**CONFERENCE & EXPO |** SERIES

**11-JUL**<br/>2024

**STUTTGART** • GERMANY FILDERHALLE CONVENTION & EVENT CENTER

# BATTERY RECYCLING

## ELECTRIC VEHICLE SUMMIT EUROPE

| TECHNOLOGIES | PROCESSES | CIRCULAR ECONOMY | REGULATION | CHALLENGES

**A Technically-led Agenda Curated in Collaboration with** Europes Leading OEMs; Tackling the Pressing Challenges and Expansive Opportunities In EV Battery Recycling

DON'T MISS OUT! OUR SUPER EARLY BIRD RATE ENDS 24<sup>TH</sup> MAY 2024



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#### JULY 11TH 2024 I STUTTGART

😂 CONFERENCE & EXPO I SERIES

EUROPE'S LEADING CONFERENCE FOR EV BATTERY RECYCLING UNITING INDUSTRY PIONEERS, INNOVATORS, AND EXPERTS – **JOIN US IN JULY 2024! Empower sustainability and discover breakthroughs in Battery Recycling.** 

Welcome to the EV Battery Recycling Innovation Summit Europe! Building on the resounding success of previous events on Battery Thermal Management and Advanced Battery Technologies across Europe and North America, EVBRIS EUROPE emerges as the foremost technical conference dedicated exclusively to advancing the future of battery recycling and engineering within the EV industry.

Co-located with the EV Battery Second Life Conference, set in the vibrant city of Stuttgart, Germany, this summit brings together a diverse array of technical experts from across Europe and beyond. Together, they will provide a comprehensive overview of the challenges driving battery recycling, regulation, innovation, circular supply chains and more. Through insightful analysis, innovative solutions, and live demonstrations on the exhibit floor, attendees will gain valuable insights into the cutting-edge developments shaping the industry.

Our meticulously curated agenda, developed in close collaboration with OEMs and Bellwether Organizations, addresses the critical challenges and emerging trends. As industry leaders, we are committed to delivering an unparalleled experience that fosters collaboration, innovation, and knowledge exchange. Join us as we unite industry leaders, innovators, and experts in battery recycling technology and innovation. With participation from major European vehicle manufacturers, this summit serves as a unique platform to explore the latest advancements, forge meaningful connections, and drive collaboration.

Through our longstanding relationships with the global OEM community and close consultation with leading material, solution, and technology providers, we ensure that our events attract the highest caliber of attendees.

EV Battery Recycling Innovation Summit Europe 2024 will take place in Stuttgart, Germany, on July 11th (co-located with EV Battery Second Life Conference), offering a dynamic one-day program packed with insights, networking opportunities, and visionary discussions.

Join over 400 senior engineers, thought leaders, and visionaries as we delve into the challenges and technologies shaping the future of battery recycling. Don't miss your chance to be at the forefront of innovation in the xEV battery ecosystem!

## **KEY TOPICS**

**Battery Recycling Technologies and Processes:** Including methods like pyrometallurgy, hydrometallurgy, direct recycling, and the challenges associated with each approach.

**Sustainability Challenges and Solutions:** Addressing the environmental and economic sustainability issues related to battery recycling and proposing solutions to enhance circularity.

**Regional Perspectives on Battery Recycling:** Analyzing the future scenarios and challenges for battery recycling in different regions such as Europe, the US, China, and Japan. **Technological Advances in Recycling:** Discussing innovations in recycling technology and the development of recycling plants for efficient battery material recovery.

**Material Characterization and Analysis:** Exploring methods for analyzing battery materials and processing residues to ensure purity and quality in recycling products.

**Regulatory and Legislative Framework:** Examining the impact of regulations on battery recycling and strategies for compliance within the evolving regulatory environment.

**Supply Chain Localization and Circular Economy:** Discussing strategies to localize battery supply chains, maximize value, and create a closed-loop system for sustainable battery materials.

**Battery Management and Safety:** Addressing challenges and advancements in battery management, transportation, safety standards, and risk mitigation.

Industry Collaboration and Partnerships: Exploring the importance of collaboration between stakeholders, including OEMs, recyclers, policymakers, and researchers, to drive innovation and achieve sustainability goals in the battery industry.



