



Munich Battery Discussions 2016: Electrode-Electrolyte Interface (EEI) from Fundamentals to Cell Manufacturing.

March 14 / 15, 2016 · IAS-TUM Auditorium · Lichtenbergstr. 2 a, Garching

Organizing committee:

Prof. Hubert Gasteiger (TUM, Chemistry Department, TEC), Dr. Peter Lamp (BMW Group), Dr. Filippo Maglia (BMW Group), Dr. Simon Lux (BMW Group), Konstantinos Antonopoulos (BMW Group), Dr. Odysseas Paschos (BMW Group).



PROGRAM SCHEDULE

Monday, March 14, 2016

07:30 - 08:20

Registration.

08:20 - 08:30

Welcome: IAS, TUM, BMW Group.

08:30 - 12:20

Morning Session, Chairman: Gao Liu, Lawrence Berkeley National Laboratory.

08:30 - 09:00

Peter Faguy, United States Department of Energy. Research involving electrochemical interfaces at the U.S. Department of Energy supporting the development of next-generation batteries for electric drive vehicles.

09:00 - 09:45

Michael Thackeray, Argonne National Laboratory. Addressing the instability of high capacity Li-ion battery cathodes.

09:45 - 10:30

Robert Kostecki, Lawrence Berkeley National Laboratory. *Chemical cross talk and electrode poisoning in Li-ion batteries.*

10:30 - 10:50

Coffee Break

10:50 - 11:35

Kristina Edström, Uppsala University. Interfaces and interphases in battery materials probed by PES and soft X-ray techniques.

11:35 - 12:20

Bernard Lestriez, Université de Nantes. Interfacial stability and electrochemical behavior of Li/LiFePO₄ microbatteries using novel electrolytes.

12:20 - 13:40

Lunch Reception (IAS Faculty Club, 4th floor).

13:40 – 17:00

Afternoon Session, Chairman: Tom Nilges, Technical University Munich.

13:40 - 14:25

Zonghai Chen, Argonne National Laboratory. Investigating parasitic reactions in lithium-ion batteries.

14:25 - 15:10

Yang-Kook Sun, Hanyang University. High energy lithium-ion battery using carbon-nanotube-Si composite anode and compositionally graded Li[Ni_{0.85}Co_{0.05}Mn_{0.10}]O₂ cathode.

15:10 - 15:30

Coffee Break

15.30 - 16:15

Jürgen Janek, Justus-Liebig University, Gießen. The alkali metal/solid electrolyte interface – vacancy injection, SEI formation, dendrites and more....

16.15 - 17:00

Yasutoshi Iriyama, Nagoya University. Lithium plating-stripping reaction on lithium phosphorus oxynitride (LiPON) glass electrolyte.

19:30

Conference Dinner.

08:30 - 12:35

Morning Session, Chairman: Khalil Amine, Argonne National Laboratory.

08:30 - 09:15

Yang Shao-Horn, Massachusetts Institute of Technology. New insights into the electrode/electrolyte interface on positive electrodes in Li-ion batteries.

09:15 - 10:00

Nenad Markovic, Argonne National Laboratory. Electrochemistry at well-defined interfaces in organic environments.

10:00 - 10:45

Jan Rossmeisl, University of Copenhagen. The electrochemical interface - at the atomic scale.

10:45 - 11:05

Coffee Break.

11:05 - 11:50

Dee Strand, Wildcat Discovery Technologies. Low temperature limitations of lithium ion batteries.

11:50 - 12:35

Y. Sherley Meng, University of California San Diego. Advanced diagnosis tools for probing interfaces and surfaces in electrochemical systems.

12:35 - 13:50

Lunch Reception (IAS Faculty Club, 4th floor).

13:50 - 17:10

Afternoon Session, Chairman: Hubert Gasteiger, Technical University Munich.

13:50 - 14:35

Feng Wang, Brookhaven National Laboratory. Insights into designing electrodes and interfaces for batteries from in-situ studies of model systems.

14:35 - 15:20

Ellen Ivers-Tiffée, Karlsruhe Institute of Technology. Electrode and interfaces assessed by tomography methods and impedance analysis.

15:20 - 15:40

Coffee Break.

15.40 - 16:25

Margret Wohlfahrt-Mehrens, Zentrum für Sonnenenergie- und Wasserstoff-Forschung. *Formation and characterization of SEI film and lithium plating in complete cells.*

16.25 - 17:10

Moniek Tromp, University of Amsterdam. Dynamic processes in batteries – using operando X-ray absorption spectroscopy to obtain mechanistic insights.

17:10 – 17:30

Concluding remarks.