



**Materials with New Design for Improved Lithium Ion Batteries,
Werkstoffe mit neuem Design für verbesserte Lithium-Ionen-Batterien**

- Agenda -

**Workshop im Schwerpunktprogramm 1473
der Deutschen Forschungsgemeinschaft**

Homepage WeNDeLIB: www.spp1473.kit.edu

Termin: 10. - 14. November 2014
Ort: NaturKultur Hotel Stumpf Neunkirchen
Zeilweg 16, 74867 Neunkirchen (Odenwald);
Tel.: 06262-9229-0
Homepage: <http://www.hotel-stumpf.de/de/hotel-in-der-natur/>

Montag, 10.11.2014

Anreise

19:00 gemeinsames Abendessen

Dienstag, 11.11.2014

09:00 – 10:30 Seminar (Gender Spec. Communication: Language – Situation – Effect) Leitung: Frau Prof. Dr. Schmeink

Pause

11:00 – 12:30 Seminar (Gender Spec. Communication: Language – Situation – Effect) Leitung: Frau Prof. Dr. Schmeink

Mittagspause

14:00 – 15:30 Seminar (Gender Spec. Communication: Language – Situation – Effect) Leitung: Frau Prof. Dr. Schmeink

Pause

16:00 – 17:00 Seminar (Gender Spec. Communication: Language – Situation – Effect) Leitung: Frau Prof. Dr. Schmeink

19:00 **Abendessen**

Mittwoch, 12.11.2014 (1)

- 08:30 - 08:50** *Hans Seifert (KIT)*: Begrüßung, SPP1473-Übersicht, Koordinator-Projekt, Termine; JP1
- 08:50 - 09:10** *Keke Chang (RWTH Aachen)*: Design of Li-Mn-M-O₂ Cathodes for Lithium Ion Batteries; JP3
- 09:10 - 09:30** *Maryam Masoumi (KIT)*: Synthesis and Phase Stability of LiMnO₂; JP3
- 09:30 - 09:50** *Elke Schuster (KIT)*: Thermal Behavior and Electrochemical Heat Generation in a Commercial Lithium Ion Pouch Cell; JP3
- 09:50 - 10:15** *Hans Flandorfer (Univ. Wien)*: The Meaning of Phase Diagrams for New Electrode Materials; JP4

Pause

- 11:00 - 11:20** *Alexander Beutl (Univ Wien)*: Phase Equilibria in the Intermetallic System Li-Cu-Sb; JP4
- 11:20 - 11:40** *Julia Polt (Univ. Wien)*: Phase Equilibria in the Intermetallic Systems Sb-Sn and Li-Sb-Sn; JP4
- 11:40 - 12:00** *Damian Cupid (KIT)*: *From Thermodynamic Data to Coulometric Titration Curves in 15 Minute*; JP4
- 12:00 - 12:20** *Dajian Li (KIT)*: Progress in Heat Capacity Measurements for Li-containing Materials at KIT; JP4

Mittagspause

- 14:00 - 14:20** *Artem Kozlov (TU Clausthal)*, *Martin Drüe (Univ. Jena)*: Phase Formation in Alloy-type Lithium Storage Anode Materials with C, Si and Sn; JP9
- 14:20 - 14:40** *Hans Seifert (KIT)*: Thermodynamics of Si-C-N-O materials; JP8

Pause

Anschl. Individuelle Treffen der Teilgruppen

19:00 **Abendessen**

Donnerstag, 13.11.2014 (1)

- 08:30 - 08:50** *Karsten Albe (TU Darmstadt):* First-principles calculations of Li_xSi-Si interfaces; JP8
- 08:50 - 09:10** *Pradeep Vallachira Warriam Sasikumar (TU Darmstadt):* High rate capability of SiOC Ceramic Aerogels with Tailored Porosity as Anode Materials for Li-ion batteries; JP8
- 09:10 - 09:30** *Dragoljub Vrankovic (TU Darmstadt):* Benefits of Silicon Carbonitride Matrices on the Cycling Stability of Silicon Anodes in LIBs; JP8
- 09:30 - 09:50** *Jan Kaspar (TU Darmstadt):* Synthesis and electrochemical behavior of mesoporous NiO nanosheets; JP8
- 09:50 - 10:10** *David Henriques/Torsten Markus (FZ Jülich; Hochschule Mannheim):* Determination of Lithium Activity in Li-Sb System by Knudsen Effusion Mass Spectrometry; JP4

Pause

- 11:00 - 11:20** *Sebastian Schwalbe (TU Bergakademie Freiberg):* Multiscale ab-initio calculations of Li_xSi_y crystal structures; JP10
- 11:20 - 11:40** *Daniel Thomas (TU Bergakademie Freiberg):* Absorption and Desorption Investigations in the System Li-Si-H; JP10
- 11:40 - 12:00** *Franziska Biedermann (TU Bergakademie Freiberg):* Hydrogen Sorption Investigations of Li₁₃Si₄ in the System Li-Si-H; JP10
- 12:00 - 12:20** *Stefan Loos (TU Bergakademie Freiberg):* Heat Capacity and Entropy of Olivine-type Lithium Iron Phosphate; JP10

Mittagspause

- 14:00 - 14:20** *Christian Thomas (TU Bergakademie Freiberg):* Thermochemical Investigations into Delithiation of Lithium Iron Phosphate; JP10
- 14:20 - 14:40** *Holger Fritze (TU Clausthal, Goslar):* Determination of Thermodynamic Properties by Piezoelectric Transducers; JP6
- 14.40 – 15:00** *Hendrik Wulfmeier (TU Clausthal, Goslar):* Thin-Film Calorimetry on Lithium-Manganese-Oxide; JP6
- 15:00 - 15:20** *Alexander Omelcenko (TU Clausthal, Goslar):* Realization of a Second Thin-Film Calorimeter; JP6

Pause

Anschl. Individuelle Besprechungen; Treffen der Projektleiter

Ab 17:00 Outdoor Activity mit gemeinsamen Abendessen

Freitag, 14.11.2014 (1)

- 08:30 - 08:50** *Robert Adam (TU Bergakademie Freiberg):* Phase and Microstructure Development in Electrodes for LIB based on Conversion Reactions in Mixed Co Oxides; JP12
- 08:50 - 09:10** *Maren Lepple (KIT):* CALPHAD-based investigation of the Li-Cu-O and Li-Fe-O Systems; JP12
- 09:10 - 09:30** *Nicolas Mayer (KIT):* The Co-Cu-O Anode System: Modeling and Experiments; JP12
- 09:30 - 09:50** *Geethu Balachandran (KIT):* Transition Metal Ferrites as Anode Materials for Conversion-type Mechanism in LIB; JP12

Pause

- 10:45 - 11:05** *Qian Yunxian (Univ. Münster):* Influence of electrolyte on stabilization of 3d transition metal oxide composites in conversion type electrodes for LIB; JP12
- 11:05 - 11:25** *Philip Niehoff (Univ. Münster):* The electrode - electrolyte interaction; JP12
- 11:25 - 11:45** *Hans J. Seifert (KIT):* Zusammenfassung, Nächste Schritte

Mittagessen

13:00 Ende der Veranstaltung

(1)

Auf Wunsch können die Vortragenden eine Hospitation zur Präsentationstechnik in Anspruch nehmen. Zwei Mitarbeiterinnen (Frau Yulia Kokott und Frau Anne Pupak-Gressler) der Personal-Entwicklungs-Abteilung des KIT geben dann im Einzelgespräch in den Pausen ein kurzes Feedback.