### ESTEEMED CONFERENCE CHAIR 2024

Are you ready to explore the forefront of EV Battery Recycling? Join us for a dynamic conference that delves into the heart of this industry – a comprehensive overview of the challenges driving battery recycling, regulation, innovation, circular supply chains and more. During this industry leading conference, we will unearth the strategies and insights that are shaping the future of EV Battery Recycling.

Explore the multifaceted challenges of establishing sustainable recycling practices within the electric vehicle industry. Gain insights into evolving regulatory frameworks, compliance requirements, and commercial prospects in lithium-ion battery recycling.

Immerse yourself in sessions that tackle the complexities of closed-loop systems and sustainable recycling solutions for lithium-ion batteries. Explore diverse topics including battery diversity, chemical treatment methods, and innovative materials. Engage with cutting-edge designs focused on embedding recyclability directly into electrode and cell structures. Redefine sustainable battery management with us, exploring strategies and technologies shaping circularity in the battery industry. Discover the latest advancements in battery recycling technologies aimed at cutting costs and boosting sustainability, addressing both economic and environmental challenges.

Get ready to be at the forefront of innovation in the automotive industry. This conference always promises to deliver fresh insights, ground-breaking strategies, and a glimpse into the future of EV Battery Recycling. Don't miss out – secure your seat today!

Bob

BOB GALYEN RT. CTO CATL, CHAIRMAN EMERITUS, NAATBATT



## PROGRAM 2024

#### 07:45

#### Morning Breakfasts In Networking Exhibition Area

Continental Breakfast, Fresh Scrambled Eggs, Hickory Smoked Bacon, Country Style Sausage, Breakfast Potatoes

#### 08:30

#### **Chair's Opening Remarks**

#### 08:40

#### Navigating Standards, Regulations, And Commercial Opportunities In The Recycling Of Lithium-Ion Batteries

This presentation delves into the multifaceted challenges of navigating standards, regulations, and commercial opportunities in lithium-ion battery recycling. Insights will be gained into the evolving landscape of regulatory frameworks and compliance requirements, while also exploring the diverse commercial prospects in battery recycling. Explore the intricacies of compliance standards, identifying emerging commercial opportunities, and strategizing for sustainable practices that drive both environmental stewardship and economic growth in the electric vehicle industry.

#### 09:00

#### Revitalizing Sustainability: Recycling Materials For A Circular Battery Supply Chain

Explore the challenges and opportunities in revitalizing sustainability through the recycling of materials for a circular battery supply chain. This session will address the complexities of establishing a closed-loop system for battery materials, including logistical hurdles, technological innovations, and regulatory considerations.

It will discuss the current barriers to achieving a circular battery supply chain, exploring innovative recycling technologies, and strategizing effective collaboration among stakeholders to drive sustainability in the battery industry. Actionable insights will be gained to contribute to the transformation of the battery supply chain towards a more sustainable and circular future.

#### 09:20

#### Localized And Circular Lithium-Ion Recycling Solutions And Networks

#### **Arturo Pérez de Lucia**, Director General/General Manager, **AEDIVE**

In this presentation, we delve into the challenges and opportunities surrounding localized and circular lithium-ion recycling solutions and networks. The discussion will explore the intricacies of establishing localized recycling infrastructure, including logistical, technological, and regulatory considerations.

Understand the importance of localized recycling for sustainability, identifying strategies to overcome barriers in establishing circular recycling networks, and exploring innovative approaches to maximize the efficiency and effectiveness of lithium-ion battery recycling at a local level. Gain insights to contribute to the development of sustainable and resilient recycling ecosystems for lithium-ion batteries.

#### 09:40

#### Navigating Battery Innovation And Electrochemical Insights: From Development To Passport Integration

Join us for a comprehensive exploration of the journey from battery innovation to passport integration, navigating through the intricacies of electrochemical insights and development processes. This presentation will elucidate the challenges and opportunities in optimizing battery performance, ensuring seamless integration into diverse applications, and harmonizing with evolving regulatory frameworks. Encompass understanding the latest advancements in battery technology, deciphering electrochemical complexities, and strategizing for efficient passport integration. Advance invaluable understandings to drive innovation, enhance performance, and ensure compliance in the dynamic landscape of battery development and integration.

