



INTERNATIONAL BATTERY PRODUCTION CONFERENCE

27 to 29 November 2024

Preliminary Conference Programme

Event location: Steigenberger Parkhotel Braunschweig, Germany

Day 1 of the conference

27.11.2024

| Time | | | | | | | | | Duration | |
|-------|--|-----------------------------|--|--------------|---|------------------------|---|--------------|-----------------------------|-------|
| 08:00 | Arrival of attendees | | | | | | | | 01:00 | |
| | Room Maschinenhalle | | | | Room Nimês 1+2 | | | | | |
| 09:00 | | | | | SEMINARS | | | 1:30 | 01:30 | |
| 10:30 | | | | | Break | | | 0:10 | 00:10 | |
| 10:40 | | | | | SEMINARS | | | 1:00 | 01:00 | |
| 11:40 | | | | | Break | | | 0:10 | 00:10 | |
| 11:50 | | | | | SEMINARS | | | 1:10 | 01:10 | |
| 13:00 | Arrival | | | | Lunch | | | | 1:00 | 01:00 |
| 14:00 | Welcome | | | | | | | | 0:30 | 00:30 |
| 14:30 | Keynote | | | | From Niche Market to Essential Technology: Prospects for LFP Production in Europe | | | | IBUtec, Dr. Stefan Schwarz | 00:30 |
| 15:00 | Keynote | | | | "SCALING EUROPEAN BATTERY PRODUCTION" | | | | Manz und Grob: Mark Laderer | 00:30 |
| 15:30 | Break | | | | | | | | 00:15 | |
| 15:45 | Scaling up active material production | Speaker | Institution | 00:45 | AI-assisted battery production | Speaker | Institution | 00:45 | 00:45 | |
| | From material development to large scale production of cathode active materials - How to close the gap | Katja Kretschmer | IBU-tec advanced materials AG | 00:15 | Optimizing Battery Development and Quality Control through Data Integration and AI | Marc Egelhofer | LabV Intelligent Solutions GmbH | 00:15 | | |
| | The Glatt Pow(d)er Synthesis - Aerosol-based processes to produce battery materials | Johannes Buchheim | Glatt Ingenieurtechnik GmbH | 00:15 | PROTEO - Revolutionizing Battery Design with Advanced Digital Tools | Elixabete Ayerbe | CIDETEC Basque Research and Technology Alliance | 00:15 | | |
| | Cathode Materials Pilot-Plant "Powder-Up!" - Ready for Operation | Peter Axmann | Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW) | 00:15 | Artificial intelligence informed end-of-line testing in lithium-ion battery production | Tessa Krause | Precitec GmbH & Co KG | 00:15 | | |
| 16:30 | Discussion | | | | | | | | 00:15 | |
| 16:45 | Break | | | | | | | | 00:15 | |
| 17:00 | Slurry processing | Speaker | Institution | 00:45 | Safe batteries and thermal runaway investigations | Speaker | Institution | 00:45 | 00:45 | |
| | Challenges in Slurry Mixing Process for Li-Ion Battery Electrode Manufacturing | Tiago Charana | CeNTI - Centre for Nanotechnology and Advanced Materials | 00:15 | Battery research in the context of metrology for environmental & climate protection - quality assurance, safety, and digital product passport | Olav Werhahn | Physikalisch-Technische Bundesanstalt (PTB) | 00:15 | | |
| | Innovative Battery Production with Eco-Friendly Water-Based Binders | Busra Cetin | Enwair Energy Technologies Corporation | 00:15 | Thermal Runaway Mitigation in NMC Lithium-Ion Cells: Assessing the Effectiveness of Thermal Insulation Materials | Elena Gimadieva | Otto von Guericke University Magdeburg | 00:15 | | |
| | Transfer of the continuous production of battery slurry to different extruder scales | Juan Fernando Meza Gonzalez | Karlsruhe Institute of Technology | 00:15 | Thermal runaway characteristics and gas emission from sodium-ion cells - impact of state of charge level | Kofi Owusu Ansah Amano | Otto von Guericke University Magdeburg | 00:15 | | |
| 17:45 | Discussion | | | | | | | | 00:15 | |
| 18:00 | Postersession | | | | | | | | 01:00 | |
| 19:00 | Apero | | | | | | | | | |

