



Modern Methods in Heterogeneous Catalysis Research

A series of independent lectures on catalyst preparation, characterization, testing and related topics - for advanced students

Instructors: R. Schlögl & F. Jentoft, professors, staff scientists from Fritz Haber Institute & TU & HU Berlin, guest speakers

Location: Seminar room CP, Fritz Haber Institute (Max Planck Society),
Faradayweg 16, 3rd floor, 14195 Berlin Dahlem, (U3 Thielplatz)

Time: Friday 9:00-10:30 h and 10:45-12:15 h (all times s.t.)

Program

- 19.10.07 Adsorption (K. Christmann)
Surface area and pore size determination (A. Trunschke)
- 26.10.07 Chemical analysis (R. Horn)
Catalyst characterization by diffraction methods (R. Schlögl)
- 02.11.07 ESR spectroscopy of catalytic systems: a primer (T. Risse)
Catalyst synthesis (W. Schmidt)
- 09.11.07 Catalyst characterization by microscopy (R. Schlögl)
Vibrational spectroscopy (M. Sterrer)
- 16.11.07 Introduction to reaction kinetics (C. Hess)
Bridging the pressure gap (in theory) (K. Reuter)
- 23.11.07 Electrocatalysis: experimental techniques and case studies (D. Kolb)
Temperature and pressure measurement (W. Ranke)
- 30.11.07 Principles of solid state NMR and applications in catalysis (K. Pelzer)
Methanol to olefins: development of an industrial catalytic process (S.R. Bare)
- 07.12.07 Measurement and analysis of kinetic data (R. Horn)
Microkinetic analysis (C. Breitkopf)
- 14.12.07 Shaping catalysts (E. Vogt)
Solid state kinetics (M. Behrens)
- 11.01.08 Partial catalytic oxidation (M. Baerns)
Biocatalysis (U. Kragl)
- 18.01.08 Principles of photocatalysis (H. Kisch)
Catalytic membrane reactors (A. Seidel-Morgenstern)
- 25.01.08 X-ray photoelectron spectroscopy (C. Linsmeier)
Diffuse reflectance IR and UV-vis spectroscopies (F.C. Jentoft)
- 01.02.08 (Electro-)catalysis in fuel cells (M. Bron)
Catalysis on zeolites (H.G. Karge)
- 08.02.08 SEMINAR (R. Schlögl, F.C. Jentoft)
- 15.02.08 Principles of homogeneous catalysis (T. Braun)
Thermal desorption spectroscopy (D. Rosenthal)

more information at <http://w3.rz-berlin.mpg.de/cat>