INFORMATION FOR DELEGATES

POSTER SESSION – MONDAY 18 SEPTEMBER

The main poster session will take place on **Monday 18 September from 1845 - 2100h** at the Mathematical Institute. Drinks and canapes will be served.

Posters will be on display from Monday 18 - Wednesday 20 September 2023.

Poster presenters will be able to put up their posters **on arrival** from **1230h** on Monday **18 September.** Staff will be on hand to direct you to the poster area and to assist you.

All posters should be in place no later than 1400h on Monday 18 September.

Posters should be taken down on **Wednesday 20 September** during the last coffee break. All posters to be taken down by **1530h that day** as the poster boards will be removed at that point.

PARALLEL SESSIONS

There will be 50 x 12 minute talks during the event which will run in parallel on the afternoons of 19 & 20 September Session A / Session B . Please follow the signs in the venue to Lecture room 1 or Lecture room 2 to attend your selected sessions. Our staff will be on hand to assist you.

CONFERENCE DINNER RECEPTION – TUESDAY 19 SEPTEMBER

The PSCO conference dinner reception will take place on Tuesday 19 September at the Oxford University Museum of Natural History, Parks Road, Oxford, OX1 3PW. Delegates to arrive at the venue wearing conference badges by 1900h so you can be admitted to the reception.

Drinks will be served on arrival followed by tray service. If you have dietary requirements, please make it clear to the waiting staff who will be able to cater for you correctly.

AFTER THE CONFERENCE DINNER ON TUESDAY 19 SEPTEMBER

You are invited to join us for after dinner drinks at **All Bar One**, 124 High Street, Oxford, OX1 4DF. Numbers are limited. Please remember to bring your id and wear your badges.

ANY QUESTIONS

Our team will be wearing red or blue HELPER t-shirts during the conference and will be more than happy to assist you with any queries you may have.

We hope you have an enjoyable time in Oxford and thank you for attending PSC023!

DAY 1	MONDAY 18 SEPTEMBER 2023
12.30 – 13.55	REGISTRATION/DELEGATES ARRIVE/LIGHT REFRESHMENTS
13:55 – 14.00	Welcome by Henry Snaith, University of Oxford, UK
Session chair: H	lenry Snaith, University of Oxford, UK
14.00 14.25	David Ginger, University of Washington, USA
14.00 – 14.25 IL1	Perovskite Interface Control: Optimizing Recombination, Extraction and Reverse Bias Stability
14.25 – 14.50	Christian Wolff, EPFL, Switzerland
IL2	Monolithic Perovskite-Silicon Tandem Solar Cells and Beyond
14.50 - 15.15	Feng Gao, Linköping University, Sweden
IL3	Stable perovskite solar cells based on the n-i-p structure
15.15 – 15.40	Monica Morales Masis, University of Twente, The Netherlands
IL4	Physical vapor deposition of hybrid halide perovskites and contact materials for solar cells
	Photon etc sponsor talk (3 mins)
SP1	Deciphering Perovskite Solar Cell Properties: Hyperspectral Imaging from Micro to Macro Scales
15.40 – 16.15	REFRESHMENT BREAK
Session chair: J	oe Berry, NREL, USA
16.15 - 16.40	Hairen Tan, Nanjing University, China
IL5	Efficient and stable all-perovskite tandem solar cells and modules
10.10 17.05	Yong Young Noh, Postech, South Korea
16.40 – 17.05 IL6	Development of High-Performance Sn Based Halide Perovskite Transistors
47.05 47.00	Ulrich Paetzold, KIT, Germany
17.05 – 17.30 IL7	Lamination: Innovative fabrication method for monolithic perovskite/silicon tandem solar cells

