SPP 2080 Status Meeting in Karlsruhe/ KIT

Catalysts and reactors under dynamic conditions for energy storage and conversion

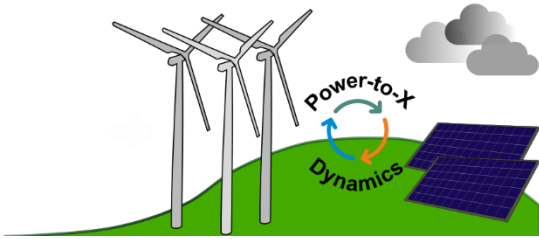
31.03.-02.04.2025

(Preliminary) Program

Location info
Talks at **NTI lecture hall** (Engesserstraße 5, 76131 Karlsruhe)
Poster sessions at **NTI foyer**

Additional info to the talks
Consortium talks: 20 min + 10 min Q&A (presented by PI's)
ECR talks: 20 min + 10 min Q&A
Alumni short lectures: 20 min (including Q&A)

SPP 2080 DynaKat
Karlsruhe Institute of Technology
DFG Deutsche Forschungsgemeinschaft



Time	Monday, 31.03.2025
11:00	**Registration** *(with coffee and snacks)*
13:00	**Opening & Welcome** by SPP 2080 Board
13:30	Invited Lecture by **Prof. Petra de Jongh** (Utrecht University) *Recent insights into the mechanism of deactivation of support metal catalysts*
14:15	*Coffee break*
14:45	**Consortium Talk** *Iron-based catalysts for CO_2 conversion into higher hydrocarbons under dynamic conditions* Kondratenko, Brückner, Pinna (Project 1)
15:15	**Consortium Talk** *Tackling irreversible catalyst deactivation: knowledge-driven design and operation of dynamic responsive methanation catalysts* Freund, Franken, Rubin (Project 3)
15:45	**Poster session #1** *with coffee break*
16:45	**SPP 2080 Alumni Short Lecture** *Structure-performance relationships of Ir-Ru electrodes for oxygen evolution during dynamic operation* Dr. Philipp Röse, KIT (1st funding period)
17:05	**Consortium Talk** *Dynamically driven rutile-based acidic oxygen evolution electrocatalysts beyond stationary efficiency* Hess, Hofmann, Strasser (Project 7)
17:35	*Short break*
17:45	**Consortium Talk** Stabilization of the RuO_2 water splitting electrocatalyst under dynamic operating conditions by surface modification Hess, Over (Project 6)
18:15	**ECR Lecture** Dr. Hanna Türk, EPFL (“DynaKat” ECR Scholarship for Female Scientists Awardee)
19:30	**SPP 2080 Dinner**
21:00	*End of program Day 1*

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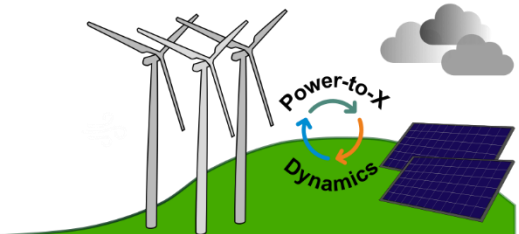

Time	Tuesday, 01.04.2025
09:00	Invited Lecture by **Prof. Núria López** (ICIQ) *Title TBA*
09:45	**Consortium Talk** *Design and in-depth investigation of nanostructured catalysts for CO_2 electroreduction* Roldán Cuenya, Magnussen (Project 8)
10:15	**Consortium Talk** *MOF-derived CO_2 methanation catalysts –Mechanisms, activity and stability during industrially relevant, dynamic dropout scenarios using hard X-ray techniques* Kleist, Bauer, Zobel (Project 4)
10:45	*Coffee break*
11:15	**SPP 2080 Alumni Short Lecture** *A Rationally Designed Catalyst-Reactor System for Load-Flexible CO_2 Methanation* Dr. Ronny T. Zimmermann (Alumni of 1st funding period)
11:35	**Consortium Talk** *Analysis of forced periodic operation of chemical reactors considering methanol synthesis as an example* Paunic, Kienle, Seidel-Morgenstern (Project 2)
12:05	**Consortium Talk** *Surface dynamics of reducible-oxide promoted inverse Ni and Cu catalysts: New concepts for CO_2-hydrogenation* Behrens, Grunwaldt, Studt (Project 9)
12:35	*Lunch buffet*
13:40	**SPP 2080 Alumni Short Lecture** *1s2p-RIXS as a new probe for Zn catalytic sites* Dr. Alexey Boubnov (Alumni of 1st funding period)
14:00	**Consortium Talk** *Sorption-Enhanced CO_2 Hydrogenation to Methanol under Dynamic Reaction Conditions* Gläser, Jentys, Deutschmann (Project 10)
14:30	**ECR lecture** *Design of Adaptive Catalytic Systems in Hydrogenation Reactions* Dr. Yuyan Zhang (“DynaKat” ECR Scholarship for Female Scientists Awardee)

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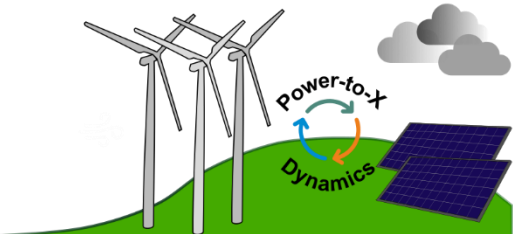

Time	Tuesday, 01.04.2025
15:00	**Poster session #2** *with coffee break*
16:25	**SPP 2080 Alumni Short Lecture** *Structure-dependent activity-stability relationships of Ir-Ru catalysts towards oxygen evolution electrocatalysis* Dr. Daniel Escalera López (Alumni of 1st funding period)
16:45	**Consortium Talk** *Structural Evolution of a High-Temperature Oxygen Evolution Catalyst under Transient Working Conditions* Eichel, Lunkenbein, Scheurer (Project 12)
17:20	Invited Lecture by **Prof. Dr. Robert Schlögl** (AvH, FHI Berlin) *Life of a Dead Material: the Dynamical Interfacial Catalyst*
18:00	*End of program Day 2 followed by social event/dinner*

Time	Wednesday, 02.04.2025
08:30	Invited Lecture (TBA)
09:15	**Consortium Talk** *Temporally and spatially resolved non-intrusive measurement of temperature and species concentration profiles during catalytic production of synthetic methane in open cell foam catalysts* Krumm, Seeger (Project 11)
09:45	**Consortium Talk** *Degradation-control of perovskite oxide OER catalysts under dynamic operation conditions via advanced operando characterization and orbital-d-band engineering* Gunkel, Hausen, Kleiner (Project 5)
10:15	*Coffee Break*
10:45	**ECR lecture** *Evaluation of oxygen evolution electrocatalysts: typical lab-scale vs industry-like conditions* Dr. Dulce M. Morales, University of Groningen ("DynaKat" ECR Scholarship for Female Scientists Awardee)
11:15	**ECR lecture** *TBA* Dr. Aram Yoon ("DynaKat" ECR Scholarship for Female Scientists Awardee)
11:45	**SPP 2080 Alumni Short Lecture** *From SPP to industry* Dr. Sebastian Weber, BASF (Alumni of 1st funding period)
12:05	**Closing** by SPP 2080 Board
13:00	*End of main status meeting*
14:00	*Start of School for Doctoral Researchers / ECR's*