25 Organiser's Remarks
Sarah Stockwell, PhD, Conference Producer, Cambridge EnerTech

8:30 Chairperson's Remarks
Sascha Nowak, PhD, Head of Analytics & Environmental, Electrochemical Energy Technology, University of Münster

8:35 Closing the Loop on Battery Grade Graphite
Robin Hansson, Recycling Manager, Vianode

Electric vehicles reduce CO2 emissions while driving to zero. For the overall CO2 balance, also the manufacturing process must be considered. Especially the anode of the battery can result in high CO2 emissions during manufacturing. This presentation discusses how Vianode is manufacturing high volume competitive anode materials with state of the art performance in North America and Europe. The Vianode proprietary production process offers a substantial improvement in product consistency, energy efficiency, CO2 and other emissions. Vianode's first large scale plant in Norway opened in 2024 and a full scale production plant in North America is under construction and will have SOP in 2027. In addition Vianode's recycling process for battery graphite is presented and measurement results will be discussed.

9:05 Innovative Direct Recycling for a Sustainable Battery Value Chain
Andreas Bittner, PhD, Executive Director, CellCircle UG

Dr. Bittner will give an introduction into CellCircle's innovative direct recycling and its benefits for a sustainable battery value chain in Europe. His presentation includes the concept for recovering ready-to-use active materials from end-of-life batteries and production waste, innovative recycling technologies as well as respective lifecycle assessment. Findings from the Horizon Europe project ReUse will show the potential of this next-generation process for economic and ecological LFP battery recycling.

9:35 Direct Recycling and Battery Deactivation to Improve Safety and Profitability in the EV Industry
Steve Sloop, PhD, President, OnTo Technology LLC

This presentation will discuss a three-dimensional approach for battery materials reclamation: Deactivation, Direct Recycling, and Design. The service of lithium-ion batteries and recycling of their materials is at the forefront of the reestablishment of the global supply chain of critical materials refining and manufacturing. The industrialization of this requires innovative processes and design to realize cost and safety demands in the next generation of lithium-ion manufacturing.

10:05 A Bio-Enabled Circular Economy for Lithium-ion Battery Cathode Metals
Louise Horsfall, PhD, Chair of Sustainable Biotechnology, University of Edinburgh

Metal ions in high concentration are toxic to living things. Microorganisms mitigate this toxicity by exporting metal ions from the cell and precipitating the ions as metal nanoparticles or minerals, preventing reentry and reducing metal-ion availability. We are harnessing this capability to recover metals from lithium-ion battery leachates, using engineering biology to optimise processes and improve scale up. The recovered materials have been well-characterised and show potential for reuse.

11:05 Coffee Break in the Exhibit Hall with Poster Viewing
(sponsorship Opportunity Available)

11:50 Securing the Raw-Material Base for Tomorrow's Solutions by Integrating Electrochemical Approaches into Hydrometallurgical Processing
Christian Heubner, PhD, Grp Mgr, Electrochemical Methods & Technologies, Fraunhofer IKTS

Integrating electrochemical strategies into hydrometallurgical processing offers a promising pathway to secure the lithium material base required for tomorrow's energy and mobility solutions. This work presents innovative electrochemical approaches that enhance lithium recovery efficiency, reduce reagent consumption, and minimise environmental impact. By coupling selective electro-extraction with sustainable process optimisation, we demonstrate how electrochemical methods can strengthen lithium supply-chain resilience and support the transition toward a circular, low-carbon battery materials economy.

12:20 Lithium Recovery in Europe: Driving Circular Economy with the CLIMA Process
Simon Bremer, PhD, Head, Development, Accurec Recycling GmbH

The CLIMA process is Accurec's innovative solution for lithium recovery from end-of-life batteries, combining thermal treatment with hydrometallurgical technology. This zero-waste process enables efficient recycling of diverse battery chemistries without mandatory discharging, achieving high-purity lithium carbonate at a fraction of the energy and CO_2 footprint compared to conventional methods. In this presentation, the CLIMA process is evaluated within the context of Europe's dynamic market, recycling approaches, and evolving legislative framework.

12:50 Recycling Challenges of Low-Value Anode and Cathode-Battery Materials: A Sustainability Perspective
Marcel Weil, Scientific Research Group Leader, Research for Sustainable Energy Technologies, ITAS & HIU, Karlsruhe Institute of Technology

Recycling of batteries under the EU Battery Directive is essential to recover valuable materials and reduce environmental harm, but also plays a key role in advancing a circular economy and ensuring sustainable use of critical resources. Central attention is given to the recycling challenges of low-value anode and cathode, addressing economic challenges, technological hurdles, and pathways to improve material recovery and advance circular approaches across present and future battery technologies.

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

14:40 Close of Track

BATTERY ENGINEERING

Building Better Batteries through Improvements in Battery Safety, Cell Engineering, and Battery Management Systems

MONDAY 18 MAY

7:00 Registration and Morning Coffee

TUESDAY 19 MAY

7:30 Registration and Morning Coffee

BATTERY INFORMATION AND INFRASTRUCTURE

8:30 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

8:35 Chairperson's Remarks
Cheng Zhang, PhD, Associate Professor, Coventry University

8:40 EVE-Ai Battery Fleet Analytics: A Universal Intelligence Layer for EV Fleets and Energy Infrastructure
Serena Carelli, PhD, Battery Modeling, Electra AI Inc.
EVE-Ai provides a unified cloud–edge intelligence layer that resolves poor battery visibility, unplanned downtime, uncertain lifetime, and fragmented data. It delivers real-time SoH, SoC, RUL, early fault detection, and prescriptive guidance that links technical health to business value. With adaptive models, digital twins, and chemistry-agnostic design, it scales seamlessly across EV, BESS, grid, and renewable assets.

9:05 Pioneering Next-Generation xEV Battery Innovations: The All-New Nissan LEAF
Kenji Hosaka, Battery Engineering, Deputy General Manager, Nissan Japan
Nissan has introduced the all-new, 3rd generation LEAF to the Europian market, building on years of real-world EV experience. This presentation explores how the unique insights gained from previous LEAF models enabled breakthrough battery innovations, developed exclusively for the 3rd generation model. It also demonstrates how these advancements deliver a superior electric mobility experience that only the 3rd generation LEAF can provide.

9:30 Battery Performance Insights: Analysing BMS Data
Wieslaw Brys, Senior Electrical Engineer, Hardware Design, Amazon Robotics
This talk delves into the operational insights gained from Battery Management System (BMS) data. It highlights key metrics, data analysis techniques, and their role in monitoring battery performance, ensuring safety, and optimising system efficiency during real-world operation.

9:55 How BMS Enable BESS Resilience of Critical Infrastructure
Sebastian Hilger, Head of Systems Engineering, Munich Electrification
The market for utility scale battery energy storage systems (BESS) is growing rapidly and the numbers of planned BESS installations in Europe are skyrocketing. They have to be fast and deploy hundreds of MWh of batteries—at the same time they need to secure the invested assets by considering resilience against cyber attacks from an early project stage until end of life.

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

CELL AND PACK MONITORING

10:55 Advanced Cell Diagnostics: Monitoring Tools for Prototype Battery Systems
Cheng Zhang, PhD, Associate Professor, Coventry University
Innovative battery diagnostics, key to high performance and safe systems, are emerging across Europe. Our projects explore prototype cells with distributed thermal arrays, fibre-optics, reference electrodes and other for battery optimisation and self-healing. These adaptive methodologies suit various systems and industrial applications. Integrating new monitoring solutions into cells and battery management systems provides unprecedented insights into battery state for characterisation, prototyping, and optimisation.

11:25 Electrochemical Modelling in the Battery Design Process
Simon Schwunk, Lead HV Battery & Cell Simulation, Energy System, Porsche AG
For battery cells, electric circuit models are widely used, since they are simple and quick. The talk highlights shortcomings of those models under different operating conditions. Electrochemical models show main advantages in scalability, inter- and extrapolation, and knowledge of inner states like the anode potential which limits fast charging. The usage is mapped on a development process.

11:55 Evaluating Effectiveness of Cell-to-cell Compression Pads for LFP and NMC Prismatic Cells
Katleen Van Nuffel, Sr Tech Svc & Dev Engineer, Technical Service & Development, Rogers Corp
Use of pads in pouch cell applications is well known but use in prismatic applications has not been widely studied. Materials with varying mechanical properties were evaluated for their impact on cycle life in LFP and NMC prismatic cells. Counterforce and cell capacity were analyzed to evaluate the effectiveness of the elastomeric pad material. The benefit of using an elastomeric pad for cell-to-cell pressure management is clear, but improvements can be made by selecting the correct pad material for the system.

12:25 Networking Luncheon *(Sponsorship Opportunity Available)*

13:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

SAFETY TESTING AND REGULATIONS

13:50 Chairperson's Remarks
Natalia Lebedeva, PhD, Scientific Project Officer, Energy Storage, European Commission

13:55 International Regulations for Electric Vehicle Battery Safety Testing: Current Trends and Updates
Natalia Lebedeva, PhD, Scientific Project Officer, Energy Storage, European Commission
In this presentation recent changes in the regulatory requirements for safety testing of battery electric vehicles and, where applicable, their batteries are discussed.

14:25 Impact and Diagnostics of Self-Discharge for Lithium-ion Batteries
Andreas Jossen, Professor & Head, Technical University, Munich
This presentation examines the mechanisms and impacts of self-discharge in lithium-ion batteries, highlighting diagnostic methods to identify degradation pathways. Understanding self-discharge behavior supports improved battery health assessment, performance prediction, and safety management across diverse applications.

14:55 Safety Assessment of Significantly Aged Commercial Cylindrical Cells for Estimation of Second Life Potential
Carlos Ziebert, PhD, Head of Calorimeter Center, Thermophysics & Thermodynamics Group, Karlsruhe Institute of Technology
Over recent years, we conducted extensive calendar and cyclic ageing studies on commercial cylindrical cells using ARC heat-wait-seek tests. Results show strong correlations between temperature, charge/discharge rates, and key safety thresholds (onset, venting, thermal runaway), informing improved thermal and safety management for first- and second-life lithium-ion cells.

15:25 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

PREVENTING THERMAL RUNAWAY

15:55 Thermal Runaway and Safety Challenges of Lithium-ion Batteries in Electric Vehicle Applications
Lee Feng, Senior Manager, Amazon
Lithium-ion safety remains one of the most critical technical challenges for electric vehicle users across transportation sectors. This talk will explore key safety concerns related to battery failure, with a particular focus on thermal runaway phenomena, contributing factors, and implications for electric vehicle design

and operation. Emphasis will be placed on real-world safety considerations, emerging mitigation strategies, and the importance of coordinated technical and organisational approaches to addressing these risks.

