

BAdW

Registration

Deadline for registration: October 4, 2021

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Participation is free of charge, but registration is required.

For registration, please also indicate if you will take part at the workshop dinner, and if you have any dietary preferences.

The workshop will be in person and the number of participants is limited to 30. According to the current requirements, all participants need proof of full vaccination, recovery, or a negative antigen test that is not older than 24 hours.

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.

jungeskolleg.badw.de

Understanding interfaces for solar energy conversion

WORKSHOP

10/7/21

BAVARIAN ACADEMY OF SCIENCES AND HUMANITIES

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Junges
Kolleg

BAYERISCHE
AKADEMIE
DER
WISSENSCHAFTEN

Program

THURSDAY, 10/7/21

- 10.00 **Registration and Coffee**
- 10.30 **Welcome**
- 10.40 **Operando Characterization of Charge Extraction and Recombination Profiles in Solar Cells with Nanoscale Resolution**
GIDEON SEGEV (Tel Aviv University)
- 11.20 **Computational Electrochemistry: Recent Insights from Theory**
NICOLAS HÖRMANN (Fritz Haber Institute)
- 12.00 **Anisotropic Light Absorption and Charge Transport Properties of Epitaxial BiVO₄ Films Synthesized by Facile and Scalable Solution-based Approach**
VIKTORIA KUNZELMANN
(Technical University of Munich)
- 12.20 **Lunch Break**
- 13.20 **Imaging the Effect of Electron Transfer at the Atomic Scale: from Single Molecules to Light- Harvesting Functional Interfaces**
LAERTE PATERA (Technical University of Munich)
- 14.00 **In-situ Investigation of Solid/Aqueous and Organic Electrolyte Interfaces for Sustainable Fuel Production**
MARCO FAVARO (Helmholtz-Zentrum Berlin)
- 14.40 **Electrochemical Performance and Stability of Atomic Layer Deposited Co₃O₄ Protection Layers**
MATTHIAS KUHLL (Technical University of Munich)
- 15.10 **TiO₂ Protective Coatings for Photoelectrodes by Atomic Layer Deposition**
OLIVER BIENEK (Technical University of Munich)

Understanding interfaces for solar energy conversion

In the field of solar energy conversion, the properties of semiconductors and their interfaces 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 these technologies, current research activities focus on the development of new semiconductor materials, and novel design concepts, as well as improved understanding through advanced in-situ characterization and theoretical calculations. In this workshop, researchers will present recent advances in the broader field of solar energy conversion ranging from synthesis of semiconductors light absorbers and their heterostructures, aspects of material stability to fundamental understanding of interface properties under operation conditions.

- 15.30 **Coffee Break**
- 15.50 **New Ways to Probe Interfaces with Diamond Quantum Sensors**
DOMINIK BUCHER
(Technical University of Munich)
- 16.30 **Novel Hybrid Perovskites for Spin-Control and Magneto-Optics**
FELIX DESCHLER
(Technical University of Munich)
- 17.10 **Individual Discussions**
- 18.00 **Workshop Dinner**