International Conference on Hybrid and Organic Photovoltaics (HOPV18)

Benidorm, Spain, 2018 May 28th - 31st
Conference Chairs: Emilio Palomares and Rene Janssen

Conference Program

May 28th - Day 1 (Monday)	
16:30 - 17:30	**Registration**
17:30 - 19:00	**welcome reception**
May 29th - Day 2 (Tuesday)	
08:00 - 08:45	**Registration**
08:45 - 08:50	**Announcement of the day**
08:50 - 09:00	**Opening**
	Session G1.1 Chair: Rene Janssen
09:00 - 09:45 G1.1-K1	Harald Ade *(North Carolina State University)* Nonfullerene Organic Solar Cells: Importance of Molecular Interaction and Vitrification
09:45 - 10:15 G1.1-I1	Juan Bisquert *(Institute of Advanced Materials (INAM), Universitat Jaume I)* 10 years of Hybrid and Organic Photovoltaics
10:15 - 10:45 G1.1-I2	Tsutomu Miyasaka *(Toin University of Yokohama)* Metal oxide-based perovskite solar cells and their superior tolerance in the space environment
10:45 - 11:15	**Coffee Break**
	Session G1.2 Chair: Rene Janssen
11:15 - 11:45 G1.2-I1	Laura Herz *(Department of Physics of University of Oxford)* Fundamental charge conduction and recombination mechanisms in hybrid perovskites operating near the intrinsic limit
11:45 - 12:15 G1.2-I2	Vincent Artero *(Université Grenoble Alpes)* Molecular-based H2-evolving photocathodes
12:15 - 12:45 G1.2-I3	Mohammad Nazeeruddin *(Group for Molecular Engineering of Functional Materials, École Polytechnique Fédérale de Lausanne, Valais Wallis, CH-1951 Sion, Switzerland)*, Kyung Taek Cho, Giulia Grancini, Yonghui Lee, Manuel Yonghui, Sanghyun Paek Growth of layered perovskites for stable and efficient photovoltaics
12:45 - 13:00 G1.2-S1	Luca Sorbello *(Greatcell Solar S.A.)* GreatCell Solar S.A.
13:00 - 14:30	**Lunch**
	Session A1 Chair: Antonio Abate Room: New Perovskite Materials
14:30 - 15:00 A1-IS1	Carolin Sutter-Fella *(Lawrence Berkeley National Laboratory)* Optoelectronic Properties and Halide Demixing in Br-Containing Metal Halide Perovskites

15:00 - 15:15 A1-O1	Sagar Jain *(SPECIFIC IKC, College of Engineering, University of Swansea, Swansea, U.K)*, Gerrit Boschloo, James Durrant Vapour assisted morphological tailoring by reducing metal defect sites in lead-free, (CH3NH3)3Bi2I9 perovskite solar cells for improved performance and long-term stability
15:15 - 15:30 A1-O2	Pavao Andricevic *(Laboratory of Physics of Complex Matter (LPMC), Ecole Polytechnique Fédérale de Lausanne)*, Xavier Mettan, Márton Kollár, Bálint Náfrádi, Andrzej Sienkiewicz, Tonko Garma, László Forró, Endre Horváth Vertically Aligned Carbon Nanotubes as Electrodes in Perovskite Single Crystal Light Emitting Electrochemical Cells
15:30 - 15:45 A1-O3	Shuzi Hayase *(Kyushu Institute of Technology, Japan)*, Nozomi Ito, Muhammad Akmal Kamarudin, Qing Shen, Yuhei Ogomi, Satoshi Iikubo, Kenji Yoshino, Takashi Minemoto, Taro Toyoda Pb free perovskite-SnGe mixed metal perovskite solar cell with 7.5 % efficiency and enhanced solar cell stability at air without encapsulation
15:45 - 16:00 A1-O6	Giulia Longo *(Department of Physics, Oxford University)*, Henry J. Snaith Vapour deposited lead free double perovskite for photovoltaic applications
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 A1-O4	Lissa Eyre *(Cavendish Laboratory, University of Cambridge, JJ Thomson Avenue, Cambridge CB3 0HE, United Kingdom)*, Robert Hoye, Pablo Docampo, Hannah Joyce, Felix Deschler Ultrafast spectroscopy of lattice-charge carrier interactions in bismuth-based perovskites
16:45 - 17:00 A1-O5	Aslihan Babayigit *(Institute for Materials Research (IMO-IMOMEC), Hasselt University, Wetenschapspark 1, 3590 Diepenbeek, BE)*, Melissa Van Landeghem, Bert Conings, Nobuya Sakai, Etienne Goovaerts, Hans-Gerd Boyen, Henry Snaith Estimating oxidised Sn4+ species at the precursor stage: on the effect of reducing agents in Sn-based perovskites.
17:00 - 17:15 A1-O7	Lukas Kinner *(AIT Austrian Institute of Technology, Center for Energy, Photovoltaic Systems, Gieffinggasse 4, 1210 Wien)*, Neha Bansal, Martin Bauch, Felix Hermerschmidt, Emil List-Kratochvil, Theodoros Dimopoulos Highly transparent and conductive embedded silver nanowire electrode for use in flexible solar cells
17:15 - 17:30 A1-O8	Sascha Feldmann *(University of Cambridge)*, Jasmine PH Rivett, Tudor H Thomas, Mojtaba Abdi Jalebi, Stuart Macpherson, Sam D Stranks, Michael Saliba, Felix Deschler Cation substitution reduces non-radiative losses in hybrid lead-halide perovskites
	Session B1 Chair: Annamaria Petrozza Room: Spectroscopy of Perovskite Materials
14:30 - 15:00 B1-IS1	Felix Deschler *(Cavendish Laboratory, University of Cambridge, JJ Thomson Avenue, Cambridge CB3 0HE, United Kingdom)* Understanding carrier recombination and luminescent yields in metal-halide perovskites
15:00 - 15:15 B1-O1	Juan-Pablo Correa-Baena *(Massachusetts Institute of Technology (MIT))*, Yanqi Luo, Thomas M. Brenner, Jordan Snaider, Shijing Huang, David P. Fenning, Tonio Buonassisi Elemental distribution influence local electronic properties in organic-inorganic perovskites
15:15 - 15:30 B1-O2	Ahmed El-Zohry *(KAUST Solar Center, Physical Sciences and Engineering Division, King Abdullah University of Science and Technology, Thuwal 23955-6900, Saudi Arabia.)*, Basamat Shaheen, Jun Yin, Boon Ooi, Osman M. Bakr, Omar F. Mohammed Ballistic Carrier Diffusion on Semiconductor Surfaces Uncovered by 4D Electron Microscopy
15:30 - 15:45 B1-O3	Xiaofeng Tang *(Institute of Materials for Electronics and Energy Technology (i-MEET), Department of Materials Science and Engineering, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, 91058, Germany.)*, Gebhard Matt, Christoph Brabec Topography-dependent phase-segregation in mixed-halide perovskite
15:45 - 16:00 B1-O6	Dengyang Guo, Roberto Brenes, Zahra Andaji Garmaroudi, Eline Hutter, Samuel Stranks, Tom Savenije *(Department of Chemical Engineering, Delft University of Technology, 2629 HZ Delft, The Netherlands.)* How Charge Carrier Dynamics are Affected by Light Soaking in (Mixed) Halide Perovskites

