

#### Day 1 - September 30

#### 13.00-14.30 Welcome and Registration

##### Tutorial Lectures

14.30-15.30	TL1	Md.K. Nazeeruddin	2D/3D layered perovskites for stable and efficient photovoltaics
15.30-16.15	TL2	David Cahen	Halide perovskites: more or less than meets the eye?

#### 16.15-16.45 Coffee Break

16.45-17.45	TL3	Filippo De Angelis	Challenges in modeling metal-halide perovskites: Structural transformations and defects
17.45-18.30	TL4	Stefaan De Wolf	Perovskites: A view from a silicon solar cell perspective

#### 18.30-21.00 Poster Session & Refreshment

#### Day 2 - October 01

#### 08.00-08.30 Welcome and Registration

##### Invited Lectures Session 1

08.30-09.00	IL1.1	Mercouri Kanatzidis	2D and "hollow" Halide Perovskite Semiconductors
09.00-09.30	IL1.2	Kylie Catchpole	High efficiency perovskite-based tandem solar cells
09.30-10.00	IL1.3	Saiful Islam	Like People, Perovskites Are Not Perfect: Atomic-Scale Insights into Defects, Diffusion and Dynamics
10.00-10.30	IL1.4	Edward Sargent	Perovskite light-emitting materials and devices

#### 10.30-11.00 Coffee Break

11.00-11.30	IL1.5	Selina Olthof	Probing the electronic structure of hybrid perovskites and the impact of interfaces
11.30-12.00	IL1.6	Michael McGehee	A Stress testing perovskite solar cells to see how tough they are and how they fail
12.00-12.30	IL1.7	Anita Wing Yi Ho-Baillie	Strategies for improving performance, improving stability and reducing toxicity for perovskite solar cells
12.30-13.00	IL1.8	Chris Case	Transforming efficiency into energy – the power of LCOE

#### 13.00-13.15 Sponsor Presentations

#### 13.15-14.30 Lunch

##### Session A1 – Contributed Talks – in Auditorium C

14.30-14.45	A1.01	Nakita K. Noel	Surface Doping of Metal Halide Perovskites
14.45-15.00	A1.02	Satoshi Uchida	The New Discovery of Superlattice Inside The Perovskite Solar Cells
15.00-15.15	A1.03	Yana Vaynzof	Origins of Photovoltaic Performance Variations in Lead Halide Perovskite Solar Cells
15.15-15.30	A1.04	Han Chen	Diffusion Engineering of Ions and Charge Carriers for Stable Efficient Perovskite Solar Cells
15.30-15.45	A1.05	Andre Horvath	Organic-inorganic lead halide perovskite nanowires: a model system to find epitaxial growth condition?
15.45-16.00	A1.06	Efrain Ochoa	Direct-indirect bandgap transition behaviour on flash infrared annealed Perovskites
16.00-16.15	A1.07	Jun Peng	High Open-Circuit Voltage Perovskite Solar Cells: Role of Surface Passivation

#### 16.15-16.45 Coffee Break

16.45-17.00	A1.08	Klara Suchan	Real-time correlative analysis of light induced phase segregation mechanism and kinetics in Br-I Perovskites
17.00-17.15	A1.09	Felix Lang	Radiation Hardness of the Triple-Cation Perovskite Cs <sub>0.05</sub> MA <sub>0.17</sub> FA <sub>0.83</sub> Pb <sub>(I<sub>0.83</sub>Br<sub>0.17</sub>)<sub>3</sub></sub>
17.15-17.30	A1.10	Aurora Manzi	Resonantly Enhanced Multiple Exciton Generation through Below-Band-Gap Multi-Photon Absorption in Perovskite Nanocrystals
17.30-17.45	A1.11	Evelyne Knapp	Physical model for impedance loop and negative capacitance in perovskite solar cells
17.45-18.00	A1.12	Daniele Meggiolaro	Computational modelling of the mechanisms of traps formation and healing in lead halide perovskite
18.00-18.15	A1.13	Sven Huettner	Unravelling the role of vacancy and ion migration in 3d and 2d metal halide perovskites
18.15-18.30	A1.14	Nga Phung	Ionic doping of perovskite solar cells

