

**Monday, 29<sup>th</sup> August 2011.**

**Bute Hall**

- 08:30 – 09:00 Opening ceremony  
09:00 – 10:00 Plenary lecture: Prof C. Campbell (University of Washington)  
*Thermodynamics and kinetics of elementary reaction steps on late transition metal catalysis, and in their sintering (Chairs: Avelino Corma & Geoff Bond)*  
10:00 – 10:30 **Coffee break**

**Session on Industrial Application – Kelvin Gallery.**

**Chairs:** Martin Lok and Anders Holmen

- 10:30 – 10:50 IO1: Professor Zinifer Ismagilov, (Boreskov Institute of Catalysis)  
*Selective catalytic oxidation of sulfur organic compounds of hydrocarbon fuels to sulfur dioxide over heterogeneous catalysts*  
10:50 – 11:10 IO2: Mr Colin Dupont, (UPMC, CNRS)  
*Tetralin ring opening on supported molybdenum carbide catalysts*  
11:10 – 11:30 IO3: Dr. Alak Bhattacharyya, (UOP Honeywell)  
*Catalytic desulfurization of hot gases from gasification units and refineries*  
11:30 – 11:50 IO4: Mr Oleg Klimov, (Boreskov Institute of Catalysis)  
*Usage of bimetallic complexes for industrial preparation of the supported catalysts for deep hydrotreatment*  
11:50 – 12:10 IO5: Dr Dejin Kong, (SINOPEC)  
*Synthesis of ZSM-5/silicalite-1 core-shell catalyst and its application in highly selective formation of para-xylene*  
12:10 – 12:30 IO6: Miss Teresa M. Portilla, (UPV-CSIC)  
*A new zeolite with pore diameter between those of 10 and 12 mr zeolites as an excellent catalyst for aromatic alkylation*  
12:30 – 14:00 **Lunch break**  
**Chairs:** Kim Johannsen and Gordon Kelly  
14:00 – 14:20 IO7: Nuno Batalha (University of Poitiers)  
*BEA zeolite germination over a support: improvement of the n-C16 hydroisomerisation performance*  
14:20 – 14:40 IO8: Mr Jeremy Francis (IFP Energies nouvelles)  
*Beneficial effect of nickel addition on USY zeolite used in hydrocracking catalysts*  
14:40 – 15:00 IO9: Dr. Kai Chung Szeto (CNRS - CPE Lyon)  
*Direct transformation from gas to liquid alkanes catalyzed by metal hydride supported on silica-alumina*  
15:00 – 15:20 IO10: Professor Hilde Venvik (Norwegian University of Science and Technology)  
*Direct synthesis of dimethyl ether in microstructured reactors*  
15:20 – 15:40 IO11: Mr. Xian-Yang Quek (Eindhoven University of Technology)  
*Unprecedented oxygenate selectivity in Fischer-Tropsch synthesis catalyzed by Ru nanoparticles*  
15:40 – 16:10 **Tea break**  
**Chairs:** Harry Bitter and Armir Börner  
16:10 – 16:30 IO12: Ms Patricia Benito (University of Bologna)  
*Development of catalysts for the reforming of the producer gas: the greensyngas experience*  
16:30 – 16:50 IO13: Dr Fábio Noronha (Instituto Nacional de Tecnologia)  
*The LaNiO<sub>3</sub> perovskite-type oxides for the production of hydrogen through steam reforming of ethanol. The effect of the preparation method*  
16:50 – 17:10 IO14:

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10:00 – 10:30 **Coffee break**

**Session on Kinetics and Mechanism – Humanities Lecture Theatre**

**Chairs:** Chris Hardacre, Angelos Efstathiou

- 10:30 – 10:50 KO1: Prof. Simon Podkolzin (Stevens Institute of Technology)  
*Studies of methane aromatization over molybdenum/ZSM-5 catalysts with operando molecular spectroscopy and DFT calculations*
- 10:50 – 11:10 KO2: Prof. Claude Mirodatos (IRCELYON-CNRS-Université Lyon)  
*Quantitative structure descriptor relationships (QSDR) in heterogeneous catalysis: combining formulation and microkinetic modeling in methane oxidative coupling catalyst optimization*
- 11:10 – 11:30 KO3: Dr. Raimund Horn, (Fritz Haber Institute)  
*Syngas formation by catalytic partial oxidation of methane on rhodium and platinum catalysts: a mechanistic study by spatial reactor profiles, in situ raman spectroscopy and microkinetic simulations*
- 11:30 – 11:50 KO4: Prof. Vladislav Sadykov (Boreskov Institute of Catalysis)  
*Mechanism of CH<sub>4</sub> dry reforming on nanocrystalline doped ceria-zirconia with supported Pt, Ru, Ni And Ni–Ru*
- 11:50 – 12:10 KO5: Professor Gianpiero Groppi (Politecnico di Milano)  
*Optimization of the thermal behavior of an adiabatic reformer for the catalytic partial oxidation of CH<sub>4</sub> at short contact time*
- 12:10 – 12:30 KO6: Davide Ferri (Empa, Swiss Federal Laboratories for Materials Science and Technology)  
*Activity improvement of La(Fe,Pd)O<sub>x</sub> for CH<sub>4</sub> oxidation under periodic red-ox conditions*
- 12:30 – 14:00 Lunch break**
- Chairs:** Bert Weckhuysen, Javier Perez-Ramirez
- 14:00 – 14:20 KO7: Emiel Hensen (Eindhoven University of Technology)  
*Supported rhodium oxide nanoparticles as highly active CO oxidation catalyst*
- 14:20 – 14:40 KO8: Dr. Georges Sitja (Centre Interdisciplinaire de Nanoscience de Marseille)  
*Size dependence of CO adsorption energy on regular arrays of palladium nanoparticles in the size range 5 to 1200 atoms*
- 14:40 – 15:00 KO9: Dr Wei Yang (Beijing University of Chemical Technology)  
*Evolution of the oxygen mobility in iron-based perovskite structures: correlation with mixed-oxide activity for low temperature co oxidation*
- 15:00 – 15:40 K Keynote 1: Dr Chuck Peden (Pacific Northwest National Laboratory)  
*Excellent Activity and Selectivity of Cu-SSZ-13 in the Selective Catalytic Reduction of NO<sub>x</sub> with NH<sub>3</sub>*
- 15:40 – 16:10 Tea break**
- Chairs:** Catherine Louis, David Lennon
- 16:10 – 16:30 KO10: Dr Marco Conte (Cardiff University)  
*Au/C catalysts for the hydrochlorination of higher alkynes: a study of the reaction mechanism*
- 16:30 – 16:50 KO11: Bart Hereijgers (Utrecht University)  
*Gold catalyzed aerobic oxidation of cyclohexane: new mechanistic insight by thorough product analysis*
- 16:50 – 17:10 KO12: Marie Holz (Ruhr University – Bochum)  
*Conversion of CH<sub>3</sub>OH over Au/ZnO and Au/TiO<sub>2</sub> under thermal and photocatalytic conditions.*

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**10:00 – 10:30 Coffee break**

**Session on Theory and Modelling – Senate Room**

**Chairs:** Dave Willock, Jose Carlos Conesa

10:30 – 11:10 T Keynote 1: Prof. Dionisios Vlachos (University of Delaware)  
*Design of Emergent-Behaving Catalytic Materials*  
11:10 – 11:30 TO1: Cuong Manh Nguyen (Ghent University)  
*Ab initio study of the adsorption of C1-C4 alcohols in H-ZSM-5 zeolite*  
11:30 – 11:50 TO2: Dr Petr Koci (Institute of Chemical Technology, Prague)  
*Integrated multiscale methodology for virtual prototyping of porous catalysts*  
11:50 – 12:10 TO3: Dr Mercedes Boronat (Instituto Tecnologia Quimica UPV-CSIC)  
*Mechanistic differences between methanol and dimethyl ether carbonylation in side pockets and large channels of mordenite*  
12:10 – 12:30 TO4: Pascal Raybaud (IFP Energies Nouvelles)  
*DFT study of the hydrodeoxygenation mechanisms over MOS<sub>2</sub> and NiMOS active phases*