16:00 - 16:30	**Coffee Break**
16:30 - 16:45 B1-O4	Hernan Miguez *(Instituto de Ciencia de Materiales de Sevilla (ICMS-CSIC))*, Miguel Anaya, Mauricio Calvo, Juan Galisteo, Juan Pedro Espinos Origin of Light Induced Ion Migration in Organic Metal Halide Perovskites in the Presence of Oxygen
16:45 - 17:00 B1-O5	Robert Westbrook *(Imperial College London, Department of Chemistry and Centre for Plastic Electronics)*, Jose Marin-Beloqui, Irene Sanchez-Molina, Hugo Bronstein, Saif Haque Illuminating Charge-Transfer at the Absorber/Hole Transport Material Interface in Perovskite Solar Cells
17:00 - 17:15 B1-O7	Ramón Arcas, Elena Mas-Marzá, Alberto García-Fernández, Francisco Fabregat-Santiago *(Institute of Advanced Materials (INAM), Universitat Jaume I)* Photoluminiscence of dual ion perovskite monocrystals
17:15 - 17:30 B1-O8	Arvydas Ruseckas *(Organic Semiconductor Centre, SUPA, School of Physics and Astronomy, University of St Andrews, St Andrews, U.K.)*, Oskar Blaszczyk, Jonathan R. Harwell, Lethy Krishnan Jagadamma, Ifor D. W. Samuel Charge recombination in methylammonium lead triiodide at low temperatures
	Session C1 Chair: Dieter Neher Room: Theory
14:30 - 15:00 C1-IS1	Ardalan Armin *(Department of Physics, Swansea University, Single Park, Swansea SA2 8PP, United Kingdoms)* Shockley-type versus Transport-limited Organic Solar Cell
15:00 - 15:15 C1-O1	Eline Hutter *(Department of Chemical Engineering, Delft University of Technology, 2629 HZ Delft, The Netherlands.)*, Rebecca Sutton, Yinghong Hu, Michiel Petrus, Pablo Docampo, Samuel Stranks, Henry Snaith, Tom Savenije The Role of the Monovalent Cation on the Recombination Kinetics in Lead Iodide Perovskites
15:15 - 15:30 C1-O2	Juan A. Anta, Jesus Idígoras, Lidia Contreras-Bernal *(Departamento de Sistemas Físicos, Químicos y Naturales, Área de Química Física, Universidad Pablo de Olavide)*, Antonio Riquelme, Susana Ramos-Terrón Small perturbation analysis of perovskite solar cells: feature extraction and modelling
15:30 - 15:45 C1-O3	Alessio Gagliardi, Ajay Singh, Waldemar Kaiser *(Technische Universitaet Muenchen)* Simulation of ion migration in perovskite solar cells using a kinetic Monte Carlo/drift diffusion numerical model and analysis of the impact on device performance
15:45 - 16:00 C1-O4	Gregory Kozyreff *(Université libre de Bruxelles)*, Marina Mariano-Juste, Jorge Bravo-Abad, Guillermo Martinez-Denegri, Jordi Martorell Light trapping by intermittent chaos in a Photonic Fiber Plate
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 C1-O5	Sebastian Müller *(School of Mathematics, University of Bristol, Bristol BS8 1TW, UK)* Continuum limit of the Gaussian disorder model for organic solar cells
16:45 - 17:00 C1-O6	Juan F. Galisteo-López *(Instituto de Ciencia de Materiales de Sevilla (ICMS-CSIC))*, Alberto Jiménez-Solano, Hernán Míguez Absorption and emission of light in optoelectronic nanomaterials: the role of the local optical environment
17:00 - 17:15 C1-O7	Pascal Kaienburg *(IEK5-Photovoltaics, Forschungszentrum Jülich, 52425 Jülich, Germany)*, Paula Hartnagel, Bart E. Pieters, David Grabowski, Jiaoxian Yu, Thomas Kirchartz Impact of Non-linear Shunts from Pinholes on Device Performance
17:15 - 17:30 C1-O8	Marko Mladenovic *(Laboratory of Computational Chemistry and Biochemistry, Dept. of Chemistry, Ecole Polytechnique Fédérale de Lausanne)*, Ursula Roethlisberger First-principles calculations of halide perovskites
	Session D1 Chair: Jianhui Hou Room: Organic Photovoltaics
14:30 - 15:00 D1-IS1	Monica Lira-Cantu *(Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and The Barcelona Institute of Science and Technology, Campus UAB, Bellaterra, 08193 Barcelona, Spain)* Novel Metal Oxides as Transport Layers in Halide Perovskite Solar Cells

15:00 - 15:15 D1-O1	Chang He *(Institute of Chemistry,Chinese Academy of Sciences)* Optimized molecular orientation and domain size enables efficient non-fullerene small-molecule organic solar cells
15:15 - 15:30 D1-O2	Z.J.W.A. Leijten *(Laboratory of Materials and Interface Chemistry, Department of Chemical Engineering and Chemistry, Eindhoven University of Technology, Groene Loper 5, 5612 AE Eindhoven)*, G. de With, H. Friedrich Mapping of oxygen and water related degradation across P3HT:PCBM interfaces
15:30 - 15:45 D1-O3	Wenchao Zhao *(Institute of Chemistry,Chinese Academy of Sciences)*, Sunsun Li, Yun Zhang, Shaoqing Zhang, Jianhui Hou Over 13% Efficiency in Blade-coated Organic Solar Cells
15:45 - 16:00 D1-O4	Huifeng Yao *(Institute of Chemistry,Chinese Academy of Sciences)* Modulation of Intramolecular Charge Transfer Effect in Highly Efficient Non-fullerene Acceptor
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 D1-O5	Fallon Colberts *(Molecular Materials and Nanosystems, Eindhoven University of Technology, Netherlands)*, Martijn Wienk, Vincent Le Corre, Lambertus Koster, Rene Janssen Processing of polymer solar cells on a water substrate
16:45 - 17:00 D1-O6	Vikas Negi *(Molecular Materials and Nanosystems, Eindhoven University of Technology, Netherlands)*, Olga Wodo, Jacobus Franeker, Rene Janssen, Peter Bobbert Full 3D simulation of phase separation in solution-processed organic solar cells
17:00 - 17:15 D1-O7	Mengmeng Li *(Molecular Materials and Nanosystems, Institute for Complex Molecular Systems, Eindhoven University of Technology, P.O. Box 513, 5600 MB Eindhoven, The Netherlands)*, Martijn Wienk, Rene Janssen Impact of Device Polarity on the Photovoltaic Performance of Polymer Solar Cells
17:15 - 17:30 D1-O8	Jiaying Wu *(Imperial College London, Department of Chemistry and Centre for Plastic Electronics)*, James Durrant Towards OPV devices scaling up: understand the loss mechanisms for thick devices
17:30 - 19:00	**Poster session**
May 30th - Day 3 (Wednesday)	
08:55 - 09:00	**Announcement of the day**
	Session G2.1 Chair: Emilio Palomares
09:00 - 09:45 G2.1-K1	Antoni Llobet *(ICIQ-BIST. Avda. PaÏsos Catalans, 16. Tarragona. E-43007. Spain)* Hybrid molecular photoanodes for water splitting
09:45 - 10:15 G2.1-I1	Jenny Nelson *(Department of Physics and Centre for Plastic Electronics, Imperial College London, London, SW7 2AZ, UK.)* The impact of chemical and physical structure on charge pair generation and solar energy conversion in molecular photovoltaic materials
10:15 - 10:45 G2.1-I2	Jianhui Hou *(Beijing National Research Center for Molecular Sciences, Institute of Chemistry, Chinese Academy of Sciences, Beijing 100190, China)* Material Design for Fullerene-free Polymer Solar Cells with Over 14% Efficiency
10:45 - 11:15	**Coffee Break**
	Session G2.2 Chair: Sagar Motilal Jain
11:15 - 11:45 G2.2-I1	Maria Antonietta Loi *(Photophysics and OptoElectronics, Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 4, 9747 AG, The Netherlands)* Sn-based Hybrid Perovskites: from solar cells to hot electrons
11:45 - 12:15 G2.2-I2	Iain McCulloch *(Imperial College London, Department of Chemistry and Centre for Plastic Electronics)* Non-fullerene acceptors for high performance organic photovoltaics

