

# UDM1. In situ and operando X-ray absorption spectroscopy for the study of catalysts and functional materials

## Wednesday, 5<sup>th</sup> February 2020 - Microsymposium UDM1 Venue: ILL Chadwick Amphitheater

8:30	Registration
9:00	Introduction by the organizers

### Morning session

Session I – Chair: Kirill Lomachenko		
9:05 – 9:50	<b>Keynote talk 1:</b> About active sites in heterogeneous catalysts	<b>Jeroen van Bokhoven</b> <i>ETH Zürich, Switzerland</i>
9:50 – 10:10	Monitoring structural changes in MoxSy phase encaged within the confinement of zeolites via HERFD-XAS and VtC-XES measured under operando sulfidation/hydrogenation reaction conditions	<b>Rachit Khare</b> <i>Technical University of Munich, Germany</i>
10:10 – 10:30	Operando XAS on atomically precise Pt-CO clusters for oxygen reduction reaction	<b>Martina Fracchia</b> <i>University of Pavia, Italia</i>
10:30 – 11:00	<i>Coffee break</i>	
Session II – Chair : Dipanjan Banerjee		
11:0 – 11:45	<b>Keynote talk 2:</b> Understanding catalysis for realistic supported catalysts: Methane oxidation and CO <sub>2</sub> methanation	<b>Per-Anders Carlsson</b> <i>Chalmers University of Technology, Sweden</i>
11:45 – 12:05	Multivariate statistical analysis of in situ and operando X-ray Absorption Spectroscopy data	<b>Samuel Regli</b> <i>Norwegian University of Science and Technology, Norway</i>
12:05 – 12:25	Fe-based bimetallic catalysts: evidencing the interplay between the two metals using in situ/operando XAS and chemometrics	<b>Eric Marceau</b> <i>Université Lille, France</i>
12:25 – 14:00	<i>Lunch at the EPN campus restaurant</i>	



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## Afternoon session

Session III – Chair: Pieter Glatzel		
14:00 – 14:45	<b>Keynote talk 3:</b> From nanoparticles synthesis in solution to functional devices – a perspective based on in situ synchrotron studie	<b>Dorota Koziej</b> <i>University of Hamburg, Germany</i>
14:45 – 15:05	Operando X-ray absorption spectroscopy studies of Pd-based catalysts	<b>Aram Bugaev</b> <i>Southern Federal University, Russia</i>
15:05 – 15:25	Identification of mobilized Cu-oxygen pairs and of their role in the low temperature NH <sub>3</sub> -Selective Catalytic Reduction	<b>Tommaso Selleri</b> <i>Politecnico di Milano, Italy</i>
15:25 – 15:45	CO oxidation over nanocomposite CuFeAl catalysts: In situ XAS study	<b>Andrey Saraev</b> <i>Boreskov Institute of Catalysis, Russia</i>
15:45 – 16:10	<i>Coffee break</i>	
Session IV - Chair: Michela Brunelli		
16:10 – 16:30	In situ Surface Resonant X-Ray Diffraction to probe the electronic structure at electrochemical interfaces	<b>Yvonne Soldo</b> <i>Institut Néel, CNRS &amp; Université Grenoble Alpes, France</i>
16:30 – 16:50	Reaction cells for XAS and HERFD-XAS operando characterization	<b>Antonio Aguilar</b> <i>Institut Néel, Université Grenoble Alpes, France</i>
16:50 – 17:10	Sample environment laboratory at the ESRF	<b>Yves Watier</b> <i>ESRF, France</i>
17:10 – 17:30	BL updates from ESRF and CRG staff	
17:30	<b>End of the meeting</b>	