International Conference on Hybrid and Organic Photovoltaics (HOPV24)

València, Spain, 2024 May 12th - 15th
Conference organizers: Bruno Ehrler and Jovana Milic

Conference Program

May 12th - Day 1 (Sunday) 1	
17:30 - 19:30	**Registration**
18:00 - 19:00	**Welcome drink**
May 13th - Day 2 (Monday) 2	
08:15 - 09:00	**Registration**
08:40 - 09:00	**Opening - Room Noble**
	Session 1A - Emerging materials and technologies (EPV) - Room Noble Chair: Giulia Grancini Room: Noble
09:00 - 09:10 Noble-T1	Giulia Grancini *(University of Pavia, Italy)* Emerging materials and technologies (EPV) Chair Opening - Giulia Grancini
09:10 - 09:40 Noble-K2	Thuc-Quyen Nguyen *(Center for Polymers and Organic Solids and Department of Chemistry and Biochemistry University of California, Santa Barbara)* Insights into Degradation Mechanisms of Bulk Heterojunction Organic Solar Cells
09:40 - 09:45 Noble-S1	Taro Tanabe *(Tokyo Chemical Industry Co., Ltd. (TCI))* Tokyo Chemical Industry - Industry Talk
09:45 - 10:15 Noble-K1	Annamaria Petrozza *(Istituto di Italiano Tecnologia)* Defects Activity in Metal Halide Perovskites
10:15 - 10:45 Noble-I1	David Mitzi *(Department of Mechanical Engineering and Materials Science, Duke University, Durham, NC USA)* (Online talk) Structure-Property Tunability Using Chirality and Symmetry Breaking in Hybrid 2D Perovskites
10:45 - 11:30	**Coffee Break**
	Session 1B1 - Material design and modelling - Room Noble Chair: Virginia Carnevali
11:30 - 11:40 Noble-T1	Virginia Carnevali *(École Polytechnique Fédérale de Lausanne (EPFL))* Material design and modelling: Chair introduction - Virginia Carnevali
11:40 - 12:10 Noble-I1	Shuxia Tao *(Computational Materials Physics, Applied Physics, Eindhoven University of Technology, the Netherlands.)* Materials Theory of Halide Perovskites: Insights from Atomistic and Molecular Modeling
12:10 - 12:40 Noble-IS1	Aron Walsh *(Faculty of Engineering, Department of Materials, Imperial College, London)* Machine Learning Perovskites
12:40 - 13:10 Noble-IS2	Saiful Islam *(Department of Materials, University of Oxford; Oxford, UK)* From Pb to Mixed Pb-Sn Perovskites: Atomic-Scale Insights into Ion Transport and Molecular Passivation
	Session 1B2 - Breaking efficiency limits - Room-I Chair: Nakita Noel
11:30 - 11:40 Room-I-T1	Nakita Noel *(University of Oxford)* Breaking efficiency limits Chair introduction - Nakita Noel
11:40 - 12:10 Room-I-I1	Colette Sullivan, Lea Nienhaus *(Florida State University, Department of Chemistry and Biochemistry)* Replacing Rubrene in Perovskite-Sensitized Photon Upconversion
12:10 - 12:25 Room-I-IS1	Olindo Isabella *(Delft university of technology)* Novel c-Si solar cell architectures exceeding conversion efficiency well above 27%
12:25 - 12:40 Room-I-IS2	Giulia Grancini *(University of Pavia, Italy)* Breaking efficiency limit in 2 eV band gap 2D perovskite solar cells
12:40 - 12:55 Room-I-IS3	Ulrich W. Paetzold *(Light Technology Institute (LTI) at Karlsruhe Institute of Technology (KIT), Karlsruhe, Engesserstr. 13, 76131, Germany)* Will Vapor Phase Deposition of Perovskite Photovoltaics Accelerate Commercialization?
12:55 - 13:10 Room-I-IS4	Thomas Hannappel *(Ilmenau University of Technology, Institute of Physics, Germany)*, M. A. Zare Pour, S. Shekarabi, A. Paszuk, D. Ostheimer, W. Jaegermann, W.-H. Cheng, O. Romanyuk, E. Runge, F. Dimroth, H. A. Atwater Tandem cells for efficient photoelectrochemical solar fuels production
	Session 1B3 - Operational and material stability - Room-III Chair: Sofia Masi
11:30 - 11:40 Room-III-T1	Sofia Masi *(Universitat Jaume I, Institute of Advanced Materials - Spain)* Operational and material stability Chair introduction - Sofia Masi
11:40 - 12:10 Room-III-I1	Monica Lira, Sonia Ruiz Raga *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and BIST, Campus UAB, Bellaterra, Barcelona, Catalonia, 08193, Spain)* Additive Engineering in Halide Perovskite/MXene Perovskite Solar Cells
12:10 - 12:25 Room-III-IS1	Ángela Sastre-Santos *(Área de Química Orgánica, Instituto de Bioingeniería, Universidad Miguel Hernández, Avda. Universidad S/N, 03202, Elche, Spain)* Arylamine Zinc and Copper Phthalocyanines as Outstanding Hole Transporting Materials in Perovskite Solar Cells
12:25 - 12:40 Room-III-IS2	Iván Mora-Seró *(Institute of Advanced Materials (INAM), Universitat Jaume I, Av. De Vicent Sos Baynat, s/n 12071 Castelló, Spain)* Advances in Sn-Perovskite Solar Cells
12:40 - 12:55 Room-III-IS3	Emilio Palomares *(ICREA, Passeig Lluís Companys 23, 08010, Barcelona, Spain)* Molecular photovoltaic devices: The Central Role of Chemistry.

12:55 - 13:10 Room-III-IS4	Victoria Ozerova, Marina Ustinova, Nikita Emelianov, Sergey Vasil'ev, Dmitry Kirukhin, Ivan Zhidkov, Sergey Aldoshin, Pavel Troshin *(Zhengzhou Research Institute, Harbin Institute of Technology, 26 Longyuan East 7th, Jinshui District, Zhengzhou, Henan Province, 450000, China)* Ultrahigh radiation hardness of complex lead halides: where are the limits?
	Session 1B4 - HOPV Rising Stars: Emerging photovoltaics - Room Premsa Chair: Jovana Milic
11:30 - 11:40 Premsa-T1	Jovana Milic *(University of Fribourg, Adolphe Merkle Institute)* HOPV Rising Stars: Chair introduction - Jovana Milic and Bruno Ehrler
11:40 - 11:55 Premsa-O5	Eline Hutter *(Utrecht University, Inorganic Chemistry and Catalysis, Debye Institute for Nanomaterials Science, Netherlands)*, Huygen Jöbsis, Loreta Muscarella, Kostas Fykouras, Linn Leppert Tuning optical and mechanical properties of Cs2AgBiBr6 double perovskites by controlled alloying
11:55 - 12:10 Premsa-O4	Loreta Muscarella *(Department of Physics and Astronomy, Faculty of Sciences, Vrije Universiteit Amsterdam)*, Huygen J. Jöbsis, Bettina Baumgartner, P. Tim Prins, D. Nicolette Maaskant, Andrei V. Petukhov, Dmitry Chernyshov, Charles J McMonagle, Eline M. Hutter Exploring Temperature- and Pressure-Dependent Elastic Properties of Halide Perovskites and Elpasolites
12:10 - 12:25 Premsa-O1	Davide Moia *(Max Planck Institute for Solid State Research, Physical Chemistry of Solids, Stuttgart, 70569, Germany)*, Mina Jung, Ya-Ru Wang, Joachim Maier Impedance models addressing ion transport and electron-hole recombination in halide perovskite based devices
12:25 - 12:40 Premsa-O2	Martin Ledinsky *(Institute of Physics of the Czech Academy of Sciences, Cukrovarnicka 10, 16200 Prague, Czech Republic.)*, Ales Vlk, Robert Hlavac, Lucie Landova, Antonin Fejfar Universal Formation Mechanism of Halide Perovskite Thin Films
12:40 - 12:55 Premsa-O3	Sandheep Ravishankar *(Forschungszentrum Jülich, Institute of Energy and Climate Research, IEK-5 Photovoltaics)* Discerning Rise Time Constants to Quantify Charge Carrier Extraction in Perovskite Solar Cells
12:55 - 13:10	Discussion
13:10 - 15:20	**Lunch Break**
15:20 - 15:30	**Paralel sessions - Chair opening (Room I, III, PREMSA, NOBLE)**
	Session 1C1 - Material design and modelling - Room Noble Chair: Virginia Carnevali
15:30 - 16:00 Noble-I1	Marina Leite *(UC Davis)* (Online talk) Tackling Stability in Halide Perovskites with Machine Learning
16:00 - 16:15 Noble-IS1	Alison Walker *(Department of Physics University of Bath, BA2 7AY, UK)*, Samuel McCallum, Jamie Lerpiniere Understanding perovskite solar cell physics through combining modelling and machine learning
16:15 - 16:30 Noble-IS2	George Volonakis *(Univ Rennes, ENSCR, INSA Rennes, CNRS, ISCR - UMR 6226, F-35000 Rennes, France.)* Materials design of halide perovskites and beyond: Opto-electronic properties, and charge carrier mobilities from first principles.