16:25 Engineering Safer Batteries: Insight into Processes Causing Self-Heating
Ulrike Krewer, Professor & Head, Karlsruhe Institute of Technology
Exposing Li-ion batteries to temperatures above 60°C leads to thermal degradation and potentially thermal runaway. This talk gives an insight into these processes including the underlying reaction network at the electrodes and in the electrolyte. Operando electrochemical mass spectrometry reveals a temperature-triggered complex sequence of various degradation gases during heating; the evolution pattern is reproduced by kinetic models, which give an unprecedented insight into the occurring reactions and crosstalk.

16:55 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.

17:25 Networking Reception in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

18:30 Close of Day

WEDNESDAY 20 MAY

8:00 Registration and Morning Coffee

MODELLING AND PERFORMANCE

8:25 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

8:30 Chairperson's Remarks
Michael Schoenleber, Co-Founder & CTO, Batemo GmbH

8:35 Mechanical feedback between cells and cell barriers and its impact on battery life
John Williams, VP Tech Svcs, Tech Svcs, Aspen Aerogels
The evolution of cell-face pressure within a pouch- or prismatic module is a negotiation between cells, cell barriers, and the module housing itself. While designers think of this primarily as a mechanical problem, it is also an electrochemical one. Cells have opinions about how tightly they're held, opinions that manifest through state-of-health (SOH). This talk will present cycling data on cells with various mechanical constraints, with the goal of identifying SOH-optimal clamping conditions.

9:05 Presentation to be Announced

9:35 Rigorous Benchmarking of Battery Chemistries: Insights from Measuring and Modelling more than 300 Cells
Michael Schoenleber, Co-Founder & CTO, Batemo GmbH
As the battery market rapidly evolves to serve diverse applications from mobility to energy storage, identifying the optimal cell chemistry is crucial. In this study, we present a comparative analysis of several major battery technologies using Batemo's unique database of over 300 characterised cells. Through both experimental analysis and digital benchmarking, we isolate material performance from form factor effects to reveal true chemistry-level differences.

10:05 Advanced Electrode Engineering for Architected and Dry-Processed Battery Electrodes
Jonghyun Park, PhD, Professor, Mechanical & Aerospace Engineering, Missouri University of Science & Technology
This talk outlines an advanced electrode engineering approach to architected and dry-processed battery electrodes, leveraging field- and laser-assisted strategies—micro-electric-field (μ-EF) casting and femtosecond-laser structuring—together with dry-processing routes. These methods control particle alignment, porosity, and ion-transport pathways to realize hyper-thick electrodes up to ~1000 μm with high areal capacity and stable cycling. Case studies will show how the resulting architectures improve rate capability and durability while enabling scalable, solvent-lean manufacturing.

10:35 Overview and Application of Advanced Characterization and Modeling Techniques for Polymeric Battery Materials
Tobias Waffenschmidt, Senior Specialist CAE, Corporate Research Systems Laboratory (CRSL), 3M
Ensuring material integrity across the service life of automotive batteries is critical, particularly as components are exposed to mechanical loads, temperature fluctuations, and operational cycling. Within modern battery pack designs, polymeric materials-including structural adhesives, double sided adhesive tapes, cushioning foams, and thermal barrier materials-play essential roles in, vibration management, thermal protection, impact resistance and overall pack durability. Accurate prediction of the mechanical performance of these polymers is therefore vital for reliable battery pack engineering. While finite element analysis is widely used for structural evaluation, the strong nonlinear, rate dependent, temperature dependent behavior of polymeric and adhesive materials presents significant modeling challenges. Standard material models often cannot fully capture this complexity .This talk provides an overview of advanced mechanical modeling strategies tailored to polymeric materials used in battery systems. It highlights characterization methods designed to capture key behaviors under battery relevant conditions such as thermal gradients, dynamic loading, and crush events. Approaches for material model calibration and parameter identification are discussed through several representative battery focused use cases. Finally, verification and validation studies are presented to demonstrate the applicability, accuracy, and limitations of these models in battery pack-related design scenarios.

11:05 Coffee Break in the Exhibit Hall with Poster Viewing *(sponsorship Opportunity Available)*

CELL AND PACK

11:50 Cell and Pack Design
Ahmed Abaza, PhD, Tech Manager, High Voltage Battery Technology, Jaguar Land Rover Ltd.

12:20 Electric Aircraft Battery Engineering 101
Zi Jian Yeo, Principal Battery Engineer, Battery, Sora Aviation
Which cell to use, 2170, 46xx, or pouch cell? How to size a battery pack for an electric aircraft? These are the typical questions in battery engineering for electric aircraft. The talk will get into the basic of Li-ion battery design with tangible aerospace best practices.

12:50 Relative Reference Estimation and Sorting of Pack SOHs in Parallel Connections
Susann Wunsch, Software Development Engineer, Daimler Buses GmbH
Reliable SOH estimation is challenging, as many methods rely on detailed models and aging-dependent parameters. This talk presents a model-free approach to detect relative capacity differences between parallel battery packs using only current and voltage data. Probabilistic metrics are combined via fuzzy logic and aggregated into a global ranking. Simulations and 26 months of bus data confirm accurate, transparent cross-checking of relative SOH estimates.

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

14:40 Close of Track

MONDAY 18 MAY

7:00 Registration and Morning Coffee

TUESDAY 19 MAY

7:30 Registration and Morning Coffee

ADVANCES IN CELL MANUFACTURING

8:30 Organiser's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

8:35 Chairperson's Remarks
Sam Jaffe, Vice President, Business Development and Product, Mana Battery

8:40 Bridging the Technology Gap for European Competitiveness via Cell Production Machinery
Kamil Burak Dermenci, PhD, Senior Researcher, Electrical Engineering and Energy Technology Research Group, VUB—Vrije Universiteit Brussel
EU must enhance its battery cell production machinery to diminish its dependence on Asian suppliers and attain sustainable mobility. The talk will cover integrated machinery development, encompassing automated modular slurry mixing, novel coating and drying systems, and integrated calendaring technology. Industry 4.0 principles are included through AI-based quality control, a collaborative data space, and digital interfaces enabling process optimization, scrap reduction, and supports battery passport development.

9:10 Ultrafast Laser Structuring Providing Refinement on Electrode Design for Cylindrical Batteries
Wilhelm Pfleging, PhD, Head of Group Laser Materials Processing/Lithium-ion Batteries, Institute for Applied Materials (IAM-AWP), Karlsruhe Institute of Technology (KIT)
Manufacturing 4690 cells involves the use of laser structuring for thick-film electrodes. Those batteries undergo an accelerated electrolyte filling process. Electrolyte rewetting during battery operation is significantly enhanced, contributing to an increased cycle lifetime and prevents lithium plating during fast charging. The R2R pilot line is undergoing further development to enhance process efficiency. It uses advanced, high-power, ultrafast lasers which have been successfully used with various types of electrode materials.

9:40 AM Batteries' Powder-to-Electrode Dry Manufacturing Technology
Christopher Mohajer, Director, AM Batteries
This session will demonstrate how AM Batteries' Powder-to-Electrode dry manufacturing process delivers batteries that are lower cost, higher performance, and more sustainable. We'll present recent results across NMC, LFP, and Si-C; show why dry electrodes are an enabling technology for solid-state and sodium-ion; compare capex, opex, energy use, and footprint versus wet coating and alternative dry methods; and outline a production-ready roadmap.

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

10:55 How to Charge Faster & Safer with an eisBMS Chipset
Wenzel Prochazka, PhD, Senior Product Manager, Electrification Systems, NXP Semiconductors Austria
A battery management system (BMS) chipset with built-in Electrochemical Impedance Spectroscopy (EIS) may bring lab-grade diagnostics into vehicles. These features may be used to support fast charging current setting and temperature monitoring in a faster, safer, and more accurate control loop. This presentation will explore the reality of implementation.

11:25 Improving Cell Properties and Production Processes through Physics-Based Computer Simulations
Jochen Zausch, PhD, Senior Scientist, Team-Leader Electrochemistry and Batteries, Flow and Material Simulation, Fraunhofer ITWM
We propose to apply computer simulations to support process development in cell and battery production to increase process understanding and optimise production parameters. We will present our approach for describing the foam encapsulation process for batteries with cylindrical cells using an advanced foam expansion model and an efficient numerical solver. Additionally, we'll also touch on our approaches for estimating the electrolyte wetting time and improving the calendering process.

11:55 Cost-Effective Ultra-Thin Lithium Metal Films for High Energy Density Batteries
Subra Herle, CTO, Technology, Elevated Materials
Ultra-thin lithium metal films enable higher energy density batteries but have been difficult to manufacture at scale. Elevated Materials' roll-to-roll, 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

12:25 Networking Luncheon *(Sponsorship Opportunity Available)*

13:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

ADVANCES IN CELL MANUFACTURING

13:50 Chairperson's Remarks
Wilhelm Pfleging, PhD, Head of Group Laser Materials Processing/Lithium-ion Batteries, Institute for Applied Materials (IAM-AWP), Karlsruhe Institute of Technology (KIT)

13:55 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.

14:25 Advancing Silicone Foam Technology: Tailored Properties and Optimised Dispensing Solutions
Dr. Chia-Hsin Ko, Associate Technical Service & Development Scientist, Mobility & Transportation Electronics, Dow Silicones Deutschland GmbH
Dow will present how material innovation, advanced testing, and simulation-driven process optimisation enable tailored foam properties, predictive dispensing models, and foam growth simulations—delivering reliable, efficient solutions that meet stringent EV safety and manufacturing standards.

14:55 Optimising Battery Materials
Keri Goodwin, PhD, Chief Technologist, Formulation, CPI
CPI supports partners in the battery-materials and cell-technology areas to accelerate the translation of their innovations from lab- to commercial-scale. We undertake materials scale-up, automated formulation, coating, and characterisation, alongside extensive know-how in process chemistry and engineering. Here we present case studies demonstrating our work in this field with examples of materials, slurry, and cell development. Use of our materials scale-up facility (AMBIC) will also be detailed.

15:25 Refreshment Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

15:55 Introduction of the Beff Navigator: DX Development Acceleration Platform to Shorten Time-to-Market
Shunsuke Amagai, Founder & Co-CEO, Beff
Beff delivers integrated solutions from design to mass production using deep lithium-ion expertise. Beff Navigator accelerates material and cell development with a rapid end-to-end process—from concept and specification design to prototyping, testing, and validation—enabling faster time-to-market. Our professional engineers provide expert support for precise specifications, high-quality prototyping and testing, and advanced analysis, ensuring efficient and reliable development. This presentation will highlight our methodologies and real-world applications using the Beff Platform.