#### 10:00

#### Beyond Disposal: Forging Circular Pathways For Lithium-ion Batteries

Embark on a transformative journey towards circular pathways for lithium-ion batteries in our presentation, "Beyond Disposal." We'll delve into the challenges and opportunities inherent in establishing sustainable recycling solutions that extend beyond traditional disposal methods. Throughout the session, attendees will uncover strategies to navigate regulatory landscapes, harness technological innovations, and foster collaborative networks for effective battery recycling. By the end, participants will be equipped with actionable insights to contribute to the evolution of circular battery ecosystems, driving sustainability and resource conservation.

#### 10:20

#### **Morning Networking Break**

#### 11:00

#### Navigating Battery Diversity: A Comparative Analysis Of Techniques

In our presentation, "Navigating Battery Diversity," we embark on a comparative analysis journey across various techniques for battery management and optimization. Delving into the intricate landscape of battery technologies, attendees will explore diverse methodologies, from material selection to manufacturing processes, aiming to unlock efficiency and sustainability. By the end of the session, participants will gain nuanced insights into navigating the complexities of battery diversity, empowering them to make informed decisions and drive innovation in the field of energy storage.

#### 11:20

Close The European Loop In Battery Production With Raw Material From Secondary Sources

#### Benjamin Bauer, Development Engineer, Fortum Batterie Recycling GmbH

- Industrial scale production of secondary Nickel, Cobalt, Manganese, Lithium and others
- How to close the loop and add value in the production process
- Service offers to waste handling for battery producers, manufacturers or other waste handling companies
- Challenges in battery recycling process

#### 11:40

#### Towards Eco-Friendly Batteries: Redefining Sustainability In Design And Recycling

In our presentation, "Towards Eco-Friendly Batteries," we explore the paradigm shift in battery sustainability through innovative design and recycling practices. Attendees will delve into the challenges and opportunities inherent in redefining sustainability across the battery lifecycle, from initial design to end-of-life recycling. Throughout the session, insights into eco-friendly material selection, manufacturing processes, and circular economy principles will be shared, empowering participants to drive meaningful change in the battery industry. By the conclusion, attendees will be equipped with strategies to enhance sustainability, minimize environmental impact, and foster a greener future for battery technology.

#### 12:00

#### Sustainable Solutions: Enhancing Value In Battery Recycling Operations

Join us for an insightful discussion on sustainable solutions aimed at maximizing value in battery recycling operations. Through a comprehensive exploration, we'll address the challenges and opportunities inherent in creating environmentally responsible and economically viable recycling processes. Attendees will gain valuable insights into innovative techniques for material recovery, process optimization, and market integration.

By the end of the session, participants will be equipped with actionable strategies to enhance the sustainability and profitability of battery recycling operations, driving positive environmental impact and economic growth in the recycling industry.

12:20	DAIMLER
	TRUCK

#### 40 Min Round Table Panel

#### Decoding Cell Chemistry: Navigating LFP Vs. NMC And Beyond, Ensuring Market Independence And Overcoming Core Material Challenges

Moderator: Arnd Böhler, Manager Center of Competence (CoC) Recycling / Recycling for eComponents, Daimler Truck AG Panelists: TBC

This round table discussion delves into the intricacies of cell chemistry, focusing on the comparison between Lithium Iron Phosphate (LFP) and Nickel Manganese Cobalt (NMC) chemistries, alongside other emerging variants. A key point of discussion revolves around strategies for achieving market independence, particularly in reducing

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reliance on Chinese markets for critical materials. Moreover, the session explores the challenges associated with core materials like graphite, addressing concerns and seeking solutions to ensure stability and sustainability in the battery supply chain.

#### 13:00

**Networking Lunch Break** 

14:00

#### Revolutionizing Recycling: Pioneering Designs For Intrinsic Recyclability In Electrodes And Cells

Explore the frontier of battery recycling with our presentation, "Revolutionizing Recycling." We'll delve into ground-breaking designs aimed at embedding recyclability directly into electrode and cell structures. Attendees will uncover the challenges and opportunities inherent in pioneering intrinsic recyclability, from material selection to manufacturing processes. Throughout the session, insights into innovative design principles, regulatory considerations, and collaborative strategies will be shared, empowering participants to drive meaningful change in the battery industry. By the conclusion, attendees will be equipped with strategies to revolutionize recycling practices, minimize waste, and foster sustainability in battery technology.