16:30 - 16:45 Noble-O1	Maxime Siber *(Forschungszentrum Jülich GmbH, Helmholtz-Institute Erlangen-Nürnberg (HI ERN),91058 Erlangen, Germany)*, Olivier Ronsin, Jens Harting Simulation of Morphology Formation in Organic Photoactive Layers
16:45 - 17:00 Noble-O2	Simon Ternes *(CHOSE, Centre for Hybrid and Organic Solar Energy, Department of Electronic Engineering, University of Rome "Tor Vergata", Rome, Italy)*, Alessio Gagliardi, Aldo Di Carlo Deep-Learning enhanced literature analysis on parameter specification in solution processing of hybrid perovskite solar cells
17:00 - 17:15 Noble-O3	Michael Hoffmann *(Fraunhofer Institute for Electron Beam and Plasma Technology FEP, Germany)*, Christian May, May Neidhardt, Patrick Schlenz, Elizabeth von Hauff Vacuum Coating for Next Generation Photovoltaics
	Session 1C2 - Breaking efficiency limits - Room-I Chair: Nakita Noel
15:30 - 15:45 Room-I-IS1	Andrea Cordaro, Ralph Muller, Stefan Tabernig, Nico Tucher, Patrick Schygulla, Oliver Hohn, Benedikt Blasi, Albert Polman *(Center for Nanophotonics, AMOLF)* Integrated near-field/far-field light scattering design creates 36,1% efficient Si/III-V multijunction solar cell
15:45 - 16:00 Room-I-O1	Hang Hu *(Institute of Microstructure Technology (IMT), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany.)*, David B. Ritzer, Sophie X. An, Yang Li, Alexander Diercks, Roja Singh, Seyedamir Orooji, Qihao Jin, Paul Fassl, Felix Laufer, Thomas Feeney, Ting Pan, Bahram Abdollahi Nejand, Ulrich W. Paetzold Efficient p-i-n-based FAPbI3 perovskite solar cells for scalable solar modules and triple-junction photovoltaics
16:00 - 16:15 Room-I-O2	Marcel Roß *(Helmholtz-Zentrum Berlin für Materialien und Energie, Division Solar Energy, 12489 Berlin, Germany)*, Stefanie Severin, Aleksandra Miaskiewicz, Viktor Škorjanc, Lars Korte, Steve Albrecht Analyzing and Optimizing the Composition of Co-Evaporated Wide Band Gap Perovskite-Absorbers
16:15 - 16:30 Room-I-O3	Klara Suchan *(Department of Mechanical Engineering, Stanford University)*, T. Jesper Jacobsson, Carolin Rehermann, Eva L. Unger, Thomas Kirchartz, Christian Wolff Rationalizing Performance Losses of Wide Bandgap Perovskite Solar Cells Evident in Data from the Perovskite Database
16:30 - 16:45 Room-I-O4	Jessica Barichello *(ISM-CNR, Istituto di Struttura della Materia, Consiglio Nazionale delle Ricerche, Via del Fosso del Cavaliere 100, 00133, Roma, Italy)*, Farshad Jafarzadeh, Gyanendra Shank, Paolo Mariani, Francesca Brunetti, Aldo Di Carlo, Fabio Matteocci Bridging the gap: Wide-bandgap perovskite solar cells for transparent and efficient BIPVs
16:45 - 17:00 Room-I-O5	Nicholas Sloane *(School of Physics, University of New South Wales, Sydney, New South Wales 2052, Australia)*, Jianghui Zheng, Christopher G. Bailey, Anita W. Y. Ho-Baillie, Timothy W. Schmidt, Dane R. McCamey Determining the Role of 2D Perovskite Passivation Layer on Bulk Perovskite-Sensitised Photochemical Upconversion
17:00 - 17:15 Room-I-O6	Damon de Clercq *(UNSW Sydney)*, Jiale Feng, Parisa Hosseinabadi, Michael Nielsen, Matthew Brett, Shyamal Prasad, Abbas Farahani, Hsiu Li, Samuel Sanders, Jonathon Beves, Ned Ekins-Daukes, Jared Cole, Pall Thordarson, Murad Tayebjee, Timothy Schmidt, Ben Carwithen Resolving the emissive intermediate in singlet fission
	Session 1C3 - Operational and material stability - Room-III Chair: Sofia Masi
15:30 - 15:45 Room-III-IS1	Wolfgang Tress *(Institute of Computational Physics, Zurich University of Applied Sciences, Winterthur, Switzerland)* Stability – From Perovskite Solar Cells to Memristors

15:45 - 16:00 Room-III-O1	Jarla Thiesbrummel *(AMOLF)*, Sahil Shah, Henry Snaith, Martin Stolterfoht Ion induced field screening governs the early performance degradation of perovskite solar cells
16:00 - 16:15 Room-III-O2	Ji-Youn Seo, Sun-Ju Kim *(Department of Nano Fusion Technology, Pusan National University, Busan 46241, Republic of Korea)* Interfacial engineering through lead binding using crown ethers in perovskite solar cells
16:15 - 16:30 Room-III-O3	Philippe Holzhey *(Department of Physics, University of Oxford, UK)*, David McMeekin, Sebastian Fürer, Steven Harvey, Laura Schelhas, James Ball, Suhas Mahesh, Seongrok Seo, Nicholas Hawkins, Jianfeng Lu, Michael Johnston, Joseph Berry, Udo Bach, Henry Snaith Intermediate-Phase Engineering via Dimethylammonium Cation Additive for Stable Perovskite Solar Cells
16:30 - 16:45 Room-III-O4	Florine Rombach *(Department of Physics, University of Oxford, UK)*, Akash Dasgupta, Manuel Kober-Czerny, James Ball, Joel Smith, Heon Jin, Michael Farrer, Henry Snaith Stability of narrow bandgap lead-tin perovskite material and photovoltaic devices
16:45 - 17:00 Room-III-O5	Elnaz Ghahremani Rad *(Laboratory for Solar Energy and Fuels (LSEF)School of Engineering, The University of British Columbia)*, Abraha Tadese Gidey, Towhid Chowdhury, Alexander R. Uhl Advancing Operational Stability of Inverted Perovskite Solar Cells Utilizing Parylene-C Encapsulation Techniques
17:00 - 17:15 Room-III-O6	Fredrik Johansson *(Condensed Matter Physics of Energy Materials, Division of X-ray Photon Science, Department of Physics and Astronomy, Uppsala University)*, Azmat Ali, Herve Crugel, Erika Giangrisostomi, Ruslan Ovsyanniikov, Mathieu Silly, Lenart Dudy, Ute Cappel, Emmanuel Lhuillier, Nadine Witkowski The Electronic Impact of Light-induced Degradation in CsPbBr3 Perovskite Nanocrystals at Gold Interfaces
	Session 1C4 - Emerging photovoltaics - Room Premsa Chair: Loreta Muscarella
15:30 - 15:45 Premsa-IS1	Tom Savenije *(Department of Chemical Engineering, Technical University Delft, The Netherlands)*, Jiashang Zhao, Xiaohui Liu, Bahiya Ibrahim, Jos Thieme, Lara van der Poll, Shuxia Tao, Lars Bannenberg Interplay between Structure and Charge Carrier Dynamics in CsMAFA-based Perovskites
15:45 - 16:00 Premsa-O1	Alan Dunbar *(University of Sheffield, Department of Chemical and Biological Engineering)*, Adam Urwick, Suleiman Bello, Malin Johansson Dynamics of perovskite synthesis in alcohol
