

9th SolTech Conference

5th - 8th October 2020 | Program

An Initiative of the
Bayerisches Staatsministerium für
Wissenschaft und Kunst



SOLAR TECHNOLOGIES



Program | Monday, 5th October 2020 (online)

Session 1 Moderator: Mukundan Thelakkat

09.00		Welcome
09.10		<i>Prof. Mukundan Thelakkat, University of Bayreuth</i>
09.10	L01	Hybrid Perovskite Quantum Dots for High Efficiency Solar Cells
09.30		<i>Lianzhou Wang, University of Queensland, Brisbane, Australia</i>
09.30	L02	Nanoscale Spectroscopies for Understanding Performance Limitations in Water Splitting Photoelectrodes
09.50		<i>Johanna Eichhorn, TU München</i>
5 minutes		Technical Time Slot
09.55	L03	Towards All-Solvent Prepared Nanostructured Organic Electronic Devices
10.15		<i>Rainer Fink, FAU Erlangen-Nürnberg</i>
10.15	L04	Photonics and Plasmonics for Chemical Energy Conversion
10.35		<i>Emiliano Cortés, LMU München</i>
5 minutes		Technical Time Slot
10.40		Break
11.10		Short Poster Introductions (P01 – P15)
5 minutes		Technical Time Slot
12.00		Lunch Break

Session 2 Moderator: Eva M. Herzig

12.45	L05	Highly Efficient Perovskite Solar Cells
01.05		<i>Nam-Gyu Park, Sungkyunkwan University, South Korea</i>
01.05	L06	Double and Multiple Peak Emission Features in Lead Halide Perovskites
01.25		<i>Konstantin Schötz, Universität Bayreuth</i>

5 minutes	Technical Time Slot
01.30 L07	Molecular Engineering of Helically-Chiral Functional Molecules
01.50	<i>Princekumar Ravat, JMU Würzburg</i>
01.50 L08	Photoinduced Interfacial Electron Transfer Kinetics in the Electric Double Layer
02.10	<i>Jenny Schneider, LMU München</i>
5 minutes	Technical Time Slot
02.15	Break

Session 3 Moderator: Stephan Kümmel

02.45 L09	Organic/Inorganic Hybrid Materials for Solar Cells:
03.05	What Insight can we gain from Theoretical Spectroscopy?
	<i>Claudia Draxl, Humboldt-Universität zu Berlin</i>
03.05 L10	Assessment of Excited-State Molecular Geometries With
03.25	Optimally-Tuned Range-Separated Hybrid Functionals
	<i>Bernhard Kretz, TU München</i>
5 minutes	Technical Time Slot
03.30 L11	New Theoretical Methods for Exploring Functional Landscapes
03.50	<i>Merle Röhr, JMU Würzburg</i>
03.50 L12	Density-Functional Investigation of
04.10	Norbornadiene/Quadricyclane Fullerene Dyads
	<i>Andreas Görling, FAU Erlangen-Nürnberg</i>
5 minutes	Technical Time Slot
04.15	Break

Program | Monday, 5th October 2020 (online)

Session 4 Moderator: Hans-Werner Schmidt

04.45 05.05	L13	Contribution of Single-Molecule Techniques to Structural Issues of Biomimetic Molecular Aggregates <i>Jürgen Köhler, Universität Bayreuth</i>
05.05 05.25	L14	Molecular Doping of Conjugated Polymers: Ionisation Efficiency from UV-vis-IR <i>Christian Müller, Chalmers University of Technology, Sweden</i>
5 minutes		Technical Time Slot
05.30		Short Poster Introductions (P16 – P25)
06.00		Closing remarks <i>Hans-Werner Schmidt, Universität Bayreuth</i>

Program | Tuesday, 6th - Thursday, 8th October

Tuesday, 6th October 2020 (not online)

Local KeyLab Programs (each Keylab organizes locally further Oral and Poster Presentations)

Tuesday, 6th October 2020 at 3 p.m.

