



MAX-PLANCK-GESELLSCHAFT

Our understanding of surfaces and interfaces has progressed enormously within the last few decades, evolving from the characterization of simple surfaces, and the use of elementary theoretical approaches, to an in-depth understanding of the properties of complex systems. These studies also extend into “nano”- science, and have a profound influence on fields such as solid state physics and modern materials science. The FIESTAE symposium aims at bringing together scientists who cover specific aspects of interface research, including heterogeneous catalysis, interfaces between metals, semiconductors, and insulators, and dynamics of processes at surfaces. The close interplay between progress on the theory front and experimental investigations utilizing novel methods and procedures is documented in the symposium by placing equal emphasis on these two aspects. This promises to be a fruitful event with invited lectures by 23 eminent scientists, a poster session, three celebratory speeches, and an after-dinner lecture. Symposium attendants will also have the chance to visit the institute’s laboratories, and to meet colleagues at the annual Summer Party of the Fritz Haber Institute which takes place after the Symposium.

ORGANIZER

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VENUE

Harnack-House of the Max Planck Society
Innestr. 16 - 20 · 14195 Berlin
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REGISTRATION

www.FIESTAE.de

HOW TO GET TO THE INSTITUTE

www.fhi-berlin.mpg.de/reach.epl



FIESTAE 2011
Frontiers in Interface Science - Theory And Experiment

FRONTIERS IN INTERFACE SCIENCE - THEORY AND EXPERIMENT

International symposium on the current status of surface and interface research in theory and experiment

June 29th - July 1st 2011

Fritz Haber Institute of the Max Planck Society, Berlin



Wednesday June 29th 2011

8:45 Opening Address: G. Meijer

9:00 J. Sauer, Berlin

Quantum chemistry of oxides: clusters, surfaces, catalysts

9:35 F. Pacchioni, Milano

Electron transfer at oxide surfaces: the MgO paradigm

10:10 M. Bäumer, Bremen

Rational design of catalysts: illusion or almost reality?

11:15 H. Metiu, Santa Barbara

Catalytic methane activation by modified oxides

11:50 E. K. U. Gross, Halle

Pushing the limits of electronic structure theory: from static to time-dependent probes

14:00 J. Libuda, Erlangen

Model catalysis: from old ideas to new concepts

14:35 J. Neugebauer, Düsseldorf

Ab-initio thermodynamics: from catalytic surfaces to high strength steels

15:10 K. Fichtorn, University Park

Understanding the controlled growth of colloidal nanostructures

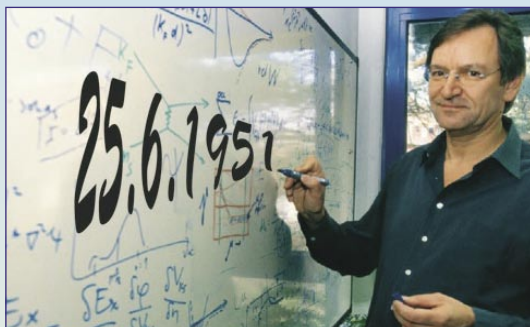
16:15 G. Rupprechter, Vienna

Surface science and technological catalysis on PdZn and PdO_x

16:50 P. C. Stair, Evanston

Atomic layer deposition for the synthesis of catalysts

20:00 POSTER SESSION



Thursday June 30th 2011

9:00 H. P. Steinrück, Erlangen

Surface science of complex molecular systems

9:35 K. Al-Shamery, Oldenburg

Elementary processes in photocatalysis

10:10 C. van de Walle, Santa Barbara

Point defects in titania

11:15 P. Kratzer, Duisburg

Atomic processes in GaAs nanowire growth

11:50 E. W. Plummer, Baton Rouge

Broken symmetry and spatial confinement in correlated materials

14:00 A. Gross, Ulm

Dynamics simulations at surfaces: from hydrogen adsorption to electrochemical interfaces

14:35 I. Mertig, Halle

Magnetolectric coupling at interfaces and surfaces

15:40 A. Rubio, San Sebastian

First-principles simulation of the spectroscopic properties of low dimensional systems

16:15 D. Menzel, Munich

Photochemistry at nanoparticles

18:00 CONFERENCE DINNER

20:00 AFTER-DINNER LECTURE

W. Kohn, Santa Barbara

Prospects for a world powered predominantly by solar and wind energy



Friday July 1st 2011

9:00 E. Umbach, Karlsruhe

Energy research: how can we meet the challenges?

9:35 S. Pantelides, Nashville

From memories to frontiers in complex oxides

10:40 R. Car, Princeton

Hydrogen bonds and quantum mechanics

11:15 C. Friend, Cambridge MA

Heterogeneous catalysis for energy efficiency: the roles of dynamic defects

13:30 LAUDATIONES

M. Stratmann, Düsseldorf

O. K. Andersen, Stuttgart

J. Hemminger, Irvine

followed by RECEPTION

from 17:00 SUMMER PARTY OF THE FRITZ HABER INSTITUTE