16:00 - 16:15 Premsa-O2	Ana Palacios Saura *(Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, Hahn-Meitner-Platz 1, 14109 Berlin, Germany)*, Joachim Breternitz, Armin Hoell, Susan Schorr Precrystallisation Arrangement in Halide Perovskites Precursor Solutions
16:15 - 16:30 Premsa-O3	Aruna Ivaturi *(Smart Materials Research and Device Technology Group, Department of Pure and Applied Chemistry, University of Strathclyde, Glasgow G1 1XL, UK)* Indoor light harvesting perovskite solar cells on TCO-free ultrathin deformable substrates
16:30 - 16:45 Premsa-O4	Heon Jin *(Department of Physics, University of Oxford, UK)*, Henry Snaith Highly efficient and stable thermal evaporated lead-tin perovskites
16:45 - 17:00 Premsa-O5	Asayil Alsulami *(Material Science and Engineering, KAUST Solar Centre, Physical science and engineering division, King Abdullah University of Science and Technology, 4700 KAUST, Thuwal 23955-6900, Kingdom of Saudi Arabia)*, Luis Lanzetta, Derya Baran Illuminating the Degradation Mechanism of Hybrid Tin-Lead Perovskites: A Foundation for Rational Stability Enhancement Strategies
17:00 - 17:15 Premsa-O6	Jeffrey Capitão *(LEPABE – Laboratory for Process Engineering, Environment, Biotechnology and Energy, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal.)*, Dzmitry Ivanou, Adélio Mendes Rethinking Dye-Sensitized Solar Cell Design with Carbon Paper Counter Electrodes
	Special Session: in the honor of Prof. Michael Graetzel - Room Noble Chair: Jovana Milic
17:15 - 17:30 Noble-I1	Anders Hagfeldt *(Department of Chemistry – Ångström Laboratory, Uppsala University, Uppsala, Sweden)* Brief Overview on the Development of Dye-Sensitized and Perovskite Solar Cells
17:30 - 17:45 Noble-I2	Marina Freitag *(Newcastle University, Newcastle upon Tyne, NE1 7RU, United Kingdom.)* Revolutionizing Indoor Energy Harvesting: From Advanced Materials to AI Integration
17:45 - 18:00 Noble-I3	Udo Bach *(ARC Centre of Excellence for Exciton Science, Monash University)* 25 years of spiro-OMeTAD
18:00 - 18:15 Noble-I4	Michael Graetzel *(Ecole Polytechnique Federale de Lausanne (EPFL))* Abstract TBA
18:15 - 19:30	**Poster session**

May 14th - Day 3 (Tuesday) 3	
08:50 - 09:00	**Announcement of the day - Room Noble**
	Session 2A - Organic photovoltaics (OPV) - Room Noble Chair: Derya Baran
09:00 - 09:10 Noble-T1	Derya Baran *(King Abdullah University of Science and Technology (KAUST) - Saudi Arabia)* Organic photovoltaics (OPV) Chair Opening - Derya Baran
09:10 - 09:40 Noble-K1	Natalie Stingelin *(School of Materials Science and Engineering Georgia Institute of Technology Atlanta, GA 30332, USA)* Designing solution-processed photonic light- and heat-management structures for solution-processable and printable solar cells
09:40 - 09:45 Noble-S1	Royal Society of Chemistry RSC *(Royal Society of Chemistry)* Royal Society of Chemistry Industry talk
09:45 - 10:15 Noble-I2	Anna Köhler *(Soft Matter Optoelectronics and Bayreuth Institute of Macromolecular Research (BIMF), University of Bayreuth, 95440 Bayreuth, Germany)* Identifying role of aggregates in PM6/Y6 organic solar cells by optical spectroscopy
10:15 - 10:45 Noble-I1	Jenny Nelson *(Department of Physics and Centre for Processable Electronics, Imperial College London, London SW7 2AZ, UK)* Exploring charge pair generation in single-component organic photovoltaic devices
10:45 - 11:30	**Coffee Break**
	Session 2A1 - Advanced characterization and automation - Room Noble Chair: Wiebke Albrecht
11:30 - 11:40 Noble-T1	Wiebke Albrecht *(AMOLF)* Advanced characterization and automation Chair introduction - Wiebke Albrecht
11:40 - 12:10 Noble-I1	Selina Olthof *(University of Cologne)* Probing the Electronic Structure of 3D and 2D Halide Perovskites
12:10 - 12:25 Noble-IS1	Pablo P. Boix *(Instituto de Tecnología Química, Universitat Politècnica de València - Consejo Superior de Investigaciones Científicas (UPV-CSIC), Avd. de los Naranjos s/n, Valencia 46022, Spain)* Device-oriented perovskite crystallization
12:25 - 12:40 Noble-IS2	Juan Bisquert *(Institute of Advanced Materials (INAM), Universitat Jaume I, Av. De Vicent Sos Baynat, s/n 12071 Castellò, Spain)* Controlling capacitive and inductive hysteresis processes of halide perovskite for solar cell and neuromorphic applications
12:40 - 12:55 Noble-IS3	Erik Garnett *(Center for Nanophotonics, AMOLF, Science Park 104, 1098 XG Amsterdam, The Netherlands)* Perovskite Plasticity: Exploiting Instability for Self-Optimized Performance
12:55 - 13:10 Noble-IS4	Dominik Kubicki *(School of Chemistry, University of Birmingham, Birmingham, B15 2TT, UK)* Atomic-level structure of small organic molecules on halide perovskite surfaces
	Session 2B2 - Towards commercialization and applications - Room-I Chair: Narges Yaghoobi Nia
11:30 - 11:40 Room-I-T1	Narges Yaghoobi Nia *(École Polytechnique Fédérale de Lausanne (EPFL) and Sapienza University of Rome - Aerospace Engineering School)* Towards commercialization and applications Chair introduction - Narges Yaghoobi Nia
11:40 - 12:10 Room-I-I1	Yulia Galagan *(TNO, Eindhoven, the Netherlands)* Synergizing Sunlight Harvesting: Advancements in Electric and Thermal Energy Technologies
12:10 - 12:25 Room-I-IS1	ANNALISA BRUNO *(School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, 637371 Singapore)* Unlocking Potential: Thermal Evaporation for Quantum Confinement in Perovskite Films
12:25 - 12:40 Room-I-IS2	Juliane Borchert *(Fraunhofer Institute for Solar Energy Systems, Freiburg, 79110, Germany.)* Hybrid Deposition - a Route Towards the Scaling of Perovskite-Silicon Tandem Solar Cells
12:40 - 12:55 Room-I-IS3	Joseph Luther *(National Renewable Energy Laboratory, NREL, Golden, CO, USA.)* Metal Halide Perovskite Photovoltaics for Electricity in Space
12:55 - 13:10 Room-I-IS4	Henk Bolink *(Instituto de Ciencia Molecular, ICMol, Universidad de Valencia)* Vacuum Deposited Perovskite Solar Cells, Benefits and Challenges.
