



### Conference Programme

August 29<sup>th</sup>, 2022

Convention Center, Ruhr-Universität Bochum

8:30 – 9:00 a.m.	<b>Registration</b>
9:00 – 9:10 a.m.	<b>Ralf Drautz</b> (Ruhr-Universität Bochum, Germany): Welcome on behalf of the Materials Chain, room 2a
<b>Session 1</b>	<b>Machine Learning and AI Methods</b>
9:10 – 9:45 a.m.	<b>Jason Hattrick-Simpers</b> (University of Toronto, Canada): “Using artificial intelligence to transform data into actionable knowledge.”
9:45 – 10:00 a.m.	<b>Yury Lysogorskiy</b> (Ruhr-Universität Bochum, Germany): “Atomic cluster expansion for materials modeling.”
10:00 – 10:15 a.m.	<b>Christopher Stein</b> (University of Duisburg-Essen, Germany): “Neural network potentials for chemical reactivity.”
10:15 – 10:30 a.m.	Coffee Break
<b>Session 2</b>	<b>Electrocatalysis</b>
10:30 – 11:05 a.m.	<b>Elena Savinova</b> (University of Strasbourg, France): “Noble metal-free electrocatalysts for anion exchange membrane fuel and electrolysis cells.”
11:05 – 11:20 a.m.	<b>Julia Linnemann</b> (Ruhr-Universität Bochum, Germany): “Transformation lability as a design criterion for water-splitting electrocatalysts.”
11:20 – 11:35 a.m.	<b>Daniel Siegmund</b> (Fraunhofer Institute UMSICHT Oberhausen, Germany): “Efficient electrohydrogenation of unsaturated organics using noble-metal free pentlandite catalysts.”
11:35 – 12:00	Coffee Break
<b>Session 3</b>	<b>Energy Storage</b>
12:00 – 12:35 p.m.	<b>Nuria Tapia-Ruiz</b> (Lancaster University, UK): “High-performance layered sodium transition metal oxides for sodium-ion batteries: Present and future perspectives.”
12:35 – 12:50 p.m.	<b>Constanze N. Neumann</b> (Max-Planck-Institut für Kohlenforschung, Germany): “MOF structure changing the reactivity of its components.”
12:50 – 1:05 p.m.	<b>Fatih Özcan</b> (University of Duisburg-Essen, Germany): “Scalable and continuous processing of particulate systems for energy applications: Importance of formulation science in battery and fuel cell research.”
1:05 – 2:00 p.m.	Lunch Break
<b>Session 4</b>	<b>Coatings and Processing</b>
2:00 – 2:35 p.m.	<b>Ruud van Ommen</b> (Delft University of Technology, The Netherlands): “Scalable manufacturing of nanostructured materials for energy applications using gas phase deposition.”
2:35 – 3:10 p.m.	<b>Robert Vaßen</b> (Jülich Research Centre, Germany): “Ceramic materials for energy conversion and storage: A perspective.”
3:10 – 3:25 p.m.	<b>Hanns Jörg Freund</b> (TU Dortmund University, Germany): “Process intensification in catalytic reactors by structured catalyst supports.”
3:25 – 3:30 p.m.	<b>Anjana Devi</b> (Ruhr-Universität Bochum, Germany): Summary of sessions
<b>Postersession</b>	<b>Current Research on Future Energy Materials and Systems</b>
3:30 – 4:30 p.m.	Poster presentations, room 1
<b>4:30 p.m.</b>	<b>End of Conference</b>