**12:30 – 14:00 Lunch break**

**Chairs:** Malgorzata Witko, Dionisios Vlachos

14:00 – 14:20 TO5: Dr Pieter Van Helden (Sasol Technology)  
*Hydrogen on cobalt surfaces – a DFT and TPD study*  
14:20 – 14:40 TO6: Pascal Raybaud (IFP Energies Nouvelles)  
*H<sub>2</sub> induced reconstruction of supported Pt clusters: metal-support interaction versus surface hydride*  
14:40 – 15:00 TO7: Prof Jean-François Paul (UCCS - Univ. Lille)  
*DFT study of the HDO reaction on sulphide catalyst*  
15:00 – 15:20 TO8: Andreas Heyden (University of South Carolina)  
*Multiscale modeling of the water-gas shift reaction at the three phase boundary of Pt/TiO<sub>2</sub> catalysts*  
15:20 – 15:40 TO9: Dr Françoise Delbecq (Ecole Normale Supérieure de Lyon)  
*Mechanism of selective hydrogenation of crotonaldehyde on ceria supported platinum particles: a DFT study.*

**15:40 – 16:10 Tea break**

**Chairs:** Rutger van Santen, Pascal Raybaud

16:10 – 16:30 TO10: Prof Chris Hardacre (Queen's University, Belfast)  
*Correction for reversible adsorption over the "inert" material*  
16:30 – 16:50 TO11: Adriana Trincherro (Chalmers University of Technology)  
*A DFT-based kinetic model for methane oxidation over Pd*  
16:50 – 17:10 TO12: Dr Mercedes Boronat (Instituto Tecnologia Quimica UPV-CSIC)  
*Oxidation active sites on gold nanoparticles*

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10:00 – 10:30 **Coffee break**

**Session on Catalyst Preparation – James Watt South Lecture Theatre**

**Chairs:** Russell Howe, Angelo Vaccari

- 10:30 – 10:50 PO1: Dr Christian Schulze Isfort (Evonik Degussa GmbH)  
*Thermal and hydrothermal stability of flame synthesized silica-titania mixed oxides*  
10:50 – 11:10 PO2: Dr Wolfgang Kleist (Karlsruhe Institute of Technology)  
*Design, characterization and applications of catalysts based on metal-organic frameworks*  
11:10 – 11:30 PO3: Dr Olga Zalomaeva (Boreskov Institute of Catalysis)  
*Cyclic carbonate synthesis from epoxides and CO<sub>2</sub> over metal organic framework Cr-mil-101*  
11:30 – 12:10 P Keynote 1: Dr Shin Mukai (Hokkaido University)  
*Synthesis Of A Tubular Radial Flow Module Equipped With A Hierarchical Pore System*  
12:10 – 12:30 PO4: Prof Christopher Jones (Georgia Institute of Technology)  
*Silica-supported poly(styrene sulfonic acid) brush materials and their application in ethyl lactate hydrolysis*  
12:30 – 14:00 **Lunch break**

**Chairs:** Antonio Sepulveda, Liubov Kiwi-Minsker

- 14:00 – 14:40 P Keynote 2: Prof. Shi-Gang Sun (Xiamen University)  
*Metal nanocrystals of high surface energy and high catalytic activity*  
14:40 – 15:00 PO5: Prof Edman Tsang (University of Oxford)  
*Studies of nanaocatalysts for cleaner energy provisons*  
15:00 – 15:20 PO6: Keita Taniya (Kobe University)  
*Selective hydrogenation of cinnamaldehyde over silica coated tin-platinum nanoparticle catalysts*  
15:20 – 15:40 PO7: Prof Weixin Huang (University of Science and Technology of China)  
*In-situ formation of catalytically active sites via the shape-controlled surface restructuring of oxide nanocrystals*  
15:40 – 16:10 **Tea break**  
**Chairs:** Valentin Parmon, Patricio Ruiz  
16:10 – 16:30 PO8: Dr Sergei Vereshchagin (Institute of Chemistry and Chemical Technology SB RAS)  
*Ferric oxide based microspheres as catalyst for OCM process – a new approach to catalyst design*  
16:30 – 16:50 PO9: Eng. Susana Lopes Silva (ENS Lyon/IFPEN Lyon)  
*Polyoxometalates encapsulation at mesoporous materials: application in ultra low sulfur diesel production*  
16:50 – 17:10 PO10: Martin Høj (Technical University of Denmark)  
*CoMo/Al<sub>2</sub>O<sub>3</sub> hydrotreating catalysts prepared by flame synthesis*

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10:00 – 10:30 **Coffee break**

**Session on Catalyst Characterisation – Bute Hall**

**Chairs:** Steve Bailey, Jerry Spivey

- 10:30 – 11:10 C Keynote 1: Prof Bert Weckhuysen (Debye Institute for NanoMaterials Science)  
*Closing The Operando Gap: The Application Of High Energy Photons For Studying Catalytic Solids At Work*  
11:10 – 11:30 CO1: Karin Föttinger (TU Vienna)  
*In situ x-ray and vibrational spectroscopic studies on Pd/ZnO and Pd/Ga<sub>2</sub>O<sub>3</sub> methanol steam reforming catalysts*  
11:30 – 11:50 CO2: Ms Diana Angarita Arias (Universitat Rovira i Virgili)  
*Characterization of Mg-Al-hydrotalcites catalysts modified with phosphoric acid used for synthesis of dimethyl carbonate from methanol and carbon dioxide*  
11:50 – 12:10 CO3: Christian Weilach (Vienna University of Technology)  
*Formation and catalytic properties of PdZn/Pd(111) surface alloys*  
12:10 – 12:30 CO4: Prof. Jose M. Lopez Nieto (Instituto Tecnologia Quimica)  
*Oxidative dehydrogenation of ethane over NiO-CeO<sub>2</sub> mixed oxides catalysts. The promoter effect of cerium oxide*  
12:30 – 14:00 **Lunch break**  
**Chairs:** Richard Gonzalez, Frank Stone  
14:00 – 14:20 CO5: Dr. Katrin F. Domke (FOM Institute AMOLF)  
*Glycol etherification on H-beta zeolites followed in 3D with nonlinear spectromicroscopy*  
14:20 – 14:40 CO6: Sylvia Reiche (Fritz-Haber-Institute)  
*Acidified carbon catalysts for liquid phase reactions in biomass conversion chemistry*  
14:40 – 15:00 CO7: Carsten Sievers (Georgia Institute of Technology)  
*Stabilization of alumina supported catalysts for aqueous phase conversion of biomass*  
15:00 – 15:20 CO8: Prof. Antonella Gervasini (Università degli Studi di Milano)  
*Intrinsic and effective acidity of K<sup>+</sup>, Ba<sup>2+</sup>, and Nd<sup>3+</sup> added to Nb<sub>2</sub>O<sub>5</sub> related to stability in biomass reactions*  
15:20 – 15:40 CO9: Kiyotaka Nakajima (Materials and Structures Laboratory)  
*HMF production from glucose aqueous solution over water-tolerant heterogeneous Lewis acid catalyst*  
15:40 – 16:10 **Tea break**  
**Chairs:** Olaf Deutschmann, Siglinda Perathoner  
16:10 – 16:30 CO10: Dr. Petr Sazama (J. Heyrovsky Institute of Physical Chemistry of the ASCR)  
*Analysis of Si- and Al- related defect sites in micro- and micro-mesoporous high-silica zeolites. Effect on selectivity and durability in MTH*  
16:30 – 16:50 CO11: Prof. Yasushige Kuroda (Okayama University)  
*On the peculiar adsorption and activation behaviours of molecular hydrogen on copper-ion-exchanged MFI-type zeolite*  
16:50 – 17:10 CO12: Miss Nidhi Gupta (The Energy and Resources Institute)  
*Application of red mud for catalytic hydrocarbon cracking and characterisation of the nature of the resultant carbon deposits*