16:25 DRYtraec Process: Shear-Based Dry Electrode Manufacturing for Lithium-ion and Next-Gen Battery Technologies
Arthur Dupuy, PhD, Research Associate, Fraunhofer IWS
Dry electrode manufacturing has emerged as a key innovation for next-generation lithium-ion and solid-state batteries, overcoming the environmental and economic limits of wet-chemical processes. The DRYtraec process, developed by Fraunhofer IWS, enables scalable, solvent-free electrode production through differential roll-speed calendering, ensuring high-quality electrodes with excellent electrochemical performance. This presentation highlights DRYtraec's principles, advantages, and results across lithium-ion, sodium-ion, lithium-sulfur, and solid-state battery technologies.

17:25 Networking Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

18:30 Close of Day

WEDNESDAY 20 MAY

8:00 Registration and Morning Coffee

8:55 Organiser's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

ADVANCES IN CELL MANUFACTURING

9:00 Chairperson's Remarks
Jochen Zausch, PhD, Senior Scientist, Team-Leader Electrochemistry and Batteries, Flow and Material Simulation, Fraunhofer ITWM

9:05 Material Validation to High-Performance Packs: Accelerating Battery Commercialization
Jonas Hertle, Project Management & Solid State Battery Expert, Chem4Batteries
Chem4Batteries provide concrete metrics on how the commercialisation of innovative technologies across the battery value chain can be accelerated. The company will emphasise its services, particularly in battery material validation and battery cell prototyping. Focus is placed on the state-of-the-art benchmarking and prototyping laboratory located in Berlin. Target groups include raw material suppliers, battery material producers, cell manufacturers, battery recycling companies, and end-users (OEMs) who are pursuing targeted cell improvements.

GLOBAL MARKET OPPORTUNITIES IN BATTERY MANUFACTURING

9:35 Impacts of AI on the Battery Industry: How Can AI Revolutionise Battery Development and Industrialisation?
Ines Miller, Associate Partner, Battery Technology, P3 Group
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 optimise 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.

10:05 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.

11:05 Coffee Break in the Exhibit Hall with Poster Viewing
(sponsorship Opportunity Available)

11:50 Optimising the Manufacturing Process of Sodium-ion Batteries by Using Physics-Based Modelling and AI
Alejandro Franco, PhD, Professor, Université de Picardie Jules Verne
I present an integrated framework utilising pilot line process data, physics-based modelling, and AI to optimise sodium-ion battery electrode manufacturing. Applications of our approach include the investigation on how process parameters influence the textural and electrochemical features of hard carbon electrodes. This multi-scale methodology allows bridging the gap between material properties and final cell performance, adapting our previously validated ARTISTIC approach from lithium-ion batteries.

12:20 Advancing Bipolar Battery Technology: From Research to Industrialisation
Michael Clauss, Senior Technical Consultant Battery System, IAV GmbH
Since 2014, IAV has been developing bipolar batteries to increase volumetric efficiency and reduce costs through simplified designs. Early research projects focused on materials, manufacturing processes, and vehicle integration. Today, collaboration with OEMs targets higher technology readiness and scalable production. This presentation outlines manufacturing-driven development steps, industrialisation challenges, and the role of advanced solid-state electrolytes enabling high-performance bipolar battery manufacturing.

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

14:40 Close of Conference

MONDAY 18 MAY

7:00 Registration and Morning Coffee

TUESDAY 19 MAY

7:30 Registration and Morning Coffee

MARKET EXPANSION OF xEVs AND THEIR BATTERIES

8:30 Organiser's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

8:35 Chairperson's Remarks
Conrad Szczuka, Officer, Battery Policy, European Commission



8:40 Electrics and Electronics: The Future of the HV Architecture at Volkswagen.
Frederik Anspach, PhD, Head of Development Components for Battery Systems, Volkswagen
Volkswagen AG plans to massively increase the proportion of electric vehicles by 2030. The focus of battery development is on attractive products in the segments Affordable, Range & Performance. Focus of this presentation will be on the electrics and electronics architecture of current and future BEV platforms as well as the design guidelines for optimising customer value with minimized variance.



9:10 Battery Technology of the New All-Electric Porsche Cayenne
Nina Winterholler, Head of Battery Mechanics, Porsche
The new all-electric Porsche Cayenne features innovative battery technology. The presentation covers mechanical architecture from cell to HV battery, with the module being Porsche's first in-house production, and also addresses the efficient cooling system. Key KPIs such as fast-charging capability, power performance, and function-integrated design are emphasised. Attendees will gain in-depth insights into technical advancements and challenges in electromobility.



9:40 An Example of Interactions Between Mechanics and Electro-Chemistry in Battery Cell Development
Edwin Knobbe, PhD, Technical Project Manager, Battery Cell Competence Centre, BMW
BMW has introduced with the BMW iX3 the sixth-generation BMW eDrive technology, which sets new standards for efficiency and long-distance capability. The BMW group has shown that battery cell designs can be influenced by the so-called Electrolyte Motion induced Salt Inhomogeneity (EMSI-effect). This presentation will focus on a solid mechanical perspective of the EMSI-effect by modelling the granular behavior of the porous coating in an anode.

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

10:55 Delivering EV Range and Value through Innovation
Andy Oury, Battery Engineer and Business Planning Manager, 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. Mr. Oury will provide an update on GM's battery strategy, focusing on engineering the right battery for the right vehicle—aligning performance, cost, and range with customer needs.

11:15 Root Cause Analysis and Repair of Defective Battery Packs at Stellantis
Horst Mettlach, Global Tech Specialist Traction Batteries, Stellantis
With increasing market share of electrified vehicles and continuously rising numbers of traction batteries, there is a demand for battery service and repair. Stellantis has set up refurbishment centers within Europe based on the experience gained in Rüsselsheim since 2011. Traction batteries of various types can be analysed and repaired. The talk will explain the integrated methodology for root cause analysis and repair of defective battery packs at Stellantis.

11:35 From Field Data to Design: Optimizing Heavy-Duty Batteries Through Application-Specific Cell Testing
Kristina Pfeifer, PhD, R&D Engineer, Product Engineering, Daimler Truck AG
Long-haul trucks operate under duty cycles that differ substantially from those of passenger cars and other light vehicles. This work presents a methodology that replaces this one-size-fits-all approach with a truck-specific ageing procedure based on recorded field data. The resulting test protocols reveal significant differences in degradation behavior, enabling more accurate service-life prediction and more informed cell selection for heavy-duty electrification.

11:55 The AI-Assisted (Near) Future of Automotive Battery Development and Production VOLTAIQ
Tal Sholklapper, CEO & Co Founder, Voltaiq Inc.
Today's EV battery teams face tremendous challenges: rapidly design new batteries that cost less, go farther, and charge faster, while achieving rigorous quality and global safety standards, all while navigating shrinking teams and tightening budgets. This talk lays out a vision for battery programs that leverages existing data via a battery-specific data ontology coupled with an AI-powered automation and analytics software platform that augments battery teams with virtual battery engineering, enabling them to go farther and faster with fewer resources.

12:25 Networking Luncheon *(Sponsorship Opportunity Available)*

13:20 Dessert Break in the Exhibit Hall with Poster Viewing *(Sponsorship Opportunity Available)*

MARKET EXPANSION OF xEVs AND THEIR BATTERIES

13:50 Chairperson's Remarks
Kristina Pfeifer, PhD, R&D Engineer, Product Engineering, Daimler Truck AG

13:55 Driving Competitiveness from Chemistry to Cell: Cost Roadmap, Key Levers Localisation, and Forex Dynamics
Er-Rami Fatima-Ezzahra, PhD, Junior Battery Cell Costing Expert, Renault SAS
This presentation outlines the roadmap connecting battery cell chemistry, cost drivers, and localisation strategies in a rapidly evolving global market. The talk provides a concise view of the key technical and economic levers needed to optimize future battery programs, balancing chemistry innovation, localised manufacturing, and Forex risk management.

14:25 How CEA Battery Prototyping Activities Can Serve a Growing Industry: Presentation of Cell Design Program with Stellantis
Eric Mayousse, Engineer, Electricity & Mobility, CEA
The CEA's battery prototyping laboratory has the advantage of being versatile. It can produce industry relevant electrodes (centimeters to meters) to manufacture prototypes of various sizes (0-10Ah). This scale allows for the evaluation of numerous KPIs for mature chemistries, as well as the exploration of new processes (reduced solvent or dry) and new generations of batteries (Gen4, Gen5). To illustrate this, the collaboration between CEA and Stellantis will be presented.

14:45 Analysis of Reduced EV Battery Capacity for Improved Efficiency and Cost
Ricardo Sodre, PhD, Head, Mechanical Biomedical & Design Engineering, Aston University
This study evaluates whether smaller batteries can meet routine driving needs while reducing energy consumption, charging duration, and overall costs. Modelling shows that downsizing batteries can improve efficiency, shorten

charging times, and lower purchase and operating costs. A 30% reduction could save around £2,650 and increase efficiency by up to 8%.

xEV MARKET OUTLOOK

15:05 Battery Materials Trends and Potential Disruptions
Dylan Khoo, Senior Analyst, Battery Materials, Argus Media
Challenges to the battery supply chain have never been more significant than they are now, and critical minerals have come to the forefront of global discussion. This presentation will cover forecasts for the supply, demand, and price of key battery materials along with potential disruptions including export controls, capacity challenges, and demand shifts.

15:25 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

REGULATORY CHALLENGES & OPPORTUNITIES

15:55 Navigating the EU Battery Regulatory Landscape: From Batteries Legislation to Standardisation and Market Trends
Conrad Szczuka, Officer, Battery Policy, European Commission
As the EU moves toward a circular and climate-neutral economy while aiming for boosting its competitiveness, the regulatory framework for batteries is evolving rapidly. Representing the European Commission's Joint Research Centre (JRC), this presentation provides a strategic update on the implementation of the EU Batteries Regulation, looking at the latest developments in omnibus amendments, implementing legislation and the rollout of the Battery Passport.

xEV BATTERY TECHNOLOGY

16:25 Advanced Battery Fire Protection Materials: Bridging Safety and Performance Challenges in EV Battery Systems
Sze-Sze Ng, Principal Technical Service Scientist, Dow
Roman Vanecek, Application Scientist, Automotive, Dow
Zheren Wang, Group Lead Battery, Forward Engineering
As battery safety regulations tighten, advanced fire protection materials are key to safer, lighter, and more flexible EV battery designs. This presentation surveys different approaches from battery packs on the road, system-level and material-level validation methods, and highlights recent advances in polymeric material research.

16:55 High-Performance & High-Consistent Cylindrical Tabless Li-ion Batteries for xEV Application
Speaker to be Announced, Jiangsu Reliance Energy Tech Co Ltd

17:25 Networking Reception in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

18:30 Close of Day

WEDNESDAY 20 MAY

8:00 Registration and Morning Coffee

xEV BATTERY TECHNOLOGY

8:25 Organiser's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

8:30 Chairperson's Remarks
Sze-Sze Ng, Principal Technical Service Scientist, Dow

8:35 Castrol ON Advanced Thermal Management Technology: How to Enable a Better Battery Solution for Customers
Jingkun Dr. Li, Senior Manager, Driveline & Electrification Fluids, Product Development, Castrol
The shift to ultra-fast charging EVs and high-efficiency BESS demands advanced thermal management. Conventional air and indirect liquid cooling are reaching their limits and cannot meet future needs like megawatt charging or large-scale systems. Castrol ON's direct immersion cooling with dielectric fluids offers a step change, enabling efficient cell-level heat transfer and improving safety, performance, cost efficiency, and battery lifetime across applications.