17.30 – 17.55 IL8	Laura Schelhas, NREL, USA
	Understanding degradation in metal halide perovskite solar cells and modules
17.55 – 18.00	COMFORT BREAK
POSTER PITCH P	RESENTATIONS (2 MINUTES EACH)
18.00 – 18.45	Introduction - Nakita Noel, University of Oxford, UK
PP1	Elsa Parrat, CEA, France
	Pulsed laser deposition of inorganic halide perovskite thin films with various compositions
	Emanuele Smecca, CNR-IMM, Italy
PP2	Two-step MAPbl3 deposition by low-vacuum proximity-space- effusion for high-efficiency inverted semi-transparent perovskite solar cells
	Jin Yan, Delft University of Technology, The Netherlands
PP3	Perovskite orientation growth and bandgap optimization via thermal evaporation
	Artem Musienko, HZB, Germany
PP4	Defect tolerance and improved stability in 1.8 eV bandgap perovskite solar cells activated by lonic Liquid Passivation
	Severin Siegrist, EMPA, Switzerland
PP5	Chlorine Incorporation for Scalable 1.8 eV Wide Bandgap Perovskite Solar Modules with Enhanced Efficiency and Photostability
PP6	Akash Dasgupta, University of Oxford, UK
110	Visualizing Macroscopic Inhomogeneities in Perovskite Solar Cells
	Eric Ahlswede, ZSW, Germany
PP7	Optimization of Electron Transport Layers for p-i-n Perovskite Solar Cells
	Gennaro Vincenzo Sannino, University of Naples Federico II, Italy
PP8	The role of Mg dopant concentration in tuning the performance of the SnO2 electron transport layer in perovskite solar cells

PP9	Jules Allègre, CEA, France
	Analysis of the functionalization of ITO layers with SAMs by Inverse PES to understand shunt issues in perovskite/Si tandem devices
PP10	Stefan Nicholson, University of Strathclyde, UK
	Unveiling the translational impact of electron transport layers on perovskite film formation
PP11	Ulrich Paetzold, KIT, Germany
	Innovative concepts to improve optical gain in CsPbBr3 perovskite thin films
	Chenglian Zhu, ETH Zurich, Switzerland
PP12	Many-body Correlations and Exciton Complexes in CsPbBr3 Quantum Dots
	Virginia Oddi, IBM Research Zurich, Switzerland
PP13	Polarimetric measurements of the bright triplet emission of single cesium lead halide perovskite quantum dots at cryogenic temperature
	Irum Firdous, City University Hong Kong
PP14	Electrostatically triggered autonomous self-healable and stretchable hydrogel for flexible perovskite solar cells
18.45 – 21.00	POSTER DRINKS RECEPTION, Maths Institute
DAY 2	TUESDAY 19 SEPTEMBER 2023
Session chair: D	avid Ginger, University of Washington, USA
08.30 - 08.55	Annamaria Petrozza, IIT, Italy
IL9	Defects Activity in Metal Halide Perovskites Semiconductors
08 55 00 20	Alex Jen, City University of Hong Kong
08.55 – 09.20 IL10	Novel Multifunctional Additives for Enhancing the Efficiency and Stability of Perovskite Solar Cells
00.20 00.45	Joe Berry, NREL, USA
09.20 – 09.45 IL11	Advanced Perovskite Solar Cells and Modules: Critical Performance Considerations

09.45 – 10.10 IL12	Eva Unger, HU Berlin, Germany
	Rational process optimization for high performance scaled perovskite PV Prototypes
SP2	Horiba sponsor talk (3 mins)
	Understanding photovoltaics materials and their performances with spectroscopy
	GSOLAR sponsor talk (3 mins)
SP3	Perovskite cell module IV accurate testing challenges & Gsolar Testing solutions
10.15 – 10.45	REFRESHMENT BREAK
Session chair: N	Ionica Morales Masis, University of Twente, The Netherlands
10.45 11.10	David Mitzi, Duke University, USA
10.45 – 11.10 IL13	Chirality, Symmetry Breaking and Switching in 2D Halide Perovskites
11.10 11.05	Nakita Noel, University of Oxford, UK
11.10 – 11.35 IL14	Refining Perovskite Ink Chemistry: The Road to Improved Efficiency and Stability
11.35 – 12.00	Stefaan De Wolf, KAUST, Saudia Arabia
IL15	Pathways to efficient perovskite/silicon tandem solar cells
12.00 – 12.05	Introduction to IL16 by the Royal Society of Chemistry
12.05 12.25	Giulia Grancini, University of Pavia, Italy
12.05 – 12.35 IL16	2D (or not 2D) Perovskite Passivation Strategy for High Efficient Solar Cells—What's Behind
SD/	Wavelabs sponsor talk (5 mins)
514	Measurement challenges for PST solar cells
	NIREOS sponsor talk (3 mins)
SP5	Interfero-what? Life (spectroscopy and hyperspectral imaging) without gratings or prisms