**Tuesday, 30<sup>th</sup> August 2011.**

**Bute Hall**

- 09:00 – 10:00 Plenary lecture: Prof Manfred Reetz (Max-Planck-Institut für Kohlenforschung, Mülheim) *Tuning Monooxygenases by Genetic and Chemical Means*  
**Chair:** Giuseppe Bellussi, Martyn Twigg
- 10:00 – 10:30 Coffee break**

**Session on Industrial Application – Kelvin Gallery**

**Chair:** Gabriele Centi, Riitta Keiski

- 10:30 – 11:10 I Keynote 1: Dr Joseph Kocal (UOP)  
*Conversion of 2nd Generation Renewable Feedstocks to Fungible Liquid Transportation Fuels*
- 11:10 – 11:30 IO15: Prof. Aline Auroux (IRCELYON-CNRS)  
*Development of catalysts for production of fatty nitriles at low temperature*
- 11:30 – 11:50 IO16: Dr Catia Cannilla (CNR-ITAE)  
*Transesterification of vegetable oils on Mn-based catalysts for biodiesel production: correlation between surface and textural properties*
- 11:50 – 12:10 IO17: Hidetoshi Ohta (Catalysis Research Center, Hokkaido University)  
*Aqueous-phase hydrodeoxygenation of phenols under acid-free conditions with bifunctional carbon-supported Pt catalysts*
- 12:10 – 12:30 IO18: Dr Juan Manuel Coronado (IMDEA Energy)  
*Ni<sub>2</sub>P/SBA-15: a new type of nonsulfide hydrotreating catalyst for green diesel production*
- 12:30 – 14:00 Lunch break**
- Chair:** Jim Dumesic, Eric Marceau
- 14:00 – 14:20 IO19: Chuan Wang (Institute of Chemical and Engineering Sciences)  
*Mild condition hydrogenation of furfural on Pt/MWNT catalysts - stabilization of furfural in bio oil upgrading*
- 14:20 – 14:40 IO20: Dr Eleni Iliopoulou (CPERI/CERTH)  
*Catalytic upgrading of biomass pyrolysis vapours using transition metal-modified ZSM-5 zeolite*
- 14:40 – 15:00 IO21: Prof Dmitry Murzin (Åbo Akademi University)  
*Aqueous phase reforming of biomass feedstocks as an approach to hydrogen production*
- 15:00 – 15:20 IO22: Samuel Blass (Department of Chemical Engineering and Materials Science, University of Minnesota)  
*Biomass upgrading in millisecond autothermal staged reactors*
- 15:20 – 15:40 IO23: Kameh Tajvidi (Max-Planck-Institut für Kohlenforschung)  
*Efficient utilization of cellulose and wood via hydrolytic hydrogenation*
- 15:40 – 16:10 Tea break**
- Chair:** Florence Epron, James McGregor
- 16:10 – 16:30 IO24: Prof Ye Wang (Xiamen University)  
*Polyoxometalate-supported Ru nanoparticles for conversions of cellobiose and cellulose into sorbitol in hydrogen in water*
- 16:30 – 16:50 IO25: Marcelo D Kaufman-Rechulski (Paul Scherrer Institut)  
*Supported ruthenium catalyst for cleaning biomass producer gas at elevated temperatures*
- 16:50 – 17:10 IO26: Oihane Sanz (University of Basque Country)  
*Metallic monoliths for nitrates reduction in water*

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**Chair:** Giuseppe Bellussi, Martyn Twigg
- 10:00 – 10:30 Coffee break**

**Session on Kinetics and Mechanism – Humanities Lecture Theatre**

**Chair:** Alexei Lapkin, Angeliki Lemonidou

- 10:30 – 10:50 KO13: Dr Alexey Fedotov (A.V. Topchiev Institute of Petrochemical Synthesis)  
*Mechanistic aspects of high-rate biofermentation products conversion into hydrogen containing gas using porous membrane-catalytic systems*
- 10:50 – 11:10 KO14: Oliver Korup (Fritz Haber Institute of the Max Planck Society)  
*Autothermal catalytic partial oxidation (CPO) of methane on platinum investigated by high resolution spatial reactor profiles*
- 11:10 – 11:30 KO15: Mrs Ewelina Leino (Abo Akademi University)  
*Kinetics of the synthesis of diethyl carbonate starting from CO<sub>2</sub> and ethanol over heterogeneous catalysts*
- 11:30 – 11:50 KO16: Dr Ursula Bentrup (Leibniz -Institute for Catalysis at the University of Rostock)  
*Mechanistic investigations of the oxidative carbonylation of methanol to dimethyl carbonate over CuY zeolite: an operando drifts/uv-vis-drs/ms study*
- 11:50 – 12:10 KO17: Dr Olga Ovsitser (Leibniz -Institute for Catalysis at the University of Rostock)  
*Selective dehydrogenation of propane and iso-butane over well-defined VO<sub>x</sub>/SiO<sub>2</sub>-TiO<sub>2</sub> catalysts*
- 12:10 – 12:30 KO18: De Chen (Norwegian University of Science and Technology)  
*Selective C-H and C-C bond activation of propane on platinum nanoparticles with different sizes and shapes*
- 12:30 – 14:00 Lunch break**
- Chair:** Fred Meunier, Richard Wells
- 14:00 – 14:20 KO19: Prof Alfons Drochner (Technische Universität Darmstadt)  
*Isotopic studies on Mo/V/W-mixed oxide catalysts during the selective oxidation of acrolein*
- 14:20 – 14:40 KO20: Dr Sonia Carre (Université de Lille)  
*Comparative kinetic and ir spectroscopic measurements on Rh-based ngv catalyst: toward an integrated approach*
- 14:40 – 15:00 KO21: Amol Amrute (ETH Zurich)  
*Mechanism-performance relationships of metal oxides in catalyzed HCl oxidation*
- 15:00 – 15:40 K Keynote 2: Prof Javier Pérez-Ramírez (ETH Zurich)  
*Transient Mechanistic Studies In Heterogeneous Catalysis: Recent Success Stories*
- 15:40 – 16:10 Tea break**
- Chairs:** Vasile Parvulescu, Inmaculada Rodriguez Ramos
- 16:10 – 16:50 K Keynote 3: Dr Mathias Laurin (Friedrich-Alexander-Universität Erlangen-Nürnberg)  
*Ionic Liquid Based Model Catalysts*
- 16:50 – 17:10 KO22: Prof Jorg Libuda (University Erlangen-Nuremberg)  
*Spillover processes at the microscopic level*

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**Chair:** Giuseppe Bellussi, Martyn Twigg
- 10:00 – 10:30 Coffee break**

