

BAdW

Energy materials at work

WORKSHOP

07/04/22

Registration

Deadline for registration: April 6th, 2022

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Participation is free of charge, but registration is required.

The workshop will be in person and the number of participants is limited to 36. According to the current requirements, all participants need proof of full vaccination, or recovery.

Organization

Johanna Eichhorn is a junior group leader at the Walter Schottky Institute of the Technical University of Munich and member of the Young Academy of the Bavarian Academy of Sciences and Humanities since 2020.

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**BAVARIAN ACADEMY OF SCIENCES
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**Junges
Kolleg**

BAYERISCHE
AKADEMIE
DER
WISSENSCHAFTEN

Program

- 10.00 Uhr **Registration and Coffee**
- 10.30 Uhr **Welcome**
- 10.35 Uhr **Scanning Probe Microscopy for Nanoscale Characterization of Energy Materials**
JOHANNA EICHHORN (TU München)
- 11.00 Uhr **Optical Imaging and Spectroscopy of Energy Materials on the Nanometer Scale**
ACHIM HARTSCHUH (LMU München)
- 11.35 Uhr **Understanding Catalytic Processes at Interfaces using Time-Resolved In-Situ Spectroscopy in the IR and Visible Range**
FELIX ECKMANN (TU München)
- 12.10 Uhr **Lunch Break**
- 13.10 Uhr **Sniffer: Highly Sensitive Characterization of Low Density Surface Catalysts**
SEBASTIAN KAISER (TU München)
- 13.45 Uhr **A μ -Reactor for Investigating Low Surface Area Photocatalysts at Ambient Condition**
CLARA ALETSEE (TU München)
- 14.20 Uhr **Characterization of CO₂ Reduction on Gold Using a Spectroelectrochemical Operando Approach**
MALO DUPORTAL (TU München)

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In the field of solar energy conversion, the properties of semiconductors are exploited, for example, to convert solar light into electronic energy with photovoltaic devices for immediate use, or to generate storable solar fuels through photoelectrochemical conversion and artificial photosynthesis. For the development of new semiconductor materials and novel design concepts, fundamental understanding of the device properties under operation conditions through advanced operando and in-situ characterization is decisive. In this workshop, researchers will present recent advances in the development of emerging characterization techniques in the broader field of solar energy conversion to resolve nanoscale heterogeneities in energy materials, time-dependence of charge transport/transfer processes, catalytic reaction and product generation mechanisms.

- 14.55 Uhr **Coffee Break**
- 15.30 Uhr **Plasmonics and Photonics for Energy Conversion**
CHRISTOPH GRUBER
(LMU München)
- 16.05 Uhr **Quantum Sensors as Novel Tool for Surface Science**
FABIAN FREIRE (TU München)
- 16.40 Uhr **End**