9:05 High-Power Li-ion Innovations: Advancing Performance and Enhanced Safety for the xEV Era
Nan Hong Lester Yeh, R&D Manager, Advanced Battery Technologies, Molicel
As electrification extends from ultra-fast charging to high-performance hybrids, battery technology must deliver both extreme power and uncompromising safety. Molicel will explore how next-generation electrochemical innovations address key xEV challenges: instantaneous high-rate discharge for dynamic acceleration, thermal stability under high loads, and intrinsic safety through advanced cell design. We will discuss how these proven high-power technologies are being integrated into the AI-driven vehicle ecosystem to redefine the future of mobility.

9:35 Continuously Adapting: Scalable Pack Solutions for Right-Sizing Autonomy and Cost in a Changing Market
Alexander Fandakov, PhD, Team Manager of Battery & E Traction, Powertrain Research & Technology, IAV GmbH
As demand grows for customer-focused xEVs with high autonomy and competitive pricing, the rise of cylindrical cells supports adaptability to different applications, and supply chain concerns increasingly shape cell chemistry and pack design decisions. This presentation introduces a scalable cell-to-pack approach using cylindrical cells, cutting costs and maximising volume utilisation while improving heat transfer, charging rates, and repairability by eliminating potting, thus delivering cost-effective autonomy "rightsised" for the respective application.

10:00 Battery Swapping: The Cornerstone of Grid-Interactive Electric Mobility
Frank Kindermann, PhD, Head of Battery System Development Europe, NIO
Battery swapping is emerging as a holistic solution that bridges vehicle applications and grid services, redefining energy delivery for electric mobility. Standardized battery packs, as demonstrated by NIO's approach, support modular upgrades in chemistry, thermal management, and diagnostics, ensuring backward compatibility and continuous innovation. Beyond convenience, swap stations can act as distributed energy hubs, integrating renewable sources and enabling demand-side management.

10:25 Batemo Insights Technology Radar—From Years of Data to Answers in Seconds
Jan Richter, CEO, Batemo GmbH
Decision-making often suffers from a limited view of the market. 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!

10:50 Achieve Cost-Efficient, High-Performance Deployment with Modular Immersion Cooling Battery
Sean Chiang, Senior Manager & Head of Europe Office, XING Mobility Inc.
Achieve Cost-Efficient, High-Performance Deployment with Modular Immersion Cooling Battery

11:05 Coffee Break in the Exhibit Hall with Poster Viewing
(sponsorship Opportunity Available)

11:50 Enhanced Battery Safety with ASSB: Navigating Regulations, Design, and Real-World Solutions
Paul Schiffbaenker, Director Battery Technology, Product & Business Development, AVL List GmbH
Global safety standards like GB38031-2025 and ECE-R100 v5 are reshaping battery design. We detail their implications for business model readiness in global markets, address proven strategies to prevent thermal propagation, and examine effective use of simulation tools. Gain insights from real-world demonstrators and design guidelines – while questioning whether LFP is truly the ultimate safe choice, or if ASSB's promise conceals challenges such as Li-metal ignition risk and swelling effects.

xEV VENTURE PARTNERING AND INVESTMENT

12:20 PANEL DISCUSSION: World-Wide Venture: How Leveraging International Partnerships Can Level-Up the Innovation Ecosystem
Moderator: John Kwon, General Counsel of Global Legal & Strategy, Contemporary Amperex Technology Limited (CATL)
Strategic partnering is key to the success of global electrification. This featured panel of international experts will provide key insights into the state of investment opportunities and how start ups can be prepared to successfully navigate the VC and CVC landscape. The panel will also preview the Rise and Pitch breakout sessions.
Panelists:
Alexander Schwerdt, Investment Manager, Plug and Play Tech Center
Gyen Ming Angel, Managing Director, Prosemino
Mark Windeknecht, PhD, Climate Tech Investor, World Fund
David Steven Jacoby, Managing Director, Energy Consulting, Boston Strategies International

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

14:40 Close of Conference

LITHIUM BATTERY CHEMISTRY — PART 2

Advancements in Lithium-ion and Beyond

WEDNESDAY 20 MAY

13:20 Registration Open

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

CELL AGING

14:40 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

14:45 Chairperson's Remarks
Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster

14:50 Advancing Battery Performance and Durability in New Platform of Volvo Cars
Qianye Huang, PhD, Senior Cell Engineer, Battery Cell Hardware, Volvo Cars
This presentation highlights Volvo Cars' transition to the SPA3 platform and its approach to advancing battery performance and durability in next-generation EVs. It discusses balancing fast charging, energy density, safety, and lifetime through Cell-to-Body integration, thermal management, and intelligent BMS control. Central to this strategy is a battery aging framework combining aging studies, field analysis, and predictive modeling to better understand degradation and enable optimized lifetime management.

15:20 Presentation to be Announced

15:50 Process Control and moisture measurement in the battery life-cycle
Gerhard Kirner, Head of Process Analytics HUB EMEA, Process Analytics, Metrohm Deutschland GmbH & Co. KG
Modern batteries require tight process windows and precise material specs for long life. Measurements are essential across the entire life-cycle: predicting outcomes in R&D, ensuring consistent quality in production, and enabling efficient material recovery in recycling. Moisture strongly affects cell quality. The presentation highlights applications and control mechanisms from ore over production to recycling.

16:20 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

16:50 Polymer Interphases Designed with Single-Ion Conducting Polymers
Robert Dominko, PhD, Lab Head, Materials Chemistry, National Institute of Chemistry
Interphase stability is crucial for long-term battery performance, especially in all-solid-state systems. A mixed ionic–electronic conducting layer on NMC811 cathodes modulates interfacial kinetics and enables stable cycling under pressure-free conditions. For lithium metal anodes, a protective coating based on modified cellulose, a single-ion conducting polymer, and LiNO3 promotes uniform Li? transport, suppresses dendrite formation, and improves Coulombic efficiency and cycling stability.

17:20 Beyond Ceramic: Separator Coatings as an Underused Performance and Cost Lever
Peter Frischmann, PhD, Co-Founder & CEO, Sepion Technologies
Ceramic coatings made Li-ion batteries safer, but they are now becoming dead weight: thicker, heavier, and wetter. Sepion's ultra-thin nanoporous polymer coatings replace ceramic with a lighter, drier, metal-protective functional layer that drops into existing separator platforms. This talk will argue that the next step-change in battery performance and $/kWh will come from demanding more from the separator.

17:50 Performance Trends in Commercial Battery Technologies
Miha Podbreznik, Technology Manager, Strategy, Fraunhofer Research Facility Production Battery Cell FFB
This presentation provides an overview of performance trends in commercial automotive battery technologies. By examining cells across different formats and chemistries, the session highlights how designs have evolved, which factors influence current performance levels, and where future developments may head. The talk offers a perspective on the technological directions shaping next-generation electric vehicle batteries.

18:20 Close of Day

THURSDAY 21 MAY

8:30 Registration and Morning Coffee

SOLID STATE

8:55 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

9:00 Chairperson's Remarks
Juergen Janek, PhD, Professor, Solid-State Ionics & Electrochemistry, Justus Liebig University, Giessen

9:05 All-Solid-State Sulfide Ceramic Batteries—Performance, Innovation, Interface Engineering, and Safety
Benoit Fleutot, PhD, Lead Researcher, CEETES, Hydro Quebec
Despite progress in lithium-ion batteries, all-solid-state batteries (ASSBs) offer higher energy density. Sulfide-based electrolytes show promise but face moisture sensitivity and interfacial instability. Hydro-Québec develops ceramic composite ASSBs, optimising cathode interactions and lithium metal interfaces. Innovations like ultra-thin lithium anodes enable over 700 cycles. Electrochemical analysis guides improvements, bringing sulfide-based ASSBs closer to commercialisation and transforming future battery technology with safety.

9:35 Rio Tinto Lithium's Printable Lithium Technology, LIOVIX®: a Practical Solution to Commercialization of Solid-State and Advanced Li-ion Batteries
Marina Yakovleva, Director, R&D and New Business Development, Rio Tinto Lithium
The focus of this presentation will be on the morphology of the lithium metal LIOVIX-based electrode that offers improved cell performance, such as longer cycling life.

10:35 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

SOLID STATE *(CONT.)*

11:05 Ceramic All-Solid-State Batteries with Ni-Rich NMC Cathodes—Energy-Efficient Processing and Recycling
Martin Finsterbusch, PhD, Group Leader, Solid State Batteries, Forschungszentrum Juelich GmbH
A new strategy is presented to achieve fully ceramic LLZO-NMC cathodes for all-solid-state batteries with areal capacities up to 5 mAh/cm² using pressure assisted sintering (FAST/SPS), also reducing the required energy and processing time by more than 80%. The interface structure and its evolution upon cycling is investigated in detail and strategies are presented to reverse the degradation by component-based recycling, making the presented ASBs more attractive for industrialisation.

11:35 Lithium-Metal Batteries: From Cell Development to Application Concepts
Seyedhosein Payandeh, PhD, Cell Expert, FEV
This presentation addresses three complementary aspects of lithium-metal battery development. First, it discusses all-solid-state battery development

at the materials and cell-concept level, highlighting key performance and integration challenges. Second, it presents benchmarking results and failure-mode insights derived from the analysis of lithium-metal cells currently available on the market. Third, it translates these learnings into application-oriented battery pack concepts, considering critical system-level requirements such as safety, integration, and scalability.

12:05 Commercialising Next-Generation Lithium-Metal Battery Technology for Electric Vehicle Applications
Martin M. Winterkorn, PhD, Director, QuantumScape
Solid-state batteries promise to revolutionise energy storage with longer range, faster charging, and improved safety. Many players have shown promising proofs of concept, but the major challenge is scaling the technology to meet the massive global battery demand. This talk will cover solid-state lithium-metal battery benefits for electric vehicles and other applications, advanced separator production processes, unique commercialisation strategies including non-exclusive licensing models and current progress toward market deployment.

12:35 Winning before EVs: A Faster Path through Profit-Led Adoption
Jorge Diaz-Schneider, CEO, ION Storage Systems
With Cornerstone cells customer-qualified, the focus shifts from commercialization to scale. ION grows share where our tech wins outright: high-value, non-EV markets. Our ceramic separator with no swell, no pressure, and wide temperature range, unlocks unthinkable, new use cases, and accelerates adoption. EV is the destination, not the start. Proving value in premium niches with a cathode-agnostic anode creates a faster, more profitable path to mass EV adoption.

