Operando VIII Poster Presenters

May 11-12, 2026

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	Name	Affiliation	Poster Title
1	Mikhail Agrachev	ETH Zurich	Operando EPR investigation of anionic vacancies: semiconductor physics and heterogeneous catalysis
2	Margareth Baidun	Delft University	When Water Turns Poison: Operando Modeling of Ni-Ga Catalyst Deactivation
3	Allueva Alava / Matteo Monai will present	Utrecht University	Unraveling Structure-Activity Relationships in Pd-Cu Catalysts for CO_2 Hydrogenation to Higher Alcohols
4	Daniel Cano Blanco	Paul Scherrer Institute	Operando transient EPR spectroscopy unravels active Fe^{2+} ions in zeolites with unprecedented site-selectivity
5	Qijun Che	SLAC	Operando X-ray spectroscopy of transition metal oxides interfaces
6	Luke Keenan	Diamond Light Source	Thin-Film Operando Sample Environment for X-ray HERFD, Emission and Fluorescence Spectroscopy
7	Shih-Yuan Chen	AIST	Towards Integrated Ammonia Synthesis and Separation: Unraveling Active Sites in Functional Nanoporous Materials
8	Pietro De Angeli	Delft University	Elevating Cobalt to Noble Heights: understanding Co-Re catalyst outstanding TOF in Methanol Steam Reforming through in-situ DRIFTS
9	Jan den Hollander / Vaishnavi Ganesh will present	Utrecht University	Spectroscopy Insights into Washcoated Monoliths for CO Oxidation

10	Mohamad El Roz / Marco Daturi will present	University of Caen	FTIR and XAS Operando for Mechanistic Insights into the In-Situ Restructuring of Coordinated Copper in Post-Metalated MOFs during Photocatalysis
11	Sheima Khatib	Virginia Tech	Decoupling Dynamic Metal Site Evolution in Mo-Based MFI Catalysts for Methane Dehydroaromatization via Operando Spectroscopy
12	Niko Hansen	UC Davis	Investigating Relationships Between Gas-Phase Reactive Intermediate Speciation and Product Yields during Heterogeneous Catalytic Reactions
13	Jonathan Hanson / Siu-Wai Chan will present	Brookhaven National Lab	Understanding nano-Ceria formation from operando post-treatment
14	Rosalie Hocking	Australian Synchrotron	Following Redox Chemistry Across Space and Time
15	Paolo Lazzarini	University of Turin	Reducibility of unsupported and Al_2O_3-supported RuO_2 catalysts: when Ru-oxide challenges Ru-metal in hydrogenation
16	Yuanyuan Li	Oak Ridge National Lab	Track the structure evolution of catalysts for CO_2 hydrogenation to alcohols
17	Haoyi Li	SLAC	Engineering a Membrane Assembly Electrode Device for a Durable and High-rate Ethylene Synthesis via CO Electroreduction
18	Ivan Lopez Luque	Delft University	Elucidating Rhenium Surface Dynamics on TiO_2 under High-Pressure CO_2 Hydrogenation Conditions
19	Raquel Portela	ISP, CSIC	Operando MES-Raman and MES-DRIFTS study of CO oxidation on highly dispersed CeOx on Cu_2O nanocubes

20	Hyun Suk Kang	Tarleton State University	Spectroelectrochemical Understanding of the Electronic Nature of Mixed-Dimensional Excitonic Systems
21	Ezgi Erdem	SLAC	Employing K-Promotion in Cu-In Catalysts to Control Phase Separation and CO_2 Activation for Low-T RWGS
22	Honghong Shi	PNNL	Regulating aldol condensation activity using Pt single atoms
23	Miaomiao Wen	Chalmers University	In Situ DRIFTS Investigation of the Evolution of Surface Species in the Direct Conversion of Methane to Methanol over HFerrierite
24	Dean Miller	SLAC	Operando Electrochemical K-edge XAS Captures Near-Surface Electrolyte Composition and Transient Molecular Catalyst Structures
25	Kaan Yalcin / Coleman Kronawitter	UC Davis	The Nuclearity and Reactivity of Highly Dispersed, Cationic Platinum in Medium Pore Zeolites during Reaction and Thermal Treatment
26	Mathias Kiefer	SLAC	Operando XRD During High-Temperature Electrolysis at the Stanford Synchrotron Radiation Lightsource: Enabling Real-Time SOEC Analysis
27	Yuying Huang	Shanghai Advanced Research Institute	Operando QXAFS Study of Oxygen Evolution Reaction Electrocatalysis of Cobalt-based Oxides
28	Ruichao Xu	National Synchrotron Radiation Laboratory	Operando HERFD-XANES and VtC-XES Probes Atomic and Electronic Structure Evolution