SP6	Greatcell Solar Materials sponsor talk (3 mins)
	A novel class of precursors for pioneering perovskites
12.50 – 14.00	LUNCH
SESSION A 14.00 – 15.00	Perovskites for light emitting optoelectronic devices
Session chair: A	nnamaria Petrozza, IIT, Italy
14.00 - 14.12	Bernard Wenger, Helio Display Materials, UK
0P2A.01	Perovskites for In-Pixel Colour Conversion
	Jiajun Luo, Huazhong University of Science and Technology, China
14.12 – 14.24 0P2A.02	Efficient all-thermally evaporated perovskite LEDs for TFT-integrated electroluminescence displays
	Chaoyang Kuang, Linkoping University, Sweden
14.24 – 14.36 0P2A.03	Molecular Interaction Strategies Enable Highly Stable and Efficient Perovskite Light-Emitting Diodes
14.00 14.40	Weidong Xu, Northwestern Polytechnical University, China
14.36 – 14.48 0P2A.04	The effects of local compositional heterogeneity in mixed halide perovskite blue emitters
	Zhongcheng Yuan, University of Oxford, UK
14.48 – 15.00 0P2A.05	Interface-assisted cation exchange enables high-performance perovskite light-emitting diodes with tuneable emissions and improved operational stability
SESSION B 14.00 – 15.00	Tandem PV
Session chair: H	enk Bolink, UVEG, Spain
14.00 – 14.12 0P2B.01	Cordula Wessendorf , Centre for Solar Energy and Hydrogen Research (ZSW), Germany
	Semi-transparent Perovskite Modules for 4T-Tandem Perovskite/CIGS Devices

14.12 – 14.24 0P2B.02	Florian Scheler, Helmholtz-Zentrum Berlin, Germany
	PI Treatment for Triple Halide Perovskite to Achieve 32.5% Efficient Perovskite/Silicon Tandem Solar Cells
14.24 – 14.36 OP2B.03	Junke Wang, University of Oxford, UK
	2-Terminal Perovskite-ClGS Tandem Solar Cells with Efficiency Above 25%
14.36 – 14.48 0P2B.04	Michael Owen-Bellini, NREL, USA
	Durability Testing and Packaging Strategies for 4-Terminal Perovskite/Silicon Tandem PV Modules
44.40 45.00	Qi Jiang, NREL, USA
14.48 – 15.00 0P2B.05	Compositional texture engineering for highly stable wide-bandgap and tandem perovskite solar cells
15.00 - 15.05	COMFORT BREAK
SESSION A 15.05 – 16.05	Low dimensional Perovskites
SESSION A 15.05 – 16.05 Session chair: L	Low dimensional Perovskites aura Herz, University of Oxford, UK
SESSION A 15.05 - 16.05 Session chair: L 15.05 - 15.17	Low dimensional Perovskites aura Herz, University of Oxford, UK Francesco Quochi, Università di Cagliari, Italy
SESSION A 15.05 - 16.05 Session chair: L 15.05 - 15.17 OP2A.06	Low dimensional Perovskites aura Herz, University of Oxford, UK Francesco Quochi, Università di Cagliari, Italy Exciton dissociation in 2D layered metal-halide perovskites
SESSION A 15.05 - 16.05 Session chair: L 15.05 - 15.17 0P2A.06 15.17 - 15.29	Low dimensional Perovskites aura Herz, University of Oxford, UK Francesco Quochi, Università di Cagliari, Italy Exciton dissociation in 2D layered metal-halide perovskites Daniele Cortecchia, University of Bologna, Italy
SESSION A 15.05 - 16.05 Session chair: L 15.05 - 15.17 OP2A.06 15.17 - 15.29 OP2A.07	Low dimensional Perovskites aura Herz, University of Oxford, UK Francesco Quochi, Università di Cagliari, Italy Exciton dissociation in 2D layered metal-halide perovskites Daniele Cortecchia, University of Bologna, Italy Compositional engineering of layered tin perovskites for lasing
SESSION A 15.05 - 16.05 Session chair: L 15.05 - 15.17 0P2A.06 15.17 - 15.29 0P2A.07	Low dimensional Perovskites aura Herz, University of Oxford, UK Francesco Quochi, Università di Cagliari, Italy Exciton dissociation in 2D layered metal-halide perovskites Daniele Cortecchia, University of Bologna, Italy Compositional engineering of layered tin perovskites for lasing David Otto Tiede, Institute of Materials Science of Seville, Spain
SESSION A 15.05 - 16.05 Session chair: L 15.05 - 15.17 OP2A.06 15.17 - 15.29 OP2A.07 15.29 - 15.41 OP2A.08	Low dimensional Perovskites aura Herz, University of Oxford, UK Francesco Quochi, Università di Cagliari, Italy Exciton dissociation in 2D layered metal-halide perovskites Daniele Cortecchia, University of Bologna, Italy Compositional engineering of layered tin perovskites for lasing David Otto Tiede, Institute of Materials Science of Seville, Spain From connected to isolated QDs: charge carrier dynamics in perovskite nanocrystal embedded in porous films
SESSION A 15.05 - 16.05 Session chair: L 15.05 - 15.17 OP2A.06 15.17 - 15.29 OP2A.07 15.29 - 15.41 OP2A.08 15.41 - 15.52 OP3A.08	Low dimensional Perovskites aura Herz, University of Oxford, UK Francesco Quochi, Università di Cagliari, Italy Exciton dissociation in 2D layered metal-halide perovskites Daniele Cortecchia, University of Bologna, Italy Compositional engineering of layered tin perovskites for lasing David Otto Tiede, Institute of Materials Science of Seville, Spain From connected to isolated QDs: charge carrier dynamics in perovskite nanocrystal embedded in porous films Dennis Kudlacik, TU Dortmund, Germany