13:05 Networking Luncheon (Sponsorship Opportunity Available

13:45 Dessert Break in the Exhibit Hall with Last Chance for Poster Viewing

SOLID STATE *(CONT.)*

14:15 Chairperson's Remarks
Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster

14:20 Composite Cathodes for Oxide Ceramic All-Solid-State Batteries
Dina Fattakhova-Rohlfing, PhD, Head, Electrochemical Storage, Forschungszentrum Juelich
All-solid-state batteries based on LLZO electrolytes offer high safety and energy density but face challenges in forming stable composite cathodes with high-energy CAMs. We demonstrate additive-free, fully ceramic NCM/LLZO composite cathodes enabled by optimized LLZO composition and low-temperature FAST/SPS processing, achieving dense microstructures, improved interfacial stability, high active material loading, and promising areal capacities.

14:50 Solid Oxide-Based Electrolytes for Advanced Metal Batteries
Venkataraman Thangadurai, PhD, Chair, Energy & Faraday Institution; Adjunct Professor, School of Chemistry, University of St. Andrews
Recent progress and future directions in solid-state oxide-based membranes for next-generation batteries will be discussed. Special attention will be given to Li-based garnets and sodium silicate-based electrolytes for alkali metal batteries.

15:20 Polymer Hybrid Electrolytes for Solid-State Batteries
Gunther Brunklaus, PhD, Group Leader, Forschungszentrum Juelich GmbH
Hybrid electrolytes are suitable for operation in batteries with higher capacity anodes and could allow for medium EV, drone, or robotics applications. Here, we discuss critical details of processing, interface design, and hybrid membrane variation at cell operation, thereby emphasizing that practical factors such as scalability and polymer extrusion processing should be accounted for at early stages of materials development, also discussing opportunities for component design by numerical simulations.

15:50 Session Break

ROADMAP TO 2040

16:05 Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

16:10 PANEL DISCUSSION: Roadmap to 2040: Opportunities & Illusions





Moderator: Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster
This panel of experts will discuss forecasts for 2040, providing insights about opportunities, challenges, barriers, and key factors shaping the 2040 roadmap and where the industry is going in the near term.

Panelists:
Wolfgang Bernhart, Senior Partner, Global Co-Head Advanced Technology Center, Roland Berger GmbH
Otmar Bitsche, PhD, Senior Advisor, P3; Formerly Director, E-Mobility, Porsche AG
Fabrice Renard, Senior Advisor, Avicenne Energy
Stefan Koller, Senior Vice President, Material R&D and Pre-Development, VARTA Innovation GmbH

17:05 Close of Conference

WEDNESDAY 20 MAY

13:20 Registration Open

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

xEV BATTERY TECHNOLOGY

14:40 Organiser's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

14:45 Chairperson's Remarks
Otmar Bitsche, PhD, Senior Advisor, P3; Formerly Director, E-Mobility, Porsche AG

14:50 EV Battery Thermal Explosion 1D Analysis Technology
Dongyeong Kim, Research Engineer, Vehicle Safety Validation Team, Hyundai Motor Co
Securing EV Thermal runaway safety is a key challenge for automakers, and real-life verification for this requires a lot of time and money. this presentation introduces innovative 1D analysis technology that accurately models the thermal runaway heating mechanism of battery component developed by Hyundai Motor Company. this technology will enable preemptive verification before physical testing, dramatically increasing development efficiency and changing the paradigm of next-generation battery safety design.

15:20 Ahead of the Heat: EIS for Early Warning and Prevention of Thermal Runaway
Claire Leveugle, PhD, Senior Principal Engineer, Automotive, Analog Devices
This presentation will demonstrate how Electrochemical Impedance Spectroscopy (EIS) can provide early warning of thermal runaway (TR) in electric vehicle (EV) battery packs. By measuring the impedance of individual cells, we can unlock insights into internal failures that precede TR.

15:50 Proven Reliability of TotalEnergies Immersion Cooling Technology in Application
Niranjan Edappady, Global Product Development Manager, TotalEnergies

16:20 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

16:50 Advancing Automotive Battery-Pack Safety with Innovative Venting Units
Juergen Kosicki, Manager, MANN+HUMMEL
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.

17:20 Battery Platform Updatability
Joern Neuhausen, PhD, Director, PwC Strategy
Automotive OEMs and suppliers face rapid innovation cycles in cells, BMS, and battery system, intensifying performance and cost pressure and stretching platform investments. Our platform updateability blueprint shows how early definition of battery platform updateability across defined mechanical, electrical, thermal, and software interfaces enables the fast phase-in of new technologies within existing platforms.

17:40 Close of Day

THURSDAY 21 MAY

xEV BATTERY TECHNOLOGY *(CONT.)*

8:55 Organiser's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

9:00 Chairperson's Remarks
Philipp Milanes, Director Sales, PTE Sales, AVL

9:05 Hybrid Battery Enclosure: Integrating Cooling Plate in One-Shot Injection-Moulding Process
Rene Krouss, Development Engineer, Innovation & Research, Textron Inc.
Innovative integration of an aluminum cooling plate, serving as the enclosure base, into a thermoplastic battery housing via one-shot injection moulding enables significant cost and weight reduction. The design supports C2P/C2M architectures, reduces pack Z-height, and enhances mechanical functionality. Proven manufacturability, validated performance, and safety meet all housing requirements while maintaining thermal performance from aluminum cold plates.

9:35 Advances in Novel Pressure Management Systems for Conventional and Solid-State Battery Systems
Javier Zurbitu, PhD, CTO, BATTBELT
Internal pressure management within battery packs is gaining critical relevance due to its direct implications for operational safety, durability, and overall performance. Moreover, emerging battery technologies introduce additional challenges associated with higher internal pressures and increased cell swelling. This presentation addresses recent technological developments for internal pressure control in both conventional lithium-ion systems and next-generation solid-state battery systems, without compromising energy density, packaging efficiency, or cost competitiveness.

10:05 Progress in Solid-State Li-Air Batteries: From Scientific Concepts to Engineering Prototypes
Tim Lin, PhD, CTO and Founder, Solid Energies
Lithium-air batteries (LaB) offer theoretical energy density of ~5200 Wh/kg through complete 4-electron oxygen reduction to Li2O, rivaling gasoline's energy content. Current liquid-electrolyte LaBs yield incomplete reduction, delivering a fraction of theoretical capacity. Solid Energies Inc. advance solid-state lithium-air battery (SSLaB) technology, overcoming these limitations through the integration of a novel polymer-based solid-state electrolyte with multiscale porous cathodes, transforming SSLaB technology from laboratory concept to practical ultrahigh-energy-density products.

8:30 Registration and Morning Coffee

10:35 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

xEV BATTERY TECHNOLOGY *(CONT.)*

11:35 From Regulation to Technology to Business: A Holistic Approach to Sustainability in Battery Development
Andreas Braun, Product Area Manager, Battery Systems & Methodology, AVL Deutschland GmbH
Sustainability in battery development poses a major challenge: aligning regulations, engineering, and business models under growing complexity. This presentation introduces a structured approach that helps organisations map challenges and opportunities across these dimensions. Attendees will learn how this framework supports compliance, design-for-x, digitally enabled lifecycle strategies, and resilience—providing a practical roadmap to turn sustainability requirements into actionable solutions and competitive advantage.

12:05 Global LFP Adoption in BEVs – A Game Changer for Margin Parity?
Dennis Gallus, Principal, Roland Berger GmbH
Price parity between battery electric vehicles (BEVs) and internal combustion engines (ICE) remains the critical enabler for achieving OEM BEV penetration targets. This presentation synthesizes current market developments, OEM strategic responses, and the geopolitical trade-offs shaping the pathway to margin parity in a LFP-centric BEV landscape.

xEV GLOBAL MARKET OUTLOOK

12:35 Sodium and Beyond: Novel Chemistries for Automotive Applications
Chloe Herrera, Senior Analyst, Lux Research
Cost and supply chain security has inspired an uptick in battery chemistries alternatives to Li-ion. In particular, Na-ion is poised to directly compete with Li-ion in terms of cost and application suitability for certain use cases. This talk will provide Lux Research's outlook on the cost and innovation of Na-ion batteries and beyond, and provide an actionable framework to build up the industry.

13:05 Networking Luncheon (Sponsorship Opportunity Available

13:45 Dessert Break in the Exhibit Hall with Last Chance for Poster Viewing

xEV GLOBAL MARKET OUTLOOK *(CONT.)*

14:15 Chairperson's Remarks
Dennis Gallus, Principal, Roland Berger GmbH

14:20 Forecasting 2030 Battery Costs—Impact of Production Cost on Future Battery Landscape
Shivangee Chauhan, Research Analyst, Benchmark Mineral Intelligence
The session will examine the key drivers of battery cost reduction, with recent Chinese developments used as a platform for identifying potential opportunities for Western producers to optimise production cost. Utilising Benchmark's mine-to-grid battery supply chain coverage, these insights into 2030 battery cost will inform potential demand scenarios for technology adoption, assessing the cost competitiveness of alternative technologies including sodium ion and solid-state batteries.

14:50 A Comprehensive Overview of Global start-ups for Advanced Air Mobility
Christian Scheidler, Editor-in-Chief, EV-portal
An electric revolution is taking place in the aircraft sector. Rapid advances in the energy density of lithium-ion cells are enabling a new category of electric aircraft that can take off and land vertically like a helicopter, but with less noise, no emissions, at a much lower price, and with greater safety.

15:20 Forecasting the Future of Battery Technology
Jard Van Ingen, CEO & Co-Founder, Focus LLC
Breakthroughs in battery technology are accelerating, but leaders still struggle to see which chemistry or architecture will dominate next. This session introduces a first-of-its-kind agentic forecasting method developed by GetFocus from MIT research that uses global patent data, NLP, and improvement-rate modeling to quantify the true pace of battery innovation. Attendees will gain a clear, data-driven view of where xEV battery technology is heading and how fast.

15:50 Session Break

ROADMAP TO 2040

16:05 Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

16:10 PANEL DISCUSSION: Roadmap to 2040: Opportunities & Illusions





Moderator: Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster
This panel of experts will discuss forecasts for 2040, providing insights about opportunities, challenges, barriers, and key factors shaping the 2040 roadmap and where the industry is going in the near term.

