



MAX-PLANCK-INSTITUT
FÜR CHEMISCHE PHYSIK FESTER STOFFE

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Joint European C-MAC and COST CM0904 EuroSchool
“Intermetallic Compounds in Catalysis”
at the Max Planck Institute for Chemical Physics of Solids
Dresden, April 22 – 27, 2012

- Introduction to Intermetallic Compounds
- Chemical Bonding in Intermetallic Compounds
- Surface Structure of Intermetallic Compounds
- Adsorbate Interactions on Intermetallic Compounds

Presented by Juri Grin, Julian Ledieu, Sven Lidin, Ronan McGrath

- Introduction to Catalysis
- Quantum Chemical Calculations on Surface-Adsorbate Interactions
- SMSI/RMSI in Catalysis

Presented by Sergey Levchenko, Simon Penner, Robert Schlögl

- Intermetallic Compounds as catalysts in Methanol Steam Reforming
- Semi-Hydrogenation of Acetylene over Intermetallic Compounds
- Industrially Feasible Synthesis of Supported Intermetallic Compounds

Presented by Marc Armbrüster, Malte Behrens, An-Pang Tsai



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Scope

The EuroSchool addresses the timely topic of intermetallic compounds in catalysis. Intermetallic compounds play a major role on conventionally supported heterogeneous catalysts by being formed under reducing pre-treatment conditions or during reaction. In addition, they can form the basis for a knowledge-based approach in catalysis, enabling fast development and innovation.

The EuroSchool starts with a general introduction to intermetallic compounds – a class of metallic compounds with very interesting chemical and physical properties. It provides insight into heterogeneous catalysis and the interaction of molecules with surfaces. The occurrence and forming conditions of intermetallic compounds in catalysis is elucidated before exemplifying the advantages of using intermetallic compounds in catalysis and the knowledge-based approach on two examples. Finally, the feasibility of industrial syntheses protocols for these materials is shown.

The lectures are presented by the leading experts in the different fields and comprehend tutorials for most of the lectures. In addition, time for discussion with the lecturers, a lab visit and an excursion to BASF Schwarzheide GmbH (www.basf-schwarzheide.de/en/), a subsidiary of BASF – The Chemical Company is foreseen.

Target Audience

This EuroSchool aims at advanced students, PhD students and PostDocs in the fields of catalysis, intermetallic compounds or complex metallic alloys. Due to the high relevance in a number of industrial processes, the EuroSchool also is relevant for industrial decision makers, technological managers, innovation marketing specialists, process engineers and senior researchers who would like to gather deep understanding of the high potential of intermetallic compounds in heterogeneous catalysis. Other participants interested in the topics are highly welcome.

Registration

The number of participants is strictly limited to 60. As we expect great demand we recommend to register as early as possible but by March 31, 2012 at the latest. Hotel contingents are reserved until March 15, 2012.

For more information, registration and the up-to-date program please visit www.methanol-to-hydrogen.eu or www.eucmac.eu.

The EuroSchool is additionally supported by



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