

Lithium Battery Chemistry 2017

Held at AABC Europe 2017

Mainz, Germany
31 January 2017

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R&D SYMPOSIUM 3

Lithium Battery Chemistry

31 January 2017 | Congress Centrum Mainz | Mainz, Germany

Part of the 7th Advanced Automotive Battery Conference Europe

TUESDAY, 31 JANUARY

RECENT ADVANCES IN LITHIUM-ION BATTERY MATERIALS

- 7:30** **Symposium Registration and Morning Coffee**
- 8:30** **Chairperson's Opening Remarks**
Martin Winter, Ph.D., Chair, Applied Material Science for Energy Conversion and Storage, MEET Battery, Research Center, Institute of Physical Chemistry, University of Muenster
- 8:35** **Development of High Performance Carbon Anode Material** **1**
Takafumi Izawa, Researcher, Battery Materials Research Laboratory, Kurashiki Research Center, Kuraray Co., Ltd.
- 8:55** **Carbonaceous Anode Materials and Conductive Additives as Key to Higher Performance Lithium-Ion Batteries** **16**
Michael E. Spahr, Director, Research & Development, IMERYS Graphite & Carbon
- 9:15** **Commercialization of Silicon Anodes for Electric Vehicle Applications** **29**
Jörg Kaiser, Ph.D., Specialist Application Engineering, Electronics Materials Solutions Division, 3M Germany
- 9:35** **Highly Conducting Carbon-Coated Current Collector "SDX™" for Large Li-Ion Batteries** **35**
Hideki Tomozawa, General Manager, Isehara R&D Center, Advanced Battery Materials Division, Showa Denko K.K.
- 9:55** **Q&A**
- 10:10** **Grand Opening Coffee Break with Exhibit & Poster Viewing** *Sponsored by*

- 11:00** **Chairperson's Remarks**
Martin Winter, Ph.D., Chair, Applied Material Science for Energy Conversion and Storage, MEET Battery, Research Center, Institute of Physical Chemistry, University of Muenster
- 11:05** **New Battery Materials for BEVs – A Challenge** **N/A**
Joerg Huslage, Research Manager, Volkswagen
- 11:25** **The Impact of CO₂-Emissions and Energy Consumption During Li-Ion Battery Manufacturing on the Environmental Balance Sheet of BEV** **48**
Klaus Brandt, Individual Consultant
- 11:45** **Insights into NMC Degradation Processes for High Energy Systems: How Far Can We Push?** **58**
Stephane Levasseur, Business Venturing, Battery Materials Division, Umicore, Belgium
- 12:05** **Simple Experiments Giving Deep Insights into Capacity Fade and Capacity Loss Mechanisms in Li Battery Materials** **71**
Martin Winter, Ph.D., Chair, Applied Material Science for Energy Conversion and Storage, MEET Battery, Research Center, Institute of Physical Chemistry, University of Muenster



CHEMISTRY

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- 12:25 Solvay's Extended Offer for High Voltage Li-Ion Batteries 87**
Thierry Baert, Sales & Marketing, LIB and PV, SOLVAY
Thomas Mathivet, Business Development Manager, Battery for Europe, SOLVAY

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12:45 Q&A

13:00 Networking Lunch

14:15 Dessert Refreshment Break with Exhibit & Poster Viewing

BEYOND AND ASIDE LITHIUM-ION BATTERIES

- 15:00 Chairperson's Remarks**
Doug Campbell, President & CEO, Solid Power
- 15:05 Post Lithium-Ion Technologies: Novel and Sustainable Materials for Energy Storage N/A**
Andreas Hintennach, Ph.D., Group Research Electrochemistry, Mercedes-Benz Research & Development, Daimler AG
- 15:25 Recent Progress in Lithium Sulfur Batteries 99**
Stefan Kaskel, Ph.D., Professor, Department of Chemistry, Technical University Dresden, Fraunhofer Institute Materials and Beam Technology
- 15:45 New Materials for Electrochemical Storage - From Post Li Ion to Post Li Systems 111**
Maximilian Fichtner, Ph.D., Executive Director, Nanomaterials & Nano Mikrostructures, Helmholtz Institute Ulm for Electrochemical Energy Storage
- 16:05 Solid State Materials 129**
Jürgen Janek, Ph.D., Professor, Justus-Liebig University of Giessen, Institute of Physical Chemistry
- 16:25 Advances and Remaining Challenges in Electrolytes for Solid-State Batteries 140**
Doug Campbell, President & CEO, Solid Power
- 16:45 Q&A**
- 17:05 Networking Reception with Exhibit & Poster Viewing**
- 18:05 Close of Day**

Sponsored by

