

Conference Programme IBPC 2022

Version date 02.11.2022
 Status Final
 Event location Steigenberger Parkhotel Braunschweig



Day 0 of the conference

06.11.2022

Time	Type
18:00	Get Together (Lounge 17777 at Steigenberger Parkhotel)

Day 1 of the conference

07.11.2022

Time	Room Maschinenhalle			Room Nimês 1+2			Duration
	Topic	Speaker	Duration	Topic	Speaker	Duration	
08:30	Arrival of attendees						00:30
09:00	Welcome	Welcome Talk			A. Kwade / C. Herrmann		00:15
09:15	Keynote	Towards sustainable battery production systems and supply chains - Prof. Christoph Herrmann & Prof. Thomas Spengler (TU Braunschweig)					00:35
09:50	Break						00:05
09:55	Material formulation	Chair: Zellmer	00:45	Battery production 4.0 I	Chair: Schröder	00:45	00:45
	Tapped density as a quality control for powder in battery manufacturing	Salvatore Pillitteri	00:15	Industry 4.0 Software Architecture and Data Collection during Cell Production	Bob Zollo	00:15	
	Optimization of battery microstructures and their electrolyte filling process using pore-scale simulations	Benjamin Kellers	00:15	Towards Digital Twin for Sustainable Battery Cell Production: Model-based Digitalization Platform	Gabriela Ventura Silva	00:15	
	Dependence of the Electrochemical Performance of LiNi0.5Mn1.5O4 Cathodes on the Conductive Additive for High-Voltage LIB Applications	Heather Cavers	00:15	Implementation of Traceability into the Battery Production	Alessandro Sommer	00:15	
10:40	Discussion						00:15
10:55	Break						00:20
11:15	Slurry production	Chair: Kwade	00:45	Battery production 4.0 II	Chair: Herrmann	00:45	00:45
	Continuous processing of negative electrode pastes for lithium ion batteries	Kristina Borzutzki	00:15	DigiBattPro 4.0 - Development and validation of digitalization artifacts in real-life production scenarios	Florian Maier	00:15	
	From lab scale to production scale - upscaling of the continuous mixing process for LIB electrode slurries	Valentin Dolder/Desiree Griessl	00:15	Flexible production of humidity-sensitive electrodes for future battery cells	Christina Hein	00:15	
	Process development for continuous extrusion coating of battery electrodes and scale up to pilot scale	Jann Seeba	00:15	Automated data management and process parameter determination in R&D cell production	Markus Hagen	00:15	
	Discussion						00:15
12:15	Lunch break						01:00
13:15	Planery Discussion	Machinery and plant engineering supply for European battery Gigafactories - Dr. Stephan Witt (Jagenberg AG) & Hans Schneider (Zeppelin Systems GmbH)					00:40
13:55	Keynote	On the way to accelerate mobility for all - Dr. Christoph Weber (ACC - Automotive Cells Company)					00:35
14:30	Break						00:15

14:45	Microstructural effects during processing	Chair: Kandula	00:45	Battery supply chains and factory designs	Chair: Spengler	00:45	00:45
	Stressing of SBR during dispersion and its microstructural effect on slurry and electrode properties	René Jagau	00:15	The Role of Digitalization in the Battery Supply Chain	Philipp Wunderlich	00:15	
	Structure and rheology of electrode slurries and their importance in battery manufacture	Carl Reynolds	00:15	Resilient production planning in closed-loop supply chains for lithium-ion batteries	Christian Scheller	00:15	
	Bridging battery performance ageing and electrode calendaring parameters through model-based estimation of tortuosity	Clara Ganuza	00:15	A flexible and extensible process model for battery production systems with value chain interface capabilities for LCA analysis	Daniel Perez Clos	00:15	
15:30	Discussion						00:15
15:45	Postersession 1 with coffee						01:30
17:15	Development of recycling processes	Chair: Yagmurlu	00:45	Electrode, cell and module diagnostics during production	Chair: Schilde	00:45	00:45
	Recovery of lithium from process water of Li-ion battery recycling processes	Aliza Marie Salces	00:15	Inline Characterization of Electrode Properties and Associated Challenges in the Calendaring Process of Lithium-Ion Battery Electrodes	Andreas Mayr	00:15	
	Controlled Lithium enrichment in artificial minerals in LIB derived slags based on thermodynamic tools and concentration by froth flotation - an update to the state of research	Hao Qiu	00:15	Investigation of defect formation in lithium-ion battery anode and cathode manufacturing for improved in-line quality assurance	Arnaud du Baret de Limé/Artur Scheibe	00:15	
	Direct reuse of Al and Cu current collectors from spent lithium-ion batteries	Emma Kendrick	00:15	Inline intermediate product characterization and quality control for lithium ion electrode production	Alexander Schoo	00:15	
18:00	Discussion						00:15
18:15	Break						00:15
18:30				Industrial Solutions for Cell Production	Chair: Kwade	01:00	01:00
				Gigafactories equipped with Eirich MixSolver® and ContiFeeder® technology - a field report	Stefan Gerl	00:10	
				Potentials for Yield Enhancement By Inline Metrology for Slurries and Coatings	Marcus Klein	00:10	
				Improved optical inline particle inspection	Jochen Sander	00:10	
				Reducing costs of cell cycling during high volume production to monitor the output quality of a Gigafactory	Albert Gröbmeyer	00:10	
				BioLogic – Key Parameters for Advanced Techniques and Analysis in Battery Cycling	Sandra Kienast	00:10	
				High Accuracy Feeding: A key to continuous mixing process	Keith Melton	00:10	
20:00	End of day 1 - start of evening event - Maschinenhalle						