Panelists:
Wolfgang Bernhart, Senior Partner, Global Co-Head Advanced Technology Center, Roland Berger GmbH
Otmar Bitsche, PhD, Senior Advisor, P3; Formerly Director, E-Mobility, Porsche AG
Fabrice Renard, Senior Advisor, Avicenne Energy
Stefan Koller, Senior Vice President, Material R&D and Pre-Development, VARTA Innovation GmbH

17:05 Close of Conference

GLOBAL BATTERY RAW MATERIALS

Balancing Supply, Demand & Costs for Battery Component Materials

WEDNESDAY 20 MAY

13:20 Registration Open

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

GLOBAL DEMAND FOR BATTERY RAW MATERIALS

14:40 Organiser's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

14:45 Chairperson's Remarks
Stefan Debruyne, Director of External Affairs, SQM International

14:50 Due Diligence in the EU Batteries Regulation—2026 Update
Jean-Baptiste Collovray, Manager, Kumi Consulting
Despite the delay until 2027, the EU Batteries Regulation still includes one of the first regulatory obligations to implement risk-based due diligence in line with OECD frameworks. Profound changes to current practices are expected. About one year before the due diligence obligations' application, learn the latest about the current status of EUBR due diligence, existing practice and risk-based due diligence—practical insights and how to get started—if you haven't?

15:20 Sustainability Strategies and Perspectives along the Battery Value Chain
Maximilian Stephan, Research Associate, Fraunhofer Institute for Systems and Innovation Research ISI
Sustainability along the battery value chains, as well as resilient battery ecosystems, are gaining momentum in European ambitions. This talk presents a roadmap for sustainable batteries that builds on the circular economy 9R framework. The roadmap prioritises high-impact and feasible 9R pathways to strengthen Europe's battery resilience and competitiveness and accumulates market assessments, and R&D, industrial, and policy actions.

15:50 Fluorine: The Backbone of Battery Materials
Carl Thoemmes, Business Deveopment Director, Orbia Fluor & Energy Materials
Fluorine is one of the most critical—and often underappreciated—elements in modern lithium ion battery technology. In this presentation, we examine fluorine's role as a backbone material in the lithium ion battery ecosystem, beginning with its fundamental chemical properties and extending through its application in key battery components. Particular focus is placed on fluorine based materials that directly influence energy density, cycle life, thermal stability, and high voltage operation.

16:20 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

16:50 How Local Value-Chain Initiatives Will Reshape Battery-Materials Markets
David Steven Jacoby, Managing Director, Energy Consulting, Boston Strategies International
It's no secret that many countries aim to reduce dependence on foreign sources of critical minerals by re-shoring their value chains. This presentation analyses how tariff negotiations and strategic trade realignments will impact mining, processing, and assembly of batteries and other products reliant on cobalt, nickel, graphite, lithium, and rare earths across three scenarios—growth, comparative advantage, and technology standardisation—highlighting implications for CFOs, CEOs, and CTOs investing in value chain continuity.

MARKET OPPORTUNITIES IN BATTERY RAW MATERIALS

17:20 Lithium, Cobalt, Graphite: Trends and Fundamentals for Key Battery-Metals Trio
Lukasz Bednarski, Principal Analyst, S&P Global
In this presentation, we will delve into the critical trio of battery metals: lithium, cobalt, and graphite. We will explore the current market dynamics for these essential metals, highlighting key trends and providing forecasts for their supply & demand fundamentals and prices.

17:50 The LFP Effect: Manufacturing Breakthroughs Are Rewriting Lithium Investing
Cameron Hughes, Battery Market Analyst, CRU Group
Chinese LFP producers are able to now use synthesis routes that take lithium chloride/sulphate directly, skipping full carbonate conversion. This lowers project capex, boosts yields, and streamlines logistics—reshaping costs and timelines through the industry. As intermediates proliferate, carbonate's benchmark role fades, favoring investments in those linked directly to the Chinese value chain and those willing to adapt.

18:20 Close of Day

THURSDAY 21 MAY

8:30 Registration and Morning Coffee

MARKET OPPORTUNITIES IN BATTERY RAW MATERIALS *(CONT.)*

8:55 Organizer's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

9:00 Chairperson's Remarks
Richard Clark, Senior Adviser, Allied Graphite

9:05 China's Lithium-Battery Market Update
Floyd Ping, Senior Consulting Manager, Battery Market, SMM
Rapid growth of global lithium-ion battery demand, geopolitical factors, and technological development have a great impact on the lithium-ion battery industry, specifically on raw materials. Heavy investment in the raw materials sector could lead to overcapacity once EV sales' growth is lower than expected. Different types of batteries also could reduce dependency on certain raw materials. Huge fluctuation in raw-materials prices could deeply damage the battery industry and beyond.

9:35 Sustainable Lithium Supply—SQM at the Forefront of Transparent Mining Assurance
Stefan Debruyne, Director of External Affairs, SQM International
This presentation highlights the vital role of innovation in driving sustainable mobility, with SQM at the forefront as the world's leading lithium producer. We will explore SQM's commitment to ESG principles, resource-efficient production, and innovative efforts to reduce its footprint. Emphasis will also be placed on SQM's collaborative work with indigenous communities, focusing on value sharing and co-creation, alongside insights into the growing lithium demand and SQM's capacity expansion.

10:05 Nickel Market Review: Trends and Developments in 2026
Francisco Pinto, Manager of Statistical Analysis, International Nickel Study Group
The presentation will review recent developments in the global nickel market, covering mine and primary nickel production, usage, and international trade. It will discuss factors likely to influence the market in 2026 and beyond. The analysis will draw on INSG's monthly data and the short-term forecast discussed and approved by its member countries.

10:35 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

11:05 Evolving Supply Chains from Next-Generation Battery Technologies
Max Reid, Head of Battery Technology and Costs, CRU Group
Upcoming innovations in battery chemistries and technologies promise improvements in performance, cost, and battery safety. However, they have the potential to upheave traditional supply chains via new routes and new players. This presentation analyses the potential demand for new technologies, including semi-solid, all-solid-state, LMFP, and LMR, and their impact on raw material demand and supply chains.

11:35 Cathode Active Materials: The Strategic Core of Performance, Cost, and Sustainability
Tom Van Bellinghen, Founder, Lithink
Cathode active materials (CAM) occupy a pivotal position in lithium-ion battery systems, as they are the single most influential component across all three core design criteria: performance, cost, and CO_2 footprint. Understanding cathode materials—both from a technical and a supply-chain perspective—is therefore essential for anyone working to advance next-generation battery technologies or scale-up sustainable energy storage solutions.

12:05 Presentation to be Announced

13:05 Networking Luncheon (Sponsorship Opportunity Available

13:45 Dessert Break in the Exhibit Hall with Last Chance for Poster Viewing

MARKET OPPORTUNITIES IN BATTERY RAW MATERIALS *(CONT.)*

14:15 Chairperson's Remarks
Francisco Pinto, Manager of Statistical Analysis, International Nickel Study Group

14:20 Anode Materials for Lithium-ion Batteries—The Past, the Present, and the Future
Richard Clark, Senior Adviser, Allied Graphite
China dominates the lithium-ion battery anode space, but the West wants supply security. We have ongoing competition at the anode between synthetic and natural graphite and various forms of silicon-containing materials, as well as a reemergence of lithium. This presentation will provide a coherent projection of the future, based on the presenter's work of more than 25 years in the anode space.

14:50 Critical Materials and Supply-Chain Constraints
Aline Soares, PhD, Senior Market Researcher, Project Blue
Supply chain issues facing battery raw materials will be explored in detail, along with extraction and processing costs of midstream battery materials and downstream battery cells. As downstream production ramps in Europe and North America this decade, underlying supply chains will become stretched, opening the door for challenge but also opportunity. These themes and an overall market-demand outlook for the sector will be presented.

15:20 Role of Kemira in Building European pCAM Production
Piritta Salonen, Principal Scientist, Research & Innovation, Kemira
Europe's battery sector faces limited local production and heavy reliance on imports from Asia. Kemira, with over a century of experience in chemistry and proven expertise in metal salts for water treatment, is applying this knowledge to develop sustainable iron-based materials for battery applications such as LFP. This presentation will discuss how Kemira's portfolio and R&D enable regional production and strengthen Europe's position in the global battery market.

15:50 Session Break

ROADMAP TO 2040

16:05 Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

16:10 PANEL DISCUSSION: Roadmap to 2040: Opportunities & Illusions





Moderator: Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster
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Fabrice Renard, Senior Advisor, Avicenne Energy
Stefan Koller, Senior Vice President, Material R&D and Pre-Development, VARTA Innovation GmbH

17:05 Close of Conference

AI FOR ENERGY STORAGE

Optimising Future Energy-Storage Systems with Artificial Intelligence

WEDNESDAY 20 MAY

13:20 Registration Open

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

AI-ACCELERATED BATTERY DEVELOPMENT

14:40 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

14:45 Chairperson's Remarks
Weihan Li, Junior Professor, RWTH Aachen University

14:50 Characterisation 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 characterisation and multimodal reconstruction to data-driven design and optimisation. Using real industrial case studies, we'll show how Polaron's platform accelerates the path to higher-performing battery materials.

15:20 Integrating AI/ML, Physics, and Real-World Test Data for Battery Material Development—Without Overtraining
Brian Sisk, PhD, CTO, Sepion Technologies

Artificial intelligence and machine learning have transformed battery research, progressing integration of computational techniques with chemistry/physics. Starting with quantitative models, progressing through multiphysics models and "digital twins," we now see AI/ML being used as primary research tools. Without physics-based models and real-world test data, we incur the risk that "models training models" loses fidelity. This presentation focuses on the integration of AI/ML, physics, and testing to reduce overtraining risk.

15:50 Foundation Models and Agentic AI for Intelligent Battery Fleets eatron
Can Kurtulus, CTO, Technology & Innovation, Eatron Technologies

This talk presents Eatron's AI-SOC and AI-RUL foundation models for accurate SOC, SOH, and RUL prediction across chemistries and battery architectures. Trained on diverse lab and fleet data, they enable rapid adaptation with minimal fine-tuning. Combined with agentic AI workflows that generate autonomous insights across fleets, they pave the way for truly AI-native, self-optimizing battery systems.

16:20 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

AI FOR BATTERY RECYCLING

16:50 AI-Powered Identification and Sorting of Unlabeled Lithium-ion Batteries
Elixabete Ayerbe Olano, PhD, Team Leader, Modelling and Postmortem Analysis, FDTN CIDETEC

Industrial battery sorting demands fast, non-destructive, and cost-effective diagnostics, yet conventional methods are often too slow or resource-intensive. CIDETEC explored simple voltage measurements combined with explainable machine-learning strategies to classify lithium-ion chemistries and estimate state-of-health (SOH) from different C-rate data. This approach captures degradation trends and supports cell reuse decisions, offering a scalable, practical solution for automated, high-throughput battery diagnostics without requiring extensive historical data or laboratory testing.