	Session 2B3 - Emerging materials - Room-III Chair: Eline Hutter
11:30 - 11:40 Room-III-T1	Eline Hutter *(Utrecht University, Debye Institute for Nanomaterials Science)* Emerging materials Chair introduction - Eline Hutter
11:40 - 12:10 Room-III-I1	Paulina Plochocka *(Laboratoire National des Champs Magnétiques Intenses, CNRS)* Organic Inorganic Halide Perovskite: Exciting Playground for Exciton and Polaron Studies
12:10 - 12:25 Room-III-IS1	Amita Ummadisingu *(Chemical Engineering, University College London)* Anomalous charge transport in lead halide perovskite field-effect transistors and mitigation using 3D/2D heterostructures
12:25 - 12:40 Room-III-IS2	Ji-Youn Seo *(Department of Nano Fusion Technology, Pusan National University, Busan, Korea)* Controlled growth of hybrid halide perovskites by molecular engineering
12:40 - 12:55 Room-III-IS3	James W. Ryan *(Department of Chemistry, Swansea University Singleton Park, Swansea SA2 8PP)*, Aaron Cookson Squaraine-Based Memristors and Their Neuromorphic Capabilities
12:55 - 13:10 Room-III-IS4	Filip Podjaski *(Department of Chemistry, Imperial College London, UK)* Organic based semiconductors in ionic envirnments
	Session 2B4 - HOPV Rising Stars: Organic & Hybrid Photovoltaics - Room Premsa Chair: Francesca Brunetti
11:30 - 11:40 Premsa-T1	Francesca Brunetti *(University of Rome (Tor Vergata))* HOPV Rising Stars: Chair introduction - Francesca Brunetti
11:40 - 11:55 Premsa-O4	Sofia Masi *(Institute of Advanced Materials (INAM), Universitat Jaume I, Av. De Vicent Sos Baynat, s/n 12071 Castellò, Spain)* Transparent Electrodes for High Perovskite Solar Cells Light Utilization Efficiency

11:55 - 12:10 Premsa-O1	Roja Singh *(Institute of Microstructure Technology (IMT), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany.)*, Hang Hu, Thomas Feeney, Alexander Diercks, Felix Laufer, Yang Li, The Duong, Fabian Schackmar, Bahram A. Nejand, Ulrich W. Paetzold Impact of materials stoichiometry and surface morphology on stability of perovskite solar cells
12:10 - 12:25 Premsa-O2	Paramvir Ahlawat *(Yusuf Hamied Department of Chemistry, University of Cambridge, Lensfield Road, CB2 1EW, Cambridge, UK)* Molecular details of heterogeneous nucleation and buried interface in metal halide perovskites
12:25 - 12:40 Premsa-O3	Benjamin Gallant *(Department of Physics, University of Oxford, Clarendon Laboratory, Parks Road, OX1 3PU, United Kingdom)*, Philippe Holzhey, Joel Smith, Saqlain Choudhary, Karim Elmestekawy, Henry Snaith From 2D to 3D: A green solvent system for templated sequential deposition of efficient and stable formamidinium lead triiodide
12:40 - 12:55 Premsa-O5	Bhumika Chaudhary *(Institute for Photovoltaics, University of Stuttgart, Pfaffenwaldring 47, 70569, Stuttgart, Germany)* Role of Structural Dimensionality Towards Stability of Multifunctional Hybrid Halide Perovskites
12:55 - 13:10	Discussion
13:10 - 15:20	**Lunch Break**
15:20 - 15:30	**Paralel sessions - Chair opening (Room I, III, PREMSA, NOBLE)**
	Session 2C1 - Advanced characterization and automation - Room Noble Chair: Wiebke Albrecht
15:30 - 15:45 Noble-IS1	Omer Yaffe *(Weizmann Institute of Science, Herzl St. 234, Rehovot 7610001, Israel)* (Online talk) Coupled vibrational modes in organic crystals
15:45 - 16:00 Noble-O1	Nada Mrkyvkova *(Center for Advanced Materials Application, Slovak Academy of Sciences, Dúbravská cesta 9, 845 11 Bratislava, Slovakia)*, Vladimir Held, Peter Nadazdy, Karol Vegso, Quentin Guesnay, Daming Zheng, Frank Schreiber, Peter Siffalovic In situ Study of Perovskite Thin Film Growth
16:00 - 16:15 Noble-O2	Mirella Al Katrib *(IPVF, Institut Photovoltaïque d'Ile-de-France, 18 Boulevard Thomas Gobert, 91120 Palaiseau, France)*, Pia Dally, Muriel Bouttemy Advanced Characterization of Perovskite Solar Devices at Buried Interfaces: Innovative Methodology by coupling GD-OES with XPS In-depth Profiling
16:15 - 16:30 Noble-O3	Birgit Kammlander *(Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden)*, Alberto García-Fernandez, Håkan Rensmo, Ute B. Cappel Investigating electron and ion dynamics of lead halide perovskite single crystals via time-resolved photoelectron spectroscopy
16:30 - 16:45 Noble-O4	Manuel Kober-Czerny *(Department of Physics, University of Oxford, UK)*, Akash Dasgupta, Seongrok Seo, Heon Jin, Henry Snaith All-Optical Assessment of Perovskite Thin-Films and Half-Stacks by Coupling Time-Resolved PL with Bayesian Inference
16:45 - 17:00 Noble-O5	Imme Schuringa *(Light Management for Photovoltaics, AMOLF, Netherlands)*, Saskia Fiedler, Bruno Ehrler Correlating Optical and Structural Properties of Halide Perovskite Thin Films at the Nanoscale
	Session 2C2 - Towards commercialization and applications - Room-I Chair: Narges Yaghoobi Nia
15:30 - 15:45 Room-I-IS1	Daniel Ramirez *(Centro de Investigación, Innovación y Desarrollo de Materiales—CIDEMAT, Universidad de Antioquia , Medellín, Colombia.)* Full solution-processed Perovskite solar cells
15:45 - 16:00 Room-I-O1	Andrés Soto *(LEPABE – Laboratory for Process Engineering, Environment, Biotechnology and Energy, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias, 4200-465 Porto, Portugal.)*, Vera Duarte, Adélio Mendes, Luísa Andrade Boosting Efficiency and Active Area in Inverted Perovskite Modules: Optimization of Geometric Fill Factor using Laser Ablation
16:00 - 16:15 Room-I-O2	Helge Eggers *(Light Technology Institute (LTI) at Karlsruhe Institute of Technology (KIT), Karlsruhe, Engesserstr. 13, 76131, Germany)*, Pesch Raphael, Sutter Johannes, Ulrich W. Paetzold Green Solvents Used in Optimized (Hybrid) Inkjet Printing for Scalable Fabrication of Highly Efficient (>18%) Perovskite Solar Cells
16:15 - 16:30 Room-I-O3	Dimitris Chalkias *(Nanotechnology & Advanced Materials Laboratory, Department of Electrical and Computer Engineering, University of the Peloponnese, GR26334 Patras, Greece)*, Archontoula Nikolakopoulou, Lykourgos Kontaxis, Elias Stathatos Development of 20%-efficient and mechanically robust ambient-air-processed carbon-based flexible perovskite solar cells using green and benign-to-plastics antisolvent quenching
16:30 - 16:45 Room-I-O4	Jesus Sanchez-Diaz *(Institute of Advanced Materials (INAM), Universitat Jaume I, Av. De Vicent Sos Baynat, s/n 12071 Castellò, Spain)*, Felipe A. Vinocour Pacheco, Wiktor Zuraw, Senol Oz, Ivan Mora Sero Upscalable and flexible Tin-Based Perovskites solar cells and minimodules by Bladecoating technic
16:45 - 17:00 Room-I-O5	Alexander Diercks *(Light Technology Institute (LTI) at Karlsruhe Institute of Technology (KIT), Karlsruhe, Engesserstr. 13, 76131, Germany)*, Julian Petry, Thomas Feeney, Roja Singh, Ulrich W. Paetzold, Paul Fassl Understanding Substrate-Dependent Growth of Sequentially Evaporated Perovskite Thin Films
17:00 - 17:15 Room-I-O6	Dilara Öz *(University of Cologne, Institute for Physical Chemistry)*, Dr. Selina Olthof Do substrates matter? - the impact of hole transport layers on Iodide/Bromide composition in thermally evaporated mixed halide perovskites
	Session 2C3 - Emerging materials - Room-III Chair: Eline Hutter
15:30 - 15:45 Room-III-IS1	Sascha Feldmann *(Rowland Institute, Harvard University, US)* Tracking charge & spin in time and space in halide perovskites
15:45 - 16:00 Room-III-O1	Vera La Ferrara *(ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development)*, Antonella De Maria, Gabriella Rametta Green Anisole as Antisolvent in Planar Triple-Cation Perovskite Solar Cells with Varying Cesium Concentrations
16:00 - 16:15 Room-III-O2	Anna Capitaine *(Institut Photovoltaïque d'Ile-de-France (IPVF))* Enhanced efficiency and stability for perovskite inversed architecture based on quasi-2D perovskite passivation
16:15 - 16:30 Room-III-O3	Oscar Zacharias Telschow *(Leibniz-Institut für Festkörper- und Werkstoffforschung Dresden (IFW), Helmholtzstraße 20, 01069, Dresden, Germany.)*, Angelika Wrzesińska-Lashkova, Shivam Singh, Jianan Li, Bernd Plietker, Yana Vaynzof Enhancing Moisture Stability in Perovskite Solar Cells through Dual Interfacial Modification