Day 2 of the conference

08.11.2022

Time	Type	Topic				Duration	
08:30	Keynote	The Umbrella Concept Battery Research of the BMBF – Towards a Technological Sovereign and Sustainable Battery Value Chain - Ingo Höllein (Federal Ministry of Education and Research (BMBF))				00:35	
09:05	Keynote	Series Production of Cell Factories in Europe - Frank Blome (PowerCo SE)				00:35	
09:40	Break					00:20	
		Room Maschinenhalle			Room Nimês 1+2		
		Topic	Speaker	Duration	Topic	Speaker	Duration
10:00		Circular economy and sustainability	Chair: Herrmann	00:45	Production of solid state batteries	Chair: Michalowski	00:45
		Sodium-Ion Batteries - Advancing in sustainability?	Jens Peters	00:15	Upscaling of solvent-free synthesis of sulfide-based solid electrolytes and demonstration of a continuous production process	Michael Grube	00:15
		Carbon Footprint of Production Equipment – Implications for Cell and Equipment Suppliers	Joscha Schnell	00:15	Scalable ASSB production processes for efficient wet dispersion of slurries in research, pilot and future production plants.	Alberto Masi	00:15
		LCA of Recent Innovations in the Battery Cell Production using a Modular Material and Energy Flow Model	Nicolas von Drachenfels	00:15	Characterization of production-relevant properties of all-solid-state battery materials	Timon Scharmann	00:15
10:45	Discussion					00:15	
11:00	Postersession 2					01:30	
12:30	Lunch break					01:00	
13:30		Electrode processing	Chair: Zellmer	00:45	Boundary areas in next-generation batteries	Chair: Michalowski	00:45
		Enabling High Loadings for Aqueous NMC811 Cathodes via Multi-Layer Coating	Lukas Neidhart	00:15	Ion Transport Investigations on Hierarchically Structured Cathodes with Nano Porous Particles for Sodium-Ion Batteries	Luca Schneider	00:15
		Dry battery electrode production by IWS DRYtraec® technology	Benjamin Schumm	00:15	Rational optimization of cathode/electrolyte bilayer assemblies for all-solid-state batteries	Artur Tron	00:15
		A time-resolved investigation of the vacuum post-drying for lithium-ion-battery electrodes	Thilo Heckmann	00:15	Influence of the cathode mixing parameters on the coulombic efficiency loss of LFP solid-state polymer electrolyte batteries	Maria Carmen Morant-Miñana	00:15
14:15	Discussion					00:15	
14:30	Awarding of the poster prizes					00:15	
14:45	Keynote	tba - Maik Cordes (FREYR Battery)				00:35	
15:20		Electrode drying	Chair: Dilger	00:45	Formation and aging	Chair: Essmann	00:45
		BearLITE - processing - now proven, enables new battery manufacturing	Kai K. O. Bär	00:15	Investigation of thickness changes of multilayer lithium-ion battery cells during cycling	Niklas Penningh	00:15
		Scaling effects of fast laser drying processes in battery production	Samuel Fink	00:15	Fast Charging Capability during the Formation of Coin and Pouch Cells	Robin Drees	00:15
		Application of the conductive drying process for the electrode production of lithium-ion batteries	Tobias Krüger	00:15	Detailed Model-based Lithium-Ion Cell Diagnosis after Fast Formation	Daniel Witt	00:15
16:05	Discussion					00:15	
16:20	Virtual Tour BLB - Room Maschinenhalle					00:25	
16:45	The End						