

LOCATION PLAN | Day 1



① Registration

② Foyer Maschinenhalle (Poster Session/Sponsors)

Battery production 4.0, modelling, simulation and digital twin (BP)
 Battery supply chains and factory designs (BSC)
 Electrode, cell and module diagnostics during production (DDP)
 Cell assembly (CA)
 Formation and Aging (FA)
 System integration and application (SI)
 Material development and production (MDP)

③ Maschinenhalle (Keynotes/Presentations)

④ Bath+Sousse (Poster Session)

Electrode Production (EP)

⑤ Kasan (Poster Session)

Recycling, circular economy and sustainability (RCS)
 Production of next-generation batteries (NGB)

⑥ Nimês 1+2 (Presentations)

⑦ Foyer (Sponsors)

LOCATION PLAN | Day 2



① Registration

② Foyer Maschinenhalle (Poster Session/Sponsors)

Battery production 4.0, modelling, simulation and digital twin (BP)
Cell Types, module and pack design and production (CTP)
Electrode, cell and module diagnostics during production (DDP)
Cell assembly (CA)
Formation and Aging (FA)
Material development and production (MDP)

③ Maschinenhalle (Keynotes/Presentations)

④ Bath+Sousse (Poster Session)

Electrode Production (EP)

⑤ Kasan (Poster Session)

Recycling, circular economy and sustainability (RCS)
Production of next-generation batteries (NGB)

⑥ Nimês 1+2 (Presentations)

⑦ Foyer (Sponsors)



POSTER SESSION | Day 1

Battery production 4.0, modelling, simulation and digital twin

- BP_1.1 Scalable energy models for battery cell production
Gabriela Ventura Silva, TU Braunschweig | IWF
- BP_1.2 Intelligent Ramp-up Control for Cost Reduced and Flexible Production of Future Battery Cells – InTeAn
Rui Yan Li, RWTH | PEM
- BP_1.3 Challenges of Traceability in Continuous Mixing Process
Simon Otte, KIT | wbk
- BP_1.4 AI-based intelligent quality assurance and process monitoring for continuous, solvent-free electrode manufacturing
Philipp Heugel, Fraunhofer ICT

Battery supply chains and factory designs

- BSC_1.1 Technology Potential Analysis and Development of Mini-Environments for Intralogistics in Battery Cell Production
Max Niggstich, Fraunhofer FFB
- BSC_1.2 Analysis of the economic, environmental and social trade-offs of implementing resilience measures in circular battery production
Moritz Proff, TU Braunschweig | AIP

Cell assembly

- CA_1.1 Design and performance analysis of a high-speed sealing mechanism for pouch cells
Benjamin Schumann, TU Braunschweig | IWF
- CA_1.2 Holistic Analysis of Stacking Approaches for Battery Cell Manufacturing and Development of a Procedure Selection Methodology
Matthias Miggelt, Fraunhofer FFB
- CA_1.3 Current state of development of Fraunhofer FFB cell designs
Franziska Klein, Fraunhofer ICT
- CA_1.4 Novel Anode Embedding Method of FBG Sensors for Enhanced Diagnostics
André Hebenbrock, Clausthal University of Technology | EST
- CA_1.5 Cost assessment for the contacting process in battery cell production
Matthias Smulka, RWTH