16:30 - 16:45 Room-III-O4	Victoria Ozerova *(Federal Research Center for Problems of Chemical Physics and Medicinal Chemistry of the Russian Academy of Sciences, Chernogolovka, Russia)*, Nikita Emelianov, Lyubov Frolova, Pavel Troshin Rational design of molecular modifiers for enhancing the intrinsic photochemical stability of complex lead halide perovskites
16:45 - 17:00 Room-III-O5	Valerio Stacchini *(HySPRINT Innovation Lab, Department Solution-Processing of Hybrid Materials and Devices, Helmholtz Zentrum Berlin, Berlin, Germany.)* Challenges and Breakthroughs with Novel Electron Selective Monolayers in Perovskite Solar Cells
17:00 - 17:15 Room-III-O6	Ghewa AlSabeh *(Adolphe Merkle Institute, University of Fribourg, 1700 Fribourg, Switzerland)*, Lukas Pfeifer, Ming Ren, Dominik Kubicki, Paul Zimmermann, Lena Merten, Alexander Hinderhofer, Frank Schreiber, Fabiola Faini, Giulia Grancini, Igor Moudrakovski, Davide Moia, Joachim Maier, Michael Grätzel, Jovana V. Milić Enhancing the Functionality of Layered Hybrid Perovskites
	Session 2C4 - Organic & Hybrid Photovoltaics - Room Premsa Chair: Ya-Ru Wang
15:30 - 15:45 Premsa-IS1	Matteo Bonomo, Gabriele Viada, Davide Gallo, Ana Yancy Segura Zarate, Simone Galliano, Giulio Kock, Luca Bonandini, Nadia Barbero, Alberto Menozzi, Pauline Chotard, Franck Barath, Francesca De Rossi, Fabio Matteocci, Frederic Sauvage, Aldo Di Carlo, Francesca Brunetti, Claudia Barolo *(Univ Torino, NIS Interdept, Dept Chem, I-10125 Turin, Italy, Univ Torino, INSTM Reference Ctr, I-10125 Turin, Italy)* Sustainable Thermosetting Polyurethane Resins as interlayers and primary Encapsulants in emerging photovoltaics
15:45 - 16:00 Premsa-O1	Gregor Trimmel *(Institute for Chemistry and Technology of Materials (ICTM), NAWI Graz, Graz University of Technology, Stremayrgasse 9, 8010 Graz, Austria)*, Robert Saf, Elena Zuccala, Karin Bartl, Thomas Rath Investigations of Impurities and Degradation Products in Organic Solar Cells
16:00 - 16:15 Premsa-O2	Julia Hönigsberger *(Institute for Chemistry and Technology of Materials (ICTM), NAWI Graz, Graz University of Technology, Stremayrgasse 9, 8010 Graz, Austria)*, Barbara Muhry, Bettina Schlemmer, Thomas Rath, Gregor Trimmel Side Chain Engineering of a Non-Fused Ring Electron Acceptor for Improved Thermal and Photo-Stability
16:15 - 16:30 Premsa-O3	Eunchi Kim *(Forschungszentrum Jülich, IEK-5 Photovoltaik, Jülich, North Rhine-Westphalia, Germany)*, Thomas Kirchartz Limits to the Superposition Principle and Importance of Photoshunt in Organic Solar Cells
16:30 - 16:45 Premsa-O4	Abdel-aziz wayzani *(Laboratoire de Chimie Moléculaire et Thio-organique, ENSICAEN, Université Caen-Normandie, UMR CNRS 6507 & FR 3038, 6 boulevard Maréchal Juin, 14050 Caen, France.)*, Loic Le Pluart, Cyprien Lemouchi, Ganesh Sharma, Pierre Harvey LOW BANDGAP METALLOOLIGOMER FOR ORGANIC SOLAR CELLS
16:45 - 17:00 Premsa-O5	Han Xu *(KAUST: King Abdullah University of Science and Technology)*, Jianhua Han, Derya Baran Understanding the Structure-Stability Relationship of Photovoltaic Materials for Outdoor Stable Organic Solar Cells
17:00 - 17:15 Premsa-O6	Sreelakshmi Chandrabose *(CEA-Paris Saclay)*, Ana M Valencia, Nisreen Alshehri, Frederic Laquai, Caterina Cocchi, Dieter Neher Mitigating Triplet Loss in 2D-WSe2/Non-fullerene Heterostructures Using Halogenated Acceptors
	Special Session: Energy Policy and Diplomacy - Room Noble Chair: Bruno Ehrler
17:15 - 17:30 Noble-I1	Jovana Milic *(University of Fribourg, Adolphe Merkle Institute)* Special Session: Energy Policy and Diplomacy participation
17:30 - 17:45 Noble-I2	Jao van de Lagemaat *(National Renewable Energy Laboratory, NREL, Golden, CO, USA.)*, Billy J. Stanbery, Michael Woodhouse Sustainable Manufacturing Pathways to Terawatt-scale Photovoltaic Deployment: The Role of New Technologies and Circular Economy
17:45 - 18:00 Noble-I3	Marc Rechter *(H.M. Rechter)* Current State of Affairs EU PV Manufacturing
18:00 - 18:15	Discussion
20:30 - 22:00	**Social Dinner**

May 15th - Day 4 (Wednesday) 4	
08:50 - 09:00	**Announcement of the day - Room Noble**
	Session 3A - Hybrid photovoltaics (HPV) - Room Noble Chair: Amita Ummadisingu
09:00 - 09:10 Noble-T1	Amita Ummadisingu *(University College London)* Hybrid photovoltaics (HPV) Chair opening - Amita Ummadisingu
09:10 - 09:40 Noble-K1	Ursula Roethlisberger *(Ecole Polytechnique Fédérale de Lausanne (EPFL))* Computational Insights into the Multifaceted Role of Additives in Perovskite Solar Cells
09:40 - 09:45 Noble-S1	Technology Co. Ltd. Enlitech *(Enli Technology Co. Ltd.)* Enlitech - Industry talk
09:45 - 10:15 Noble-I2	Christoph Brabec *(Institute of Materials for Electronics and Energy Technology (i-MEET), Department of Materials Science and Engineering, FAU, Martensstrasse 7, 91058 Erlangen, Germany)* Discovering molecules and processed with optimized performance for emerging PV Technologies
10:15 - 10:45 Noble-I1	Hemamala Karunadasa *(Stanford University)* (Online talk) Abstract TBA
10:45 - 11:30	**Coffee Break**
	Session 3B1 - Device physics and engineering - Room Noble Chair: Jarla Thiesbrummel
11:30 - 11:40 Noble-T1	Jarla Thiesbrummel *(AMOLF)* Device physics and engineering Chair introduction - Jarla Thiesbrummel
11:40 - 12:10 Noble-I1	Maria A. Loi *(Zernike Institute for Advanced Materials, University of Groningen, Netherlands)* In-situ SnSe deposition as passivation for scalable and stable quasi-2D lead-tin perovskite solar cells
12:10 - 12:25 Noble-IS1	Ute Cappel *(Condensed Matter Physics of Energy Materials, Division of X-ray Photon Science, Department of Physics and Astronomy, Uppsala University)* Insight into the physics of perovskite solar cells from photoelectron spectroscopy
12:25 - 12:40 Noble-IS2	Frédéric Laquai, Christopher Petoukhoff *(King Abdullah University of Science and Technology (KAUST), KAUST Solar Center, Thuwal 23955-6900, Saudi Arabia)* Interfacial Charge Carrier Recombination Processes in Metal Halide Perovskite Solar Cells
12:40 - 12:55 Noble-IS3	Michael Saliba *(Institute for Photovoltaics (ipv), University of Stuttgart)* Shedding Light on Wide Bandgap Perovskites
12:55 - 13:10 Noble-IS4	Thomas Kirchartz *(IEK5-Photovoltaik, Forschungszentrum Jülich GmbH, 52425 Jülich, Germany)* Consequences of power-law photoluminescence decays in halide perovskite films
	Session 3B2 - Emerging concepts - Room-I Chair: Bhumika Chaudhary
11:30 - 11:40 Room-I-T1	Bhumika Chaudhary *(University of Stuttgart)* Emerging concepts Chair introduction - Bhumika Chaudhary
11:40 - 12:10 Room-I-I1	Hui-Seon Kim *(Inha University)* Engineered lattice strain for perovskite solar cells
12:10 - 12:25 Room-I-IS1	Lethy Krishnan Jagadamma *(Energy Harvesting Research Group, SUPA, School of Physics and Astronomy, University of St Andrews)*, Shaoyang Wang, Sam Miller, Tim Kodalle, Carolin Sutter-Fella Halide Perovskites Based Indoor Photovoltaics: Role of Interfacial Layers
12:25 - 12:40 Room-I-IS2	Diego Solis-Ibarra *(Instituto de Investigaciones en Materiales, UNAM. Mexico City, Mexico)* Introducing Non-Innocent Organic Molecules into Hybrid Perovskites for Enhanced Functionality
12:40 - 12:55 Room-I-IS3	Filippo De Angelis *(Department of Chemistry, Biology and Biotechnology and INSTM, University of Perugia, Via Elce di Sotto 8, I-06123, Perugia, Italy)* Controlling Doping and Defect Activity Towards Photostable Tin-Halide Perovskites
12:55 - 13:10 Room-I-IS4	Renaud DEMADRILLE *(Grenoble Alpes University, CNRS, CEA, INP, IRIG/SYMMES, F38000 Grenoble, France)*, Samuel FAUVEL, Johan LIOTIER, José-Maria ANDRES CASTAN, Antonio J. RIQUELME, Valid M. MWALUKUKU, Stéphanie NARBEY, Pascale MALDIVI, Juan ANTA Push-pull photochromic dyes for use in semitransparent solar cells with dynamic optical properties.