Executive Committee Meeting (per Zoom)

Wednesday, 7th October and Thursday, 8th October 2020

Symposium organized by young scientists of SolTech Consortium
“Online Science Communication Workshop”
by the *European Science Communication Institute*

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Selected Posters: Online Session 5th October 2020



Universität Bayreuth

- P01** A crosslinkable Spiro-OMeTAD derivative for Perovskite Solar Cells | *Beck, Christian*
- P02** Movement of charge carriers in a polymer | *Beer, Patrick*
- P03** HOMO – HOMO Electron Transfer: An Elegant Strategy for p-type Doping of Polymer Semiconductors towards Thermoelectric Applications | *Goel, Mahima*
- P04** Time-resolved microscopy studies of the crystallization behaviour of slot-die coated MAPbI₃ films | *Kuhn, Maik*
- P05** Highly Efficient Supramolecular Nucleation Agents: Towards P3HT-based Superstructures | *Wenzel, Felix*



Friedrich-Alexander-Universität Erlangen-Nürnberg

- P06** Stable organic cations – carbon bridged triangulenium salts | *Böck, Michael*
- P07** Mixed Organic Ligand Shells: From Controlling Nanoparticle Surface Morphologies Towards Tuning their Optoelectronic Properties | *Henkel, Christian*
- P08** Electron transport in a 3D iron MOF framework: Simulations | *Hennemann, Matthias*
- P09** Organics Direct Inorganics: Polymer-MoS₃-Particles for Photocatalysis and Surfactant-Perovskite Particles with Improved Photostability | *Krieger, Anja*
- P10** Superpyridine and its chemistry | *Schöll, Kilian*



Ludwig-Maximilians-Universität München

- P11** Transfer of Direct to Indirect Bound Excitons by Electron Intervalley Scattering in Cs₂AgBiBr₆ Double Perovskite Nanocrystals | *Dey, Amrita*
- P12** Just-in-time delivery: Photobase effect in photocatalytic hydrogen generation | *Fang, Jiawen*
- P13** Charge Traps in all-inorganic CsPbBr₃ Perovskite Nanowire Field Effect Phototransistors | *Winterer, Felix*
- P14** Iridium containing porous oxide microparticles as oxygen evolution reaction catalysts | *Böhm, Daniel*
- P15** Highly Conducting Redox-Active Wurster-Type Twisted Covalent Organic Frameworks | *Guntermann, Roman*



Technische Universität München

- P16** Plasmonics with Gold Nano-Structure Arrays on Silicon Electrodes for Applications in Electrochemistry | *Feil, Moritz*
- P17** Reliable electrostatic energies in MPE implicit solvation | *Filser, Jakob*
- P18** High Carrier Mobility in Macroporous Silicon/Germanium Thin Films | *Giebel, Michael A.*
- P19** Band edge engineering in oxynitride semiconductors | *Kraut, Max*
- P20** Perovskite and organic solar cells on a rocket flight | *Reb, Lennart K.*



Julius-Maximilians-Universität Würzburg

- P21** From Organic Solar Cells towards Efficient Near-infrared Absorbing Photodiodes | *Kim, Jinhong*
- P22** Tetrahydroxy-PBIs in the ZnO interlayer of Non-Fullerene Organic Solar Cells | *Nagler, Oliver*
- P23** Chiroptical Properties of Indolenine Squaraines with a Stereogenic Center at Close Proximity | *Selby, Joshua*
- P24** Thermoelectric Characterization of Polymer Thin Films | *Siegert, Marie*
- P25** Functionality Optimization: Optimal Packing Arrangements for Singlet Fission | *Singh, Anurag*

Each Poster will be introduced by the presenting author using 2-3 powerpoint slides.

All Poster contributions will be coordinated by the Co-Host of the respective University.

All the remaining Posters can be presented on 6th October in local sessions.

List of Speakers

Invited Lectures

Draxl, Claudia	Humboldt-Universität zu Berlin, Germany	claudia.draxl@physik.hu-berlin.de
Müller, Christian	Chalmers University of Technology, Sweden	christian.muller@chalmers.se
Park, Nam-Gyu	Sungkyunkwan University, South Korea	npark@skku.edu
Wang, Lianzhou	University of Queensland, Brisbane, Australia	l.wang@uq.edu.au

Contributed Lectures

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Poster Introductions

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Host and Co-Hosts

Host

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Organization

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Solar Technologies Go Hybrid

Coordinator 2020
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Date: 5th October 2020

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Solar Technologies Go Hybrid is an Initiative of



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