Electrode production

- EP_1.1 Optimized inline monitoring of the drying process of battery electrodes
Jonas Mohacsi, KIT | TFT
- EP_1.2 PVDF Binder Mapping Optimisation for NMC Cathode Microstructure
James Parker, University of Sheffield
- EP_1.3 Metal-On-Polymer CurrentCollectors: An Innovative Roll-to-Roll Production Process
Claus Lubber, Fraunhofer FEP
- EP_1.4 Continuous processing of LFP-based aqueous cathode pastes for lithium-ion batteries
Hannah Mittag, Fraunhofer FFB
- EP_1.5 Hybrid Laser Drying of LFP Cathodes for Lithium-Ion Battery Electrode Production
Sebastian Wolf, RWTH | PEM
- EP_1.6 Characterization of longitudinal wrinkling during calendaring of NMC811 cathodes
Ann-Kathrin Wurba, KIT
- EP_1.7 Analysis and Comparison of Convective, Laser and Near-Infrared Anode Drying at the Lithium-Ion Battery Production
Raoul Höller, Fraunhofer FFB
- EP_1.8 A novel design and manufacturing process of Si-based anodes using nature inspired polydopamine
Jingyu Xie, Landshut University of Applied Sciences
- EP_1.9 The role of binder properties and additive distribution in dry cathode manufacturing by compaction in a calender roll mill
Andreas Gyulai, KIT | IAM-ESS
- EP_1.10 Dry Coating – is it really a benefit to more cost efficient and sustainable battery production?
Joscha Schnell, P3 automotive GmbH
- EP_1.11 Innovative Ultrasonic Array System for 100% In-line Basis Weight Coating Control
Roberto Morisi, Marposs
- EP_1.12 Enhanced dispersion of Ni-rich cathode inks with experimental ElectroRite® Additives for improved electrochemical performance
Joanna Galantowicz, University of Birmingham
- EP_1.13 Influence of Lithium-Ion Electrode Production Steps on the Effective Thermal Conductivity
Julia Gandert, KIT
- EP_1.14 Advancements in continuous extrusion coating of battery electrodes: Process development and pilot-scale scaling
Granit Jashari, Fraunhofer IKTS
- EP_1.15 Increasing your OEE by advanced sensors
Jens Reiser, Precitec GmbH & Co. KG
- EP_1.16 Mitigation of Binder Migration in the Drying Process by Use of Additives
David Burger, KIT | TFT

Electrode, cell and module diagnostics during production

- DDP_1.1 Improving battery cell quality prediction in the end-of-line manufacturing step using chromatic confocal distance sensors
Daniel Nusko, Fraunhofer ISE
- DDP_1.2 Exploring the Impact of Electrode Topography on Battery Performance: Insights from 3D-Profilometry
Artur Scheibe, RWTH | PEM

Formation and aging

- FA_1.1 Influence of the vinylene carbonate concentration on the formation process
Philip Niehoff, University of Münster | MEET
- FA_1.2 Impact of SiOx in SiOx/graphite-composite electrodes on the formation process
Maik Stamm, University of Münster | MEET

Material development and production

- MDP_1.1 Challenges and approaches to realize next-generation lithiumsulfur batteries
Eun Ju Jeon, TU Braunschweig | iPAT
- MDP_1.2 Carbon produced from atmospheric CO2 via a novel CCUS process- a promising electrode material for supercapacitors
Neele Uhlenbruck, KIT | ITES

Production of next-generation batteries

- NGB_1.1 Dry coating of sulfide-based components for All-Solid-State Batteries
Arthur Dupuy, Fraunhofer IWS
- NGB_1.2 Biopolymer gel electrolytes for zinc-based batteries
David Lammers, TU Braunschweig | ibvt
- NGB_1.3 Production of PEO-based composite cathodes for all solid-state batteries using scalable, solvent-free polymer extrusion
Katharina Platen, Fraunhofer IFAM
- NGB_1.4 Influence of Pressure in ASSB Assembly: Scalable Concepts to Improve Cell Performance
Lovis Wach, Technical University of Munich

Recycling, circular economy and sustainability

- RCS_1.1 Concept of a Mechanical Cell Disassembly as an Enabler for Direct Recycling
Sebastian Henschel, KIT | wbk
- RCS_1.2 Purification of organic electrolyte components from high-voltage lithium-ion batteries
Martin Wolke, TU Braunschweig | ICTV
- RCS_1.3 Impact of dismantling level on black mass in mechanical battery recycling process
Steffen Fischer, TU Braunschweig | iPAT
- RCS_1.4 Enhancing efficiency and sustainability in mechanical recycling of lithium-ion batteries: Insights from a digitalized pilot plant
Dennis Beusen, TU Braunschweig | iPAT
- RCS_1.5 Influence of comminution and drying parameters on the properties of lithium ion battery black mass
Jannik Born, TU Braunschweig | iPAT
- RCS_1.6 Drying of electrolyte solvents from porous electrodes and separators for recycling processes of lithium-ion batteries
Lukas Lödige, KIT | TFT
- RCS_1.7 Comminution of polymers for the recycling of battery periphery in a hammer mill
Sandra Boekhoff, TU Braunschweig | iPAT
- RCS_1.8 Assessing the economic and environmental impacts of leasing batteries for electric vehicle fleets: A solution for companies and customers?
Miguel Gonzalez-Salazar, University of Applied Sciences Würzburg-Schweinfurt