AI FOR BATTERY MANUFACTURING APPLICATIONS

17:20 AI-Driven Anomaly Detection in Battery-Cell Manufacturing Using Scanning Acoustic Microscopy
Moritz Kroll, Junior Research Group Leader, University of Freiburg and Fraunhofer ISE

Manufacturing anomalies in battery cells can compromise safety and longevity of energy storage systems. Scanning acoustic microscopy offers a promising approach for rapid, cost-effective, and reliable in-line inspection of battery cells. Unsupervised feature extraction from ultrasonic time-series data, combined with clustering algorithms, enables automated anomaly identification, localisation, and classification, reducing production waste and enhancing battery safety.

17:50 Battery Manufacturing Process Modelling and Optimisation Based on a Hybrid (AI and Physics-Based) Approach
Mona Faraji-Niri, PhD, Assistant Professor, Energy Systems, Energy Innovation Centre, University of Warwick

The manufacturing process of batteries has about 140 steps and almost 600 variables, which make the optimisation of battery performance against the manufacturing process very challenging. AI techniques provide an opportunity to formulate and understand the impact of key variables, and eventually, when combined with physics-based models and experimental practices, can support products' predictability and reduce the number of tests and experiments needed for their design and optimisation.

18:20 Close of Day

THURSDAY 21 MAY

8:30 Registration and Morning Coffee

LEVERAGING REAL-WORLD BATTERY DATA

8:55 Organiser's Remarks
Victoria Mosolgo, Conference Producer, Cambridge EnerTech

9:00 Chairperson's Remarks
Brian Sisk, PhD, CTO, Sepion Technologies

9:05 What Battery Field Data Can Tell Us and How AI Helps Us Hear It
Weihan Li, Junior Professor, RWTH Aachen University

Field data from batteries offers an enormous and often underused opportunity to accelerate innovation in battery technology. In this talk, I will explore the key challenges and emerging opportunities associated with leveraging real-world operational data throughout the battery development cycle.

9:35 BMINN: Learning Chemical Potentials of Battery Electrodes from Routine Current-Voltage Data
Changfu Zou, PhD, Professor, Electrical Engineering, Chalmers University of Technology

Phase transitions in battery electrodes govern rate performance, safety, and lifetime, yet their underlying thermodynamics are typically accessible only through specialised cells and costly *operando* characterisation. Here, we introduce Bayesian model-integrated neural networks (BMINN) to reconstruct thermodynamically consistent electrode chemical potentials and Gibbs free energies directly from cycling data. The obtained detailed free-energy landscapes accurately capture staging structures, energy barriers, and phase-separation dynamics of graphite electrodes.

10:05 Leveraging AI to Accelerate Diagnostics of Ageing Modes towards Precise Mitigation of Battery Degradation
Haijun Ruan, PhD, Assistant Professor, Institute for Clean Growth & Future Mobility, Coventry University
Diagnosing battery degradation is challenging due to the complex, nonlinear, and path-dependent nature of the problem. We develop a rapid, generalised diagnostic that quantifies degradation modes of batteries aged under various conditions, without performing extensive ageing experiments for AI training. The identified modes are employed to advance derating control, effectively managing fast degradation. This work highlights the value of AI in identifying degradation modes and mitigating battery degradation.

10:35 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

AI FOR BATTERY MONITORING

11:05 Fast Charge and ROM-AI, Bridging the Gap between Cell and Pack Design
Philippe Desprez, PhD, Principal Expert, Automotive Cells Company (ACC)
Fast-charge management is a must to democratise EV usage. Charging time is the companion criterion to embedded energy for increasing EV acceptance. We will discuss experimental high-throughput screening approach advantages and challenges. Then fast-charge digital-twin approach is presented with use of ROM-AI to connect EV fast-charge time to cell design and material choice. Finally, AI capability for design exploration and guidance towards global design optimization.

11:35 Connecting Patterns to Principles: Explainable AI for Monitoring Battery Health
Eibar J. Flores, Research Scientist, SINTEF Industry
We highlight the role of differential curves as vital signs of battery health. Moving beyond low-rate characterisation, we show that data-driven methods can uncover patterns from high-rate differential capacity. Explainable AI attributes poor cell health to phase transitions in active materials, linking material behavior to operational outcomes. Using AI to connect data patterns to electrochemical principles supports the diagnosis of battery health and guides design choices for longer battery lifetime.

12:05 Intelligent Battery-Management System for Li-Metal Batteries
Kostyantyn Khomutov, Co-Founder and CEO, GBatteries
Li-metal batteries offer exceptional energy density but face safety and cycle-life challenges. GBatteries' Intelligent Battery Management System uses adaptive pulse-based control to enhance performance, reduce degradation, and enable prediction, detection, and prevention of safety events. Validated in drone and aerospace applications, it improves runtime by up to 63%. This session explores how intelligent control accelerates the safe adoption of Li-metal batteries for electric mobility.

12:35 From AI Tools to Battery Agents: How Molecular Universe Is Turning Battery Challenges into Solvable Workflows
Scott Carlyle, Vice President Business Development, Business Development, SES AI Corp
This talk introduces the next step in AI-driven battery development. How AI is compressing the path from identifying new molecules to validating candidates and testing them in cells. The talk will tease a future where battery R&D is not just supported by AI tools, but actively advanced by specialised AI agents focused on challenges such as electrolyte design, safety, lifetime, fast charge, and performance optimisation.

13:05 Networking Luncheon (Sponsorship Opportunity Available

13:45 Dessert Break in the Exhibit Hall with Last Chance for Poster Viewing

LEVERAGING REAL-WORLD BATTERY DATA *(CONT.)*

14:15 Chairperson's Remarks
Mona Faraji-Niri, PhD, Assistant Professor, Energy Systems, Energy Innovation Centre, University of Warwick

14:20 Data-Driven Battery-Safety Prediction
Jun Xu, PhD, Associate Professor Mechanical Engineering, Spencer Lab, University of Delaware
This work unifies physics-based electrochemo-mechanical modelling with machine-learning tools to rapidly identify battery safety risks, including defective cells, internal short circuits, and thermal-runaway precursors. Large datasets generated from coupled mechanical and electrochemical simulations enable accurate risk classification across states of charge, loading conditions, and cell formats. The work demonstrates a powerful physics-informed, data-driven approach for real-time battery safety assessment.

14:50 Understanding Forecasting Performance for Market Participation of Battery Energy Storage Systems
Paolo Gabrielli, Principal Engineer, Energy Management & Markets, Huawei
This contribution investigates the performance of electricity price forecasting when using forecasts to maximize the revenue of battery energy storage systems (BESS) into multiple electricity markets, including wholesale electricity markets as well as frequency reserve markets. More specifically, we study the correlation between forecasting performance and BESS profitability, we investigate several performance metrics, and we assess which performance metrics are most suited when focusing on energy market applications.

15:20 AI-Based High-Precision Time Series Regression and Its Application in Energy Storage
Michael Grill, Head of Artificial Intelligence & Simulation, FKFS
Many issues in design, monitoring, and optimisation of battery storage systems are based on time series, for example, from sensor signals. The real systems behind the sensor are inherently inertial. In battery cells, these inertia effects often occur simultaneously on different scales (e.g. electrochemical processes and thermal inertia). AI approaches must therefore be able to deal with inertia effectively. Possible solutions and applications will be presented in the lecture.

15:50 Session Break

ROADMAP TO 2040

16:05 Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

16:10 PANEL DISCUSSION: Roadmap to 2040: Opportunities & Illusions





Moderator: Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster
This panel of experts will discuss forecasts for 2040, providing insights about opportunities, challenges, barriers, and key factors shaping the 2040 roadmap and where the industry is going in the near term.

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Fabrice Renard, Senior Advisor, Avicenne Energy
Stefan Koller, Senior Vice President, Material R&D and Pre-Development, VARTA Innovation GmbH

17:05 Close of Conference

WEDNESDAY 20 MAY

13:20 Registration Open

13:20 Networking Luncheon (Sponsor Opportunity Available)

14:10 Dessert Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

SCALING GLOBAL BATTERY PRODUCTION

14:40 Organizer's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

14:45 Chairperson's Remarks
Peter Lamp, PhD, Senior Strategic Advisor, Scires Battery Technologies GmbH

14:50 M&A and IPO trends in the Battery Energy industry
John Kwon, General Counsel of Global Legal & Strategy, Contemporary Amperex Technology Limited (CATL)
This presentation will current strategies for M&A and IPO trends in the battery energy industry.

15:20 Mass Production Processes for Semi-Solid and Solid-State Batteries: From the "Laboratory" to the "Production Line"
Mark Lu, PhD, Senior Industrial Analyst, Industrial Economics & Knowledge Center, Industrial Technology Research Institute
The solid-state battery market is beginning to differentiate between "mass-producible semi-solid-state" and "all-solid-state batteries under development." Semi-solid-state batteries were delivered and installed in vehicles in China between 2024 and 2025, with common manufacturing processes employing "in-situ curing" technology to solve the solid-solid interface contact problem. Some Chinese manufacturers are also preparing continuous manufacturing processes for all-solid-state batteries; this report will be updated with the latest developments in 2026.

15:50 Dry Coating of High-Performance Lithium-ion Cathodes
Alexander Hewitt
Rory McNulty, Product & Market Strategy Lead, Anaphite
Conventional slurry mixing and coating techniques require the use of energy-intensive drying processes on a vast scale, resulting in huge capex and energetic costs with significant carbon emissions. In this talk we will present case studies that show techniques to improve the process for producing a composite electrode material for dry coating, whilst maximising cell performance. This process will help cell manufacturers harness the benefits of dry coating at scale.

16:20 Refreshment Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

16:50 The European Battery Industry's Outlook against Chinese Market Dominance and Declining EV Sales Growth
Wolfgang Bernhart, Senior Partner, Global Co-Head Advanced Technology Center, Roland Berger GmbH
Outlook on achieving manufacturing targets with on-demand supply balance for Li, Ni, Co, Mn, and graphite; alternative feedstock and processing routes; comparing costs and CO2 emission; strategies to secure critical raw materials adopted by major players; framework for holistic evaluation of manufacturing strategies.

17:20 Lessons Learned in Battery Manufacturing Scale-Up and How UKBIC Bridge the Gap between R&D and Commercialization Scale-Up
Yahya Alvar, Head, Business Development, UK Battery Industrialization Center
This talk will present the lessons learned in battery manufacturing scale-up and how UKBIC bridges the gap between R&D and commercialisation scale-up.

17:50 Regulatory and Market Developments for Batteries and Battery Raw Materials—and Their Contractual and Financial Implications
Thomas Voland, Partner, Clifford Chance Partnerschaft mbB
The regulatory framework and the markets for batteries and battery raw materials are changing rapidly. After years of tightening regulatory requirements lawmakers are now deregulating the product and manufacturing requirements. However, new challenges have arisen, e.g., in relation to trade restrictions. In this session, we will provide a snapshot of legal evolutions in the battery supply chain and discuss, amongst others, state intervention, contractual implications and impacts on financing of projects.

