



# IDECAT

Integrated Design of  
Catalytic Nanomaterials  
for a Sustainable Production

## Conference on Catalysis Concepts, Complexity and Diversity in Catalysis

chairman: Jean-Marie Basset, co-chairman: Rutger van Santen

Porquerolles<sup>(\*)</sup> 12 - 17 May 2007

### Programme

#### Heterogeneous Catalysis

- **Prof. R. Anwander**, University of Bergen, Norway  
Size/shape-selective reactions on periodic nanoporous silica
- **Prof. G. Centi**, Università di Messina, Italy  
Nanostructured electrocatalysts
- **Dr. C. Copéret**, LCOMS - ESCPE Lyon, France  
Molecular understanding of heterogeneous catalysts
- **Prof. A. Corma**, Instituto de Tecnología Química, Valencia, Spain  
Molecular design of single and double site catalysts for one step and for cascade reactions
- **Prof. K. Domen**, University of Tokyo, Japan  
Design of photocatalysts for overall water splitting
- **Prof. E.J.M. Hensen**, TU Eindhoven, Netherland  
Understanding alkane activation over Lewis acid sites in zeolites
- **Prof. J. Lercher**, TU München, Germany  
Alkane activation by solid acids
- **Prof. F. Trifiro**, Università di Bologna, Italy  
The valorization of alkanes. Still a bridge between challenges and industrial needs
- **Prof. B. Weckhuysen**, Utrecht University, the Netherlands  
Catalysts live and up close: probing catalytic solids with spectroscopy and microscopy

#### Homogeneous and Enzymatic Catalysis

- **Prof. K. Faber**, Karl Franzens Universität, Graz, Austria  
Impossible reactions catalyzed by racemases, stereo-complementary dehydrogenases and sulfatases
- **Prof. J. F. Hartwig**, Univ. of Illinois at Urbana Champaign, USA  
Catalytic organometallic carbon-heteroatom bond formation
- **Prof. S. Sabo Etienne**, LCC, Toulouse, France  
Concepts in catalysis: the sigma-CAM mechanism
- **Prof. G. Van Koten**, Utrecht University, the Netherlands  
Making homogeneous catalysts (nano)filterable

#### Industrial Catalysis

- **Dr N. Bats**, IFP Solaize, France  
Ionic liquids : template or solvent in synthesis of zeolites and zeolite analogues ?
- **Dr. A. Mc Connell**, SASOL, Sasolburg, South Africa  
Recent progress towards the design and optimisation of highly selective ethylene oligomerisation catalysts
- **Dr. R. Farrauto**, BASF Catalysts LLC, Princeton, USA  
From the internal combustion engine to the fuel cell: moving towards the hydrogen economy.
- **Dr. R. B. Hall**, EXXONMOBIL, Clinton, USA  
Influence of micropore cage dimension on MTO and olefin conversion catalysis

#### Surface Science, Spectroscopy and Modelling

- **Prof. S. Bordiga**, Università di Torino, Italy  
Spectroscopic investigations of zeolites
- **Prof. J. Evans**, University of Southampton, UK  
Rhodium: the chameleon catalyst
- **Dr. P. Sautet**, ENS Lyon, France  
Alkane activation with Zr and W complexes grafted on gamma-alumina : synergy between support and complex reactivity from a quantum chemical approach
- **Dr. S. Shaikhutdinov**, Fritz-Haber-Institut - MPG - Berlin, Germany  
Model systems for heterogeneous catalysts at atomic resolution
- **Dr. R. Schloegl**, Fritz-Haber-Institut - MPG - Berlin, Germany  
Understanding heterogeneous catalysis of demanding processes: how essential is complexity?
- **Prof D. de Vos**, KU Leuven, Belgium  
Fluorescence microscopic studies of the reactivity of heterogeneous catalysts
- **Prof. M. Witco**, University of Cracovy, Poland  
Quantum chemistry as a tool to study catalytic active centers

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(\*) Porquerolles is a Mediterranean island near the coast, close to Toulon/Marseille, south of FRANCE