12:15 - 12:45 G2.2-I3	Gerasimos Konstantatos *(ICFO-Institut de Ciencies Fotoniques, The Barcelona Institute of Science and Technology)* Near and Short-wave Infrared Colloidal Quantum Dot Solar Cells
12:45 - 13:00 G2.2-S1	Taro Tanabe *(TCI Europe NV)* TCI Chemicals
13:00 - 14:30	**Lunch**
	Session A2 Chair: Trystan Watson Room: Large Area Processing of Perovskites
14:30 - 15:00 A2-IS1	Xiongfeng Lin, Udo Bach *(ARC Centre of Excellence in Exciton Science, Monash University)* Back-Contact Perovskite Solar Cells
15:00 - 15:15 A2-O1	Ilker Dogan *(Holst Centre/TNO – Solliance)*, Francesco Di Giacomo, Santosh Shanmuham, Valerio Zardetto, Henri Fledderus, Harrie Gorter, Gerwin Kirschner, Ike de Vries, Weiming Qiu, Wiljan Verhees, Robert Gehlhaar, Yulia Galagan, Herbert Lifka, Tom Aernouts, Sjoerd Veenstra, Pim Groen, Ronn Andriessen Towards roll-to-roll production of perovskite solar cells: sheet-to-sheet slot-die processing of high efficiency cells and modules
15:15 - 15:30 A2-O2	Florian Mathies, Gerardo Hernandez Sosa, Fabian Schackmar, Bryce S. Richards, Ulrich Lemmer, Ulrich W. Paetzold *(Light Technology Institute, Karlsruhe Institute of Technology, Engesserstr. 13, 76131, Germany)* Inkjet Printed Perovskite Photovoltaics
15:30 - 15:45 A2-O3	Wallace Choy *(Department of Electrical and Electronic Engineering, The University of Hong Kong, Pok Fu Lam Road, Hong Kong SAR, China)*, Jian Mao Solution-based and Microfabrication-free Approach to Form Ordered Nanostructured Perovskites for Photovoltaic and LED Applications
15:45 - 16:00 A2-O4	Daniel Perez-del-Rey, Pablo P. Boix *(Universidad de Valencia - ICMol (Institute of Molecular Science))*, Benedikt Dänekamp, Jorge Ávila, Cristina Momblona, Michele Sessolo, Henk Bolink Working mechanisms of vacuum-deposited perovskite solar cells
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 A2-O5	James Blakesley *(National Physical Laboratory)* Introducing energy rating standards and their implication for Perovskite modules
16:45 - 17:00 A2-O6	Trystan Watson *(1SPECIFIC, College of Engineering, Swansea University Bay Campus, Fabian Way, SA1 8EN Swansea, United Kingdom)*, Francesca De Rossi, Jenny Baker, David Beynon, Katherine Hooper, Simone Meroni, Zhengfei Wei, Dave Worsley, Daniel Williams Design and development of all printable perovskite solar modules with 198 cm2 active area
17:00 - 17:15 A2-O7	Cheok Nang Pat, Clara Aranda, Juan Bisquert, Xueqing Xu, Antonio Guerrero *(Institute of Advanced Materials (INAM), Universitat Jaume I)* Perovskite Solar Cells from Blade coated Non-Toxic Solvents
17:15 - 17:30 A2-O8	Juliane Borchert *(Clarendon Laboratory, Department of Physics, University of Oxford, Parks Road, Oxford, OX1 3PU, United Kingdom)*, Rebecca L Milot, Jay B Patel, Christopher L Davies, Adam D Wright, Laura Martínez Maestro, Henry J Snaith, Laura M Herz, Michael B Johnston Co-evaporated Formamidinium Lead Iodide Solar Cells
	Session B2 Chair: Maria Antonietta Loi Room: Spectroscopy of Organic Materials
14:30 - 15:00 B2-IS1	Tracey Clarke *(Department of Chemistry, University College London)*, Kealan Fallon, Michelle Vezie, Jenny Nelson, Artem Bakulin, Hugo Bronstein Ultra-low band gap polymers for organic electronic applications
15:00 - 15:15 B2-O1	DOUGLAS YEBOAH *(Charles Darwin University)*, Jai Singh Correlative Influence of Charge Carrier Recombination and Extraction Processes on the Fill Factor in Bulk Heterojunction Organic solar Cells

15:15 - 15:30 B2-O2	Mohammed Azzouzi *(Department of Physics and Centre for Plastic Electronics, Imperial College London, London, SW7 2AZ, UK.)*, Jun Yan, Thomas Kirchartz, Jenny Nelson Non-Radiative Energy Losses in Bulk-Heterojunction Organic Photovoltaics
15:30 - 15:45 B2-O3	Yanting Yin *(Chemical Physics and Nanotechnology Research Leader Flinders Centre for NanoScale Science and Technology School of Chemical and Physical Sciences, Flinders University)* Within few Nanometres-the Way to Characterise Dipoles and Reconstruct Energy Bands at Metal Oxide/Organic Interface
15:45 - 16:00 B2-O4	Michael Price *(Optoelectronics Group, University of Cambridge)*, Xu-hui Jin, George Whittell, Richard Friend, Ian Manners Efficient exciton transport in conjugated polyfluorene nanofibers
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 B2-O5	Adam Pockett *(SPECIFIC, Swansea University)*, Harrison Lee, Wing Chung Tsoi, Matthew Carnie Studying degradation in OPV devices using a combination of frequency and time domain optoelectronic techniques
16:45 - 17:00 B2-O6	Mustapha Abdu-Aguye *(Photophysics and Optoelectronics, Zernike Institute for Advanced Materials, University of Groningen, The Netherlands)*, Nutifafa Doumon, Ivan Terzic, Vincent Voet, Katya Loos, Jan Anton Koster, Maria Antonietta Loi Photophysical properties of semiconducting-ferroelectric block copolymers for organic photovoltaics
17:00 - 17:15 B2-O7	Jose Manuel Marin-Beloqui *(Department of Chemistry, University College London)*, Kealan Fallon, Hugo Bronstein, Tracey Clarke Donor and Acceptor Character in a Cross-Conjugated Polymer: a Transient Absorption Spectroscopy Study
17:15 - 17:30 B2-O8	Blaise Godefroid *(Université libre de Bruxelles)*, Gregory Kozyreff Organic solar cell design as a function of internal luminescence quantum efficiency
	Session C2 Chair: Gerasimos Konstantatos Room: Perovskite Nanocrystals
14:30 - 15:00 C2-IS1	David Tilley *(Department of Chemistry, University of Zurich)* Earth-Abundant Materials for Solar Water Splitting
15:00 - 15:15 C2-O1	Iván Mora-Seró *(Institute of Advanced Materials (INAM), Universitat Jaume I)* The next step forward: Halide Perovskite Nanocrystals
15:15 - 15:30 C2-O2	Junsheng Chen *(Chemical Physics and NanoLund, Lund University, P.O. Box 124, 22100 Lund, Sweden)*, Pavel Chábera, Maria E. Messing, Kaibo Zheng, Tonu Pullerits Photophysics of two-photon absorption in CsPbBr3 perovskite quantum dots
15:30 - 15:45 C2-O3	Marina Gerhard *(Chemical Physics and NanoLund, Lund University, P.O. Box 124, 22100 Lund, Sweden)*, Boris Louis, Rafael Camacho, Aboma Merdasa, Jun Li, Alexander Dobrovolsky, Johan Hofkens, Ivan Scheblykin Non-radiative recombination in organo-metal halide perovskites: Seeing beyond the ensemble-averaged picture with temperature-dependent photoluminescence microscopy
15:45 - 16:00 C2-O4	Satoshi Uchida *(Research Center for Advanced Science and Technology (RCAST) The University of Tokyo)*, Tae Woon Kim, Ludmila Cojocaru, Tomonori Matsushita, Takashi Kondo, Hiroshi Segawa Superlattice inside the perovskite solar cells
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 C2-O5	Mauricio Calvo *(Multifunctional Optical Materials Group, Instituto de Ciencia de Materiales de Sevilla, Consejo Superior de Investigaciones Científicas-Universidad de Sevilla)*, Andrea Rubino, Miguel Anaya, Juan Francisco Galisteo, Hernan Miguez ABX3 perovskite nanocrystals templated in porous matrices
16:45 - 17:00 C2-O6	Zahra Zolfaghari, Seog Joon Yoon *(Institute of Advanced Materials (INAM), Universitat Jaume I)*, Iván Mora Seró Photoinduced Charge Transfer Processes of Cesium Lead Halide Perovskite Quantum Dots in Optoelectronic Devices