	Session 3B3 - Hybrid Session: Hybrid Photovoltaics - Room-III Chair: Imme Schuringa
11:30 - 11:40 Room-III-T1	Imme Schuringa *(Center for Nanophotonics, AMOLF, The Netherlands)* Hybrid Session: Hybrid Photovoltaics Chair introduction - Imme Schuringa & Ghewa AlSabeh
11:40 - 12:10 Room-III-I1	Anita Ho-Baillie *(School of Photovoltaic and Renewable Energy Engineering, The University of Sydney)* (Online talk) Perovskite tandem solar cells and the role of diffusions.
12:10 - 12:25 Room-III-O1	APOORVA SINGH *(Department of Materials Engineering, Indian Institute of Science, Bengaluru, 560012, Karnataka, India)*, Praveen C Ramamurthy Modifications in Perovskite Solar Cells to Explore Performance Enhancement, Stability and Anomalous Effects
12:25 - 12:40 Room-III-O2	Aleš Vlk *(Institute of Physics of the Czech Academy of Sciences, Cukrovarnicka 10, 16200 Prague, Czech Republic.)*, Robert Hlaváč, Lucie Landová, Julius Vida, Tomáš Homola, Antonín Fejfar, Martin Ledinský Passivation of Bulk Defects in Halide Perovskites thin Films by Plasma Treatment
12:40 - 12:55 Room-III-O3	Romain Lavoipierre *(LEPMI/GUIDE, Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, Grenoble INP)*, Emilie Planès, Lionel Flandin, Lara Perrin Electrodeposition of perovskite for photovoltaic application: consequences of AVAI additive on electrodeposited MAPbI3
12:55 - 13:10 Room-III-O4	Jeffrey Christians *(Department of Engineering, Hope College, Holland, MI, USA)*, Josephine Surel, Elizabeth Cutlip, James Mandeville Photovoltaic Windows and Chromogenic Perovskites
	Session 3B4 - HOPV Industry Talks - Room Premsa Chair: Andrés Eloy Redondo Soto

11:30 - 11:40 Premsa-T1	Andrés Redondo *(University of Porto, LEPABE - Laboratory for Process Engineering, Environment, Biotechnology and Energy, Portugal)* HOPV Industry Talks Chair introduction - Andrés Redondo
11:40 - 11:55 Premsa-O3	Andrés Soto *(University of Porto, LEPABE - Laboratory for Process Engineering, Environment, Biotechnology and Energy, Portugal)* HOPV Industry Talks - Chair introduction - Andrés Soto
11:55 - 12:10 Premsa-O4	Alessandro Mezzetti *(European Commission, Joint Research Centre (JRC))*, Valentina Larini, Laura Ciammaruchi, Ewan Dunlop, Giulia Grancini, Giacomo Ceccone Acetone as an inexpensive, green solvent for perovskite solar cell recycling
12:10 - 12:25 Premsa-O5	Elias Peraticos *(FOSS Research Centre for Sustainable Energy, Department of Electrical and Computer Engineering, University of Cyprus, 75 Kallipoleos Str., Nicosia, 1678, Cyprus)*, Vasiliki Paraskeva, Matthew Norton, Aranzazu Aguirre, Anurag Krishna, Tom Aernouts, Maria Hadjipanayi Evolution of Hysteresis Index Based on 2-year Outdoor Testing
12:25 - 12:40 Premsa-O1	Oliver Salomon *(Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW) Stuttgart, Germany)*, Roland Würz, Tina Wahl, Jonas Hanisch Towards a roll-to-roll production of perovskite solar cells with slot die coating using green solvents.
12:40 - 12:55 Premsa-O2	Estelle Cariou *(IPVF, Institut Photovoltaïque d'Ile-de-France, 18 Boulevard Thomas Gobert, 91120 Palaiseau, France)*, Marion Provost, Thomas Guillemot, Javid Hajhemati, Philip Schulz, Jean Rousset Large-Scale Solution Process of Self-Assembled Monolayers as Passivation Layer for Inverted Perovskite Solar Cells
12:55 - 13:10	Discussion
13:10 - 15:20	**Lunch Break**
15:20 - 15:30	**Paralel sessions - Chair opening (Room I, III, PREMSA, NOBLE)**
	Session 3C1 - Device physics and engineering - Room Noble Chair: Jarla Thiesbrummel
15:30 - 16:00 Noble-IS1	Juan-Pablo Correa-Baena *(School of Materials Science and Engineering Georgia Institute of Technology Atlanta, GA 30332, USA)* Structural Phase Transformations in Halide Perovskites
16:00 - 16:15 Noble-O1	Sergio Galve-Lahoz *(Institute of Advanced Materials (INAM), Universitat Jaume I, Av. De Vicent Sos Baynat, s/n 12071 Castellò, Spain)*, Jesus Sanchez-Diaz, Juan Luis Delgado, Iván Mora-Seró, Jorge Marco Enhancing Tin Perovskite Solar Cells Performance through Innovative Fullerene Derivatives for Minimized Interfacial Voc Losses
16:15 - 16:30 Noble-O2	Kousumi Mukherjee *(Department of Applied Physics, Eindhoven University of Technology, partner in Solliance, P.O. Box 513, 5600 MB Eindhoven, The Netherlands)*, Denise Kreugel, Nga Phung, Cristian van Helvoirt, Valerio Zardetto, Mariadriana Creatore On the VOC Loss in NiO-based Inverted Metal Halide Perovskite Solar Cells
16:30 - 16:45 Noble-O3	Chris Dreessen *(IEK-5 Photovoltaik, Forschungszentrum Jülich GmbH, Germany)*, Yuan Ye, Genghua Yan, Toby Rudolph, Markus Hülsbeck, Benjamin Klingebiel, Jiajiu Ye, Uwe Rau, Thomas Kirchartz How Shallow Traps Lead to Long and Variable Charge Carrier Decay Times in Lead Halide Perovskites
16:45 - 17:00 Noble-O4	Sarah Gillespie *(AMOLF Institute, Science Park 104, Amsterdam, 1098XG The Netherlands)*, Jerome Gautier, Julia van der Burgt, John Anker, Bart Geerligs, Gianluca Coletti, Erik Garnett Silicon-Inspired Analysis of Interfacial Recombination in Perovskite Photovoltaics
17:00 - 17:15 Noble-O5	Sander Heester *(Zernike Institute for Advanced Materials, University of Groningen, The Netherlands)*, Federico Ventosinos, Lidón Gil-Escrig, Henk Bolink, Jan Anton Koster Explaining the drop in open-circuit voltage of co-evaporated FACsPbIBrCl perovskites with increased chloride content using drift-diffusion simulations
	Session 3C2 - Emerging concepts - Room-I Chair: Bhumika Chaudhary
15:30 - 15:45 Room-I-IS1	Konstantinos Rogdakis *(DDepartment of Electrical Computer Engineering, Hellenic Mediterranean University (HMU), Heraklion 71410, Crete, Greece)*, Michalis Loizos, Weifan Luo, Patricia A Gaina, Jovana V. Milić, Emmanuel Kymakis Memristive perovskite solar cells for self-powered IoT edge computing
15:45 - 16:00 Room-I-O6	Antonio J. Riquelme *(Univ. Grenoble Alpes, CEA, CNRS, IRIG-SyMMES, 17 rue des Martyrs, 38000 Grenoble, France)*, Valid M. Mwalukuku, Samuel Fauvel, Johan Liotier, Yann Kervella, Quentin Huaulmé, Alix Haurez, José-María Andrés-Castán, Stéphanie Narbey, Juan A. Anta, Renaud Demadrille Insights from Optoelectronic Small Perturbation Techniques on Photovoltaic Process in Photochromic Dye-Sensitized Solar Cells
16:00 - 16:15 Room-I-O1	Ya-Ru Wang *(Max Planck Institute for Solid State Research, Stuttgart, Germany.)*, Marko Mladenović, Rothlisberger Ursula, Milić Jovana V., Moia Davide, Grätzel Michael, Maier Joachim Photo De-Mixing in Mixed Bromide-Iodide Perovskites: Dimensionality and Encapsulation Effects on Ionic & Electronic Transport Properties
16:15 - 16:30 Room-I-O2	Hye-Ji Bae, Tae-Youl Yang *(Chungnam National University)* Interlayer Distance Dictates Ion Transport and Degradation in 2D Perovskites for Optoelectronic Applications
16:30 - 16:45 Room-I-O3	Milos Dubajic *(Department of Chemical Engineering and Biotechnology, University of Cambridge, Cambridge CB3 0AS, U.K.)*, Sam Stranks, Aron Walsh, James Neilson A-site cation dictates local octahedral tilting and ferroelasticity in lead halide perovskites
16:45 - 17:00 Room-I-O4	Esther Yi-Hang Hung *(Department of Physics, University of Oxford, UK)*, Harry Sansom, Henry Snaith A novel, lead-free halide perovskite derivative for ferro- and piezo-electric applications
17:00 - 17:15 Room-I-O5	Agustin O. Alvarez *(Center for Nanophotonics, AMOLF, Science Park 104, 1098 XG Amsterdam, The Netherlands)*, Jeroen de Boer, Bruno Ehrler Insights into the Operational Mechanisms of Halide Perovskite Memristors
	Session 3C3 - Hybrid Session: Hybrid Photovoltaics - Room-III Chair: Davide Moia
15:30 - 15:45 Room-III-IS1	Carolin Sutter-Fella *(Molecular Foundry, Lawrence Berkeley National Laboratory, 1 Cyclotron Road, Berkeley, 94720 California, USA)* (Online talk) 2D passivation of 3D halide perovskite films: What is moving at the 2D/3D interface ?
