

EINLADUNG

zu den Kolloquien des Instituts für Technische Chemie und Polymerchemie sowie des Helmholtz-Kollegs Energie-Relevante Katalyse im Sommersemester 2016. Die Kolloquien finden zu den u. a. Terminen jeweils

freitags um 14.30 Uhr im Hörsaal 006, Gebäude 11.21, statt.

- 13.05.2016 Prof. Dr.-Ing. Robert Güttel, Institut für Chemieingenieurwesen, Universität Ulm**
“Structured Catalysts for Fischer-Tropsch-Synthesis”
- 17.05.2016 Sondertermin: 14.00 Uhr, Hörsaal 006, Gebäude 11.21**
Prof. Dr. Galen Fisher, Chemical Engineering, University of Michigan, Ann Arbor, Michigan, USA
“Exhaust Gas After-Treatment “
- 03.06.2016 Prof. Dr.-Ing. Elias Klemm, Institut für Technische Chemie, Universität Stuttgart**
“Electrochemical Activation of Carbon Dioxide“
- 10.06.2016 Prof. Dr. Josetxo Pomposo, Centro de Física de Materiales (CSIC, UPV/EHU) – Materials Physics Center, San Sebastián, Spain**
“Recent Advances and Opportunities in Single-Chain Polymer Nanoparticles“
- 17.06.2016 Prof. Dr. Udo Kragl, Abteilung Analytische und Technische Chemie, Institut für Chemie, Universität Rostock**
“Regio- and enantioselective Oxidation with Chemo- and Biocatalysts”
- 24.06.2016 Dr. Andreas Schropp, DESY Photon Science, Hamburg**
“High-Resolution X-Ray Microscopy at PETRA III and LCLS”

**Die Dozenten
des Instituts für Technische Chemie
und Polymerchemie sowie des Helmholtz-
Kollegs Energie-Relevante Katalyse**

Abstracts:

24.06.2016 Dr. Andreas Schropp, DESY Photon Science, Hamburg

“High-Resolution X-Ray Microscopy at PETRA III and LCLS”

Hard x-ray microscopy is a powerful method for structure determination that is applied in a variety of scientific fields, like biology, chemistry (catalysis), physics, materials science and nanotechnology. Our microscopy setup at the PETRA III beamline P06 provides access to different contrast mechanisms such as absorption spectroscopy, fluorescence and coherent x-ray diffraction and is designed to produce focused hard x-ray beams with sizes of 50 nm (FWHM) and even smaller. It allows to image structures with high spatial resolution and yields local elemental, chemical and structural information of a specimen. Scanning coherent x-ray microscopy (ptychography) can be combined with resonant x-ray absorption methods potentially yielding local chemical information with a spatial resolution of 10 nm and even below. Additionally, the relatively new x-ray free-electron-lasers, such as the LCLS and soon the European XFEL, provide very intense and short x-ray pulses of a few tens of femtoseconds, which opens up completely new scientific opportunities for the investigation of fast dynamical processes. In this talk, results of different imaging experiments carried out at these state-of-the-art x-ray sources will be presented.