17:00 - 17:15 C2-O7	Meltem F. Ayguler *(Department of Chemistry and Center for Nanoscience (CENS), Ludwig-Maximilians Universität (LMU))*, Bianka M. D. Puscher, Thomas Bein, Ruben D. Costa, Pablo Docampo Light-emitting Electrochemical Cells based on Inorganic Metal Halide Perovskite Nanocrystals
17:15 - 17:30 C2-O8	Erik M.J Johansson *(Uppsala University, Sweden)* Efficient, low-weight and semitransparent quantum dot solar cells
	Session D2 Chair: Gerrit Boschloo Room: Dye Sensitized Solar Cells and Water Splitting
14:30 - 15:00 D2-IS1	Kevin Sivula *(EPFL)* Engineering semiconductor materials for robust photoelectrochemical solar fuel production
15:00 - 15:15 D2-O1	Yan Hao, Wenxing Yang, Gerrit Boschloo *(Department of Chemistry- Ångström Laboratory, Uppsala University)* Fine-tuning of redox intermediates for highly efficient dye-sensitized solar cells
15:15 - 15:30 D2-O2	Marina Freitag *(Uppsala University, Sweden)* Copper Complexes for Dye-sensitized Solar Cells
15:30 - 15:45 D2-O3	Qingqing Miao *(Institute of Process Engineering, Chinese Academy of Sciences)*, Suojiang Zhang Hybrid/Tandem Strategy for High-efficient Solar Cell Systems
15:45 - 16:00 D2-O4	Hannes Michaels *(Uppsala University, Sweden)* Highly-stable Cu(I)/(II) oxazoline-bipyridine complexes
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 D2-O5	Antonio Alfano *(Center for Nano Science and Tecnology, Istituto Italiano di Tecnologia)*, Alessandro Mezzetti, Franceso Fumagalli, Chen Tao, Maria Rosa Antognazza, Emilio Palomares, Annamaria Petrozza, Fabio Di Fonzo Tandem Hybrid Organic-Inorganic Photocathode-Perovskite Solar Cell For Unassisted Water Splitting
16:45 - 17:00 D2-O6	Ingrid Rodríguez-Gutiérrez, Manuel Rodríguez-Pérez, Rodrigo García-Rodríguez, Alberto Vega-Poot, Geonel Rodríguez-Gattorno, Bruce A. Parkinson, Gerko Oskam *(Departamento de Física Aplicada, CINVESTAV-IPN Mérida)* CuBi2O4 for solar water reduction: an IMPS analysis
17:00 - 17:15 D2-O7	Roger Jiang *(Department of Chemistry- Ångström Laboratory, Uppsala University)*, Gerrit Boschloo Overcoming The Mass Transport Limitations of Dye-Sensitised Solar Cells
17:15 - 17:30 D2-O8	Bo Xu *(Physical Chemistry, Department of Chemistry-Ångström Laboratory, Uppsala University, Box 523, SE-751 20 Uppsala, Sweden)*, Haining Tian High Performance All-Solid-State Dye-Sensitized Solar Cells
19:00 - 22:00	**Social Dinner and party**
May 31st - Day 4 (Thursday)	
08:55 - 09:00	**Announcement of the day**
	Session G3.1 Chair: Iain McCulloch
09:00 - 09:45 G3.1-K1	Michael Graetzel *(Laboratory of Photonics and Interfaces, Ecole Polytechnique Fédérale de Lausanne, Switzerland)* Molelcular Photovoltaics and Perovskite Solar Cells
09:45 - 10:15 G3.1-I1	Koen Vandewal *(Institute for Materials Research (IMO-IMOMEC), Hasselt University, Wetenschapspark 1, 3590 Diepenbeek, BE)* The open-circuit voltage of organic photovoltaics
10:15 - 10:45 G3.1-I2	He Yan *(Department of Chemistry, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong)* Temperature dependent aggregation enables efficient fullerene and non-fullerene organic solar cells -- A new path toward next generation organic solar cells
10:45 - 11:15	**Coffee Break**

	Session G3.2 Chair: Kevin Sivula
11:15 - 11:45 G3.2-I1	Neil Greenham *(Cavendish Laboratory, University of Cambridge, JJ Thomson Avenue, Cambridge CB3 0HE, United Kingdom)* Singlet Fission to Enhance Photovoltaic Efficiency
11:45 - 12:15 G3.2-I2	Annamaria Petrozza *(Center for Nano Science and Technology @Polimi, Istituto Italiano di Tecnologia, via Giovanni Pascoli 70/3, 20133, Milan, Italy.)* Defect Physics and (In)Stability in Metal-halide Perovskite Semiconductors
12:15 - 12:45 G3.2-I3	Filippo De Angelis *(CNR-ISTM Perugia)* Origin of high open circuit voltage in lead-halide perovskite solar cells
12:45 - 13:00 G3.2-S1	Filippo De Angelis *(Istituto di Scienze e Tecnologie Molecolari del CNR (CNR-ISTM))* Introducing next HOPV edition in Rome, Italy
13:00 - 14:30	**Lunch**
	Session A3 Chair: Monica Lira-Cantu Room: Stability of Perovskite Solar Cells
14:30 - 15:00 A3-IS1	Antonio Abate *(Helmholtz-Center Berlin for Materials and Energy Kekuléstraße 5 12489 Berlin Germany)* Active materials for stable perovskite solar cells
15:00 - 15:15 A3-O1	Alessandro Senocrate *(Max Planck Institut for Solid State Research)*, Tolga Acartürk, Gee Yeong Kim, Rotraut Merkle, Ulrich Starke, Michael Grätzel, Joachim Maier Mechanism of oxygen interaction with halide perovskites
15:15 - 15:30 A3-O2	Amjad Farooq *(Institute of Microstructure Technology, Karlsruhe Institute of Technology, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany)*, Ihteaz Hossain, Jonas Schwenzer, Bryce Richards, Efthymios Klampaftis, Ulrich Paetzold Ultra-Violet Light Driven Degradation in Perovskite Solar Cells
15:30 - 15:45 A3-O3	Dechan Angmo *(Commonwealth Scientific and Industrial Research Organisation, Australia)*, Xiaojin Peng, Chuantian Zuo, Youn-Jung Heo, Mei Gao, Doojin Vak Translating gas/solvent-assisted perovskite film formation from spin-coating in the glovebox to scalable manufacturing methods under ambient conditions
15:45 - 16:00 A3-O4	Bardo Bruijnaers *(Molecular Materials and Nanosystems, Eindhoven University of Technology, Netherlands)*, Eric Schiepers, Christ Weijtens, Stefan Meskers, Martijn Wienk, René Janssen The importance of oxygen exposure of perovskite solar cells with a PEDOT:PSS hole transport layer
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 A3-O5	Ute Cappel *(Applied Physical Chemistry, Dept. of Chemistry, Royal Inst. of Technology (KTH))*, Sebastian Svanström, Håkan Rensmo Composition dependence of photo-induced chemical changes in mixed-ion perovskite materials
16:45 - 17:00 A3-O6	Francesca De Rossi *(Swansea University - SPECIFIC)*, Jenny Baker, James McGettrick, Trystan Watson The influence of 5-AVAI content on the stability of all printed perovskite solar cells and modules
17:00 - 17:15 A3-O7	Ajay Jena *(1Toin Univeristy of Yokohama, Kanagawa, Japan)*, Youhei Numata, Masashi Ikegami, Tsutomu Miyasaka Strategic Compositional Changes at MAPbI3/spiro-OMeTAD Junction to Improve Thermal Stability of The Solar Cells
17:15 - 17:30 A3-O8	Emilio J. Juarez-Perez *(Energy Materials and Surface Sciences Unit (EMSS), Okinawa Institute of Science and Technology Graduate University (OIST), 1919-1 Tancha, Onna-son, Okinawa 904-0495, Japan)* Mitigation of photodecomposition processes in lead halide based solar cells to improve operational stability
	Session B3 Chair: Carolin Sutter-Fella Room: Perovskite Solar Cells