15:45 - 16:00 Room-III-IS2	david cahen *(Dept. of Molecular Chemistry and Materials Science, Weizmann Institute of Science, Rehovot, 7610015, Israel)*, antoine kahn (Online talk) Surface and Interface Defects can Control Bulk Doping in Polycrystalline Pb-Halide Perovskites

16:00 - 16:15 Room-III-O1	Abhishek Raj *(CSIR-National Environmental Engineering Research Institute (NEERI), Nagpur-440020, India)*, Manish Kumar, Avneesh Anshul Strategically grown Cs2AgBiBr6 double perovskite material for lead-free all inorganic perovskite solar cells
16:15 - 16:30 Room-III-O2	Kezia Sasitharan *(Newcastle University, Newcastle upon Tyne, NE1 7RU, United Kingdom.)*, Marina Freitag Metal-Organic Nanosheets for Synchronous Harvest and Storage of Solar Energy
16:30 - 16:45 Room-III-O3	Povilas Luizys *(Department of Organic Chemistry, Kaunas University of Technology, Kaunas, Lithuania)*, Jianxing Xia, Maryte Daskeviciene, Vygintas Jankauskas, Kasparas Rakstys, Vytautas Getautis, Mohammad Khaja Nazeeruddin Flexible Hole-Transporting Materials With N-Carbazolyl-Based Chromophores Linked Via Aliphatic Chain For Perovskite Solar Cells
16:45 - 17:00 Room-III-O4	Philippe Holzhey *(Adolphe Merkle Institute, University of Fribourg, 1700 Fribourg, Switzerland)*, Michael Prettl, Silvia Collavini, Nathan Chang, Michael Saliba Towards commercialisation with lightweight, flexible perovskite solar cells for residential photovoltaics
15:30 - 17:15	**Session 3C4 - Networking space: innovative perspectives for HOPV - Room Premsa**
	Special Session: Raising the New Generation of HOPV Scientists Chair: Ghewa AlSabeh
17:15 - 17:30 Scientists-I1	Marc Rechter *(H.M. Rechter)* Special Session: Raising the New Generation of HOPV Scientists participation
17:30 - 17:45 Scientists-I2	Juliane Borchert *(University of Freiburg)* Special Session: Raising the New Generation of HOPV Scientists participation
17:45 - 18:00 Scientists-I3	Thuc-Quyen Nguyen *(University of California Santa Barbara)* Special Session: Raising the New Generation of HOPV Scientists participation
18:00 - 18:15 Scientists-I4	Marina Freitag *(School of Natural and Environmental Sciences, Newcastle University, UK)* Special Session: Raising the New Generation of HOPV Scientists participation
18:15 - 18:30	**Closing and Awards ceremony**

Poster Contribution

018	Daphne M. Dekker *(Light Management in New Photovoltaic Materials (LMPV), AMOLF, Amsterdam, The Netherlands)*, Moritz C. Schmidt, Agustin O. Alvarez, Bruno Ehrler Comparison of PEDOT:PSS and 2PACz as Hole Transport Layers for Lead-Tin Perovskite Solar Cells
029	Fatou Diaw-Ndiaye *(Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, Grenoble INP, LEPMI, 38000 Grenoble, France)*, Emilie Planes, María Bernechea, Lara Perrin, Lionel Flandin Development of solar cells combining perovskite and quantum dots
030	Eleftherios Christopoulos, Nagia S. Tayara *(Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, 11635 Athens, Greece)*, Polycarpos Falaras, Nektarios Nasikas, Andreas Kaltzoglou A Feasibility Study of Perovskite Solar Cells under Peltier Cooling
031	Jeroen de Boer *(AMOLF, Amsterdam, Netherlands)*, Bruno Ehrler Lead halide perovskites for low-energy consumption neuromorphic applications
097	Stefania Riva *(Condensed Matter Physics of Energy Materials, Division of X-ray Photon Science, Department of Physics and Astronomy, Uppsala University)*, Soham Mukherjee, Corrado Comparotto, Sergei M. Butorin, Mahmoud Abdel-Hafiez, Jonathan Scragg, Håkan Rensmo, Garima Aggarwal, Abdel Rahman Allan, Evelyn Johannesson, Fredrik O.L. Johansson, Gabriel J. Man, Dibya Phuyal, Konstantin A. Simonov, Justus Just, Konstantin Klementiev Exploring growth mechanism, material chemistry, and electronic structure of chalcogenide perovskite BaZrS3
172	Karen Radetzky *(Department of Physics and Astronomy, Uppsala University, Uppsala, Sweden)*, Alberto Garcia Fernandez, Birgit Kammlander, Evelyn Johannesson, Rahul Varma, Håkan Rensmo, Ute Cappel In situ study of a single crystal model system for inverted perovskite solar cells
178	Zhongjin Shen *(School of Natural and Environmental Sciences, Newcastle University, United Kingdom NE1 7RU)* Molecular Engineering of Low-Cost, Efficient and Stable Photosensitizers for Dye-Sensitized Solar Cells
179	Gabriela Lewinska *(AGH University of Krakow, Institute of Electronics, 30 Mickiewicza Ave, 30-059 Krakow, Poland)*, Katarzyna Ungeheuer, Jerzy Sanetra, Konstanty Marszalek Cuprous oxide thin films as a supporting layer in binary and ternary organic cells
180	Hryhorii P. Parkhomenko, Askhat N. Jumabekov *(Department of Physics, School of Sciences and Humanities, Nazarbayev University, Astana 010000, Republic of Kazakhstan)* Back-contact perovskite light-emitting diodes
181	Elias Stathatos *(Nanotechnology & Advanced Materials Laboratory, Department of Electrical and Computer Engineering, University of the Peloponnese, GR26334 Patras, Greece)*, Dimitris Chalkias, Archontoula Nikolakopoulou, Argyroula Mourtzikou Optical amendment of blue semi-transparent photovoltaic glass panes using a Eu3+-based down-conversion phosphor for enhanced UV-light protection and power conversion efficiency
182	Yan Wang *(Department of Chemistry, City University of Hong Kong, Hong Kong SAR, P. R. China)*, Zonglong Zhu Efficient and Stable Perovskite/Organic Tandem Solar Cells through an All-Polymer Mixture
183	Hryhorii Parkhomenko *(Department of Physics, School of Sciences and Humanities, Nazarbayev University, Astana 010000, Republic of Kazakhstan)*, Mykhailo Solovan, Sanjay Sahare, Andrii Mostovyi, Damir Aidarkhanov, Nora Schopp, Taras Kovaliuk, Marat Kaikanov, Annie Ng, Viktor Brus Impact of a Short-Pulse High-Intense Proton Irradiation on High-Performance Perovskite Solar Cells
185	Andrii Mostovyi *(Department of Physics, School of Sciences and Humanities, Nazarbayev University, Astana 010000, Republic of Kazakhstan)*, Hryhorii Parkhomenko, Nora Schopp, Mykhailo Solovan, Viktor Brus Organic Solar Cells with Highly Transparent Ternary Bulk-Heterojunctions
186	Fiona McPartlan *(AMOLF, Amsterdam, Netherlands)*, Daphne Dekker, Bruno Ehrler A study of the role of interfaces in degradation of lead-tin perovskite solar cells
187	Robert Hlavac *(Institute of Physics of the Czech Academy of Sciences, Cukrovarnická 10, 16200 Prague, Czech Republic.)*, Ales Vlk, Zdenek Remes, Lucie Landova, Katarina Pekarkova, Antonin Fejfar, Martin Ledinsky Localization of defects in halide perovskites using photothermal deflection spectroscopy
188	Mykhailo Khytko *(Institute of Physics of the Czech Academy of Sciences, Cukrovarnická 10, 16200 Prague, Czech Republic.)*, Swarnendu Banerjee, Matěj Hývl, Antonín Fejfar, Martin Ledinský AFM Studies of Perovskite Degradation: A Critical Assessment of Stability and Crystallographic Orientation
190	Ji-youn Seo, Sun-Ju Kim, Jong-Min Kim *(Laboratory of Nano Energy Harvesting Materials and Devices, Department of Nano Engineering, Pusan National University, Pusan, Korea)* Controlled Growth of Hybrid Halide Perovskites by Crown Ether Complexation for Perovskite Solar Cells
191	Maryam Choghaei *(University of Cologne)*, Viren Tyagi, Shuxia Tao, Selina Olthof Systematic investigation of alkylammonium-based 2D Ruddlesden-Popper perovskites: the impact of varying chain length
192	Manuela Ferrara *(Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), Portici Research Centre, Portici (NA), Italy)*, Maria Federica Caso, Fausta Loffredo, Giuseppe Nasti, Corinna Ponti, Gennaro V. Sannino, Carmen Serpico, Fulvia Villani, Paola Delli Veneri, Lucia V. Mercaldo Co-evaporation and hybrid approaches for fabrication of MAPbI3 for perovskite solar cells
193	Giovanni Spinelli *(Newcastle University, Newcastle upon Tyne, NE1 7RU, United Kingdom.)*, Marina Fraitag Conductivity in Thin-Films of Transition Metal coordination Complexes
194	James Martin *(BCMaterials, Basque Center for Materials, Applications and Nanostructures, UPV/EHU Science Park, 48940 Leioa, Spain)*, Samrana Kazim, Shahzada Ahmad, Luis Lezama Synthesis and Opto-electrical properties of Transition metal alloyed Lead- free layered perovskite nanocrystals.