##### Session B1 – Contributed Talks – in Room Garden 1BC

14.30-14.45	B1.01	Franziska Krieg	Colloidal CsPbX <sub>3</sub> (X=Cl, Br, I) Nanocrystals 2.0: Zwitterionic Ligands for Improved Durability and Stability
14.45-15.00	B1.02	Camille Stavarakas	Probing Buried Recombination Pathways in Perovskite Structures using 3D Photoluminescence Tomography
15.00-15.15	B1.03	Michael Toney	Acoustic Phonon Lifetimes Limit Thermal Transport in MAPbI <sub>3</sub>
15.15-15.30	B1.04	P.Cholakkal Harikesh	Doping and Switchable Photovoltaic Effect in Lead Free Perovskites Enabled by Metal Cation Transmutation
15.30-15.45	B1.05	Daniela Marongiu	Diffuse absorbance of semitransparent perovskite solar cells
15.45-16.00	B1.06	Tadas Malinauskas	Long-term stability of the oxidized hole transporting materials used in perovskite solar cells
16.00-16.15	B1.07	Pranoy Nandi	Temperature Dependence of Light-Induced Phase Separation in CH <sub>3</sub> NH <sub>3</sub> Pb(I <sub>1-x</sub> Br <sub>x</sub> ) <sub>3</sub>

#### 16.15-16.45 Coffee Break

16.45-17.00	B1.08	Bethan Charles	Phase Behaviour of Mixed Caesium, Methylammonium and Formamidinium Perovskites
17.00-17.15	B1.09	Pabitra K. Nayak	Impact of heterovalent doping in metal halide perovskite material
17.15-17.30	B1.10	Ivan Scheblykin	Resolving individual non-radiative recombination channels and origin of photoluminescence temperature dependence in perovskites
17.30-17.45	B1.11	Christian Wolff	Suppressed interfacial recombination enables high efficiency pin-perovskite solar cells
17.45-18.00	B1.12	Gee Yeong Kim	Large tunable light-induced ion conduction in halide perovskites and implications for photo-decomposition
18.00-18.15	B1.13	Lioz Etgar	Two Dimensional organic-inorganic perovskite from nanostructures to solar cells
18.15-18.30	B1.14	Giacomo Giorgi	Electronic and Optical Features of 2D Organic-Inorganic Halide Perovskites

##### Session C1 – Contributed Talks – in Room Garden 2BC

14.30-14.45	C1.01	The Duong	Light and elevated Temperature Induced Degradation (LeTID) in Perovskite Solar Cells and Development of Stable Semi-transparent Cells
14.45-15.00	C1.02	Francesco Di Giacomo	Large area (>140 cm <sup>2</sup> ) perovskite solar modules made by sheet to sheet and roll to roll fabrication with 14.5% efficiency
15.00-15.15	C1.03	Stefano Pisoni	Tailored Lead Iodide Growth and Alkali-treatment for Highly Efficient Flexible Perovskite Solar Cells and Thin-Film Tandem Devices
15.15-15.30	C1.04	Alexander Colsmann	Probing the Microstructure of Methylammonium Lead Iodide Perovskite Thin-Films
15.30-15.45	C1.05	Laura Schelhas	Insights into Operational Stability and Processing of Halide Perovskite Active Layers
15.45-16.00	C1.06	Yen-Hung Lin	Hybrid Organic-Perovskite Photojunction Transistors with on-Demand Photoresponsivity for Electro-Optic Applications
16.00-16.15	C1.07	Aldo Di Carlo	Perovskite top cell optimization for a novel 2-terminal mechanically stacked perovskite/silicon tandem solar cell

#### 16.15-16.45 Coffee Break

16.45-17.00	C1.08	Ievgen Levchuk	Engineering of Perovskite Quantum Dot Enhanced Films (QDEF) for implementation in a tablet device with high colour purity
17.00-17.15	C1.09	Iwan Zimmermann	Unravelling the crystallization process of mixed ion perovskites: The role of Cs for the fabrication of efficient and reproducible solar cells