14:30 - 15:00 B3-IS1	Gustavo de Miguel *(Departamento de Química Física y Termodinámica Aplicada, Instituto Universitario de Investigación en Química Fina y Nanoquímica IUQFN, Universidad de Córdoba, Campus de Rabanales, Edificio Marie Curie, Córdoba, Spain)*, Alexander Davis Jodlowski, Cristina Roldán-Carmona, Luis Camacho Delgado, Mohammad Khaja Nazeeruddin Guanidinium/Methylammonium Lead Iodide Perovskite: An Unexplored Avenue for Stable and 20% Efficient Solar Cells
15:00 - 15:15 B3-O1	Yongyoon Cho *(UNSW School of Photovoltaic & Renewable Energy Engineering)*, Arman Mahboubi Soufiani, Jae Sung Yun, Jincheol Kim, Da Seul Lee, Jan Seidel, Xiaofan Deng, Martin A. Green, Shujuan Huang, Anita W.Y. Ho-Baillie Mixed 3D-2D passivation treatment for mixed-cation lead mixed-halide perovskite solar cells for higher efficiency and better stability
15:15 - 15:30 B3-O2	Matthieu Manceau, Muriel Matheron, Ibrahim Bulut, Noëlla Lemaitre *(Univ. Grenoble Alpes, INES, CEA, LITEN, DTS)*, Solenn Berson From Perovskite-based Solar Cells to Large area Modules for Indoor Applications
15:30 - 15:45 B3-O3	Yinghong Hu *(Department of Chemistry and Center for NanoScience (CeNS), LMU Munich, Butenandtstr. 11, 81377 Munich, Germany)*, Eline M. Hutter, Philipp Rieder, Irene Grill, Jonas Hanisch, Meltem F. Aygüler, Alexander G. Hufnagel, Matthias Handloser, Thomas Bein, Achim Hartschuh, Kristofer Tvingstedt, Vladimir Dyakonov, Andreas Baumann, Tom J. Savenije, Michiel L. Petrus, Pablo Docampo Understanding the Role of Cesium and Rubidium Additives in Perovskite Solar Cells: Trap States and Charge Carrier Mobility
15:45 - 16:00 B3-O4	Endre Horváth *(EPFL SB IPHYS LPMC , station 3, 1015, Lausanne)*, Massimo Spina, Bálint Náfrádi, Eric Bonvin, Márton Kollár, Andrzej Sienkievicz, Anastasiia Glushkova, Alla Arakcheeva, Zsolt Szekrényes, Hajnalka Tóháti, Katalin Kamarás, Richard Gaal, László Forró Organic-inorganic lead halide perovskite nanowires: formation mechanism and optoelectronic applications
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 B3-O5	Riva Alkarsifi *(Aix-Marseille University, Centre Interdisciplinaire de Nanosciences de Marseille CINaM, UMR CNRS 7325, Marseille, France)*, Florent Pourcin, Pavlo Perkhun, Mats Fahlman, Christine Videlot-Ackermann, Olivier Margeat, Jörg Ackermann Doped Metal Oxide Nanocrystals for Solution-Processed Hole Extraction Layers in High Efficient Organic Solar Cells
16:45 - 17:00 B3-O6	Petra Cameron *(Department of Chemistry, University of Bath)*, Dominic Ferdani, Samuel Pering, Isabella Poli, Peter Baker Understanding the Changes Introduced by Cation Substitution in Perovskite Solar Cells
17:00 - 17:15 B3-O7	Luis Pazos-Outon *(University of California, Berkeley, US)*, T. Patrick Xiao, Eli Yablonovitch Fundamental efficiency limit of lead iodide perovskite solar cells
17:15 - 17:30 B3-O8	Fabio Matteocci *(C.H.O.S.E-Univ. Tor Vergata)*, Emanuele Calabrò, Luigi Vesce, Alessandro Lorenzo Palma, Valentina Mirruzzo, Enrico Lamanna, Aldo Di carlo Perovskite solar modules: a new era for thin film PV technology
	Session C3 Chair: Udo Bach Room: Multi-junction Solar Cells
14:30 - 15:00 C3-IS1	Henk Bolink *(Instituto de Ciencia Molecular, Universidad de Valencia, C/ Catedrático J. Beltrán 2, 46980 Paterna, Spain)*, Lidon Gil-Escrig, Pablo P. Boix, Cristina Momblona, Jorge Avila, Daniel Perez del Rey, Michele Sessolo, Benedikt Daenekamp Fully Evaporated High Efficiency Single Junction and Tandem Perovskite based Solar Cells.
15:00 - 15:15 C3-O1	Mehrdad Najafi *(ECN – Solliance, High Tech Campus 21, 5656 AE, Eindhoven, The Netherlands)*, Valerio Zardetto, Dong Zhang, Maarten Dorenkamper, Francesco Di Giacomo, Ilker Dogan, Wiljan Verhees, Herbert Lifka, Alessia Senes, Paul Poodt, Bart Geerligs, Tom Aernouts, Sjoerd Veenstra, Ronn Andriessen Stable semi-transparent perovskite solar cells for 26.1%-Efficiency Perovskite/c-Si 4-Terminal tandem cell