**Session on Homogeneous Catalysis – Senate Room**

**Chair:** Istvan Hovath, Bob Tooze

- 10:30 – 11:10 H Keynote 1: Dr Mizuki Tada (University of Tokyo)  
*Design Of Molecularly Imprinted Metal-Complex Catalysts For Selective Catalysis*
- 11:10 – 11:30 HO1: Dr Evgeny Pidko (Eindhoven University of Technology)  
*Molecular aspects of ionic liquid-mediated glucose dehydration by metal chlorides*
- 11:30 – 11:50 HO2: Dr Christophe Michon (CNRS - UCCS UMR 8181 - Univ. Lille 1)  
*Hydroamination of unactivated alkenes catalysed by a combination of copper and silver salts: the unveiling of a bronsted acid catalysis*
- 11:50 – 12:10 HO3: Prof Christopher Jones (Georgia Institute of Technology)  
*Highly regioselective ring-opening of terminal epoxides with Co(III)- porphyrin, salen and salphen catalysts*
- 12:10 – 12:30 HO4: Dr Ralf Jackstell (Leibniz Institut für Katalyse an der Universität Rostock)  
*A general and efficient iridium-catalyzed hydroformylation of olefins*
- 12:30 – 14:00 Lunch break**

**Session on Environmental Catalysis – Senate Room**

**Chair:** Isabella Nova, Robbie Burch

- 14:00 – 14:40 E Keynote 1: Bill Partridge (Chalmers University of Technology)  
*Spatiotemporal Analysis Of SCR Reactions In Zeolite SCR Catalysts*
- 14:40 – 15:00 EO1: Eleonora Aneggi (Fisica e Ambiente, Università di Udine)  
*Evidence of a redox route mechanism in soot oxidation over ceria*
- 15:00 – 15:20 EO2: Benat Pereda-Ayo (University of the Basque Country)  
*Studies on nitrogen formation pathways during the regeneration of NO<sub>x</sub> storage and reduction catalysts assisted by isotope labelling techniques*
- 15:20 – 15:40 EO3: Dr Petr Koci (Institute of Chemical Technology, Prague)  
*Modelling of N<sub>2</sub>O formation during the regeneration of NO<sub>x</sub> storage catalyst*
- 15:40 – 16:10 Tea break.**
- Chair:** Bill Partridge, Arturo Martinez-Arias
- 16:10 – 16:30 EO4: Andrew Beale (Utrecht University)  
*Isolated Cu<sup>2+</sup>: active sites for selective catalytic reduction of NO*
- 16:30 – 16:50 EO5: Alexandre Baylet (Université de Lyon)  
*Sulphated TiO<sub>2</sub> for selective catalytic reduction of NO<sub>x</sub> by decane*
- 16:50 – 17:10 EO6: Luis J. Alemany (University of Malaga)  
*Nanofibrous Pt-Ba lean NO<sub>x</sub> catalyst with improved sulfur resistance and thermal durability*

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- 10:00 – 10:30 Coffee break**

**Session on Catalyst Characterisation – Bute Hall**

**Chair:** Chuck Peden, Mike Bowker

- 10:30 – 10:50 CO13: Prof Wolfgang Grünert (Ruhr University Bochum)  
*New facets of a proven catalyst system: the response of  $V_2O_5$ - $WO_3$ / $TiO_2$  de $NO_x$  catalysts to thermal stress and what it tells about the V-W interaction*
- 10:50 – 11:10 CO14: Dr William Partridge (Oak Ridge National Laboratory)  
*Axial redistribution of  $NO_x$  storage and resulting impact on lean $NO_x$  trap performance under fast lean/rich cycling conditions*
- 11:10 – 11:30 CO15: Prof Emrah Ozensoy (Bilkent University)  
 *$NO_x$  uptake and storage properties of  $BaO_x$ / $Pt(111)$  model catalyst: influence of Ba coverage, surface morphology and stoichiometry*
- 11:30 – 11:50 CO16: Andrzej Kotarba (Jagiellonian University)  
*Assignment of active sites in cobalt spinel catalyst for low temperature  $N_2O$  decomposition*
- 11:50 – 12:10 CO17: Mr Naresh Muddada (University of Oslo)  
*Influence of dopants on oxychlorination catalyst: an insight through combined spectroscopy and kinetic tests*
- 12:10 – 12:30 CO18: Dr Elena Golubina (M.V.Lomonosov Moscow State University)  
*The role of support in formation and stabilization of catalytically active metal nanoparticles for hydrodechlorination*
- 12:30 – 14:00 Lunch break**
- Chair:** Alfonso Caballero, Davide Ferri
- 14:00 – 14:40 C Keynote 2: Prof Jan-Dierk Grunwaldt, (Karlsruhe Institute of Technology)  
*Probing Catalysts In Action: Time And Spatially Resolved Information Using X-Ray Absorption Spectroscopy*
- 14:40 – 15:00 CO19: Patricia Benito (University Of Bologna)  
*X-ray absorption and XRD/XRF tomography at micro and nanoscale for the characterization of structured catalysts*
- 15:00 – 15:20 CO20: Matthias Bauer (Karlsruhe Institute of Technology)  
*Synchrotron radiation and catalysis: new insights into structure and electronic details by exotic but powerful methods*
- 15:20 – 15:40 CO21: Christiane Kartusch (ETH Zurich)  
*In situ determination of the oxidation state of gold supported on ceria in the liquid phase hydrogenation of nitrobenzene*
- 15:40 – 16:10 Tea break**
- Chair:** Krijn de Jong, Paulo Pescarmona (tbc)
- 16:10 – 16:30 CO22: Prof Michael Claeys (University of Cape Town)  
*Study on formation and stability of cobalt carbide in the Fischer-Tropsch synthesis using an in-situ magnetometer*
- 16:30 – 16:50 CO23: Prof Dragomir Bukur (Texas A&M University at Qatar)  
*Fischer-Tropsch synthesis on  $Co/Al_2O_3$  catalyst – effect of reductant type*
- 16:50 – 17:10 CO24: Laure Braconnier (IFP Energies nouvelles)  
*Orientation of the crystalline phase during cobalt catalysts activation followed by operando XRD and DRIFTS*

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**Chair:** Giuseppe Bellussi, Martyn Twigg
- 10:00 – 10:30 Coffee break**

**Session on Catalyst Preparation – James Watt South Lecture Theatre**

**Chair:** John Winfield, Jason McPherson

- 10:30 – 10:50 PO11: Dr.-Ing. Ralph Kraehnert (Technical University of Berlin)  
*Mesoporous IrO<sub>2</sub> films templated by peo-b-pb-b-peo block-copolymers: self-assembly, crystallization behaviour and electro-catalytic OER performance*
- 10:50 – 11:10 PO12: Dr Xiaowei Chen (University of Cadiz)  
*Synthesis of ceria-praseodymia nanotubes with high catalytic activity for CO oxidation*
- 11:10 – 11:30 PO13: Annelies Peeters (K.U. Leuven)  
*Lewis acid double metal cyanide catalysts for hydroamination*
- 11:30 – 11:50 PO14: Dr Sergei Vereshchagin (Institute of Chemistry and Chemical Technology SB RAS)  
*Ferric oxide based microspheres as catalyst for OCM process – a new approach to catalyst design*
- 11:50 – 12:10 PO15: Dr Jonathan Bartley (Cardiff University)  
*Synthesis of high surface area CuMnO<sub>x</sub> catalysts by supercritical antisolvent precipitation*
- 12:10 – 12:30 PO16: Zhili Dong (Nanyang Technological University)  
*Facile synthesis of hierarchical titanate catalysts by electrochemical spark discharge spallation*
- 12:30 – 14:00 Lunch break**
- Chair:** Mercedes Boronat, Tatiana Rostovshichikova (tbc)
- 14:00 – 14:20 PO17: Mr James Charles Pritchard (Cardiff University)  
*Direct synthesis of hydrogen peroxide using Au-Pd/C catalysts prepared by sol-immobilization*
- 14:20 – 14:40 PO18: Mr Kevin Guillois (IRCELYON)  
*Design of a silica-supported gold catalyst for the aerobic epoxidation of trans-stilbene in methylcyclohexane*
- 14:40 – 15:00 PO19: Dr Krisztina Frey (Institute of Isotopes, Hungary)  
*SiO<sub>2</sub> supported Ag-Au alloy nanoparticles with high catalytic activity in different reactions*
- 15:00 – 15:20 PO20: Dr. Jennifer. K. Edwards (Cardiff University)  
*Effect of the reaction conditions on the performance of Au-Pd/C catalysts for the direct synthesis of hydrogen peroxide*
- 15:20 – 15:40 PO21: Dr Wenjie Shen (Dalian Institute of Chemical Physics)  
*Stabilized gold particles on ceria nanorods for WGS reaction*
- 15:40 – 16:10 Tea break**
- Chair:** Jacek Rynkowski, Lachezar Petrov (tbc)
- 16:10 – 16:30 PO22: Shanshan Wang (Max-Planck-Institut für Kohlenforschung)  
*Highly active supported copper nanoparticles in methanol synthesis*
- 16:30 – 16:50 PO23: Ying Guo (Humboldt-Universität zu Berlin)  
*Sol-gel synthesis and characterization of nanoscopic transition metal fluorides*
- 16:50 – 17:10 PO24: Kazuhiko Maeda (University of Tokyo)  
*Improvement of photocatalytic activity of tantalum oxynitride for hydrogen evolution from water under visible light by introducing zirconia nanoparticles*