Day 2 of the conference

28.11.2024

| Time | | | | | | | | | Duration |
|-------|--|--------------------|---|----------|---|--------------------------------|---|----------|---------------|
| 09:00 | Keynote Carbon and water footprint of battery-grade lithium from brine and spodumene: A simulation-based LCA Prof. Guido Sonnemann | | | | | | | | 00:30 |
| 09:30 | Transit | | | | | | | | 00:05 |
| | Room Maschinenhalle | | | | Room Nimès 1+2 | | | | |
| | Topic | Speaker | Institution | Duration | Topic | Speaker | Institution | Duration | |
| 09:35 | Diagnostics in electrode and battery production | | | 00:45 | Next generation (silicon-based) anode materials | | | 00:45 | 00:45 |
| | Porosity detection on Li-Ion battery electrode using Laser Speckle Photometry | Ulana Cikalova | Fraunhofer IKTS | 00:15 | Vacuum Coating Technologies for Lithium-Ion Batteries: Silicon-based Next Generation Anodes | Claus Lubber | Fraunhofer FEP | 00:15 | |
| | Non-invasive electrochemical defect identification in battery cells through quantum imaging | Gary Kendall | CDO2 Germany | 00:15 | Investigations of Silicon Anodes in Sulfide-Based All-Solid State-Batteries | Lukas Alexander Dold | Fraunhofer Institute for Solar Energy Systems ISE | 00:15 | |
| | Interpretation of cell-to-cell variation through process identification and statistical analysis | Tom R  ther | University of Bayreuth | 00:15 | Comparison of magnetron-sputtered lithium and silicon anodes for solid-state batteries | Julian Brokmann | Fraunhofer Institute for Surface Engineering and Thin Films IST | 00:15 | |
| 10:20 | Discussion | | | | | | | | 00:15 |
| 10:35 | Postersession + Coffee break | | | | | | | | 01:25 |
| 12:00 | Lunch break | | | | | | | | 01:00 |
| 13:00 | Keynote | | | | | | | | tba |
| 13:30 | Keynote | | | | | | | | Paul Anderson |
| 14:00 | Break | | | | | | | | 00:10 |
| 14:10 | Innovative drying methods for battery electrodes | Speaker | Institution | 00:45 | Processing of anorganic solid state electrolytes and batteries | Speaker | Institution | 00:45 | 00:45 |
| | Induction heating for accelerated drying of aqueous and solvent based electrode wet films | Max von Horstig | TU Braunschweig, iPAT | 00:15 | Blue laser sintering of lithium lanthanum zirconate (LLZO) | Florian Ribbeck | Fraunhofer-Institut f  r Lasertechnik, ILT | 00:15 | |
| | Scaling effects of fast laser drying processes in battery production | Delil Demir | Fraunhofer Institute for Laser Technology (ILT) | 00:15 | Enabling the Coating Process of Sulfide-Based Solid-State Battery Components for Roll-to-Roll Production in an Inert Atmosphere | Elena Jaimez-Farnham | Technical University of Munich | 00:15 | |
| | IR-LED Drying of Lithium-Ion Battery Anodes: Opportunities and Challenges | Larissa von Riewel | Heraeus Noblelight | 00:15 | Influence of the Process Atmosphere on the Assembly of Sulfide Solid-State Batteries | Timon Scharmann | TU Braunschweig, IWF | 00:15 | |
| 14:55 | Discussion | | | | | | | | 00:15 |
| 15:10 | Dry Coating | Speaker | Institution | 00:45 | Sustainability along the value chain | Speaker | Institution | 00:45 | 00:45 |
| | Impact of Particle Shape on PTFE-Fibrillation and Film Properties in Dry Coating Using Calendering for Battery Electrodes | Marcella Horst | TU Braunschweig, iPAT | 00:15 | Using parametric life cycle assessment models for absolute environmental sustainability assessments of lithium-ion batteries | Abdur-Rahman Ali | TU Braunschweig, IWF | 00:15 | |
| | DRYtraec® Process: A Versatile Dry Electrode Manufacturing Setup for Various Battery Technologies | Arthur Dupuy | Fraunhofer Institute for Material and Beam Technology IWS | 00:15 | Energy-saving potential in HVAC system for dry rooms in battery production | Mohammad Mehdi Salehi Dezfouli | Norwegian University of Science And Technology | 00:15 | |
| | Current challenges and potential solutions for dry electrode manufacturing – will it replace wet processing completely? | Joscha Schnell | P3 automotive GmbH | 00:15 | Idea Generation Workshop as a Tool for Facilitating Eco-design and Implementing a Life Cycle Perspective in Battery Production | Emanuel Bengtsson | RISE Research Institutes of Sweden AB | 00:15 | |
| 15:55 | Discussion | | | | | | | | 00:15 |
| 16:10 | Break | | | | | | | | 00:10 |

