Conference Program

14th SolTech Conference

September 29 - October 01, 2025

Bayreuth | Arvena Kongress Hotel

14th SolTech Conference, 2025, Bayreuth

Conference Schedule

Monday, September 29, 2025	
11:00 – 13:00	**Registration & Welcome Lunch**
Session 1	**Chair: Mukundan Thelakkat**, University of Bayreuth
13:00	**Mukundan Thelakkat**, University of Bayreuth *Opening remarks*
13:10	**Colin Nuckolls,** Columbia University, New York, USA *Molecules and Macromolecules as High Performance Electrochemical Materials*
13:50	**Jan Niedens** (JMU) *Novel Catalytic Boro-Degermanylation Reaction to Access Functionalized Azaboraspirobifluorenes*
14:10	**Heyou Zhang** (UBT) *Photoswitchable Nanoparticle Arrays*
14:30	**Manman Hu** (FAU) *Inverse design workflow discovers hole-transport materials tailored for perovskite solar cells*
14:50 – 15:30	**Coffee Break**
Session 2	**Chair: Rainer Fink**
15:30	**Ron Naaman,** Weizmann Institute of Science, Rehovot, Israel *Chirality and Electrons' spin- A miraculous twist in materials and energy*
16:10	**Elena Mack** (FAU) *Tailoring interfaces – molecular doping of transition metal dichalcogenide nanosheet networks*
16:30	**Simon Leisibach** (TUM) *Au/TiO_2 and Pt/TiO_2 Dual-Site Catalysts for the Alkaline Hydrogen Evolution Reaction*
16:50 – 18:00	**Poster Session I** (Poster no 1 - 32)
18.00 – 20.00	**Get Together (Beer, Pretzel, Fingerfood)**

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Tuesday, September 30, 2025	
Session 3	**Chair: Frank Würthner**
08:45	**Makoto Fujita**, University of Tokyo, Japan *Cavity-controlled photoreactions within self-assemblerd coordination cages*
09:25	**Leander Ernst** (JMU) *Photoinduced stepwise charge hopping in π-stacked perylene bisimide donor-bridge-acceptor arrays*
09:45	**Frederic Laquai**, Ludwig-Maximilians-Universität München *Photophysics of Non-Fullerene Acceptor Organic Solar Cells*
10:25 – 10:55	**Coffee Break**
Session 4	**Chair: Thomas Fässler**
10:55	**Ladislaus Dobrenizki**, Siemens Energy Global GmbH & Co. KG, Erlangen, Germany *Scaling and Production Ramp-up, the Major Challenges for the Hydrogen Economy*
11:35	**Verena Streibel** (TUM) *Transition Metal Nitride Semiconductors for Photoelectrochemical Energy Conversion*
11:55	**Peter Stahl** (LMU) *How Charge Influences Mechanism: Porphyrin Photocatalysts for CO_2 Reduction*
12:15	**Kirill Gubanov** (FAU) *Molecular Di-Oxygen-Driven Enhancement of Charge Transfer and Hydrogen Evolution in Phenazine-TCNQ Donor-Acceptor Complexes*
12:35 – 13:30	**Lunch Break**
Session 5	**Chair: Jochen Feldmann**
13:30	**Student Highlights (5 talks, five min. each, 5mn discussion):** Maximilian Spies (UBT), Lukas Mai (FAU), Nivedita Pan (LMU), Aimilios Christidis (TUM), Philipp Kirchner (JMU)
14:05	**Uri Banin,** Hebrew University of Jerusalem, Israel *Photocatalysis with semiconductor quantum dots towards solar energy harvesting*
14:45	**Alejandro Cadranel** (FAU) *Single-Atom Enhanced Carbon Dots for OER*
15:05	**Sushant Ghimire** (LMU) *Core-Shell Structure Boosts Free Exciton Characteristics in I-III-VI Quantum Dots*
15:25 – 15:55	**Coffee Break**
Session 6	**Chair: Peter Müller Buschbaum**
15:55	**Karthik Shankar**, University of Alberta, Canada *Polymeric Graphitic Carbon Nitride: A One-Stop Shop for Organic and Hybrid Optoelectronics?*
16:35	**Kazutaka Shoyama** (JMU) *Dispersion Force-Driven Design of Organic Crystalline Solid Solutions*
16:55	**Lakshminarayana Polavarapu**, Universidade de Vigo, Spain *Metal Halide Crystals as Next-Generation Chiroptical Materials*
17:35 – 18:30	**Poster Session II** (Poster no 33 - 64)
19:00	**Conference Dinner**

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Wednesday, October 01, 2025	
Session 7	**Chair: Stephan Kümmel**
08:45	**Carolin Müller**, Friedrich-Alexander-Universität Erlangen-Nürnberg *Molecules in Motion: Twisting Pathways of Photoexcited Dynamics*
09:25	**Thomas Bergler** (UBT) *Searching for ferroelectric porous metal organic frameworks using machine-learning and Monte-Carlo-simulations*
09:45	**Frederico Delgado** (TUM) *Machine-Learning Force Fields Reveal Shallow Electronic States on Dynamic Halide Perovskite Surfaces*
10:05	**Dana Medina** (LMU) *Structuring, Fast and Slow - Tracing Covalent Organic Framework Formation In Operando*
10:25 – 11:00	**Coffee Break**
Session 8	**Chair: Thomas Bein**
11:00	**Rene A. J. Janssen,** Eindhoven University of Technology, Netherlands *Material and device design for multijunction perovskite solar cells*
11:40	**Markus Griesbach** (UBT) *Controlling Halide Segregation in Mixed-Halide Perovskites Through Crystallite Size and Defect Density*
12:00	**Altantulga Buyan-Arivjikh** (TUM) *$CsPbBr_3$ Nanocrystals as Bottom Interface Nucleation Seeds for Printing Oriented $FAPbI_3$ Thin Films: An In-Situ Study*
12:20	**Tobias Siegert** (UBT) *Modelling Thermal Halide Exchange of Perovskite Powders with and without $BMIMBF_4$ from an Interdiffusion Perspective*
12:40	**Sebastian Hammer** (JMU) *Unraveling Structural Dynamics in Molecular Semiconductors with Ultrafast Electron Diffraction*
13:00	**Closing Remarks:** Mukundan Thelakkat and Johannes Brendel
13:10-14:30	**Snacks & Goodbye**

Solar Technologies Go Hybrid - KeyLabs

Universität Bayreuth

Julius-Maximilian-Universität Würzburg

Friedrich-Alexander-Universität Erlangen-Nürnberg

Technische Universität München

Ludwig-Maximilian-Universität München

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