MUNICH BATTERY DISCUSSION 2019: "Improvement of Li-ion Batteries through Electrolyte Development: from Liquid to Solid-State Electrolytes"

PROGRAM SCHEDULE

Monday, March 18, 2019

07:30 – 08:20
Registration.

08:20 – 08:30
Welcome: IAS, TUM, BMW Group.

08:30 – 12:35
Morning Session, Chairman: Khalil Amine, Argonne National Laboratory.

08:30 – 09:15
Ryoji Kanno, Tokyo Institute of Technology.
All-solid-state battery using sulfide electrolytes – history, current status, and future perspectives.

09:15 – 10:00
Heng Zhang, CIC Energigune.
Lithium salts: from liquid to solid electrolytes.

10:00 – 10:45
Dee Strand, Wildcat Discovery Technologies.
Stabilization of lithium metal anodes.

10:45 – 11:05
Coffee Break.

11:05 – 11:50
Stefano Passerini, Helmholtz Institute Ulm, Karlsruhe Institute of Technology.
Polyanionic electrolytes for lithium batteries.

11:50 – 12:35
Patrick Johansson, Chalmers University of Technology, Gothenburg.
Highly concentrated electrolytes: properties, prospects and problems.

12:35 – 13:50
Lunch Reception (IAS Faculty Club, 4th floor).

13:50 – 17:10
Afternoon Session, Chairman: Stefan Sedlmaier, BMW Group.

13:50 – 14:35
Jürgen Janek, Justus Liebig University, Gießen.
Monitoring degradation reactions at solid electrolyte interfaces in LIB and ASSB.

14:35 – 15:20
Sven Uhlenbruck, Forschungszentrum Jülich GmbH.
High energy density: chances and challenges of oxide-based solid-state batteries.

15:20 – 15:40
Coffee Break.

15.40 – 16:25
Julian Schwenzel, Fraunhofer Institute for Manufacturing and Advanced Materials, IFAM.
Polymer based solid state batteries: recent advances and design strategies.

16.25 – 17:10
Rüdiger Eichel, Forschungszentrum Jülich GmbH.
All-phosphate / All solid-state batteries.

19:30
Conference Dinner (Restaurant Poseidon, Freisinger Landstraße 3, 85748 Garching).

Tuesday, March 19, 2019

08:30 – 12:35
Morning Session, Chairman: Werner Weppner, Christian-Albrechts-University, Kiel.

08:30 – 09:15
Arno Kwade, Technische Universität Braunschweig.
Challenges and possible solutions of electrode production for all solid state batteries.

09:15 – 10:00
Jun Liu, Pacific Northwest National Laboratory.
Strategies for next generation high energy batteries.

10:00 – 10:45
Mareike Wolter, Fraunhofer-Institut für Keramische Technologien und Systeme, Dresden.
Material and process development for the scaled manufacturing of all solid state batteries.

10:45 – 11:05
Coffee Break.

11:05 – 11:50
Wolfgang Zeier, Justus Liebig University, Gießen.
Developing a deeper understanding and optimization of solid electrolytes for the use in solid-state batteries.

11:50 – 12:35
Ellen Ivers-Tiffée, Karlsruhe Institute of Technology.
All-solid-state battery performance modeling based on various solid-electrolyte characteristics.

12:35 – 13:50
Lunch Reception (IAS Faculty Club, 4th floor).

13:50 – 17:10
Afternoon Session, Chairman: Jürgen Garche, FCBAT Ulm.

13:50 – 14:35
Jennifer L.M. Rupp, Massachusetts Institute of Technology.
Lithium solid state conductors for "Lithionics" to safely store energy and for neuromorphic data emulation.

14:35 – 15:20
Brian E. Francisco, Solid Power, Inc.
From theoretical to practical considerations for sulfide solid electrolytes.

15:20 – 15:40
Coffee Break.

15.40 – 16:25
Yang Shao-Horn, Massachusetts Institute of Technology.
Design principles of solid and liquid ion conductors.

16:25 – 17:10
Ying Shirley Meng, University of California San Diego.
Progression of practical all-solid-state batteries: synthesis, interfacial engineering, and scaling.

17:10 – 17:30
Concluding remarks: IAS, TUM, BMW Group.