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	Charles Jouanique	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 Nimês 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 Luber	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 Rüther	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	00:30
13:30	Keynote	Elemental stewardship: its role in advancing net-zero						Paul Anderson	00:30
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 für 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

16:20	**Recycling of LIB: Disassembly and mechanical processing**	**Speaker**	**Institution**	**00:45**	**Industry Session I: Dry Electrode Processing**	**Speaker**	**Institution**	**00:45**	00:45
	tba	tba	tba	00:15	Improved Solids Handling Solutions for Dry Battery Electrode Production	Hans Schneider	Zeppelin Systems GmbH	00:15	
	Disassembly technologies for automotive batteries: automation and concepts	Johannes Feik	FFT Produktionssysteme GmbH & Co. KG	00:15	Material Feeding and Distribution for Battery Dry Coating	Urs Helfenstein	Coperion K-Tron LLC	00:15	
	Mechanical Recycling in pilot scale: Impact and effects of dismantling level and process conditions	Dennis Beusen / Steffen Fischer / Jannik Born	TU Braunschweig, iPAT	00:15	Processing and scaling of structured dry mixes for dry battery electrodes (DBE) on a scale from 0.1 l to 500 l	Dr. Stefan Gerl	Maschinenfabrik Gustav Eirich GmbH & Co. KG	00:15	
17:05	Discussion				Continuous extrusion-mixing of dry electrode masses for more cost-effective battery manufacturing	Christian Hänsel	Bühler AG, Battery Solutions	00:15	
17:20	Break								00:15
17:35					**Industry Session II: Industrial characterization and simulation methods**	**Speaker**	**Institution**	**01:15**	
					Optimized Electrodes and Separators by Particle Size Adjustment and advanced Particle- and Pore Size Analysis	Dr. Lena Weigold	Retsch GmbH	00:15	
					EIS and AI: Considerations to make before trusting your data to AI!	Tim Johannsen	Bio-Logic Science Instruments GmbH	00:15	
	Conversion for dinner				Multi-scale characterization and elemental analysis with electron microscopy for battery manufacturing and research	Dr. Jens Greiser	Thermo Fisher Scientific	00:15	
					Industrial-Scale Production of Carbonnanotubes (CNTs) for Gigafactories	Maximilian Münzner	Netzsch GmbH	00:15	
					tba	tba	Volkswagen AG	00:15	
18:50	Break+Reception								00:10
19:00	Gala Dinner								

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. Grießl & Hr. Pritzl		00:30
09:30	Keynote	Sustainable Industrial Recycling at its Best - Challenges and Sustainable Solutions for Co, Ni and Li Recovery out of Black Mass					H.C. Stark; Juliane Meese-Marktscheffel		00:30
10:00	Break								00:10
	Room Maschinenhalle				**Room Nimês 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**	**00:45**	**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	
					Development of a validated simulation model for all solid-state batteries	Maximililian Luczak	Math2Market 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	Filip Francqui	Granutools	00:10	
12:10	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	
12:25	Break			00:15	Discussion			00:10	
					Break				00:10
12:45	Poster Prizes	Prof. Arno Kwade / Prof. Christoph Herrmann							
13:00	Lunch								
Assigned slots	Tours to the Battery LabFactory Braunschweig/CLB								