

**Operando Science of Functional Energy Conversion,
Storage Materials and Devices**



Wednesday, 8th February 2023 - Microsymposium UDM3 Venue: ESRF auditorium		
08:50 - 09:00	Welcome from organizers	
Session I: Chair: R. Chattot		
09:00 - 09:30	<u>The Use of Operando Scattering to investigate the Degradation of Pt/C Fuel Cell Catalyst</u>	Matthias Arenz, University of Bern
09:30 - 09:50	<u>Operando XAS Analysis of Co-Fe co-Catalysts in a Flow Photoelectrochemical Cell</u>	Raffaello Mazzaro, University of Bologna
09:50 - 10:10	<u>Operando High-energy Surface X-ray Scattering Studies of Oxide Growth and Surface Restructuring of Pt Single Crystal Electrodes</u>	Olaf Magnussen, Kiel University
10:10 - 10:30	<u>Breathing Pt Nanoparticle Imaged using <i>in situ</i> BCDI</u>	Frédéric Maillard, INP Grenoble - CNRS - UGA
10:30 - 11:00	<i>Coffee break</i>	
Session II: Chair: A. Martinelli		
11:00 - 11:30	<u>Advancing Materials for CO₂ Capture and Conversion: Insights from Structural Characterization under Operating Conditions</u>	Paula Abdala, ETH Zürich
11:30 - 11:50	<u>Tandem CO₂ Valorization and Ethane Dehydrogenation: Nature of Highly Selective Iron Oxide Active Sites and the Low Z Elements Point of View</u>	Alessandro Longo, ESRF Grenoble
11:50 - 12:10	<u>Structural Defects Related to Carbon Contamination during the Solidification of Silicon for Photovoltaic Applications: ex-situ and in situ X-ray Imaging Characterization</u>	Nathalie Mangelinck-Noël, Aix Marseille University
12:10 - 12:30	<u>Multimodal Characterization of LiNiO₂/Graphite Batteries: Going towards Understanding Lithiation Heterogeneities at High Cycling Rates</u>	Quentin Jacquet, CEA Grenoble
12:30 - 13:50	Lunch at EPN campus restaurant	
Session III: Chair: M. Mirolò		
13:50 - 14:20	<u>Understanding Battery Electrochemistry by Bathing Model Systems in (Coherent) X-Rays</u>	Hans-Georg Steinrück, Paderborn University
14:20 - 14:40	<u>The Importance of Experimental Conditions in Operando Batteries Studies: the Case of LiNiO₂ Cathode Material</u>	Antonella Iadecola, RS2E Amiens
14:40 - 15:00	<u>Beam Damage in Operando Synchrotron Studies: Conditions and Consequences</u>	Thibaut Jousseume, CEA Grenoble
15:00 - 15:20	<u>Energy Dispersive EXAFS Studies on Rechargeable Batteries at the ODE Beamline Soleil Synchrotron</u>	Qingyu Kong, Synchrotron Soleil Gif-sur-Yvette
15:20 - 15:40	<u>In Situ Measurements on Battery Cells with X-ray Nano-Tomography</u>	Olga Stamati, ESRF Grenoble
15:40 - 16:00	<u>XRD-CT Investigation of LPSCI Degradation Occurring during Cycling</u>	Oskar Thompson, LEPMI Grenoble
16:05	Closing remarks and farewell	