15.53 – 16.05 0P2A.10	Jaemin Lee, Korea Research Institute of Chemical Technology, South Korea
	Over 21% EQE Red Perovskite QD-LEDs Enabled by a Novel Anion Exchange Precursor
SESSION B 15.05 – 16.05	Phase stability
Session chair: N	Id Nazeeruddin, EPFL, Switzerland
15.05 15.17	Bowen Yang, Uppsala University, Sweden
15.05 – 15.17 0P2B.06	Surface treatment for stabilization of α -FAPbl3 based perovskite solar cells
15 17 - 15 20	David McMeekin, University of Oxford, UK
0P2B.07	Intermediate-phase engineering via dimethylammonium cation additive for stable perovskite solar cells
15 20 15 /1	Dominik Kubicki, University of Birmingham, UK
0P2B.08	Atomic-level insights into the stabilization of FAPbI3 and CsPbX3 (X=I, Br) perovskite phases
	Mostafa Othmann, EPFL, Switzerland
15.41 – 15.53 0P2B.09	Alleviating Nanostructural Phase Impurities Enhances the Optoelectronic Properties, Device Performance and Stability of Cesium-Formamidinium Metal-Halide Perovskites
45 50 40 05	Riccardo Pallotta, University of Pavia, Italy
15.53 – 16.05 0P2B.10	Tuning FAPbl3 crystallization temperature: an effective way to improve FAPbl3 perovskite solar cells
16.05 – 16.40	REFRESHMENT BREAK
SESSION A 16.40 - 17.40	Perovskites photodetectors
Session chair: Mercouri Kanatzidis, Northwestern University, USA	
10.40 10.50	Chunyun Wang, University of Stuttgart, Germany
16.40 – 16.52 0P2A.11	Bi-based lead-free perovskites for photodetector and solar cell applications