**Wednesday, 31<sup>st</sup> August 2011.**

**Bute Hall**

- 09:00 – 10:00 Plenary lecture: Prof. Rutger van Santen (University of Eindhoven, FG lecturer)  
*Structure sensitivity and insensitivity in heterogeneous catalysis*  
Chair: Norbert Kruse, Jim Anderson
- 10:00 – 10:30 Coffee break**

**Session on Catalyst Preparation – James Watt South Lecture Theatre**

**Chair:** Julian Ross, Magali Boutonnet

- 10:30 – 11:10 P: Keynote 3: Prof Eric Marceau (UMR7197 CNRS – UPMC)  
*In Situ Study Of The Impact Of Sorbitol Addition And Ruthenium Promotion On The Structure And Performance Of SiO<sub>2</sub>-Supported Cobalt Catalysts For Fischer-Tropsch Synthesis*
- 11:10 – 11:30 PO25: Hirsá Torres Galvis (Utrecht University)  
*Stable iron catalysts for the selective production of lower olefins from synthesis gas*
- 11:30 – 11:50 PO26: Karolina Rohan (Unité de Catalyse et de Chimie de Solide)  
*New heteropolyanionic niobium-tungsten based precursors for fluid catalytic cracking and hydrocracking pre-treatment catalysts*
- 11:50 – 12:10 PO27: José Antonio Díaz (Universidad de Castilla - la Mancha)  
*Gas-phase hydrogenation of 2-tert-butylphenol using Ni catalysts supported on carbonaceous materials*
- 12:10 – 12:30 PO28: Professor Youzhu Yuan (Xiamen University)  
*High activity and selectivity of carbon nanotube supported Ag catalysts for hydrogenation of dimethyl oxalate*
- 12:30 – 14:00 Lunch break**

**Wednesday, 31<sup>st</sup> August 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Rutger van Santen (University of Eindhoven, FG lecturer)  
*Structure sensitivity and insensitivity in heterogeneous catalysis*  
Chair: Norbert Kruse, Jim Anderson

**10:00 – 10:30 Coffee break**

**Session on Catalyst Characterisation – Bute Hall**

**Chair:** Jacques Vedrine, Jose Manuel Lopez-Nieto

10:30 – 10:50 CO25: Kazuhiko Amakawa (Fritz-Haber-Institut der Max-Planck-Gesellschaft)  
*Insight into the active site of molybdenum oxide supported on SBA-15 in propene metathesis*

10:50 – 11:10 CO26: Andreas Haghofer (Vienna University of Technology)  
*Pd/Ga<sub>2</sub>O<sub>3</sub> methanol steam reforming catalysts: an in situ x-ray absorption study*

11:10 – 11:50 C:Keynote 2: Davide Ferri (Empa, Swiss Federal Laboratories for Materials Science and Technology)  
*Making EXAFS Surface Sensitive? A Concentration Modulation Study Of CO-NO On Rh/Al<sub>2</sub>O<sub>3</sub> And Pd/Al<sub>2</sub>O<sub>3</sub>*

11:50 – 12:10 CO27: Dr. Michael Haevecker (Helmholtz-Zentrum Berlin / BESSY II)  
*Surface evolution of a phase-pure MI MoVTenb oxide catalyst under selective propane oxidation conditions*

12:10 – 12:30 CO28: Mrs Dorothee Laurenti (CNRS)  
*Clean preparation method for a proper evaluation of the support effect for CoMo and NiMo catalysts*

**12:30 – 14:00 Lunch break**

**Wednesday, 31<sup>st</sup> August 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Rutger van Santen (University of Eindhoven, FG lecturer)  
*Structure sensitivity and insensitivity in heterogeneous catalysis*  
Chair: Norbert Kruse, Jim Anderson

**10:00 – 10:30 Coffee break**

**Session on Kinetics and Mechanism – Humanities Lecture Theatre**

**Chair:** Michael Claeys, Andras Erdohelyi

10:30 – 11:10 K Keynote 4: Prof. Xinhe Bao (Dalian Institute of Chemical Physics)  
*Catalytic Chemistry of the Nano-confined Systems*

11:10 – 11:30 KO23 Prof. Toshihiro Miyao (University of Yamanashi)  
*Effect of various additives on selective CO methanation over Ru-doped Ni-Al oxide catalyst*

11:30 – 11:50 KO24: Xenophon Verykios (University of Patras)  
*Mechanistic aspects of the selective methanation of CO over Ru/TiO<sub>2</sub> catalyst*

11:50 – 12:10 KO25: Barbara Graf (Laboratory of Industrial Chemistry, Ruhr-University Bochum)  
*The coupling of transient kinetic measurements with adsorption calorimetry for the investigation of CO adsorption and methane formation on iron catalysts applied in Fischer-Tropsch synthesis*

12:10 – 12:30 KO26: Anders Holmen (Norwegian University of Science and Technology)  
*A study of chain propagation and termination on a 20% cobalt supported on carbon nanotube (CNT) Fischer-Tropsch catalyst*

**12:30 – 14:00 Lunch break**

**Wednesday, 31<sup>st</sup> August 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Rutger van Santen (University of Eindhoven, FG lecturer)  
*Structure sensitivity and insensitivity in heterogeneous catalysis*  
Chair: Norbert Kruse, Jim Anderson

**10:00 – 10:30 Coffee break**

**Session on Catalyst Deactivation – Senate Room**

**Chair:** Agustin Martinez-Feliu, John Birtill

10:30 – 10:50 DO1: Dr. Ard Koeken (Utrecht University)  
*Carbon deposition during iron catalyzed Fischer-Tropsch synthesis studied with a tapered element oscillating microbalance*

10:50 – 11:10 DO2: Majid Sadeqzadeh (Ecole Centrale de Lille )  
*Sintering of cobalt-based catalysts in a fixed bed Fischer-Tropsch reactor: mechanism and modelling*

11:10 – 11:30 DO3: Cathrin Welker-Nieuwoudt (Sasol Technology)  
*The impact of cobalt aluminate formation on the deactivation of cobalt-based Fischer-Tropsch synthesis catalysts*