#### 14:20

#### Maximizing Output, Minimizing Waste: Approaches To Effective Black Mass Chemical Treatment

Join us for an in-depth exploration of effective chemical treatment methods for black mass in battery recycling operations. Our presentation focuses on maximizing output and minimizing waste through innovative approaches to black mass treatment. Attendees will gain insights into the challenges and opportunities associated with chemical treatment techniques, including material recovery, process optimization, and environmental considerations. By the end of the session, participants will be equipped with actionable strategies to enhance the efficiency and sustainability of black mass treatment processes, driving positive environmental impact and economic growth in battery recycling operations.

#### 14:40

#### Empowering Innovation: Fumed Metal Oxides Revolutionize Li-ion Battery Safety And Efficiency

Discover the transformative potential of fumed metal oxides in revolutionizing the safety and efficiency of Li-ion batteries in our presentation. We'll delve into the challenges and opportunities inherent in integrating these innovative materials into battery design and manufacturing processes. Attendees will gain insights into the mechanisms behind enhanced battery performance and safety, as well as the regulatory considerations and commercial prospects associated with fumed metal oxide adoption. By the end of the session, participants will be empowered to leverage fumed metal oxides to drive innovation, improve battery performance, and ensure safer energy storage solutions.

#### 15:00

#### Breaking Ground: Building Recycling Plants With Advanced Spoke And Hydro Metallurgy Technologies

Join us in exploring the forefront of battery recycling with advanced spoke and hydro metallurgy technologies. Our presentation delves into the challenges and opportunities in establishing recycling plants that utilize these innovative processes. Attendees will gain insights into the efficiency gains, environmental benefits, and economic viability offered by these cutting-edge technologies. By the end of the session, participants will be equipped with strategies to break new ground in battery recycling, driving sustainability and resource conservation in the industry.

#### 15:20

#### EU Battery Recycling Market Outlook And Strategic Implications

Maximilian Wegner, Senior Project Manager, Roland Berger

- How will the market volume for battery recycling develop in Europe?
- Are there enough feedstock materials to meet the EU targets for minimum recycling content by 2031/36?
- What is the economic viability of recycling and how high are the future break-even acquisition costs for EOL batteries?
- How is the battery recycling value chain currently structured? Are major changes to be expected?
- What are the key success factors and strategic implications for stakeholders along the value chain?

#### 15:40

#### Direct Recycling Redefined: Unlocking Potential With Multi-Chemistry Processing

Join us as we redefine direct recycling with multichemistry processing in our presentation. We'll delve into the intricacies of this innovative approach, exploring its potential to revolutionize battery recycling. Attendees will gain insights into the challenges and opportunities associated with multichemistry processing, including material recovery, process optimization, and regulatory compliance. By the end of the session, participants will be equipped with actionable strategies to leverage this technology for efficient and sustainable battery recycling, driving positive environmental impact and economic growth in the industry.

#### 16:00

#### **Networking Break**

#### 16:40

#### Sustainable Battery Management: Pioneering The Future Of Circularity

Join us for a forward-looking exploration of sustainable battery management in our presentation. We'll delve into pioneering strategies and technologies shaping the future of circularity in the battery industry. Attendees will gain insights into innovative approaches for battery lifecycle management, including design for recycling, reuse, and sustainable materials sourcing. By the end of the session, participants will be equipped with actionable insights to drive sustainable practices, minimize environmental impact, and foster a circular economy in the battery sector.

#### 17:00

#### 40 Min Round Table Panel Discussion

Title: TBC Moderator: TBC Panelists: TBC

17:40

#### 40 Min Round Table Panel Discussion

Title: TBC Moderator: TBC Panelists: TBC

#### 18:20

#### Circular Solutions: Redefining Battery Mineral Supply Chains For Tomorrow

In this presentation, we explore the paradigm shift towards circular solutions in battery mineral supply chains. Attendees will delve into innovative approaches reshaping the future of mineral sourcing, processing, and recycling for sustainable battery production. Through insightful discussions on challenges and opportunities, participants will gain actionable insights to drive the transition towards circularity. By the end of the session, attendees will be empowered to champion sustainable practices, minimize resource depletion, and foster a resilient mineral supply chain ecosystem for the future of battery technology.