16.52 – 17.04 0P2A.12	Jean-Marie Verilhac, CEA, France
	Groundbreaking perovskite technologies for advanced X-ray medical imaging systems
17.04 – 17.16 0P2A.13	Kostiantyn Sakhatskyi, ETH Zurich, Switzerland
	Stable perovskite single-crystal X-ray imaging detectors with single-photon sensitivity
17.16 – 17.28 0P2A.14	Pilar Lopez-Varo, IPVF, France
	X-Ray Photovoltage and lon Migration in Perovskite Solar Cells in X-Ray Photoemission Spectroscopy
17.28 – 17.40	Sergii Yakunin, ETH Zurich, Switzerland
0P2A.15	Figures-of-merit of X-ray detectors for low-dose imaging
SESSION B 16.40 – 17.40	Low bandgap perovskites and solar cells
Session chair: Giulia Grancini, University of Pavia, Italy	
	, , , ,
16 40 - 16 52	Antonella Treglia, IIT, Italy
16.40 – 16.52 0P2B.11	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer
16.40 - 16.52 0P2B.11 16.52 - 17.04	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK
16.40 – 16.52 0P2B.11 16.52 – 17.04 0P2B.12	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells
16.40 - 16.52 0P2B.11 16.52 - 17.04 0P2B.12 17.04 - 17.16	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells Isabella Poli, IIT, Italy
16.40 - 16.52 OP2B.11 16.52 - 17.04 OP2B.12 17.04 - 17.16 OP2B.13	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells Isabella Poli, IIT, Italy Defects and Degradation in Tin Halide Perovskites
16.40 - 16.52 0P2B.11 16.52 - 17.04 0P2B.12 17.04 - 17.16 0P2B.13 17.16 - 17.28	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells Isabella Poli, IIT, Italy Defects and Degradation in Tin Halide Perovskites Luca Gregori, Università degli Studi di Perugia, Italy
16.40 - 16.52 0P2B.11 16.52 - 17.04 0P2B.12 17.04 - 17.16 0P2B.13 17.16 - 17.28 0P2B.14	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells Isabella Poli, IIT, Italy Defects and Degradation in Tin Halide Perovskites Luca Gregori, Università degli Studi di Perugia, Italy Dissociative Host-Dopant Bonding Facilitates Molecular Doping in Halide Perovskites
16.40 - 16.52 OP2B.11 16.52 - 17.04 OP2B.12 17.04 - 17.16 OP2B.13 17.16 - 17.28 OP2B.14 17.28 - 17.40	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells Isabella Poli, IIT, Italy Defects and Degradation in Tin Halide Perovskites Luca Gregori, Università degli Studi di Perugia, Italy Dissociative Host-Dopant Bonding Facilitates Molecular Doping in Halide Perovskites Sahil Shah, University of Potsdam, Germany
16.40 - 16.52 0P2B.11 16.52 - 17.04 0P2B.12 17.04 - 17.16 0P2B.13 17.16 - 17.28 0P2B.14 17.28 - 17.40 0P2B.15	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells Isabella Poli, IIT, Italy Defects and Degradation in Tin Halide Perovskites Luca Gregori, Università degli Studi di Perugia, Italy Dissociative Host-Dopant Bonding Facilitates Molecular Doping in Halide Perovskites Sahil Shah, University of Potsdam, Germany lon-induced field screening governs the early performance degradation of perovskite solar cells
16.40 - 16.52 OP2B.11 16.52 - 17.04 OP2B.12 17.04 - 17.16 OP2B.13 17.16 - 17.28 OP2B.14 17.28 - 17.40 OP2B.15	Antonella Treglia, IIT, Italy Pb-Sn Halide Perovskites for photovoltaics: understanding carrier extraction with a doped active layer Florine Rombach, University of Oxford, UK Material and device stability of lead-tin perovskite solar cells Isabella Poli, IIT, Italy Defects and Degradation in Tin Halide Perovskites Luca Gregori, Università degli Studi di Perugia, Italy Dissociative Host-Dopant Bonding Facilitates Molecular Doping in Halide Perovskites Sahil Shah, University of Potsdam, Germany Ion-induced field screening governs the early performance degradation of perovskite solar cells END OF DAY 2