System integration and application

- SI_1.1 Expansion of silicon containing anodes in pilot pouch cells and its effect on the energy density and module integration
David Dirnbauer, Austrian Institute of Technology
- SI_1.1 TranSensus LCA: Towards a harmonized LCA approach for zero emission vehicles
Jana Husmann, TU Braunschweig | IWF



POSTER SESSION I Day 2

Battery production 4.0, modelling, simulation and digital twin

- BP_2.1 Ontology-Aware Modeling of Relevant Parameters for Data Preparation in Smart Battery Cell Production
Arno Schmetz, Fraunhofer FFB
- BP_2.2 Predictive Analytics Platform for Lithium-ion Battery Cell Manufacturing
Chao Zhang, TU Braunschweig I IWF
- BP_2.3 Application of transfer learning in battery cell manufacturing scale-up
Marten Klenner, PowerCo SE
- BP_2.4 Modeling the continuous battery slurry mixing process: Material transport and distribution in a twin-screw-extruder
Juan Meza, KIT
- BP_2.5 Workflow for Estimation of locally generated Joule Heat during thermal runaway consisting of DEM-simulations of the microstructure and simplified full-cell simulations
Tobias Ohnimus, TU Braunschweig I iPAT

Cell assembly

- CA_2.1 Modelling of a Z-Stacking Machine for Virtual and Risk-Free Exploration of Optimization Approaches
Kamal Husseini, KIT I wkb
- CA_2.2 Ultrasonic welding of metal-polymer current collectors: Challenges and Limitations
Hakon Gruhn, TU Braunschweig I ifs
- CA_2.3 Insertion of Lithium Nitrate as Additive in Li-Ion Battery Cells and its Implications for the Upscaling in Large-Scale Cells
Felix Diller, Technical University of Munich I iwB
- CA_2.4 Production of High Quality Pouch Cell Housing through Optimized Deep Drawing Process Control
Nils Schmidgruber, KIT I wkb

Electrode production

- EP_2.1 Influence of the Calendering Density on Pilot-Scale Gr/SiO Electrodes
Andreas Röck, ZSW
- EP_2.2 From Organic to Water-Based Processing: Pilot Scale Production of High Specific Energy LFMP Cathodes
Vidur Kumar, ZSW
- EP_2.3 About the drying behavior of a highly-concentrated granulebased system- A new concept for an energy- and cost-efficient battery electrode production
Kevin Ly, KIT I TFT
- EP_2.4 Experimental and numerical study of NIR drying of LIB electrodes
Oleg Iliev, Fraunhofer ITWM
- EP_2.5 Integration of optical measurement methods into a traceability concept to investigate cause-effect relationships in the context of electrode production in battery cell production
Mark Stringe, Fraunhofer FFB
- EP_2.6 Characterization of the induction drying process for the lithium ion electrode production
Tobias Krüger, TU Braunschweig I ifs
- EP_2.7 Influence of high-intensive dry mixing carbon black with lithium iron phosphate for lithium-ion battery cathode productions
Simon Raffenberg, University of Münster I MEET
- EP_2.8 Experimental study and numerical prediction of coating defects in multilayer slot-die coating of battery electrodes
Alexander Hoffmann, KIT I TFT
- EP_2.9 Electrode and Separator Extrusion
Nicolaus Rehse, Collin Lab + Pilot Solutions GmbH
- EP_2.10 Investigation of Adhesion Strength and Binder Distribution in aqueously processed LNMO Cathodes based on Surface Free Energy
Andreas Weber, KIT I IAM-ESS
- EP_2.11 Structure-Property Relationships for Laser-Structured Electrodes in Lithium-Ion Batteries
Maher Kouli, TU Braunschweig I ifs
- EP_2.12 Dry mixing and its effect on powder properties for dry coated lithium-ion battery cathodes: A comparison between batch mixing and extrusion
Marcella Horst, TU Braunschweig I iPAT
- EP_2.13 Influence of Various Polyvinylidene Difluorides on the Carbon Binder Domain for Different Active Material Morphologies in LiNi_{0.6}Mn_{0.2}Co_{0.2}O₂-based Positive Electrodes
Johanna Kauling, University of Münster I MEET
- EP_2.14 Upscaling and Improvement of Water-based Ni-rich Positive Li-ion Battery Electrodes
Sonja Radloff, ZSW
- EP_2.15 Investigation of a high intensity mixing process with powders for the production of dry coated cathodes and anodes
Lukas Bahlmann, TU Braunschweig I iPAT

