



# COST ACTION D-41

INORGANIC OXIDES: SURFACES AND INTERFACES

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**2010 Annual Meeting of the COST Action**

*Torino, October 7-9, 2010*

*Museo Regionale di Scienze Naturali  
Via Giolitti 36*

## PROGRAM

<b>Thursday, October 7</b>	
12:00-13:55	<b>Registration</b>
14:00-14:10	<b>G. Pacchioni (Milano) E. Giannello (Torino): Welcome</b>
<b>Section 1. Discussion leader: Francesc Illas, Barcelona</b>	
14:10-14:50	<b>Invited Talk. Hajo Freund</b> , <i>Fritz-Haber-Institut der Max-Planck-Gesellschaft, Berlin, Germany</i> Thin oxide films, supported oxide nanoparticles and their reactivity
14:50-15:00	<b>Oliver Diwald</b> ( <i>Erlangen</i> ) Report on WG1 activities
15:00-15:30	<b>J. Goniakowski</b> <i>CNRS, Institut des Nanosciences de Paris, Paris, France</i> Polarity of ultra-thin MgO(111) films deposited on a metal substrate
15:30-16:00	<b>S. Surnev</b> <i>Institute of Physics, Surface and Interface Physics, Karl-Franzens University Graz Graz, Austria</i> Fabrication of a NiO <sub>x</sub> nanodot superlattice
16:00-16:30	<b>Coffee break</b>
<b>Section 2. Discussion leader: Walter Langel, Greifswald</b>	
16:30-17:00	<b>G. Thornton</b> <i>London Centre for Nanotechnology, University College London, London UK</i> Bonding of methyl phosphonate to TiO <sub>2</sub> (110)
17:00-17:30	<b>M. Chiesa</b> <i>Dipartimento Chimica IFM and NIS. Università di Torino, Torino IT</i> Local environment of Ti <sup>3+</sup> ions in reduced TiO <sub>2</sub> through spin density studies.
17:30-18:00	<b>O. Diwald</b> <i>Institute of Particle Technology, University of Erlangen-Nuremberg, Germany</i> Solar light and dopant induced recombination effects: photoactive nitrogen in TiO <sub>2</sub> as a case study.
<b>Friday, October 8</b>	
<b>Section 3. Discussion leader: Sergio Valeri, Modena</b>	
09:00-09:40	<b>Invited Talk. Adriano Zecchina</b> , <i>Dipartimento Chimica IFM and NIS. Università di Torino, Torino IT</i> The surface structures of anatase and rutile microcrystals :a concise review
09:40-09:50	<b>Elio Giannello (Torino)</b> Report on WG2 activities
09:50-10:20	<b>A. Adamski</b> <i>Jagiellonian University, Faculty of Chemistry, Krakow, Poland</i> Design and spectroscopic investigations of nanoxide catalysts functionalized with tailored vanadia.
10:20-10:50	<b>J. C. Conesa</b> <i>Instituto de Catálisis y Petroleoquímica, CSIC, Madrid, Spain</i> On the relevance of dispersion interactions for the energetics of titania polymorphs
10:50-11:20	<b>Coffee break</b>
<b>Section 4. Discussion leader: Greg Metha, Adelaide</b>	
11:20-11:50	<b>S. Stankic</b> <i>CNRS, Institut des Nanosciences de Paris, Paris, France</i> Gold nanoparticles supported on smoke MgO
11:50-12:20	<b>P. Sushko</b> <i>Department of Physics and Astronomy and London Centre for Nanotechnology, University College London, UK</i> SO <sub>3</sub> and SO <sub>4</sub> species at the low coordinated sites of MgO nanocubes

12:20-12:50	<b>H.-P. Steinrück</b> Lehrstuhl für Physikalische Chemie II, Universität Erlangen-Nürnberg, Erlangen, Germany Interaction of small molecules with thin NiO layers on Cu(111)
12:50-14:30	<b>Lunch break</b>
<b>Section 5. Discussion leader: Falko Netzer, Graz</b>	
14:30-15:10	<b>Invited Talk. Piero Ugliengo</b> , Dipartimento Chimica IFM and NIS. <i>Università di Torino, Torino IT</i> Computational simulation of prebiotic processes
15:10-15:20	<b>Joerg Libuda</b> (Erlangen) Report on WG3 activities
15:20-15:50	<b>J. Libuda- K. Neymann</b> Lehrstuhl für Physikalische Chemie II, Universität Erlangen-Nürnberg, Erlangen, Germany and Departament de Química Física and IQTCUB, Universitat de Barcelona, Barcelona, Spain Chemistry on pure and and Pt-loaded ceria surfaces: experiment and theory
15:50-16:20	<b>A. Kartuzian</b> Chair of Physical Chemistry, Chemistry Department, Technische Universität München, Germany. Linear and nonlinear optical properties of supported metal clusters and adsorbed molecules
16:20-16:50	<b>H. Helmann</b> Applied Physics and Competence Centre of Catalysis, Chalmers University of technology, Göteborg, Sweden Methane activation on palladium (-oxide)
16:50-18:50	<b>Poster Session &amp; MC Meeting</b>
<b>Saturday. October 9</b>	
<b>Section 6. Discussion leader: Gianfranco Pacchioni, Milano Bicocca</b>	
09:00-09:40	<b>Invited Talk. Scott Chambers</b> , Fundamental and Computational Sciences Directorate, Pacific Northwest National Laboratory, Richland, WA 99352 -- USA Properties of MBE-grown Fe-doped and (Fe, N) co-doped TiO <sub>2</sub> Rutile Epitaxial Films
09:40-09:50	<b>Alex Shluger</b> (London) Report on WG4 activities
09:50-10:20	<b>M. Reichling</b> Fachbereich Physik, Universität Osnabrück, Barbarastrasse 7, 49076 Osnabrück, Germany Characterizing TiO <sub>2</sub> (110) surface states by their work function
10:20-10:50	<b>M. Castell</b> Department of Materials, University of Oxford, Parks Road, Oxford OX1 3PH, UK Surface structures of ultra-thin TiO <sub>x</sub> and BaO films on Au (111)
10:50-11:20	<b>Coffee break</b>
<b>Section 7. Discussion leader: Friedrich Esch, München</b>	
11:20-11:50	<b>G. Granozzi</b> Department of Chemical Sciences, , University of Padova, Italy Probing transformation of relevance in catalysis on a single oxide layer: Fe on TiOx/Pt(111)
11:50-12:20	<b>A. Shluger.</b> Department of Physics and Astronomy, University College London, Gower Street, London WC1E 6BT, UK Electronic and optical properties of polycrystalline metal oxides
12:20-12:30	<b>G. Pacchioni</b> (Milano Bicocca) <b>E. Giamello</b> (Torino) : <b>Closing</b>