196	Thelma Serrano *(Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Laboratorio de Materiales I, Av. Pedro de Alba s/n, Ciudad Universitaria, C.P. 66455, San Nicolás de los Garza, Nuevo León, México)*, Pedro Hernández, Fernanda Retana, Idalia Gómez Influence of Chemical Composition of FexZn1-xS on The Efficiency of Organic-Inorganic Hybrid Solar Cells
197	Bernadette Ortner *(Institute for Chemistry and Technology of Materials, NAWI Graz, TU Graz, 8010 Graz)*, Georg Haberfehlner, Thomas Rath, Gregor Trimmel Strategies to improve the semitransparency of organic solar cells investigated on different donor/acceptor combinations
199	Moritz Schmidt *(AMOLF Institute, Science Park 104, Amsterdam, 1098XG The Netherlands)*, Bruno Ehrler An updated approach to quantify ion migration in perovskite solar cells based on capacitance transients

200	Joaquín Valdez García *(Department of Mechanical and Materials Engineering, Faculty of Technology, University of Turku, FI-20500 Turku, Finland)*, Joice Jaqueline Kaschuk, Yazan Al Haj, Aleksi Kamppinen, Orlando J. Rojas, Tiffany Abitbol, Jaana Vapaavuori, Kati Miettunen Cellulose in Perovskite Solar Cells: from Substrates to Additives
203	José Martínez, Fernanda Retana, Thelma Serrano, Idalia Gómez *(Universidad Autónoma de Nuevo León, Facultad de Ciencias Químicas, Laboratorio de Materiales I, Av. Pedro de Alba s/n, Ciudad Universitaria, C.P. 66455, San Nicolás de los Garza, Nuevo León, México)* Polythiophene (PTh) and PTh/GO thin films for potential application in solar cells
204	Alexander Ehm *(Institut für Physik, Technische Universität Chemnitz, 09126 Chemnitz, Germany)*, Rukiya Matsidik, Michael Sommer, Dietrich R. T. Zahn Monitoring the Crystallisation Process of NDI-T2 Based Oligomers Using Spectroscopic Ellipsometry
205	Stefan Moscher *(Institute for Chemistry and Technology of Materials (ICTM), NAWI Graz, Graz University of Technology, Stremayrgasse 9, 8010 Graz, Austria)*, Sebastian Mairinger, Lukas Troi, Fernando Warchomicka, Gregor Trimmel, Thomas Rath Lead-free Tin Halide Perovskite Solar Cells - Refinement of Perovskite Film Crystallization
209	Larissa van de Ven *(AMOLF Institute, Science Park 104, Amsterdam, 1098XG The Netherlands)*, Daphne Antony, Maria Antonietta Loi, Bruno Ehrler Tin-lead Perovskites: Perfect Alloy or Nano-scale Tin-Lead Ratio Inhomogeneity
211	Jaume-Adrià Alberola-Borràs *(Institute of Advanced Materials (INAM), Universitat Jaume I, Av. De Vicent Sos Baynat, s/n 12071 Castellò, Spain)*, Sofia Masi, Rosario Vidal, Iván Mora-Seró Environmental Impacts of semi-Transparent Evaporation of Electrodes for Colourful Perovskite Solar Cells Obtained with Life Cycle Assessment
212	Thi Kim Cuc Mai *(Microelectronics Research Unit, Faculty of Information Technology & Electrical Engineering, P. O. Box 8000, FI-90014, University of Oulu, Finland.)*, Jaakko Palosaari, Jari Juuti, Janne Halme Optimization of Hole Transport Layer (HTL)-Free Carbon-Based Perovskite Solar Cells Fabricated in Ambient Conditions
213	Florine Rombach *(Department of Physics, University of Oxford, Clarendon Laboratory, Parks Road, Oxford, OX1 3PU, UK)*, Luca Gregori, Anika Sidler, Jayne Whitworth, Stefan Zeiske, Heon Jin, Esther Hung, Silvia Motti, Pietro Caprioglio, Daniele Meggiolaro, Henry Snaith Impact of Metal Impurities on Recombination in Lead-Tin Perovskites
215	Linde van de Ven *(Light Management for Photovoltaics, AMOLF, Netherlands)* Sn-based perovskite from a stable intermediate
216	Sepideh Khazraei *(Microelectronics Research Unit Faculty of Information Technology and Electrical Engineering University of Oulu- Finland)*, Jari Hannu The impact of printable copper complex redox shuttle incorporating 2D hybrid Ti3C2 MXene to enhance quasi-solid-state dye-sensitized solar cells performance
217	Gulnur Akhtanova *(Department of Physics, School of Sciences and Humanities, Nazarbayev University, Astana 010000, Republic of Kazakhstan)*, Hryhorii Parkhomenko, Joachim Vollbrecht, Andriy Mostovyi, Nora Schopp, Viktor Brus Surface Recombination in Organic Solar Cells: Intrinsic vs. Doped Active Layer
218	Lars Sonneveld *(AMOLF)*, Nikolai Orlov, Eric Garnett, Bruno Ehrler Towards Characterization of Perovskite Crystals under Solar Cell Operating Conditions: SEM-EBSD Measurement Parameters and Protective Coatings
219	Robin Schot *(AMOLF Institute, Science Park 104, Amsterdam, 1098XG The Netherlands)*, Tom Veeken, Oussama Er-Raji, Adrian Callies, Patricia Schulze, Albert Polman 3D Spatially Resolved PL Maps of Textured Perovskite-Silicon Tandem Cells
221	Oleksii Omelianovych *(Department of Chemical Engineering, Chungnam National University, Daejeon, South Korea)*, Liudmila L. Larina, Ho-Suk Choi Enhancing Perovskite Solar Cells with TiN Nanoparticles: Structural, Morphological, and Optical Effects
226	Feray Ünlü *(Department of Solution-Processed Materials and Devices, HySPRINT Innovation Lab, Helmholtz-Zentrum Berlin für Materialen und Energie GmbH, Kekuléstraße 5, 12489 Berlin, Germany)*, Alejandra Florez, Keely Dodd-Clements, Carolin Rehermann, Matthias Grosch, Florian Mathies, Sanjay Sanjay, Eva Unger Fabrication of MAPbI3 from non-toxic solvents for “greener” solution-processed perovskite solar cells
227	Andras Bojtor, David Krisztian, Ferenc Korsos, Oki Gunawan, Gabor Parada *(Semilab Co. Ltd, 2. Prielle K. str., Budapest, Hungary)* Wavelength Dependent Studies of Carrier Resolved Photo Hall Measurements
228	Noor Alotaibi *(Department of Physics and Astronomy, University of Sheffield, UK)* Developing wide bandgap Perovskite Photovoltaics for Indoor Applications