17.15-17.30	C1.10	Tobias Stubhan	Accelerating Development of the Perovskite Technology with Smart Automation
17.30-17.45	C1.11	Mario Caironi	Perovskites Light Detectors with Low Noise and High Gain-Bandwidth Product Printed From Non-Hazardous Solvents
17.45-18.00	C1.12	Florian Mathies	Inkjet-printing of triple cation perovskite layers in solar cells
18.00-18.15	C1.13	Gabriele Raino	Perovskite Nanocrystals as Non-Classical Light Sources
18.15-18.30	C1.14	Matthias Bräuninger	Monolithic perovskite/silicon tandem solar cells with > 25% efficiency via sequential evaporation and spin coating
<b>18.30-20.30</b>	<b>Poster session</b>		
<b>20.30-23.00</b>	<b>Social Dinner</b>		
<b>Day 3 - October 02</b>			
<b>08.30-09.00</b>	<b>Registration</b>		
<b>Invited Lectures Session 2</b>			
09.00-09.30	IL2.1	Henry Snaith	Perovskites on a trajectory; routes to further advances in efficiency and stability
09.30-10.00	IL2.2	Eva Unger	Birth, life and death of mixed ABX <sub>3</sub> perovskites
10.00-10.30	IL2.3	Nripan Matthews	Halide perovskite light emitting diodes
<b>10.30-11.00</b>	<b>Coffee Break</b>		
11.00-11.30	IL2.4	Sang Il Seok	Positive effects of additives on perovskite based solar cells
11.30-12.00	IL2.5	Hongwei Han	Efficient Printable Mesoscopic Perovskite Solar Cell: From Cell to System
12.00-12.30	IL2.6	Laura Herz	Fundamental properties of hybrid perovskites governing photovoltaic operation near the intrinsic limit
12.30-13.00	IL2.7	Kai Zhu	Scalable Fabrication of Perovskite Solar Cells towards Terawatt-Scale Photovoltaic Module Technology
<b>13.00-13.15</b>	<b>Sponsor Presentations</b>		
<b>13.15-14.30</b>	<b>Lunch</b>		
<b>Session A2 – Contributed Talks – in Auditorium C</b>			
14.30-14.45	A2.01	Nicola Courtier	Interpreting Ideality Factors for Planar Perovskite Solar Cells using an Ion Motion and Charge Carrier Transport Model
14.45-15.00	A2.02	Julia Wiktor	Role of polarons in the low recombination rates at iodine defects in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub>
15.00-15.15	A2.03	Jorge Ávila	Influence of doped charge transport layers on efficient perovskite solar cells
15.15-15.30	A2.04	Michele Saba	Direct or Indirect Bandgap in Hybrid Lead Halide Perovskites?
15.30-15.45	A2.05	Pablo P. Boix	The Importance of Interfaces in Vacuum-Deposited Perovskite Photovoltaics
15.45-16.00	A2.06	David Egger	The Effect of Small Phonon Energies on Long Lifetimes in Halide Perovskite Solar Cells
16.00-16.15	A2.07	Edoardo Mosconi	First Principles Modeling of Mixed 2D/3D Organohalide Perovskites
<b>16.15-16.45</b>	<b>Coffee Break</b>		
16.45-17.00	A2.08	Emanuele Calabrò	Stability analysis on n-i-p planar Perovskite Solar Cells and Modules using a SnO <sub>2</sub> based ETL
17.00-17.15	A2.09	Arup Mahata	Exploring the boundary of 3D perovskites domain: The case of FAPb <sub>1-x</sub> Sn <sub>x</sub> Br <sub>3</sub> perovskites
17.15-17.30	A2.10	Oleksandra Shargaieva	Understanding the formation of hybrid perovskites: a complex's journey from solution to thin film
17.30-17.45	A2.11	Szymon Zelewski	Grain size dependent structural phase transition hysteresis in hybrid perovskites
17.45-18.00	A2.12	Xiaofeng Tang	The dominant role of grain boundary in the phase-segregation of mixed-halide perovskite
18.00-18.15	A2.13	Daniel Niesner	Spin-polarized electronic bands of lead halide perovskites
18.15-18.30	A2.14	Tom Savenije	The Role of the Monovalent Cation on the charge dynamics in Lead Iodide Perovskites
<b>Session B2 – Contributed Talks – in Room Garden 1BC</b>			
14.30-14.45	B2.01	Moritz Futscher	Quantification of Ion Migration in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Solar Cells
14.45-15.00	B2.02	Aboma Merdasa	Spectrally, Spatially & Temporally Resolved PL Quantum Yield Reveals the Photophysics behind Formation and Role of PbI <sub>2</sub> in MAPbI <sub>3</sub> thin films
