

# NIM Conference

## "Nanostructured Functional Materials for Sustainable Energy Provision"

Wednesday, July 26 - Friday, July 28, 2017

Literaturhaus München

Final Program

**Wednesday, 26 July 2017**

**9:00 - 9:10**

**Introduction and greetings**

**Session 1: Batteries (Chair A. Bandarenka)**



**9:10 - 9:50**

**Prof. Dr. Hubert Gasteiger (Technical University of Munich)**

Gassing reactions of NCM cathodes operated at high voltage



**9:50 - 10:30**

**Prof. Dr. Julia Kunze-Liebhäuser (University of Innsbruck)**

Anatase and amorphous TiO<sub>2</sub> Nanotube Anodes for Li-ion batteries: XPS and impedance study of lithiation and delithiation

**10:30 - 10:50**

**Coffee break**



**10:50 - 11:30**

**Prof. Dr. Andreas Jossen (Technical University of Munich)**

Effects within Graphite based Anodes of Li-Ion Batteries



**11:30 - 12:10**

**Prof. Dr. Yong Lei (Technical University of Ilmenau)**

Template-realized nanostructures with high structural controlling for energy conversion and storage devices



**12:10 - 12:50**

**Dr. Pekka Peljo (École Polytechnique Fédérale de Lausanne)**

Doing chemistry with redox flow batteries: from hydrogen production to conversion of heat to power

**12:50 - 14:00**

**Lunch break (city center)**

## **Session 2: Electrocatalysis for energy provision (Chair B. Garlyyev)**



**14:00 - 14:40**

**Prof. Dr. Marc Koper (University of Leiden)**

Platinum electrochemistry: new views on an old problem



**14:40 - 15:20**

**Prof. Dr. Peter Strasser (Technical University of Berlin)**

Free electrons to molecular bonds and back - The dark side of solar fuels and solar chemicals

**15:20 - 15:40**

**Coffee break**



**15:40 - 16:20**

**Prof. Dr. Wolfgang Schuhmann (Ruhr-Universität Bochum)**

Harvesting bioenergy - biofuel cells and photobiovoltaics



**16:20 - 17:00**

**Prof. Dr. Frederic Maillard (Université Grenoble)**

Why we should implement structural disorder in oxygen reduction reaction electrocatalysts



**17:00 - 17:40**

**Prof. Dr. Ifan Stephens (Imperial College London)**

Probing trends in oxygen electroreduction: Acid versus base

**Thursday, July 27, 2017**

**Session 3: Catalysis, photo-catalysis and photo-electrochemistry (Chair I. Stephens)**



**9:00 - 9:40**

**Prof. Dr. Bettina Lotsch (Max Planck Institute for Solid State Research)**

2D polymeric frameworks as tunable platforms for light-driven hydrogen evolution



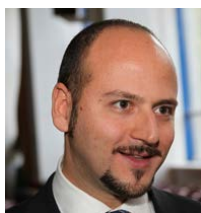
**9:40 - 10:20**

**Prof. Dr. Radim Beranek (Universität Ulm)**

Light-driven chemistry: coupling of light absorbers with catalysts for enhanced activity, stability, and selectivity

**10:20 - 10:40**

**Coffee break**



**10:40 - 11:20**

**Dr. Fabio Di Fonzo (Istituto Italiano di Tecnologia, Milan)**

Hybrid organic-inorganic photoelectrochemical systems: a new class of devices for the sustainable conversion of solar energy to fuel



**11:20 - 12:00**

**Prof. Dr. Karsten Reuter (Technical University of Munich)**

On the active site model in computational catalyst screening



**12:00 - 12:40**

**Prof. Dr. Marina Freitag (Uppsala University)**

Copper complexes for dye-sensitized solar cells

**12:40 - 14:00 Lunch break (provided at the conference center) with poster session**

**Session 4: Solar cells and optoelectronics (Chair M. Freitag)**



**14:00 - 14:40**

**Prof. Dr. Peter Müller-Buschbaum (Technical University of Munich)**

In-operando studies probing morphology degradation in organic solar cells



**14:40 - 15:20**

**Dr. Wolfgang Richard Tress (École Polytechnique Fédérale de Lausanne)**

Peculiarities of Perovskite Solar Cells

**15:20 - 15:40**

**Coffee break**



**15:40 - 16:20**

**Dr. Filippo De Angelis (CNR-ISTM Perugia)**

Modelling materials and processes in perovskites solar cells



**16:20 - 17:00**

**Dr. Eva M. Herzig (Technical University of Munich)**

Exploiting grazing incidence X-ray scattering for the study of organic thin film morphology



**17:00 - 17:40**

**Dr. Annamaria Petrozza (Istituto Italiano di Tecnologia, Genua)**

Understanding defect physics in metal-halide perovskites for optimizing optoelectronic devices

**19:30**

**Conference Dinner Zum Franziskaner, Residenzstr. 9**

**Friday, July 28, 2017**

**Session 5: Functional organic and nano-systems (Chair A. Gagliardi)**



**9:00 - 9:40**

**Prof. Dr. Thomas Bein (University of Munich)**

Light-induced processes in covalent organic frameworks



**9:40 - 10:20**

**Dr. Oliver Schneider (Technical University of Munich)**

Ionic liquids in energy conversion and materials science

**10:20 - 10:50**

**Coffee break**



**10:50 - 11:30**

**Dr. Alexander Urban (University of Munich)**

Exciton dynamics in metal halide perovskite nano-platelets



**11:30 - 12:10**

**Prof. Dr. Katharina Krischer (Technical University of Munich)**

Photoelectrochemical CO<sub>2</sub> reduction on Cu|Au Nanostructure arrays on Silicon

**12:10 - 12:30**

**Concluding remarks**