18:20 Close of Day

THURSDAY 21 MAY

8:30 Registration and Morning Coffee

SCALING GLOBAL BATTERY PRODUCTION

8:55 Organiser's Remarks Talk Title to be Announced
Craig Wohlers, General Manager, Cambridge EnerTech

9:00 Chairperson's Remarks
Wolfgang Bernhart, Senior Partner, Global Co-Head Advanced Technology Center, Roland Berger GmbH

9:05 European Battery Ecosystem - Status and Challenge
Peter Lamp, PhD, Senior Strategic Advisor, Scires Battery Technologies GmbH
This presentation will cover the present status of an European battery ecosystem and address the challenges to grow it to a sustainable, profitable business for the involved industries along the value chain. Present hurdles and possible measures to improve the situation are discussed.

9:35 Why LFP Economics in Europe Are Still Misunderstood: Lessons from Real Gigafactory Cost Models
Fabrice Renard, Senior Advisor, Avicenne Energy
This talk would focus on the gap between perceived and actual LFP competitiveness in Europe, drawing on detailed cost models used to advise European gigafactory projects. It would highlight where cost assumptions tend to break down, how LFP compares to NMC under European industrial conditions, and what this really means for OEM and cell maker decision-making.

10:05 Setting up a Gigafactory – Regulatory Compliance and Risk Management
Pál Lászlófi, Director, CATL, Hungary
The presentation covers the technical, regulatory,, and social impacts of gigafactories in Hungary and Europe. Additionally, it provides an overview of the complexities in permitting and regulatory compliance with a view to the related SEVESO and IPPC authorizations.

10:35 Coffee Break in the Exhibit Hall with Poster Viewing
(Sponsorship Opportunity Available)

11:05 Decoding Success: Key Differentiators in Battery Factory Project Outcomes—and What That Means for the Next Generation of Gigafactories
Eric Boschert, Battery Manufacturing Expert, Jacobs Engineering
This talk explores what truly separates successful battery factory projects from those that struggle, drawing on lessons learned across Europe and North America. We'll examine how rapid technology evolution—from NMC to LFP and beyond—is reshaping manufacturing strategies and driving new design requirements.

11:25 Morocco - Emerging Battery Hub
Idriss Alami, Managing Partner, EV Battery, ALEXEC Consulting Sp z o o
Morocco is emerging as a new battery hub close to Europe providing opportunities for vertical integration and closed loop campaigns. This

presentation shall give an overview about the ongoing battery projects and landscape in Morocco and related opportunities in regards to Manufacturing, Sourcing, Recycling and how Morocco will make the global battery supply chain more resilient.

11:45 Presentation to be Announced

12:05 Global Cost Disparities in Battery Cell Production: A China-Europe Comparison
Luke Sweeney, Lead Analyst Battery Cost Modelling, Fastmarkets
We will introduce Fastmarkets' Battery Cost Model in analysing global disparities in battery cell production, specifically comparing Europe to China. And, in doing so, introduce our integrated Cathode Active Material (CAM) cost model to outline CAM's role in overall cell economics. Finally, we'll provide a forward-looking forecast, projecting battery cell production costs over the next five years, highlighting key trends and influencing factors shaping the industry.

12:35 Navigating Battery Industry Risks
Simon Engelke, PhD, Founder & Chair, Battery Associates
The battery industry faces significant risks across supply chain, commercial, and societal impact dimensions. This presentation explores the key challenges of raw material access, financing, and cell sourcing strategies. It also highlights key commercial risks like warranties and second-life suitability, alongside pressing concerns such as battery fires and grid stability. Attendees will gain insights on emerging strategies to address these challenges and drive sustainable growth of the battery sector.

13:05 Networking Luncheon (Sponsorship Opportunity Available

13:45 Dessert Break in the Exhibit Hall with Last Chance for Poster Viewing

INNOVATION IN R&D FOR MANUFACTURING

14:15 Chairperson's Remarks
Max Reid, Head of Battery Technology and Costs, CRU Group

14:20 Generative Engineering & Digital Twins for Scalable Battery Innovation
Katharina Gerber, Engagement Manager for the Battery Industry, Siemens
This presentation explains how global battery manufacturers accelerate innovation and scale production using advanced simulation tools. It covers the entire process from material design through slurry mixing, coating, drying, calendaring, and cell formation. By combining physics-based models with AI-driven optimisation, manufacturers achieve rapid design iterations, prevent defects, automate processes, reduce costs, improve quality, and shorten time-to-market for next-generation battery technologies.

14:50 Advanced Mechanical Components for Current & Future Cells
Peter Kritzer, PhD, Principal Expert E Mobility & Batteries, Freudenberg Sealing Technologies GmbH & Co KG
Mechanical cell components offer a significant, but currently underestimated potential to improve cells. This presentation gives an overview of Freudenberg´s product portfolio for Lithium Cells. Presented products are Cell Caps and Cell Stack Envelopes. In each case a "Generation 1" is presented, which can be implemented in current projects. The "Generations 2" will show, how cell performance like safety and cycle life can be improved by lateral thinking approaches.

15:15 Process Control of Twin-Screw Extrusion for Performant, Continuous Electrode Mixing
Philip Bellchambers, PhD, Research Fellow, WMG, University Of Warwick
Precise, controlled, repeatable and traceable electrode mixing is fundamental to maximising efficiency and yield, and cannot be compensated for by consolidation during calendering. This talk presents an overview of current research on effective control of electrode microstructure through continuous extrusion processing, quantifying the impact upon processability, sustainability and electrochemistry. Examples demonstrate the often-overlooked significance of electrode mixing when screening materials, rapid process development, and process advantages for large-scale manufacturing.

15:50 Session Break

ROADMAP TO 2040

16:05 Chairperson's Remarks
Craig Wohlers, General Manager, Cambridge EnerTech

16:10 PANEL DISCUSSION: Roadmap to 2040: Opportunities & Illusions





Moderator: Martin Winter, PhD, Director & Professor, Electrochemical Energy Technology, University of Muenster
This panel of experts will discuss forecasts for 2040, providing insights about opportunities, challenges, barriers, and key factors shaping the 2040 roadmap and where the industry is going in the near term.

Panelists:
Wolfgang Bernhart, Senior Partner, Global Co-Head Advanced Technology Center, Roland Berger GmbH
Otmar Bitsche, PhD, Senior Advisor, P3; Formerly Director, E-Mobility, Porsche AG
Fabrice Renard, Senior Advisor, Avicenne Energy
Stefan Koller, Senior Vice President, Material R&D and Pre-Development, VARTA Innovation GmbH

17:05 Close of Conference



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- Your poster will be seen by this exclusive group of technical and business development executives from major European and international battery companies, automotive technology centers and the global materials and energy industries
- Discuss your research and collaborate with interested attendees and speakers
- Your poster will be published in our conference materials
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- Roland Matthé, Stellantis

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- During the event, your company will host an Invitation-only VIP Dinner for 10 – 12 guests and up to 3 representatives from your company. We can accommodate up to 15 seats total. This is a strict cap.
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- Approximately 1-2 months from the start of the event, your CSS will send you and your team an introductory email including:
  - o Information on the selected restaurant.
  - o A blind pre-registration list of event attendees. (title, department, company, location)
  - o A draft invitation to be sent to your prospective guests.
  - o A link to a spreadsheet hosting your confirmed guest list.
- One-time use of post-conference mailing lists (for a physical mailing) using a 3rd party mail house (GDPR Compliant)
- Company listing including contact information and 50-word description in Conference Materials (deadlines permitting)

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- Sponsor of Coffee or Refreshment Break
- Sponsor will have the opportunity to provide a 2-3 minute video to be displayed in the meeting rooms prior to the break
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- One booth staff passes

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- An 8' (2 ½ meters) Display Board will be prominently displayed at the event (sponsor will submit artwork to CET
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For more information regarding sponsorship opportunities, please contact:



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Sherry Johnson
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Companies L-Z
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Senior Business Development Manager
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reymael@cambridgeenertech.com

AdvancedAutoBat.com/Europe

Sample List of 2025 Delegates

3M Co, Sr Application Engineer, EMEA ePowertrain Grp

Amazon Robotics, Sr Electrical Engineer, Hardware Design

American Honda Motor Co Inc, Sr Project Engineer, PEM

Arkema, R&D Engineer, CNT & Battery Applications

Asahi Kasei Corp, Project Dev Engineer, Battery Materials

Belenos Clean Power Holding Ltd, Head, Battery

BMW Grp, Head, Research Battery Technology

Cabot Corp, New Bus Dev Mgr

CEA, Research Engineer, LITEN

Daimler Truck AG, R&D Engineer, Product Engineering

Deutsches Elektronen Synchrotron DESY, Beamline Scientist, FS PETRA D

Dow Chemical Co, Instrument Technician

ExxonMobil Corp, Customer & Application Tech Dev Mgr, Carbon Materials Venture

Ferrari SpA, Battery Cell Responsible, R&D

Fraunhofer Institute for Solar Energy, Process Engineer, Battery Material Tech & Scale Up & Electric

GDI, Process Engineer, PECVD

General Motors Co, Sr Researcher, Battery Cell & Pack

Hankook & Company Co Ltd, Team Mgr, R&D & Quality

Henkel KGaA, Specialist Sustainable Batteries, Product Dev
Battery Solutions

Hitachi Ltd, Chief Researcher, R&D Grp

Honda R&D Co Ltd, Staff Engineer, Battery Research & Dev

Hyundai MOBIS, Principal Research Engineer, HEV Battery System Dev Team

JX Nippon Oil & Energy Corp, Researcher, R&D

Korea Electronics Technology Institute, Principle Engineer, Advanced Batteries Research Ctr

Lucid Motors Inc, Mgr, Battery Cell Lifetime & Parameterization

Mercedes Benz AG, Head, HV Battery System Dev

Nissan Motor Co Ltd, Battery Research Engineer, Research & Advanced Engineering

Panasonic R&D Co of America, Engineering Mgr, Energy Storage R&D

Paraclete Energy Inc, VP Special Projects

Porsche AG, Dir Battery Systems, Electrical Electronic Engineering

PwC, Dir

QuantumScape Corp, Sr Engineer, Cell Dev

Robert Bosch GmbH, Sr Expert, Mobility Aftermarket

S&P Global, Sr Analyst Critical Minerals, Metals & Mining

Samsung SDI Europe GmbH, R&D Scientist, Next Generation Batteries

Shell Deutschland GmbH, Global Product Mgr, E Coolants & Thermal Fluids

Sherwin Williams Co, Global Market Mgr & Energy & EV Battery,
General Industrial

Siemens AG, Project Mgr, R&D

Tata Motors Ltd, Lead Engineer, Battery Dev & Cell Integration

Toshiba Electronics Europe GmbH, Sr Mgr, Battery Marketing

Toyota Motor Europe, Sr Engineer, Advanced Powertrain

Volkswagen AG, Battery Cell Specialist, Li ion Battery Cells & Pre Dev

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