- EP_2.16 Enabling the production of homogeneous high-load positive electrodes by tailoring the electrode formulation – a conductive additive and solvent approach
Candeniz Gercek, University of Münster I MEET
- EP_2.17 Introducing Processing Additives to Enable Aqueous Processing of LiNi_{0.8}Mn_{0.1}Co_{0.1}O₂ for Lithium Ion Batteries A pH Control and Surfactant Approach
Vinzenc Göken, University of Münster I MEET
- EP_2.18 Material effects in the production of silicon oxide/ graphite based anodes from laboratory to pilot scale
Anna Gerlitz, University of Münster I MEET
- EP_2.19 Development of a module for inline variation of the angle of attack for existing electrode coating systems
Florian Denk, KIT I wkb

Electrode, cell and module diagnostics during production

- DDP_2.1 Potential of Computed Tomography Imaging for Detection of Inhomogeneities in Battery Cells
Paul-Martin Luc, Technische Universität Berlin
- DDP_2.2 High-speed and high-resolution x-ray tomography for battery inspection
Emil Espes, Excillum AB

Formation and aging

- FA_2.1 Effects of mechanical pressure on pouch-cells and their components
Merit Holdorf, TU Braunschweig I elenia
- FA_2.2 Accelerated Solid Electrolyte Interphase Formation and its Impact on the Performance of 1 Ah Lithium Ion Battery Pouch Cells
Mika Hellkuhl, University of Münster I MEET

Material development and production

- MDP_2.1 New binder adhesion property characterization for a highquality battery production
Ayşe Yarangünü, TU Braunschweig I ifs
- MDP_2.2 Study on Novel Carboxylated Binder Systems for Electrode Production
Anja Rajic, TU Braunschweig I ifs

Production of next-generation batteries

- NGB_2.1 Requirements Engineering and Management for Production Technology of Solid-State Batteries
Jan Felix Plumeyer, RWTH I PEM
- NGB_2.2 Comparison of reaction enthalpies under solvent variation in the wet-chemical synthesis of β -Li₃PS₄
Aurelia Gries, Fraunhofer IFAM
- NGB_2.3 Direct coating of solid electrolyte on cathodes using a slot die
Andrea Wiegandt, Fraunhofer IFAM

Recycling, circular economy and sustainability

- RCS_2.1 Electrochemical recovery of metals from battery black mass
Claudia Schulze, Fraunhofer IKTS
- RCS_2.2 Enhancing Battery Sustainability: A Novel Sustainability Modelling Platform for Battery Production
Joris Baars, Fraunhofer IST
- RCS_2.3 Feasibility analysis of the automated dismantling process for the automotive traction batteries, including a comparative economic analysis
Johannes Feik, DHBW Mosbach
- RCS_2.4 Modelling and Flow Sheet Simulation of Mechanical Recycling Processes for Li-Ion Batteries
Franziska Punt, TU Braunschweig I iPAT
- RCS_2.5 Towards a harmonized approach for prospective environmental and economic assessments of battery innovations
Kira Patzke, Fraunhofer IST
- RCS_2.6 How to quantify recyclability improving design decisions?
Sönke Hansen, TU Braunschweig I IWF
- RCS_2.7 Raw materials' supply chain linked to the environmental impacts of ceramic solid-state electrolytes
Nelli Kononova, TU Braunschweig I IWF
- RCS_2.8 Effects of different impurities on synthesized NMC particles
Simon Arndt, TU Braunschweig I iPAT

Cell Types, module and pack design and production

- CTP_2.1 Identifying the impact of the positive active material on the cell design and battery cell production capacity
Anna Weichert, Fraunhofer FFB
- CTP_2.2 Towards Multi-Disciplinary Design Automation of Circular Battery Modules – Framework, Potentials, and Future Research
David Inkeremann, Clausthal University of Technology I IMW