

## Poster Session 1 – Monday, 10 January 2022

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|----|-------------------------|---|
| 1  | Timo Engl *             | <b>Model Reactor for Investigations on CO<sub>2</sub> Methanation under Dynamic Reaction Conditions</b>                                   |
| 2  | Sebastian Weber *       | <b>X-ray Ptychography as a Tool to Understand Catalyst Synthesis and Deactivation in 3D</b>   |
| 3  | David Kellermann        | <b>Integrated Modelling of Dynamic Surface Changes and Kinetics of a Novel Nickel-Based Catalyst for CO<sub>2</sub> Methanation</b>       |
| 4  | Moritz Langer           | <b>Holistic Kinetic Modeling of the CO<sub>2</sub> Methanation Reaction</b>   |
| 5  | Nils Prinz              | <b>The Pair Distribution Function (PDF) – a Powerful Method to Study Energy Materials</b>   |
| 6  | Leif Schwensow          | <b>Stabilized MOF-Derived Ni/C Catalysts for the Methanation of CO<sub>2</sub> under Dynamic Operating Conditions</b>                     |
| 7  | Sven Wendholt           | <b>Ni-Based Catalysts for CO<sub>2</sub> Methanation Probed by X-ray Spectroscopy under In-Situ Conditions</b>                            |
| 8  | Alexander Hopf *        | <b>Hollow carbon spheres as model catalyst supports for polymer exchange membrane fuel cells</b>  |
| 9  | Tao Jiang *             | <b>Diatomic Fe-Co Sites for Efficient OER</b>   |
| 10 | Daniel Escalera López * | <b>Strategies to uncover activity-stability relationships in Ir-based catalysts for water splitting</b>                                   |
| 11 | Karin Kleiner *         | <b>Charge Transfer Multiplet Calculations - Solving the Electronic Structure (the d-Band) of Perovskite for the OER in Alkaline Media</b> |

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| 12 | Katrine Svane *        | High Entropy Oxides for the Oxygen Evolution Reaction  |
| 13 | Yuechao Yao *          | Metal-Organic Frameworks Derived High Entropy Sulfides Encapsulated by Porous Carbon for the Oxygen Reduction Reaction and Oxygen Evolution Reaction |
| 14 | Francesco Mattarozzi * | Ligand-Free Silver Nanoparticles for CO <sub>2</sub> Electrocatalytic Reduction to CO  |
| 15 | Julian Borowec *       | Structure-Activity Correlations in Electrocatalysis Investigated by Means of Combined Atomic Force and Scanning Electrochemical Microscopy           |
| 16 | Joel Britschgi *       | Novel Electrochemical Method to Functionalize Methane on a BDD-anode   |
| 17 | Inga Dorner *          | Differences between Dynamic and Stationary Analysis of the Electrochemical CO <sub>2</sub> Reduction   |
| 18 | Antonia Herzog *       | Operando Insights into Bimetallic Cu-Ag Nanocubes during CO <sub>2</sub> Electroreduction toward Liquid Products                                     |
| 19 | Hendrik Heenen *       | Mechanism for Acetate Formation in CO(2) Reduction on Cu: Selectivity Trends with pH and Nanostructuring Derive from Mass Transport                  |
| 20 | Fabio Dionigi          | Operando X-Ray Scattering to Track Atomic Level Structural Transformation in NiFe LDH  |
| 21 | Juliane Titus          | Control of Textural Properties and Ni Species of Ni-Catalysts Supported on Si-Stabilized ZrO <sub>2</sub>  |

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|-----------|-------------------|--|
| <b>22</b> | Mariam Schulte    | <b>Spatially-Resolved Insights into Local Activity and Structure of Ni Based CO<sub>2</sub> Methanation Catalysts in Fixed-Bed Reactors</b>      |
| <b>23</b> | Amanda Petersen   | <b>pH and Anion Effects on Cu-Phosphate Interfaces for CO Electroreduction</b>   |
| <b>24</b> | Steffen Czoska    | <b>Mechanistic and Structural Investigation of OER Catalysts by Oxygen Evolution Reaction at High Potentials Probed by Operando Spectroscopy</b> |
| <b>25</b> | Javier Villalobos | <b>Requirements for the Activation of Co-Based Catalysts during Electrochemical Restructure for Oxygen Evolution</b>                             |

**\* incl. Flash Talk**

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