DAY 3	WEDNESDAY 20 SEPTEMBER 2023
Session chair: Eva Unger, HU Berlin Germany	
08.30 – 08.55 IL17	Mercouri Kanatzidis, Northwestern University, USA
	Crystals, films and interfaces of 2D halide perovskites
00.55 00.00	Francesca Brunetti, University of Rome, Italy
08.55 – 09.20 IL18	Flexible perovskite solar cells and modules: from device fabrication to examples of possible applications
00.00 00.45	Derya Baran, KAUST, Saudi Arabia
09.20 – 09.45 IL19	Engineering Tin-Based Perovskites: from Tuning the Electrical Properties to Improving Stability
00.45 40.40	Maksym Kovalenko, ETH Zurich, Switzerland
09.45 – 10.10 IL20	Precision engineering of luminescent lead-halide quantum dots: from single photons to coherent collective states
10.10 - 10.45	REFRESHMENT BREAK
Session chair: J	oe Berry, NREL, USA
Session chair: J	oe Berry, NREL, USA Laura Herz, University of Oxford, UK
Session chair: J 10.45 – 11.10 IL21	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites
Session chair: J 10.45 – 11.10 IL21 11.10 – 11.35	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites Henk Bolink, University of Valencia, Spain
Session chair: J 10.45 – 11.10 IL21 11.10 – 11.35 IL22	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites Henk Bolink, University of Valencia, Spain Vacuum deposited semi-transparent perovskite solar cells
Session chair: J 10.45 – 11.10 IL21 11.10 – 11.35 IL22	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites Henk Bolink, University of Valencia, Spain Vacuum deposited semi-transparent perovskite solar cells Yana Vaynzof, TUD, Germany
Session chair: J 10.45 – 11.10 IL21 11.10 – 11.35 IL22 11.35 – 12.00 IL23	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites Henk Bolink, University of Valencia, Spain Vacuum deposited semi-transparent perovskite solar cells Yana Vaynzof, TUD, Germany Vapor Deposition of Metal Halide Perovskites – Photovoltaics and Beyond
Session chair: J 10.45 – 11.10 IL21 11.10 – 11.35 IL22 11.35 – 12.00 IL23	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites Henk Bolink, University of Valencia, Spain Vacuum deposited semi-transparent perovskite solar cells Yana Vaynzof, TUD, Germany Vapor Deposition of Metal Halide Perovskites – Photovoltaics and Beyond Bo-Ram Lee, Sungkyunkwan University (SKKU), South Korea
Session chair: J 10.45 – 11.10 IL21 11.10 – 11.35 IL22 11.35 – 12.00 IL23 12.00 – 12.25 IL24	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites Henk Bolink, University of Valencia, Spain Vacuum deposited semi-transparent perovskite solar cells Yana Vaynzof, TUD, Germany Vapor Deposition of Metal Halide Perovskites – Photovoltaics and Beyond Bo-Ram Lee, Sungkyunkwan University (SKKU), South Korea Passivation Strategies for Mitigating Defect Challenges in Halide Perovskite Nanocrystal Light-Emitting Diodes
Session chair: J 10.45 – 11.10 IL21 11.10 – 11.35 IL22 11.35 – 12.00 IL23 12.00 – 12.25 IL24	oe Berry, NREL, USA Laura Herz, University of Oxford, UK Structural and ionic instabilities in lead iodide and mixed-halide perovskites Henk Bolink, University of Valencia, Spain Vacuum deposited semi-transparent perovskite solar cells Yana Vaynzof, TUD, Germany Vapor Deposition of Metal Halide Perovskites – Photovoltaics and Beyond Bo-Ram Lee, Sungkyunkwan University (SKKU), South Korea Passivation Strategies for Mitigating Defect Challenges in Halide Perovskite Nanocrystal Light-Emitting Diodes William Blythe Limited sponsor talk (3 mins)

SP9	Borun sponsor talk (3 mins)
	As a material supplier, we're ready for PSC scale-up production
12.35 – 14.00	LUNCH
SESSION A 14.00 – 15.00	Material devices architectures and their stabilities
Session chair: Y	ana Vaynzof, TUD, Germany
	Amran Al-Ashouri, HZB, Germany
14.00 – 14.12 0P3A.01	Boosting Perovskite Solar Cells and Understanding Hole Selectivity with Self-Assembled Monolayers
	Haejun Seok, Sungkyunkwan University, South Korea
14.12 – 14.24 0P3A.02	High-quality Sn-doped In203 electrode technology for high-performance perovskite solar cells
14.04 14.00	Jae-Sung Yun, University of Surrey, UK
14.24 – 14.36 0P3A.03	Exploring Microstructural Behavior of Wide Bandgap Perovskites Using Scanning Probe Microscopy
44.00 44.40	Luis-Victor Torres-Merino, KAUST, Saudi Arabia
14.36 – 14.48 0P3A.04	Decelerating halide segregation by enhancing hole extraction in wide bandgap perovskite solar cells
	Tadas Malinauskas, KTU, Lithuania
14.48 – 15.00 0P3A.05	Materials Forming Self-Assembling Monolayers: Pathway to Efficient Solar Cells
SESSION B 14.00 – 15.00	Scale up and Tandem PV
Session chair: Christian Wolff, EPFL, Switzerland	
14.00 14.10	Ke Xu, HZB, Germany
0P3B.01	Slot-die coated triple-halide perovskite for efficient and scalable perovskite/silicon tandem solar cells