11:30 – 11:50 DO4: Dr. Ludovic Pinard (Université de Poitiers)  
*Identification of carbonaceous compounds resistant at the “rejuvenation treatment” of a spent cobalt-based Fischer-Tropsch synthesis catalyst.*

11:50 – 12:30 D Keynote 1: Dr. Andrei Khodakov (UCCS, UMR8181 CNRS)  
*Different cobalt species in working alumina supported catalysts and their role in Fischer-Tropsch synthesis*

**12:30 – 14:00 Lunch break**

**Wednesday, 31<sup>st</sup> August 2011.**

**Bute Hall**

- 09:00 – 10:00 Plenary lecture: Prof. Rutger van Santen (University of Eindhoven, FG lecturer)  
*Structure sensitivity and insensitivity in heterogeneous catalysis*  
Chair: Norbert Kruse, Jim Anderson
- 10:00 – 10:30 Coffee break**

**Session on Industrial Application – Kelvin Gallery**

**Chair:** James Sullivan, Masakazu Iwamoto

- 10:30 – 10.50 IO27: Prof Rasmus Fehrmann (Technical University of Denmark)  
*Novel deNOx catalysts for biomass fired units*
- 10:50 – 11:10 IO28: Prof. Isabella Nova, (LCCP, dip. Energia, Politecnico di Milano)  
*A fundamental study of the enhanced SCR reaction over a V<sub>2</sub>O<sub>5</sub>-WO<sub>3</sub>/TiO<sub>2</sub> catalyst for stationary applications*
- 11:10 – 11:30 IO29: Prof Alessandro Trovarelli (University of Udine)  
*NH<sub>3</sub> SCR catalysts based on mixed FeEr vanadates*
- 11:30 – 11:50 IO30: Masaoki Iwasaki (Toyota Central R&D Labs., Inc.)  
*Fe/zeolite catalysts for NO reduction by NH<sub>3</sub>: quantification of active sites and enhancement of hydrothermal stability*
- 11:50 – 12:10 IO31: Dmitry Doronkin (Technical University of Denmark, CINF)  
*Combining Ag/Al<sub>2</sub>O<sub>3</sub> and Fe-BEA to obtain active and stable catalyst for H<sub>2</sub>-assisted NOx SCR by NH<sub>3</sub>*
- 12:10 – 12:30 IO32: Dr. Antonio Eduardo Palomares (Instituto Tecnologia Quimica (UPV-CSIC))  
*TNU9, a new active zeolite for the NOx selective catalytic reduction*
- 12:30 – 14:00 Lunch break**

**Thursday, 1<sup>st</sup> September 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Istvan Horvath (City University of Hong Kong)  
*Heterogenization of Homogeneous Catalytic Systems*  
Chair: Peter Wells, Mimi Hii

**10:00 – 10:30 Coffee break**

**Session on Industrial Application – Kelvin Gallery**

**Chair:** Chris Mitchell, Mario Montes

10:30 – 11:10 I: Keynote 2: Prof. Erik Fridell (IVL Swedish Environmental Research Institute)  
*Shipping - emissions, regulations and aftertreatment*

11:10 – 11:30 IO33: Shailesh S Sable (Universitat Rovira i Virgili)  
*Clofibric acid degradation by ozonation using hydrotalcite-like catalysts*

11:30 – 11:50 IO34: Lucio Ronchin (University Ca' Foscari of Venice)  
*Hydrogenation of nitrobenzene to 4-aminophenol in a fully reusable solvent system, by using Pt, Rh, Pd supported on carbon-CF<sub>3</sub>COOH catalytic system*

11:50 – 12:10 IO35: Lioubov Kiwi-Minsker (Ecole Polytechnique Fédérale de Lausanne)  
*Gold-promoted chemoselective production of aromatic amines over molybdenum nitride in both gas and liquid phase*

12:10 – 12:30 IO36: Silvia Morales-delaRosa (Instituto de Catálisis y Petroleoquímica, CSIC)  
*Catalytic epoxidation of cyclohexene with tertbutyl hydroperoxide using molybdenum heterogeneous catalysts*

**12:30 – 14:00 Lunch break**

**Bute Hall**

14:00 – 15:00 Plenary lecture: Prof. James A. Dumesic (University of Wisconsin – Madison)  
*Routes for Production of Liquid Transportation Fuels by Liquid-phase Catalytic Processing*  
Chair: Dmitry Murzin, Frank King

**Session on Industrial Application – Kelvin Gallery**

**Chair:** Sreekala Rugmini, Dragomir Bukur

15:00 – 15:20 IO37: Clemens Horn (Corning European Technology Center)  
*A simple and highly active palladium chloride based catalyst for glass micro channel reactors*

15:20 – 15:40 IO38: Dr Mimi Hii (Imperial College)  
*Alkylation of amines by alcohols in a continuous flow reactor*

**15:40 Tea break**

**Thursday, 1<sup>st</sup> September 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Istvan Horvath (City University of Hong Kong)  
*Heterogenization of Homogeneous Catalytic Systems*  
Chair: Peter Wells, Mimi Hii

**10:00 – 10:30 Coffee break**

**Session on Kinetics and Mechanism – Humanities Lecture Theatre**

**Chair:** Johannes Lercher, Jyri-Pekka Mikkola

10:30 – 10:50 KO27: Shuichi Koso (Tohoku University)  
*Mechanism of the hydrogenolysis of ethers over silica-supported rhodium catalyst modified with rhenium oxide*

10:50 – 11:10 KO28: Prof Chris Hardacre (Queen's University, Belfast)  
*Highly selective and efficient titania supported Pt and Pt-Re catalysts for liquid phase hydrogenation of carboxylic acids and amides at low temperatures and pressures*

11:10 – 11:30 KO29: Agnieszka Soltyszek (Silesian University of Technology)  
*Activity investigations of oxysalts prepared from nitrate and oxide*

11:30 – 11:50 KO30: Willinton Yesid Hernández Enciso (Université Claude Bernard Lyon 1 / IRCELYON)  
*Electrochemical Pt-Ba/YSZ catalyst for NO<sub>x</sub> storage-reduction*

11:50 – 12:10 KO31: Peter Hausoul (Utrecht University)  
*Pd-catalysed telomerization of 1,3-butadiene with biomass-based alcohols: substrate screening, mechanism and heterogenization.*

12:10 – 12:30 KO32: Tobias Hamerla (Technical University Berlin)  
*Rhodium catalyzed hydroformylation of 1-dodecene in microemulsions*

**12:30 – 14:00 Lunch break**

**Bute Hall**

14:00 – 15:00 Plenary lecture: Prof. James A. Dumesic (University of Wisconsin – Madison)  
*Routes for Production of Liquid Transportation Fuels by Liquid-phase Catalytic Processing*  
Chair: Dmitry Murzin, Frank King

**Session on Kinetics and Mechanism – Humanities Lecture Theatre**

**Chair:** Gary Attard, Istvan Palinko

15:00 – 15:20 KO33: Dr. Devis Di Tommaso (University College)  
*Iron diphosphine diamine complexes as alternative catalysts for asymmetric hydrogenation of ketones? A DFT study*

15:20 – 15:40 KO34: Prof Vasile Parvulescu (University of Bucharest)  
*The epoxidation/epoxide ring-opening reaction of trans-methylcinnamate ester in the presence of a novel heterogeneous chiral dimer Cr(III)-salen complex*

**15:40 Tea break**

**Thursday, 1<sup>st</sup> September 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Istvan Horvath (City University of Hong Kong)  
*Heterogenization of Homogeneous Catalytic Systems*  
Chair: Peter Wells, Mimi Hii