Day 3 of the conference

29.11.2024

| Time | | | | | | | | | Duration | |
|----------------|--|---|---|--------------|--|--|--|---|----------|-------|
| 09:00 | Keynote | Road from Prototype to Pilot production: Insights into design and process of 46950 cylindrical cells" | | | | | | BMW, Fr. Griebel & Hr. Pritzl | 00:30 | |
| 09:30 | Keynote | | | | | | | H.C. Stark; Juliane Meese-Marktscheffel | 00:30 | |
| 10:00 | Break | | | | | | | | | 00:10 |
| | Room Maschinenhalle | | | | Room Nimès 1+2 | | | | | |
| | Topic | Speaker | Institution | Duration | Topic | Speaker | Institution | Duration | | |
| 10:10 | Cell assembly and finalization | Speaker | Institution | 00:45 | Optimized electrode and battery performance | | | 00:45 | 00:45 | |
| | Jelly rolls for application in HV and HE battery cells with respect to design and format flexibility | Julian Grimm | Fraunhofer Institute for Manufacturing Engineering and Automation IPA | 00:15 | An industry-suited production process for LIB anodes with pre-lithiated SiO-C | Alice Hoffmann | ZSW - Zentrum für Sonnenenergie- und Wasserstoff Forschung Baden-Württemberg | 00:15 | | |
| | Mini Environments- optimized conditions for cell assembly - | Nicole Neub | Exyte Technology GmbH | 00:15 | Carbonate deprotonation on Ni-rich layered cathode: Development of a new cis-trans isomerism oligomer as an organic coverage | Fu-Ming Wang | National Taiwan University of Science and Technology, Taiwan | 00:15 | | |
| | Achieving Stable Cycling Performance of Pure Silicon Anode for Lithium-Ion Batteries by Scalable Electrochemical Pre-Lithiation | Shiho Honda | FZ Jülich GmbH, Helmholtz Institute Münster | 00:15 | Influence of Passive Material Distribution and Morphology on Cathode Performance: a Computational Approach | Timo Danner | German Aerospace Center (DLR) | 00:15 | | |
| 10:55 | Discussion | | | | | Discussion | | | | 00:15 |
| 11:10 | Break | | | | | | | | | 00:15 |
| 11:25 | Recycling of LIB: Hydrometallurgy and re-synthesis | Speaker | Institution | 00:30 | Industry Session III: Characterization methods in battery production | Speaker | Institution | 01:00 | 01:00 | |
| | Recovering Critical Raw Materials from Li-ion Batteries - Two step leaching and closed loop reagents process | Steven C. Lans | Back to Battery | 00:15 | In-line, real-time characterization of electrode slurry rheology | Fridolin Okkels | Fluidan ApS | 00:10 | | |
| | Morphology and structure investigation of recycled Graphite powder after mechanical and chemical treatment process for anodic material application | Slaheddine Jabri | TU Braunschweig, Institute of Applied Physics | 00:15 | Industrial grade solutions on gigafactory scale based on the use case of X-ray inline inspection | Hagen Berger | Exacom GmbH | 00:10 | | |
| | | | | | New method for optical surface inspection in battery and cell production | Jochen Sander | Dr. Schenk GmbH | 00:10 | | |
| | Effects of different impurities on the re-synthesis of NMC particles | Markus Rojer | TU Braunschweig, IPAT | 00:15 | Characterization of fibrillation in powder blends with PTFE for dry coating | Salvatore Pillitteri | Granutools | 00:10 | | |
| 12:25 | Discussion | | | | 00:15 | Powder rheological characterization of dry coating materials | Helena Weingrill | Anton Paar GmbH | 00:10 | |
| | | | | | | Back to the future - 25 years of electrode extrusion | Nicolaus Rehse | Collin Lab & Pilot Solutions GmbH | 00:10 | |
| 12:40 | Poster Prizes | Prof. Arno Kwade / Prof. Christoph Herrmann | | | | | | | | |
| 12:55 | Lunch | | | | | | | | | |
| Assigned slots | Tours to the Battery LabFactory Braunschweig/CLB -- | | | | | | | | | |