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International Year of
CHEMISTRY
2011

SURFACES AND CATALYSIS

The contribution of Chemistry in Piedmont

Workshop in honour of Claudio Morterra

December 6, 2011 • h 9:00 - 18:00

Aula Magna - University of Torino • Via Verdi, 8 - Torino

- 9:00 - 9:10 Prof. Emeritus **Adriano Zecchina**, NIS Centre, University of Torino
Introductory remarks
- 9:10 - 9:30 Prof. **Carlos Otero Arean**, Chemistry Dep., Universidad Islas Baleares
Professor Claudio MORTERRA: Recollections
- 9:30 - 9:50 Dr. **Giuseppina Cerrato**, Dep. Chemistry IFM and NIS Centre, University of Torino
A brief overview of Claudio's work: the "last" 20 years
- 9:50 - 13:00 Surfaces - Chairman: Prof. Elio Giamello**
- 9:50 - 10:30 Prof. **Philippe Sautet**, Chemistry Laboratory, Institute of Chemistry, University of Lyon
Modeling the structure, reactivity and support properties of gamma alumina surfaces from DFT
- Coffee break**
- 11:00 - 11:30 Prof. **Piero Ugliengo**, Dep. Chemistry IFM and NIS Centre, University of Torino
Challenging problems for quantum mechanical simulations of oxides
- 11:30 - 11:55 Prof. **Gianmario Martra**, Dep. Chemistry IFM and NIS Centre, University of Torino
Surfaces and interfaces of biomaterials: experimental studies at molecular level
- 11:55 - 12:20 Prof. **Silvia Bordiga**, Dep. Chemistry IFM and NIS Centre, University of Torino
In situ studies of "single site" heterogeneous catalysts
- 12:20 - 12:40 Dr. **Anna Maria Ferrari**, Dep. Chemistry IFM and NIS Centre, University of Torino
Quantum chemical characterization of titania surfaces and nanostructures
- 12:40 - 13:00 Dr. **Alessandro Damin**, Dep. Chemistry IFM and NIS Centre, University of Torino
Advances in Resonant Raman and SERS for surface characterization

14:30 - 18:00 **Catalysis and surfaces** - Chairman: Prof. Giuseppe Spoto

- 14:30 - 15:10 Prof. **Robert Schlögl**, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Dep. Inorganic Chemistry, Berlin
The role of heterogeneous catalysis in the energy challenge
- 15:10 - 15:40 Prof. **Leonaro Marchese**, Dep. Advanced Science and Technologies, University of Piemonte Orientale "A. Avogadro"
From early studies on model catalysts to the developments of organic hybrid materials for technological applications
- 15:40 - 16:00 Dr. **Roberto Buzzoni** and **Carlo Perego**, ENI S.p.A., Research Center for Non-Conventional Energies, Istituto ENI Donegani, Novara
Direct Synthesis of Hydrogen Peroxide, a Bridge for Innovative Applications. New Challenges from Industrial Catalytic Process Improvements
- 16:00 - 16:20 Dr. **Maela Manzoli**, Dep. Chemistry IFM and NIS, University of Torino
An insight into the reactivity of supported gold

Coffee break

- 16:40 - 17:00 Dr. **Francesco Turci**, Dep. Chemistry IFM and NIS Centre, University of Torino
Surface Chemistry and Chemical Bonding in (Nano) Particle Toxicology
- 17:00 - 17:20 Prof. **Barbara Bonelli**, DISMIC, Dep. Materials Science and Chemical Engineering, Polytechnic of Torino
Non-carbonaceous nanotubes: Imogolite-like materials
- 17:20 - 17:40 Dr. **Sara Morandi**, Dep. Chemistry IFM and NIS Centre, University of Torino
Lean NO_x Trap Catalysts: Reaction Pathways in the Storage and Reduction of NO_x Species. In situ FT-IR and Temperature Programmed measurements
- 17:40 - 18:00 Prof. **Barbara Onida**, DISMIC, Dep. Materials Science and Chemical Engineering, Polytechnic of Torino
Well-defined sites at the surface of mesoporous organosilicas
- 18:00 - 18:05 Prof. **Adriano Zecchina**
Closing remarks

International Year of Chemistry in Piemonte

President, Prof. Emeritus Adriano Zecchina - Dep. Chemistry IFM and NIS Centre, University of Torino

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