**10:00 – 10:30 Coffee break**

**Session on Catalyst Deactivation – Senate Room**

**Chair:** Ivan Kozhevnikov, Jan-Dierk Grunwaldt

10:30 – 11:10 D: Keynote 2: Dr Stewart Parker (STFC ISIS Facility)  
*Carbon Lay Down From Dry Reforming Of Methane Over Ni/Alumina Catalysts – What Is It And Where Does It Come From?*

11:10 – 11:30 DO5: Jesper Sattler (University of Utrecht)  
*Combined in situ time-resolved UV-vis, Raman and x-ray absorption spectroscopy study during deactivation of Pt and PtSn propane dehydrogenation catalysts*

11:30 – 11:50 DO6: Dr James McGregor (University of Cambridge)  
*Characterisation of coke deposits using terahertz time-domain spectroscopy*

11:50 – 12:10 DO7: Laurent Sauvanaud (Instituto De Tecnología Química)  
*Dealing with high coke yields from extra-heavy feeds: removal of coke through steam reforming in FCC*

12:10 – 12:30 DO8: Dr Benjamin Katryniok (Ecole Centrale de Lille)  
*Heteropoly acid catalysts with increased long-term performance in the dehydration of glycerol*

**12:30 – 14:00 Lunch break**

**Bute Hall**

14:00 – 15:00 Plenary lecture: Prof. James A. Dumesic (University of Wisconsin – Madison)  
*Routes for Production of Liquid Transportation Fuels by Liquid-phase Catalytic Processing*  
Chair: Dmitry Murzin, Frank King

**Session on Catalyst Deactivation – Senate Room**

**Chair:** Shi-Gang Sun, Gordon Kelly

15:00 – 15:20 DO9: Dr Gilles Berhault (IRCELYON)  
*New efficient maleic acid additive for the activation of regenerated CoMo/Al<sub>2</sub>O<sub>3</sub> hydrodesulfurization catalysts*

15:20 – 15:40 DO10: Dr Burcin Temel (Haldor Topsoe A/S)  
*Atomic-scale insight into the origin of pyridine inhibition of MoS<sub>2</sub>-based hydrotreating catalysts*

**15:40 Tea break**

**Thursday, 1<sup>st</sup> September 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Istvan Horvath (City University of Hong Kong)  
*Heterogenization of Homogeneous Catalytic Systems*  
Chair: Peter Wells, Mimi Hii

**10:00 – 10:30 Coffee break**

**Session on Catalyst Preparation – James Watt South Lecture Theatre**

**Chair:** Mizuki Tada, Chris Jones

10:30 – 10:50 PO29: Mr Alan McCue (University of Aberdeen)

*Heterogenisation of Mn salen complexes for epoxidation*

10:50 – 11:10 PO30: David Xuereb (University of Southampton)

*Strategies for organocatalyst heterogenization: effects on active site environment and catalysis*

11:10 – 11:30 PO31: Dr Anna M Segarra (University Rovira i Virgili)

*Nanohybrid materials based on l-proline and hydrotalcites as catalysts for direct asymmetric aldol reaction*

11:30 – 11:50 PO32: Prof Gopal Mishra (University of Trás-os Montes and Alto Douro)

*Synthesis, x-ray structural characterization and immobilization of scorpionate Cu complex on SBA-15: application in the liquid-gas phase cycloalkane O<sub>2</sub> oxidation*

11:50 – 12:10 PO33: Tamara Eggenhuisen (Utrecht University)

*(Cryo-)electron tomography to visualise fundamental processes of supported catalyst preparation*

12:10 – 12:30 PO34: Miranda Smith (Louisiana State University)

*FTIR study of CO hydrogenation on Co/SiO<sub>2</sub> and CuCo/SiO<sub>2</sub>*

**12:30 – 14:00 Lunch break**

**Bute Hall**

14:00 – 15:00 Plenary lecture: Prof. James A. Dumesic (University of Wisconsin – Madison)  
*Routes for Production of Liquid Transportation Fuels by Liquid-phase Catalytic Processing*

Chair: Dmitry Murzin, Frank King

**Session on Catalyst Preparation – James Watt South Lecture Theatre**

**Chair:** Francesco Pinna, Elisabeth Bordes-Richard

15:00 – 15:20 PO35: Salvador Ordonez (University of Oviedo)

*Enhancement of the basic properties of magnesium-zirconium oxides by supporting on non-microporous carbons*

15:20 – 15:40 PO36: Dr Anne Mette Frey (Utrecht University)

*Nano sized alkaline earth metal oxide on carbon nanofibers as solid base catalysts: influence of base strength on the catalytic properties*

**15:40 Tea break**

**Thursday, 1<sup>st</sup> September 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture: Prof. Istvan Horvath (City University of Hong Kong)  
*Heterogenization of Homogeneous Catalytic Systems*  
Chair: Peter Wells, Mimi Hii

**10:00 – 10:30 Coffee break**

**Session on Catalyst Characterisation – Bute Hall**

**Chair:** Guido Mul, Karin Föttinger

10:30 – 10:50 CO29: Dr Malte Behrens (Fritz-Haber-Institut, Berlin)  
*Defect analysis of high performance catalysts. What makes Cu active in methanol synthesis?*

10:50 – 11:10 CO30: Timur Kandemir (Fritz-Haber-Institut, Berlin)  
*In-situ neutron diffraction under high pressure - providing an insight into a working catalyst*

11:10 – 11:30 CO31: Tegan Roberts (University of Cambridge)  
*Probing surface interactions with magnetic resonance*

11:30 – 12:10 C Keynote 3: Dr Detre Teschner (Fritz-Haber-Institut, Berlin)  
*Application of Prompt Gamma Activation Analysis in catalytic research*

12:10 – 12:30 CO32: Dr Margarita Kantcheva (Bilkent University)  
*Gold supported on ceria doped by Al(III) and Sm(III) as catalyst for water gas shift reaction*

**12:30 – 14:00 Lunch break**

**Bute Hall**

14:00 – 15:00 Plenary lecture: Prof. James A. Dumesic (University of Wisconsin – Madison)  
*Routes for Production of Liquid Transportation Fuels by Liquid-phase Catalytic Processing*  
Chair: Dmitry Murzin, Frank King

**Session on Catalyst Characterisation – Bute Hall**

**Chair:** Eric Gaigneaux, Giuseppina Cerrato

15:00 – 15:20 CO33: Eglantine Arendt (Université catholique de Louvain)  
*How to take advantage of Dawson heteropoly compounds reorganisation in the 2-butanol reaction ?*

15:20 – 15:40 CO34: Prof Ivan Kozhevnikov (University of Liverpool)  
*Solid acid catalysts based on  $H_3PW_{12}O_{40}$  heteropoly acid: acid and catalytic properties at a gas-solid interface*

**15:40 Tea break**

**Friday 2<sup>nd</sup> September 2011.**

**Bute Hall**

- 09:00 – 10:00 Plenary lecture sponsored by the Royal Society of Chemistry:  
Prof. Matthias Beller (Leibniz Institute for Catalysis, Rostock)  
*Development of Practical Molecular-defined Catalysts for Industrial Applications and Hydrogen Technology*  
Chair: Robbie Burch, Claude Mirodatos
- 10:00 – 10:30 Coffee break**