May 12, 2026

1	Luke Keenan	Daimond Light Source	SWIFT – Spectroscopy Within Fast Timescales: The New Flagship Operando Beamline coming to Diamond
2	Hung-Ling Yu / Abir Podder will present	University of Virginia	CO_2 and CO adsorption-induced structural variation in supported Pd and PdAu bimetallic nanocluster systems
3	Floor Brzesowsky	Utrecht University	Introducing Stimulando Time-Resolved Infrared Spectroscopy to Study Intermittent Light-Stimulated CO_2 Hydrogenation
4	Jiri Dedercek	J. Heyrovský Institute, Czech Academy of Sciences	Performance of binuclear transition metal ion sites in the activation of molecular oxygen for selective methane oxidation
5	Claudia Franke	University of Stuttgart	High-Field EPR Spectroelectrochemistry – Development and Application
6	Emilie Gerouville	SPECS	NAP-XPS Equipment for Operando and In-Situ Studies
7	Qijun Che	SLAC	Operando electronic structure of RuOx at the interface
8	Neelesh Kumar	Lehigh University	Kinetic Relevance of Oxide Support Redox Processes for Supported Vanadia Catalysts during Methanol Oxidation with Transient Operando DR UV-Vis-MS Spectroscopy
9	Letizia Lanza	Delft University	Operando-Guided Low-Temperature CO_2 Capture and Conversion
10	Luca Maggiulli / Davide Ferri will present	Paul Scherrer Institute	Pulsed operando DRIFTS/GC to study the nature of the hydrocarbon pool on zeolites during the methanol-to-olefins reaction

11	Jennifer McConnell	Protochips	Technological Advances for Temperature-Dependent Electrochemical Studies Using In-Situ TEM
12	Yasuji Muramatsu	University of Hyogo	Operando/In-situ XANES Measurements of Frictional Oil/Metal Interfaces
13	Aruna Nair	SLAC	Probing Ultrafast Dynamic Processes in Photocatalysts via Time-Resolved X-ray Absorption Spectroscopy
14	Arnaud Travert	Université de Caen Normandie	Selective dehydration of isobutanol on H-FER: operando IR, multivariate analysis and kinetic modeling
15	Vaishnavi Ganesh	Utrecht University	Operando Raman Spectroscopy with Online UV-Vis Analysis of Carbon-based Catalysis under Harsh Reaction Conditions
16	Sungmin Kim	PNNL	Operando Spectroscopic Identification of Active Species in Chloroaluminate Ionic Liquids for Low-Temperature Polyolefin Deconstruction
17	Liqun Kang	Max Planck Institute	The Disappearing Surface Nitrides: Operando Evidence for Hidden Redox Dynamics in Fe/MgO during Ammonia Decomposition
18	Raquel Portela	ISP, CSIC	MESFTIR at high pressure to investigate the CO_2 hydrogenation on Pd/CeO_2 nanofibers
19	Bas den Hartigh/ Matteo Monai & Bert Weckhuysen to prsent	Utrecht University	Operando X-ray Diffraction of Co/TiO_2 Catalysts: Impact of TiO_2 Polymorphs on the Cobalt Active Phase during CO_2 Hydrogenation
20	Jason Chalmers	SLAC	Using *operando* XAS to identify correlations between structure and activity in Ga-based propane dehydrogenation catalysts