

JOINT HI-SCORE AND HYPERCELLS MEETING

ONLINE WORKSHOP

12th-14th October 2020



Schedule

October 12		
Time	Name	Title
09:00	Organizers	Welcome
1. Session	Chair: Prof. Lioz Etgar	
09:10	Carlos Francisco Pena Camargo	Halide Segregation versus Interfacial Recombination in Bromide-Rich Wide-Gap Perovskite Solar Cells
09:30	Emilio GutierrezPartida	Stable double cation perovskites with 18 μ s lifetime and high luminescence yield for efficient inverted perovskite solar cells
09:50	Max Grischek	Finding the Most Promising Route for All-Inorganic Perovskites with PL Measurements: The PCE Potential of the Most Relevant Compositions and Transport Layers
10:10 - 10:40	Coffee Break: Stay online and chat with others in breakout rooms!	
2. Session	Chair: Prof. Lioz Etgar	
10:40	Hampus Näsström	Dependence of Phase Transitions on Halide Ratio in Inorganic CsPb(BrxI1-x)3 Perovskite Thin Films
11:00	Ibrahim Simsek	Chalcogenide-perovskite thin films as absorber materials
11:20	Marion Flatken	The Colloidal Nature in Halide Perovskite Precursor Solutions
11:40 - 13:10	Lunch Break: Stay online and chat with others in breakout rooms!	

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3. Session	Chair: Prof. Roel van de Krol	
13:10	Fatima Akhundova	Combinatorial exploration of novel perovskite solar cell materials
13:20	Ke Xu	Finding a suitable high bandgap stable perovskite material for tandem application by slot die coating
13:40	Hans Koebler	Stability of PIN perovskite solar cells
14:00 - 14:30	Coffee Break: Stay online and chat with others in breakout rooms!	
4. Session	Chair: Prof. Roel van de Krol	
14:30	Bat-El Cohen	Photoelectronic properties and energy losses in low dimensional perovskite
14:50	Stav Rahmany	Two dimensional or passivation treatment: the study of hexylammonium post-deposition treatment on 3D halide-perovskite-based solar cells
15:10	Yahel Soffer	Low Frequency Collinear Pre-Resonant Impulsive Stimulated Raman Microspectroscopy
15:20 - 16:00	Coffee Break: Stay online and chat with others in breakout rooms!	
16:00 - 17:00	Meet the experts	

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Meet the experts

#	Subject	Expert
1	Perovskite and solar water splitting: what can we learn from each other?	Prof. Roel van de Krol
2	How to determine the PLQY and PL lifetimes correctly	Dr. Thomas Unold
3	The Perovskite structure: general chemistry, different compositions their obstacles, binding forces, chemistry in solution, nucleation process	Dr. Oleksandra Shargieieva
4	Diffraction - The secret behind the peaks: General diffraction methods, Rietveld/Le Bail, what can we do with powder XRD patterns?	Prof. Susan Schorr, Dr. Joachim Breternitz
5	Basic Semiconductor Physics - How to apply the general model of a p-n-junction to our well-known perovskite solar cell: energy band model for different cases (dark light doping), transfer to tandem solar cells	Prof. Dieter Neher
6	Current-voltage characteristics - Way more than just efficiency: general information one can get out of it, discussion with the help of weird examples	Dr. Martin Stollerfoht

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October 13		
Time	Name	Title
09:00	Organizers	Welcome
5. Session	Chair: Dr. Thomas Unold	
09:10	Amran Al-Ashouri	Advancing perovskite photovoltaics through holeselective contact design
09:30	Ivona Kafedjiska	NiOx as an inorganic hole-transporting material for monolithic CIGS-Perovskite tandem solar cells
09:50	Gopinath Paramasivam	Semitransparent cells to Mini Modules for 4terminal Tandem application
10:10	Bor Li	Optimizing and Upscaling Perovskite/Silicon Tandem Solar Cells with Industrial Bottom-Cells
10:20 - 11:00	Coffee Break: Stay online and chat with others in breakout rooms!	
11:00 - 12:00	HyPerCells Meeting	
12:00 - 13:10	Lunch Break: Stay online and chat with others in breakout rooms!	
6. Session	Chair: Prof. Iris Visoly-Fisher	
13:10	Johannes Sutter	Tailored Light Management Nanostructures in Perovskite-Silicon Tandem Solar Cells
13:30	Markus Schleuning	A new perspective on kinetics and thermodynamics in Photoelectrochemical cells
13:50	Ekaterina Shabratova	EPR-on-a-Chip as a new technology for operando materials characterization
14:10 - 14:30	Coffee Break: Stay online and chat with others in breakout rooms!	

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7. Session	Chair: Prof. Iris Visoly-Fisher	
14:30	Patrick Schnell	Understanding the interface of metal oxide photoanodes for direct solar water splitting
14:50	Radu Bors	Using Simulation Tools for Advancing the Development of Solar Water Splitting Devices
15:10	Anton Tsyganok	Operando X-ray absorption spectroscopy (XAS) observation of photoinduced oxidation in FeNi (oxy)hydroxide overlayers on hematite (α -Fe ₂ O ₃) photoanodes for solar water splitting
15:30 - 16:00	Coffee Break: Stay online and chat with others in breakout rooms!	
16:00 - 17:00	Meet the experts (possible topics as on Monday)	

October 14		
Time	Name	Title
09:00	Organizers	Welcome
8. Session	Dr. Martin Stolterfoth	
09:10	Lucas BodensteinerDresler	Concepts for evaluating large XPS datasets of combinatorial libraries: the CuxNi1-xOy system studied as a HTL candidate material
09:30	Dorothee Menzel	Advanced Valence Band Spectroscopy at the CsMAFA/ETL Interface
09:50	Yoni Tsadikov	Metal sulfide-oxide electrocatalysts with low overpotentials towards efficient OER

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10:10 - 10:40	Coffee Break: Stay online and chat with others in breakout rooms!
10:40 - 11:40	HI-SCORE meeting
11:40 - 13:00	Lunch Break: Stay online and chat with others in breakout rooms!
13:00 - 16:30	Transferable Skills Sessions (only students)

Transferable Skills Sessions

We will divide the students into two groups.

Time	Sessions for group 1	Time	Sessions for group 2
13:00 - 13:30	Prof. Maya Schuldiner (Department of Molecular Genetics at WIS, Israel) <i>Post-Doc Opportunities in Israel</i>	13:00 - 13:45	Prof. David Cahen (WIS & BIU, Israel) <i>Thoughts on Scientists in Society, in War & Peace, their Egos & Prizes and some...</i>
13:30 - 14:00	Dr. Paul Harten (Dept. for Technology Transfer, HZB) <i>Ingredients for a Successful Startup Company</i>	13:45 - 14:10	PD Dr. Daniel Abou-Ras (HZB) <i>Dealing with supervisors and how to be a good supervisor in the future</i>
14:00 - 14:30	Dr. Nir Klein-Kedem (formerly WIS, now: StoreDot, Israel) <i>Personal notes from moving from researcher to group leader in an R&D based company</i>	14:10 - 14:30	Hannah Funk (PhD-student, HZB) <i>What a recent Leadership Course has taught me</i>
14:30-15:00	Coffee Break	14:30-15:00	Coffee Break

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	Wrap up and Good bye.		