15:15 - 15:30 C3-O2	César Omar Ramírez Quiroz *(Friedrich-Alexander University Erlangen-Nürnberg, Institute of Materials for Electronics and Energy Technology (I-MEET), Department of Materials Science and Engineering, Erlangen, Germany.)*, Pierre J. Verlinden, Xueling Zhang, Martin A. Green, Anita Ho-Baillie, Loïc M. Roch, Michael Salvador, Steve Albrecht, Tobias Unruh, Andreas Hirsch, Alán Aspuru-Guzik, Christoph J. Brabec, George D. Spyropoulos, Bernd Rech From 4T to 2T solution processed silicon/perovskite tandems solar cells
15:30 - 15:45 C3-O3	Dario Di Carlo Rasi *(Molecular Materials and Nanosystems, Eindhoven University of Technology, Netherlands)*, Martijn Wienk, Rene' Janssen Quadruple-junction polymer solar cells with four different complementary absorber layers
15:45 - 16:00 C3-O4	F. Javier Ramos *(IPVF, Institut Photovoltaïque d'Ile-de-France, 30 RD 128, 91120 Palaiseau, France)*, Sebastien Jutteau, Jorge Posada, Adrien Bercegol, Amelle Rebai, Thomas Guillemot, Romain Bodeux, Nathanaelle Schneider, Nicolas Loones, Daniel Ory, Cedric Broussillou, Gilles Goaer, Laurent Lombez, Jean Rousset Efficient MoOx-Free Semitransparent Perovskite Solar Cell for a 22.4% 4-T Tandem with a 3% Boost over Commercially-Available Al-BSF Si Cell
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 C3-O5	Peter Fiala *(Ecole Polytechnique Fédérale de Lausanne (EPFL), Institute of Microengineering (IMT) Photovoltaics and Thin-Film Electronics Laboratory (PV-Lab), Rue de la Maladière 71b, 2002 Neuchâtel, Switzerland.)*, Terry Chien-Jen Yang, Jérémie Werner, Florent Sahli, Matthias Bräuninger, Brett A. Kamino, Gizem Nogay, Fan Fu, Raphaël Monnard, Arnaud Walter, Soo-Jin Moon, Loris Barraud, Bertrand Paviet-Salomon, Laura Ding, Juan J. Diaz Leon, Mathieu Boccard, Matthieu Despeisse, Sylvain Nicolay, Bjoern Niesen, Quentin Jeangros, Cristophe Ballif Hybrid Fabrication Method for High Efficiency Monolithic Perovskite/Silicon Tandem Solar Cells
16:45 - 17:00 C3-O6	Miguel Anaya *(Institute of Materials Science of Seville, CSIC-US)*, Gabriel Lozano, Mauricio Calvo, Hernán Míguez Optical design to boost the performance of perovskite based tandem solar cells
17:00 - 17:15 C3-O7	Benjamin Smith *(SPECIFIC / Swansea University)*, Trystan Watson Semi Transparent Perovskite Solar Cells with Transparent Back Contacts
17:15 - 17:30 C3-O8	Tobias Abzieher *(Karlsruhe Institute of Technology, Light Technology Institute (LTI), Engesserstrasse 13, 76131 Karlsruhe, Germany)*, Jonas A. Schwenzer, Florian Sutterlüti, Michael Pfau, Erwin Lotter, Michael Hetterich, Uli Lemmer, Michael Powalla, Ulrich W. Paetzold Upscalable All-Evaporated Perovskite Solar Cells Based on Inorganic Hole Transport Layers
	Session D3 Chair: Koen Vandewal Room: Electrical Characterization of Perovskites
14:30 - 15:00 D3-IS1	Dieter Neher *(nstitute of Physics and Astronomy, University of Potsdam)*, Christian Wolff, Martin Stolterfoht Hybrid Multilayer Design for Efficient Perovskite-based Solar Cells
15:00 - 15:15 D3-O1	Tereza Schönfeldová *(Laboratory of Nanostructures and Nanomaterials, Institute of Physics, Academy of Sciences of the Czech Republic, v. v. i., Cukrovarnická 10, 162 00 Prague, Czech Republic)*, Jakub Holovský, Zdeňka Hájková, Lucie Abelová, Neda Neykova, Ha Stuchlíková, Jan Kočka, Stefaan De Wolf, Antonín Fejfar, Martin Ledinský Study of Static and Dynamic Disorder in Organic-Inorganic Halide Perovskites
15:15 - 15:30 D3-O2	Andreas Baumann *(Bavarian Center for Applied Energy Research, Magdalene-Schoch-Str. 3, 97074 Würzburg, Germany)*, Mathias Fischer, Kristofer Tvingstedt, Vladimir Dyakonov Doping profile in planar perovskite solar cells
15:30 - 15:45 D3-O3	David Kiermasch, Andreas Baumann, Mathias Fischer, Vladimir Dyakonov, Kristofer Tvingstedt *(Experimental Physics VI, Julius Maximillian University of Würzburg, 97074 Würzburg, Germany)* On the assignment of carrier lifetimes in high absorption coefficient thin film solar cells via electrical transient methods

15:45 - 16:00 D3-O4	Anna Todinova *(Molecular Materials and Nanosystems, Eindhoven University of Technology, Netherlands)*, Lidia Contreras-Bernal, Manuel Salado, Shahzada Ahmad, Neftali Morillo, Jesus Idigoras, Juan Antonio Anta Choice of equivalent circuit for impedance spectra of perovskite cells: Universal approach and empirical analysis.
16:00 - 16:30	**Coffee Break**
16:30 - 16:45 D3-O5	Matt Carnie *(1SPECIFIC, College of Engineering, Swansea University Bay Campus, Fabian Way, SA1 8EN Swansea, United Kingdom)*, Adam Pockett, Jenny Baker, Francesca De Rossi, Trystan Watson Recombination and Ion Migration in Triple Mesoporous Perovskite Solar Cells
16:45 - 17:00 D3-O6	Tian Du *(Department of materials, Imperial College London)*, Weidong Xu, Jinhyun Kim, Matyas Daboczi, Ji-seon Kim, James Durrant, Martyn McLachlan Charge extraction limits open-circuit voltage in inverted planar perovskite solar cells
17:00 - 17:15 D3-O7	Meltem F. Ayguler *(Department of Chemistry and Center for Nanoscience (CeNS) University of Munich (LMU))*, Alexander G. Hufnagel, Philipp Rieder, Michael Wussler, Wolfram Jaegermann, Thomas Bein, Vladimir Dyakonov, Michiel L. Petrus, Andreas Baumann, Pablo Docampo The Influence of Fermi Level Alignment with Tin Oxide on the Hysteresis of Perovskite Solar Cells
17:15 - 17:30 D3-O8	Philipp Rieder *(Experimental Physics VI, Julius Maximillian University of Würzburg, 97074 Würzburg, Germany)*, Yinghong Hu, Meltem F. Aygüler, Alexander G. Hufnagel, Michiel L. Petrus, Pablo Docampo, Kristofer Tvingstedt, Andreas Baumann, Thomas Bein, Vladimir Dyakonov Reduced defect density in triple and quadruple cation perovskite solar cells by incorporation of Cesium
17:30 - 18:00	**Closing ceremony**

Poster Contribution

003	Saeid Rafizadeh *(Fraunhofer Institute for Solar Energy Systems ISE)*, Karl Wienands, Laura E. Mundt, Alexander J. Bett, Patricia S.C. Schulze, Ludmila Cojocaru, Lucio Claudio Andreani, Martin Hermle, Stefan Glunz, Jan Christoph Goldschmidt Record Stabilized Efficiencies Exceeding 18% for Hybrid Evaporation-Spincoating Planar Perovskite Solar Cells
005	Haining Tian *(Physical Chemistry, Department of Chemistry-Ångström Laboratory, Uppsala University, Box 523, SE-751 20 Uppsala, Sweden)*, Lei Tian, Jens Föhlinger Solid State p-Type Dye Sensitized Core-Shell Solar Cells
006	Yue Hu *(Michael Grätzel Center for Mesoscopic Solar Cells, Wuhan National Laboratory for Optoelectronics)*, Yaoguang Rong, Hongwei Han Improved Performance of Printable Perovskite Solar Cells with Bifunctional Conjugated Organic Molecule
007	Yaoguang Rong *(Michael Grazel Center for Mesoscopic Solar Cells, Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology,)*, Yue Hu, Xiaomeng Hou, Mi Xu, Hongwei Han Ambient-processed efficient and stable printable mesoscopic perovskite solar cells
008	Cho Fai Jonathan Lau *(Australian Centre for Advanced Photovoltaics, School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney 2052, Australia)*, Xiaofan Deng, Jianghui Zheng, Jincheol Kim, Zhilong Zhang, Meng Zhang, Jueming Bing, Benjamin Wilkinson, Long Hu, Robert Patterson, Shujuan Huang, Anita Ho-Baillie Enhanced Performance via Partial Pb Replacement with Ca for CsPbI3 Perovskite Solar Cell exceeding 13% Power Conversion Efficiency
010	Isabella Poli *(Centre for Sustainable Chemical Technologies, University of Bath)*, Salvador Eslava, Petra Cameron Simple solution-processing strategy for halide perovskite solar cells with enhanced stability towards moisture
030	Lidia Contreras-Bernal *(Área de Química Física, Universidad Pablo de Olavide, E-41013, Sevilla, Spain)*, Clara Aranda, Marta Valles-Pelarda, Thi Tuyen Ngo, Susana Ramos-Terrón, Juan Jesús Gallardo, Javier Navas, Antonio Guerrero, Iván Mora-Seró, Jesús Idígoras, Juan A Anta Homeopathic Perovskite Solar Cells: Effect of Humidity During Fabrication on the Performance and Stability of the Device

