

Time-Resolved and In-Situ of Heterogeneous Catalysts and Catalytic Processes using X-rays:

Current Possibilities and Future Prospects

Programme

Venue: ILL Chadwick Amphitheatre

Tuesday, 5 February 2008		
08:30-09:00	Registration at the ILL	
09:00-09:10	Welcome by Francesco Sette, Research Director of the ESRF	
09:10-10:40	Powder Diffraction (Chair: Jonathan Hanson)	
09:10	In Situ Synchrotron Powder X-ray Diffraction Studies of Catalytic Materials	Poul Norby University of Oslo, Norway
09:40	In Situ Characterization of Heterogeneous Catalysts using Time-Resolved X-ray Diffraction	Jose Rodriguez Brookhaven National Laboratory, USA
10:10	Application of Rapid in Situ Diffraction to studying the Redox Behaviour of a Fe-Mo-O Catalyst and II. The Use of TEDDI to image Catalyst Bodies	Simon Jacques Birkbeck College London, UK
10:40-11:00	<i>Coffee break</i>	
11:00-12:30	SAXS/WAXS (Chair: Didier Wermeille)	
11:00	SAXS and WAXS as Tools in Catalysis Related Research	Wim Bras ESRF Grenoble, France
11:30	Following the Formation of Nanoporous Catalytic Materials using Combined in Situ Time-Resolved SAXS/WAXS Technique	Gopinathan Sankar University College London/Royal Institution, UK
12:00	Combining WAXS/(SAXS) with Spectroscopic Measurements to follow Catalysts in Action	Andy Beale ICC Utrecht, The Netherlands
12:30-14:00	<i>Lunch</i>	
14:00-16:30	SXRD and GIXAXS (Chair: Phil Woodruff)	
14:00	X-rays in Situ: SXRD on Working Catalysts	Joost Frenken Leiden University, The Netherlands
14:30	In-Situ GISAXS and GIXD Studies of Growing Nanoparticles	Gilles Renaud CEA Grenoble, France
15:00	Sensitivity of Catalysis to Surface Structure: CO Oxidation on Rh under Realistic Conditions	Edvin Lundgren Lund University, Sweden
15:30	Model Catalysis Studies beyond the Simple CO Oxidation Reaction over RuO ₂ (110)	Herbert Over Geissen University, Germany
16:00	High Energy Diffraction and Atomic Shape Reconstruction of Nano Particles during Chemical Reactions	Andreas Stierle MPI Stuttgart, Germany
16:30-17:00	<i>Coffee break</i>	
17:00-18:00	High P Photoemission (Chair: Maddalena Pedio)	
17:00	Ambient Pressure X-ray Photoelectron Spectroscopy	Hendrik Bluhm Lawrence Berkeley National Laboratory, USA
17:30	Surface Composition and Reactivity of Catalytic Systems at Micro- and Nano-Scales	Maya Kiskinova Sincrotrone Trieste, Italy
20:00-22:30	<i>Workshop dinner at the restaurant La Corne d'Or, Corenc</i>	

Wednesday, 6 February 2008		
09:00-12:00	Users' Meeting Plenary Sessions in the ESRF Auditorium	
14:00-16:00	Parallel Sessions	
18:30-20:00	Joint Cocktail and Poster Session	
20:00-22:30	<i>Users' meeting dinner at the ESRF/ILL restaurant</i>	
Thursday, 7 February 2008		
09:10-09:40	XAFS (Chair: Michael Hagelstein)	
09:10	Development of Time-Resolved XAS Measurements (Quick EXAFS and Energy-Dispersive EXAFS) on Catalyst Systems	Andy Dent Diamond Light Source, UK
09:40-10:10	QuEXAFS (Chair: Michael Hagelstein)	
09:40	Time-Resolved XAS Studies on Dynamic Correlations between Structure and Performance of Oxide Catalysts	Thorsten Ressler TU Berlin, Germany
10:10-10:40	High Resolution XANES (Chair: Michael Hagelstein)	
10:10	In Situ High-Energy Resolution Fluorescence Detected X-ray Absorption Spectroscopy; Generating Highly Active Sites in Oxidation of Carbon Monoxide over Pt/Al ₂ O ₃	Jeroen van Bokhoven ETH Zurich, Switzerland
10:40-11:00	<i>Coffee break</i>	
11:00-11:30	XAFS Mapping (Chair: Gemma Guilera)	
11:00	Catalysts in Action: from Integral to Spatially Resolved X-ray Absorption Spectroscopy	Jan-Dierk Grunwaldt DTU Copenhagen, Denmark
11:30-12:30	Dispersive EXAFS (Chair: Gemma Guilera)	
11:30	Study of Catalytic Systems using Transmission Dispersive-XAS	Marcos Fernandez Garcia ICP Madrid, Spain
12:00	Dynamic in Situ Observation of Automotive Catalysts for Emission Control	Yasutaka Nagai Toyota, Japan
12:30-14:00	<i>Lunch</i>	
14:00-14:30	XAFS (Chair: Mark Newton)	
14:00	Synchrotron-Based Spectroscopy and Heterogeneous Catalysis: Recent Strides towards Rational Catalyst Design	Bert Weckhuysen ICC Utrecht, The Netherlands
14:30-16:00	Emerging Techniques/Possibilities (Chair: Mark Newton)	
14:30	Hard X-ray Photon-In-Photon-Out Spectroscopy with Lifetime Resolution	Pieter Glatzel ESRF Grenoble, France
15:00	In-Situ Scanning Transmission X-ray Microscopy of a Fe ₂ O ₃ Nanoparticle	Frank de Groot ICC Utrecht, The Netherlands
15:30	Application of Pair-Distribution-Function Method to In-Situ Studies in Catalysis	Peter Chupas Argonne National Laboratory, USA
16:00-16:30	<i>Coffee break</i>	
16:30-17:30	Emerging Techniques/Possibilities (Chair: Roberto Felici)	
16:30	Fast Acquisition High-Resolution Synchrotron Radiation X-ray Microtomography using Phase and Absorption Contrast for Academic and Industrial Purposes	Elodie Boller ESRF Grenoble, France
17:00	High-Throughput Structure/Function Screening of Materials with Multiple Spectroscopic Techniques	Moniek Tromp University of Southampton, UK