**Session on Catalyst Preparation – James Watt South Lecture Theatre**

**Chair:** Jon Bartley, Zdenek Sobalik

- 10:30 – 10:50 PO37: Paolo Pescarmona (University of Leuven (K.U. Leuven))  
*Chemical fixation of carbon dioxide catalysed by multilayered supported ionic liquids*
- 10:50 – 11:10 PO38: Ir. Christa Ros (TU Delft)  
*Copper deposition for the preparation of new catalysts for the electrocatalytic reduction of CO<sub>2</sub>*
- 11:10 – 11:30 PO39: Hirokazu Kobayashi (Hokkaido University)  
*Conversion of cellulose by supported ruthenium catalysts*
- 11:30 – 11:50 PO40: Zhen Zhao (China University of Petroleum)  
*Facile synthesis of three-dimensionally ordered macroporous La<sub>1-x</sub>K<sub>x</sub>CoO<sub>3</sub> catalysts and their high activities for the catalytic combustion of soot*
- 11:50 – 12:10 PO41: Robert French (University of Twente)  
*Micro and nano-structuring for photoreactor intensification*
- 12:10 – 12:30 PO42: Dr Nadezhda Shikina (Boreskov Institute of Catalysis)  
*Synthesis and study of Pt-Pd-catalysts for inlet section of combined catalyst packages of gas turbines*
- 12:30 – 14:00 Lunch break**

**Friday 2<sup>nd</sup> September 2011.**

**Bute Hall**

09:00 – 10:00 Plenary lecture sponsored by the Royal Society of Chemistry:  
Prof. Matthias Beller (Leibniz Institute for Catalysis, Rostock)  
*Development of Practical Molecular-defined Catalysts for Industrial Applications and Hydrogen Technology*  
Chair: Robbie Burch, Claude Mirodatos

**10:00 – 10:30 Coffee break**

**Session on Catalyst Characterisation – Bute Hall**

Chair: Richard Wells, Maria Olea

10:30 – 10:50 CO35: Dr Patricia Kooyman (Delft University of Technology)  
*Real in-situ TEM at atmospheric pressure using a nanoreactor*

10:50 – 11:10 CO36: Javier Ruiz-Martinez (Utrecht University)  
*Imaging catalytic activity in individual cracking catalyst particles by selective staining*

11:10 – 11:50 C: Keynote 4: Prof. Gary Attard (Cardiff University)  
*Electrochemical perspectives on Catalysis*

11:50 – 12:10 CO37: Ms Cristina Stere (Queen's University Belfast)  
*SPACIMS - spatial and temporal operando resolution of structured catalysts*

12:10 – 12:30 CO38: Dr Krisztina Frey (Institute of Isotopes, Hungary)  
*High catalytic activity in CO oxidation over MnOx nanocrystals*

**12:30 – 14:00 Lunch break**

Friday 2<sup>nd</sup> September 2011.

**Bute Hall**

09:00 – 10:00 Plenary lecture sponsored by the Royal Society of Chemistry:  
Prof. Matthias Beller (Leibniz Institute for Catalysis, Rostock)  
*Development of Practical Molecular-defined Catalysts for Industrial Applications and Hydrogen Technology*  
Chair: Robbie Burch, Claude Mirodatos

**10:00 – 10:30 Coffee break**

**Session on Kinetics and Mechanism – Humanities Lecture Theatre**

**Chair:** Edman Tsang, Deniz Uner

10:30 – 10:50 KO35: Dr James McGregor, (University of Cambridge)  
*Solvent structure and dynamics in heterogeneous catalysis*

10:50 – 11:10 KO36: Dr. Thomas Müller (RWTH Aachen University)  
*Selective hydrogenation of aldoximes to primary amines on heterogeneous catalysts*

11:10 – 11:30 KO37: Mr Erik Hagebols (University of Aberdeen)  
*Pd catalysed hydrogenation of hexyne modified by sulfur and tin.*

11:30 – 11:50 KO38: Rocio Micaela Crespo Quesada (Ecole Polytechnique Fédérale de Lausanne)  
*Shape and size-tailored Pd nanoparticles to study the structure sensitivity of 2-methyl-3-butyne-2-ol hydrogenation*

11:50 – 12:10 KO39: Prof Chris Hardacre (Queen's University, Belfast)  
*Insights into the influence of solvent structure on the rate and selectivity in the hydrogenation of citral and butan-2-one*

12:10 – 12:30 KO40: Maarten Sabbe (Universiteit Gent)  
*Benzene hydrogenation on Pt<sub>3</sub>M bimetallic catalysts: a first principles study*

**12:30 – 14:00 Lunch break**

**Friday 2<sup>nd</sup> September 2011.**

**Bute Hall**

- 09:00 – 10:00 Plenary lecture sponsored by the Royal Society of Chemistry:  
Prof. Matthias Beller (Leibniz Institute for Catalysis, Rostock)  
*Development of Practical Molecular-defined Catalysts for Industrial Applications and Hydrogen Technology*  
Chair: Robbie Burch, Claude Mirodatos
- 10:00 – 10:30 Coffee break**

**Session on Catalyst Deactivation – Senate Room**

**Chair:** Detre Teschner, Justin Hargreaves

- 10:30 – 11:10 D: Keynote 3: Dr Petra E de Jongh, (Utrecht University)  
*Cu/ZnO Methanol Synthesis Catalysts In Mesoporous SiO<sub>2</sub>: Strategies Towards Enhanced Sintering Resistance*
- 11:10 – 11:30 DO11: Dr Frederic Meunier (CNRS - University of Caen)  
*Correlation between deactivation and Pt-carbonyl formation during toluene hydrogenation using a H<sub>2</sub>/CO<sub>2</sub> mixture.*
- 11:30 – 11:50 DO12: Sebastian Fogel (Haldor Topsøe A/S)  
*Optimising Al<sub>2</sub>O<sub>3</sub> for H<sub>2</sub>-assisted NH<sub>3</sub>-SCR for NO<sub>x</sub>-removal*
- 11:50 – 12:10 DO13: Dr Irina Simakova (Boreskov Institute of Catalysis)  
*Kinetic and deactivation aspects in the transformation of pinene to camphene over gold catalysts*
- 12:10 – 12:30 DO14: Prof Chris Hardacre (Queen's University Belfast)  
*Influence of methyl halide treatment on gold nanoparticles supported on activated carbon*
- 12:30 – 14:00 Lunch break**

Friday 2<sup>nd</sup> September 2011.

**Bute Hall**

- 09:00 – 10:00 Plenary lecture sponsored by the Royal Society of Chemistry:  
Prof. Matthias Beller (Leibniz Institute for Catalysis, Rostock)  
*Development of Practical Molecular-defined Catalysts for Industrial Applications and Hydrogen Technology*  
Chair: Robbie Burch, Claude Mirodatos
- 10:00 – 10:30 Coffee break**

**Session on Industrial Application – Kelvin Gallery**

**Chair:** Luis Vicente, Vidya Batra

- 10:30 – 11:10 I: Keynote 3: Dr Chris Mitchell (Huntsman Polyurethanes)  
*Development Of A New Aniline Process: Lowering The Carbon Footprint Of The MDI Manufacturing Chain*
- 11:10 – 11:30 IO39: N Shiju (University of Amsterdam)  
*Liquid-phase Beckmann rearrangement of cyclohexanone oxime to caprolactam over WO<sub>x</sub>/ZrO<sub>2</sub> catalysts*
- 11:30 – 11:50 IO40: Dr. Cecilia Mondelli (ETH Zurich)  
*Shaped RuO<sub>2</sub>/SnO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> catalyst for large-scale stable Cl<sub>2</sub> production by HCl oxidation*
- 11:50 – 12:10 IO41: Katharina Teinz (Humboldt Universität zu Berlin)  
*Highly active and selective metal fluoride catalysts for dehydrohalogenation of 3-chloro-1,1,1,3-tetrafluorobutane*
- 12:10 – 12:30 IO42: Dr Christophe Dujardin (Université de Lille1)  
*Thermal stability of perovskite based catalysts (LaCoFeO<sub>3</sub>) for the decomposition of nitrous oxide from nitric acid plants*
- 12:30 – 14:00 Lunch break**