036	Alejandra Maria Castro Chong *(Departamento de Física Aplicada, CINVESTAV-IPN Mérida)*, Tom Aernouts, Gerko Oskam, Weiming Qiu, Joao Bastos Influence of the Presence of a Mesoporous Electron Extraction Layer on the Stability of Hybrid Perovskite Solar Cells.
045	Markus Kohlstädt *(University of Freiburg, Freiburg Materials Research Center (FMF))*, Mohammed A. Yakoob, Jan P. Herterich, Laura E. Mundt, Uli Würfel From cell to mini-module – blade coating and controlled drying for planar inverted perovskite solar cells
046	Bart Roose *(Cavendish Laboratory, University of Cambridge, JJ Thomson Avenue, Cambridge CB3 0HE, United Kingdom)* Engineering metal oxides for UV-stable perovskite solar cells
050	Dominic Ferdani *(Centre for Sustainable Chemical Technologies, University of Bath)*, Andrew Johnson, Simon Lewis, Peter Baker, Petra Cameron Investigating Mixed Cation Perovskites with Muon Spin Relaxation
051	Samuel Pering *(Department of Chemistry, University of Bath)*, Petra Cameron A-site Cationic Additives: What Do They Do?
053	Joel Smith *(The University of Sheffield)*, Onkar Game, Michael Wong-Stringer, Melissa McCarthy, Benjamin Freestone, Claire Greenland, Thomas Routledge, Ian Povey, David Lidzey Electron beam evaporation of tin oxide layer for planar perovskite solar cells
054	Sunsun Li *(Institute of Chemistry,Chinese Academy of Sciences)*, Wenchao Zhao, Long Ye, Harald Ade, Jianhui Hou Rational Molecular Design of Non-fullerene Acceptor towards High-efficiency Polymer Solar Cells
055	Dong Ding *(Imperial College London, Department of Chemistry and Centre for Plastic Electronics)* Recent Advances in Solution-Processed Hybrid Nanostructured Tin Monosulfide Solar Cells
069	Luis Lanzetta *(Imperial College London, Department of Chemistry and Centre for Plastic Electronics)*, Sozos Michael, Chloe Wong, Saif A. Haque Layered Organic Tin Halide Perovskite: Interfacial Charge Carrier Dynamics and Device Applications
073	Karen L. Valadez-Villalobos *(Department of Applied Physics, CINVESTAV-IPN, Mérida, Yuc. 97310, México)*, Jesús Idígoras, Lilian Pérez, Juan A. Anta, Gerko Oskam Effect of Different Materials as Electron Selective Contacts in the Performance of Perovskite Solar Cells
078	Su Htike Aung, Lichen Zhao, Kazuteru Nonomura, Shaik M. Zakeeruddin, Nick Vlachopoulos *(Laboratory of Photomolecular Science, Department of Chemical Science and Engineering, Swiss Federal Institute of Technology in Lausanne, EPFL--ISIC-FSB-LSPM, Station 6, CH-1015 Lausanne, Switzerland)*, Anders Hagfeldt, Michael Grätzel Electrochemically deposited blocking underlayers in efficient n-p-i perovskite solar cells
082	Yi-Bing Cheng *(Monash University, Department of Materials Science and Engineering)*, Jinbao Zhang, Quentin Daniel, Tian Zhang, Xiaoming Wen, Bo Xu, Licheng Sun, Udo Bach Effects of dopants in hole transport material (HTM) for perovskite solar cells
084	Yinghong Hu *(Department of Chemistry and Center for NanoScience (CeNS), LMU Munich, Butenandtstr. 11, 81377 Munich, Germany)*, Meltem F. Aygüler, Michiel L. Petrus, Thomas Bein, Pablo Docampo Impact of Rubidium and Cesium Cations on the Moisture Stability of Multiple-Cation Mixed-Halide Perovskites
086	Sandy Sanchez *(University of Fribourg, Adolphe Merkle Institute)* Flash infrared annealing for perovskite solar cells
090	Lei Tian *(Uppsala University, Sweden)* Charge transfer kinetics in a Core-Shell NiO-Dye-TiO2 Mesoporous Film
094	Liang Wang *(National Center for Nanoscience and Technology)*, Fengjing Liu, Xiaoyong Cai, Chao Jiang A New Strategy of Methylamine Iodide Solution Assisted Repair for Pinhole-Free Perovskite Films in High-Efficiency Photovoltaics under Ambient Conditions
097	Bart Saes *(Molecular Materials and Nanosystems, Eindhoven University of Technology, Netherlands)*, Michael Pätzel, Martin Herder, Martijn Wienk, Rene Janssen, Stefan Hecht Photochromism in Bulk Heterojunction Organic Solar Cells

098	Bowon Yoo *(Department of Chemistry, Imperial College London, South Kensington Campus, London SW7 2AZ, United Kingdom)*, Dong Ding, Luis Lanzetta, Jose Marin-Beloqui, Xiangnan Bu, Saif Haque Thin layer for efficient charge separation of bismuth iodide thin films for improved carrier transportation for photovoltaic application
103	Sebastian Svanström *(Uppsala University, Sweden)*, Jesper Jacobsson, Håkan Rensmo, Ute Cappel In-situ chemical characterisation of perovskite interfaces using XPS
105	Konstantins Mantulnikovs *(Laboratory of Physics of Complex Matter, École Polytechnique Fédérale de Lausanne, CH-1015 Lausanne, Switzerland)*, Anastasiia Glushkova, Péter Matus, Luka Ćirić, Márton Kollár, László Forró, Endre Horváth, Andrzej Sienkiewicz Morphology and photoluminescence of CH3NH3PbI3 deposits on non-planar, strongly curved substrates
111	Artiom Magomedov *(Department of Organic Chemistry, Kaunas University of Technology)*, Ernestas Kasparavičius, Kasparas Rakstys, Sanghyun Paek, Natalia Gasilova, Kristijonas Genevičius, Gytis Juška, Tadas Malinauskas, Mohammad Khaja Nazeeruddin, Vytautas Getautis Pyridination of Hole Transporting Materials in Perovskite Solar Cells
115	Wanning Li *(Institute of Chemistry,Chinese Academy of Sciences)*, Long Ye, Sunsun Li, Huifeng Yao, Harald Ade, Jianhui Hou A High Efficiency Organic Solar Cell Enabled by Strong Intramolecular Electron Push-Pull Effect of Non-Fullerene Acceptor
118	Jan-Henrik Smått *(Laboratory of Physical Chemistry, Åbo Akademi University)*, Muhammad Talha Masood, Syeda Qudsia, Simon Sandén, Oskar J. Sandberg, Mathias Nyman, Paola Vivo, Peter D. Lund, Ronald Österbacka Utilizing the Dip Coating Method to Prepare Uniform Contact Materials for Perovskite Solar Cells
121	Runnan Yu *(Institute of Chemistry, Chinese Academy of Sciences (ICCAS))*, Jianhui Hou Two Well-miscible Acceptors Work as One for Efficient Fullerene-free Organic Solar Cells
123	Wallace Choy *(Department of Electrical and Electronic Engineering, The University of Hong Kong, Pok Fu Lam Road, Hong Kong SAR, China)* New Class of Green Low-Temperature Solution-Processed Metal Oxides for High Performance Organic Solar Cells
126	Blaise Godefroid *(Université libre de Bruxelles)*, Gregory Kozyreff Multi-resonance tandem geometry for an improved light trapping at long-wavelength in thin-film solar cells
127	Sebastian F. Hoefler *(Institute for Chemistry and Technology of Materials (ICTM), Graz University of Technology, Stremayrgasse 9, 8010 Graz, Austria)*, Thomas Rath, Mathias Hobisch, Nadiia Pastukhova, Egon Pavlica, Gvido Bratina, Dorothea Scheunemann, Sebastian Wilken, Gregor Trimmel Assessing the Role of Polymer Molecular Weight for High-Performance Indacenodithiophene-Based Fullerene-Free Organic Solar Cells
135	Waldemar Kaiser *(Technical University of Munich)*, Alessio Gagliardi Enhanced thermodynamic efficiency study of excitonic solar cells
144	Atanas Katerski *(Department of Materials and Environmental Technology, Tallinn University of Technology, Ehitajate tee 5, 19086, Tallinn, Estonia.)*, Jako Siim Eensalu, Erki Kärber, Ilona Oja Acik, Arvo Mere, Malle Krunks TiO2/Sb2S3 by ultrasonic spray method for rapid fabrication of a hybrid solar cell
145	Catherine Suenne De Castro *(Applied Photochemistry Group, SPECIFIC, Materials Research Centre, College of Engineering, Swansea University, Bay Campus, Fabian Way, Swansea SA1 8EN, United Kingdom)* Photophysical Characterisation of Perovskites
150	Viresh Dutta *(Indian Institute of Technology Delhi, New Delhi-India)* Synthesis of Bismuth Iodide Perovskite Thin film by Spray Technique for Solar Cell Applications
155	Yuriy Luponosov *(Enikolopov Institute of Synthetic Polymer Materials of Russian Academy of Sciences, Moscow, Russia)*, Alexander Solodukhin, Sergei Ponomarenko Alkyl-free D-A small molecules based on triphenylamine and phenyldicyanovinyl blocks as promising class of stable materials for organic solar cells
160	Denys Shevchenko *(Solomya)* Mass Spectrometry Analysis of Hybrid and Organic Solar Cells