14.12 – 14.24 0P3B.02	Esma Ugur, KAUST, Saudi Arabia
	Visualizing Losses in Highly Efficient and Stable Perovskite-based Tandem Solar Cells
14.24 – 14.36 OP3B.03	Fengjiu Yang, NREL, USA
	Minimizing recombination losses of 1.8 eV triple-halide perovskite for highly efficient all-perovskite tandem solar cells
14.36 – 14.48 0P3B.04	Luigi Angelo Castriotta, CHOSE, University of Rome Tor Vergata, Italy
	Advanced laser structuring for perovskite solar modules with geometrical fill factor over 99.5% and efficiency of 20.7%
14.36 - 14.48	Jan-Christoph Goldschmidt, Philipps-University Marburg, Germany
01 35.03	The resource demand for TW-scale perovskite photovoltaics
15.00-15.35 REFRESHMENT BREAK	
10.00-10.00	
SESSION A 15.35-16.35	Materials processing and their optoelectronic properties
SESSION A 15.35-16.35 Session chair: N	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK
SESSION A 15.35-16.35 Session chair: N 15.35 – 15.47	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK Ana Palacios Saura, HZB, Germany
SESSION A 15.35-16.35 Session chair: N 15.35 - 15.47 0P3A.06	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK Ana Palacios Saura, HZB, Germany Influence of the Precursors in Halide Perovskites Solutions
SESSION A 15.35-16.35 Session chair: N 15.35 – 15.47 0P3A.06	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK Ana Palacios Saura, HZB, Germany Influence of the Precursors in Halide Perovskites Solutions Andres Felipe Castro Mendez, Georgia Institute of Technology, USA
SESSION A 15.35-16.35 Session chair: N 15.35 – 15.47 0P3A.06 15.47 – 15.59 0P3A.07	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK Ana Palacios Saura, HZB, Germany Influence of the Precursors in Halide Perovskites Solutions Andres Felipe Castro Mendez, Georgia Institute of Technology, USA The growth of α-FAPbl3 by thermal co-evaporation
Session A 15.35-16.35 Session chair: N 15.35 - 15.47 OP3A.06 15.47 - 15.59 OP3A.07 15.59 - 16.11	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK Ana Palacios Saura, HZB, Germany Influence of the Precursors in Halide Perovskites Solutions Andres Felipe Castro Mendez, Georgia Institute of Technology, USA The growth of α-FAPbl3 by thermal co-evaporation Christopher McNeill, Monash University, Australia
SESSION A 15.35-16.35 Session chair: N 15.35 - 15.47 OP3A.06 15.47 - 15.59 OP3A.07 15.59 - 16.11 OP3A.08	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK Ana Palacios Saura, HZB, Germany Influence of the Precursors in Halide Perovskites Solutions Andres Felipe Castro Mendez, Georgia Institute of Technology, USA The growth of α-FAPbl3 by thermal co-evaporation Christopher McNeill, Monash University, Australia Microstructure of Layered Hybrid Perovskites
SESSION A 15.35-16.35 Session chair: N 15.35 - 15.47 OP3A.06 15.47 - 15.59 OP3A.07 15.59 - 16.11 OP3A.08	Materials processing and their optoelectronic properties akita Noel, University of Oxford, UK Ana Palacios Saura, HZB, Germany Influence of the Precursors in Halide Perovskites Solutions Andres Felipe Castro Mendez, Georgia Institute of Technology, USA The growth of α-FAPbl3 by thermal co-evaporation Christopher McNeill, Monash University, Australia Microstructure of Layered Hybrid Perovskites Huagui Lai, EMPA, Switzerland

16.23 – 16.35 0P3A.10	Timo Maschwitz, University of Wuppertal, Germany
	Lead complexes and perovskite formation – a holistic approach to find the missing link
SESSION B 15.35 – 16.35	Processing, Scale up and Tandem PV
Session chair: L	aura Schelhas, NREL, USA
15.35 – 15.47 0P3B.06	Joe Briscoe, Queen Mary University of London, UK
	Developments in Additives and Scale-Up of Aerosol Treatment for enhanced Efficiency and Stability of Perovskite Solar Cells
15.47 – 15.59	Kai Brinkmann, University of Wuppertal, Germany
0P3B.07	The Stable Alternative – Organic Sub-Cells for Perovskite Tandems
	Max Hoerantner, Swift Solar, USA
15.59 – 16.11 0P3B.08	Ticking all boxes towards perovskite solar commercialization: Performance, stability and scalability
	Meret Amrein, FHNW, Switzerland
16.11 – 16.23 0P3B.09	Organic solvent free Pbl2 recycling from perovskite solar cells using hot water
10.00 10.05	Sandy Sanchez, EPFL, Switzerland
16.23 – 16.35 0P3B.10	Photonic Processing for Perovskite Halide Thin-Film Defect-Tolerant Crystal Growth
16.35 – 17.00	CLOSE/PRIZES/DELEGATES DEPART