#### 18:40

#### Cutting Costs, Boosting Sustainability: Emerging Battery Recycling Technologies

Discover the latest advancements in battery recycling technologies designed to simultaneously cut costs and boost sustainability in our presentation. We'll explore innovative approaches reshaping the landscape of battery recycling, addressing both economic and environmental challenges. Attendees will gain insights into emerging technologies, such as advanced sorting techniques and efficient material recovery processes, and their potential impact on the industry. By the end of the session, participants will be equipped with actionable strategies to leverage these technologies for improved efficiency, reduced environmental footprint, and enhanced economic viability in battery recycling operations.

#### 19:00

#### **Chair's Closing Remarks**

Bob Galyen, CTO NAATBatt, Retired CTO – CATL

19:20

#### **All Attendee Drinks Reception**

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## LEADING OEMs & BATTERY RECYCLING DEVELOPERS

**Embark on a Journey with a Technical-led Agenda Forged in Collaboration:** Painstakingly Researched and Co-Designed with Leading OEMs, Aimed at Tackling the Pressing Challenges and Expansive Opportunities of Battery Recycling

ARKEMA, **AVL List GmbH**, Bax & Company, **Bosch, Bosch Rexroth**, Call2Recycle, **Canoo**, Cirba Solutions, **Circulor**, Circunomics, **Clarios**, Cobat, **Deutsche Rohstoffagentur**, EBR, **Ecobat**, Eldan Recycling A/S, **ElectraMet**, Enabled Future Limited, **Enel X**, ERIC, **ERPA**, ERRA, ERSA, **Erion Energy**, ESRF, EUROMETAUX, **European Portable Battery Association**, Ever Resource, **Evonik Corporation**, EUCOBAT, **ExxonMobil Chemical Europe**, Fastmarkets, **Fortum Recycling & Waste**, Fraunhofer Institute for Silicate Research ISC, **Fraunhofer-Einrichtung Forschungsfertigung Batteriezelle FFB**, Freiberg University of Mining and Technology, **Germany Trade & Invest**, Gotion, Green Lion GmbH, **Hatch**, Hosokawa Micron Group, **Hydro Batteries**, Hydrovolt, Insurance Europe, Karlsruhe Institute of Technology, **KnowMade**, Koura, Li-Cycle Holdings, **Lithion Technologies**, Makersite, **Malvern Panalytical**, **Mendeelev**, Metrohm USA, **MIDAC Batteries**, Mitsui Chemicals Asahi Life Materials Co. Ltd., Morrow, **Nanoramic Laboratories**, Nomura Research Institute America, Inc., Ongoal Technology Co Ltd., **OneCharge**, Perlmutter & Idea Development (P&ID) LLC, **Peregrine Technologies**, Perlo & Idea Development (P&ID) LLC, **Primobius**, **Princeton NuEnergy**, ReElement, ReJoule, **RecycLiCo Battery Materials**, Riedhammer, **Rockwell Automation**, Roland Berger, RSE – Ricerca sul Sistema Energetico, Sphera, Stiftung GRS Batterien, **Strat Anticipation**, Systemiq, TES Sustainable Battery Solutions, TotalEnergies Fluids, Tozero, **TU Bergakademie Freiberg**, Umicore, **URT-Umwelt-Und Recyclingtecknik GmbH**, VITO, **Volta Energy Technologies**, Voltaiq, Inc., **WASTE, ZSW**, strategy & Innovation



## **JOB TITLES CROSS SECTION 2024**

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DON'T MISS OUT! OUR SUPER EARLY BIRD RATE ENDS 24<sup>TH</sup> MAY 2024

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- Prices include food & beverages, morning breakfast & coffee
- Networking breaks, coffee and snacks. Hot buffet luncheon
- Afternoon coffee break including soft drinks & snacks
- All attendee evening drinks reception open bar

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