15.00-15.15	B2.03	Dominik Kubicki	Potassium doping: microscopic phase composition of mixed-cation and mixed-halide lead perovskites from solid-state NMR
15.15-15.30	B2.04	Paul Gratia	High-resolution high-sensitivity elemental imaging of halide perovskite solar cells
15.30-15.45	B2.05	Daniele Cortecchia	Impurity doping in 2D perovskites for luminescence enhancement
15.45-16.00	B2.06	Min Kim	Hygroscopic Polymer Passivation Improving Durability of Perovskite Solar Cells
16.00-16.15	B2.07	Alessandra Alberti	Active nitrogen increases the robustness of hybrid perovskite surfaces
<b>16.15-16.45</b>	<b>Coffee Break</b>		
16.45-17.00	B2.08	Samuel Stranks	Local Strain Heterogeneity Influences the Optoelectronic Properties of Halide Perovskites
17.00-17.15	B2.09	Elizabeth Parrott	Interplay of structural and optoelectronic properties in FAPb <sub>1-x</sub> Sn <sub>x</sub> I <sub>3</sub> perovskites
17.15-17.30	B2.10	Mojtaba Abdi Jalebi	Enhanced optoelectronic quality of metal halide perovskite via novel passivation approaches
17.30-17.45	B2.11	Davide Raffaele Ceratti	Photo-damage and self-healing processes in Halide Perovskites: threshold, kinetics and mechanisms
17.45-18.00	B2.12	Juliane Borchert	Co-evaporation of Uniform, Smooth Formamidinium Lead Triiodide Thin-film Solar Cells
18.00-18.15	B2.13	Michał Baranowski	Bright exciton fine structure splitting in bulk single MAPbBr <sub>3</sub> crystal
18.15-18.30	B2.14	Claudio Quarti	Layered 2D hybrid perovskites on the move: structure-properties relationships, defects and spectroscopic response
<b>Session C2 – Contributed Talks – in Room Garden 2BC</b>			
14.30-14.45	C2.01	Annalisa Bruno	Highly Efficient Perovskite Based Tandem Solar Cells
14.45-15.00	C2.02	Christoph Brabec	From 4T to 2T solution processed silicon/perovskite tandems solar cell
15.00-15.15	C2.03	Narges Yaghoobi Nia	A Scalable Crystal Engineering Method for Fabrication of High Efficiency and Stable Planar-structure Multi Cation/Anion Perovskite Solar Cells and Modules via Sequential Deposition in Ambient Condition
15.15-15.30	C2.04	Chuanjiang Qin	Efficient and Stable quasi-2D Perovskite Light-Emitting Diodes
15.30-15.45	C2.05	Jeff Coffer	Phase Control in Mixed Halide Organolead Perovskites Using Silicon Nanotube Frameworks
15.45-16.00	C2.06	Gregory Wilson	Challenges in measurement, assessment and development of emerging perovskite semiconductors: How reliable are efficiency measurements of perovskite solar cells?
16.00-16.15	C2.07	Zhaoxin Wu	A Strategy for Architecture Design of Crystalline Perovskite Light-Emitting Diodes with high performance and stability
<b>16.15-16.45</b>	<b>Coffee Break</b>		
16.45-17.00	C2.08	Biplab Ghosh	Applications of Bismuth-based ternary halide perovskites in photovoltaics
17.00-17.15	C2.09	Antonio Agresti	3D perovskite and 2D materials: a powerful combination for high efficient photovoltaics
17.15-17.30	C2.10	Alan Bowman	Low bandgap lead/tin perovskites with enhanced radiative lifetimes and quantum efficiencies
17.30-17.45	C2.11	Francesco Lamberti	Understanding the role of tert-butylpyridine in the behavior of Spiro-OMeTAD hole transporting materials for perovskite solar cells
17.45-18.00	C2.12	Bernard Wenger	Investigation of the role of K <sup>+</sup> and other small cations in lead halide perovskite devices
18.00-18.15	C2.13	Alexey Tarasov	Reactive Polyiodide Melts: a corrosive decomposition product or an outstanding precursor for perovskite's scale-up?
18.15-18.30	C2.14	Fadwa El-Mellouhi	Intrinsic stability enhancement and ionic migration mitigation by fluorinated cations incorporation in Hybrid Lead Halide Perovskites
<b>18.30-21.00</b>	<b>Awards announcements / Closing</b>		