166	Robert Baker *(Centre for Sustainable Chemical Technologies and Department of Chemistry, University of Bath)*, Xinxing Liang, Petra Cameron Controllable Synthesis of Perovskite Quantum Dots using Flow Chemistry
177	Pedro Rodríguez-Cantó *(INTENANOMAT S.L, C/ Catedrático José Beltrán 2, 46980 Paterna, Spain.)*, Eduardo Aznar, Juan P. Martínez-Pastor, Rafael Abargues Novel transparent conducting polymeric materials suitable for hole transport in perovskite-based devices
178	Sixto Gimenez *(Institute of Advanced Materials (INAM), Universitat Jaume I)*, Drialys Cardenas-Morcoso, Miguel Garcia-Tecedor, Roser Fernandez-Climent Solar fuels production with metal oxide semiconductor materials
183	Enrico Lamanna *(CHOSE (Centre for Hybrid and Organic Solar Energy), Department of Electronic Engineering, University of Rome - Tor Vergata)*, Emanuele Calabrò, Fabio Matteocci, Aldo Di Carlo, Luca Serenelli, Mario Tucci, Paola Delli Veneri, Vera La Ferrara, Antonella De Maria Enhancing IR transmittance of Perovskite Solar Cells for 2-terminal Silicon/Perovskite tandem devices
185	Emanuele Calabrò *(Centre for Hybrid and Organic Solar Energy (CHOSE), Department of Electronic Engineering, University of Rome TOR Centre for Hybrid and Organic Solar Energy (CHOSE), Department of Electronic Engineering, University of Rome TOR VERGATA)*, Fabio Matteocci, Enrico Lamanna, Aldo Di Carlo Improving the efficiency of Low temperature planar MAPbI3 Perovskite Solar Cells using a Cesium doped SnO2
189	Sigalit Aharon *(The Hebrew University of Jerusalem, The Institute of Chemistry, Casali Center for Applied Chemistry, Jerusalem, Israel)*, Lioz Etgar The effect of the alkylammonium cation on the optical and physical properties of organic-inorganic perovskite nanoparticles
196	Narges Yaghoobi Nia *(CHOSE. (Centre for Hybrid and Organic Solar Energy), University of Rome "Tor Vergata", via del Politecnico 1, Rome 00133, Italy.)*, Fabrizio Giordano, Mahmoud Zendehdel, Alessandro Lorenzo Palma, Lucio Cinà, Fabio Matteocci, Shaik Mohammed Zakeeruddin, Michael Graetzel, Aldo Di Carlo A Scalable Crystal Engineering Approach for Fabrication of Efficient and Stable Multi Cation/Anion Perovskite Solar Cells and Modules Via Sequential Deposition in Ambient Condition
201	Petra Matunová *(Institute of Physics ASCR)*, Vít Jirásek, Bohuslav Rezek Effects of different nanodiamond surface terminations on HOMO/LUMO separation in complexes with polypyrrole: a DFT study.
207	Marius Franckevičius *(Center for Physical Sciences and Technology, Saulėtekio Av. 3, LT-10257 Vilnius, Lithuania)*, Rokas Gegevičius, Marius Treideris, Vidmantas Gulbinas The Role of Oxide Layer on the Gain Enhancement in Hybrid Perovskite Photodetectors
208	Jimmy Mangalam *(Institute for Chemistry and Technology of Materials (ICTM), Graz University of Technology, Stremayrgasse 9, 8010 Graz, Austria)*, Thomas Rath, Stefan Weber, Birgit Kunert, Gregor Trimmel Functionalized benzylphosphonic acid SAMs for modification of nickel oxide hole transport layers in lead halide perovskite solar cells
210	Ningning Liang *(Institute of Chemistry, Chinese Academy of Science, Beijing 100190, PR China)*, Kai Sun, Jianhui Hou, Zhaohui Wang Near-Infrared Non-Fullerene Electron Acceptors Based on Terrylene Diimides for Organic Solar Cells
211	Simone Meroni *(SPECIFIC, Swansea University)*, Katherine Hooper, Francesca De Rossi, Jennifer Baker, Trystan Watson Design and Optimisation of Fully Printable Perovskite Solar Modules by Scribing Method
213	Osbel Almora *(Institute of Materials for Electronics and Energy Technology (i-MEET), Friedrich-Alexander Universität Erlangen-Nürnberg, Martensstr. 7, 91058 Erlangen, Germany)*, Kyung Taek Cho, Sadig Aghazada, Iwan Zimmermann, Gebhard J. Matt, Christoph J. Brabec, Nazeeruddin Mohammad Khaja, Germà Garcia-Belmonte Discerning Recombination Mechanisms in Perovskite Solar Cells including 2D/3D Interfaces and Mixed Anions/Cations Absorbers

214	Ariadni Boziki *(Swiss Federal Institute of Technology, EPFL, ISIC, LCBC, CH-1015, Lausanne, Switzerland)*, José A Flores-Livas, Daniele Tomerini, Sandip De, Michele Ceriotti, Stefan Goedecker, Ursula Röthlisberger Structure discovery of organic-inorganic halide perovskites
216	Dibyajyoti Ghosh *(Department of Chemistry, University of Bath)* Good Vibrations: Locking of Octahedral Tilting in Mixed-Cation Iodide Perovskites for Solar Cells
217	Renan Escalante *(Centro de Investigación y de Estudios Avanzados del IPN)*, Dena Pourjafari, Alberto Vega-Poot, Juan Anta, Gerko Oskam Dye-sensitized solar cells: comparison between different TiO2 phases and scale-up
218	Masatoshi Yanagida *(Global Research Center for Environment and Energy based on Nanomaterials Science (GREEN), National Institute for Materials Science (NIMS))*, Md Bodiul Islam, Namrata Pant, Yasuhiro Shirai, Kenjiro Miyano PbI perovskite solar cells consisted of RF sputtered NiOx as hole transport layer
220	Jian Qing, Xiao-Ke Liu *(Department of Physics Chemistry and Biology Linkoping University 58183 Linkoping , Sweden)*, Mingjie Li, Chun-Sing Lee, Tze Chien Sum, Feng Gao Aligned and Graded Type-II Ruddlesden-Popper Perovskite Films for Efficient Solar Cells
221	Mahdi Alqahtani *(Electronic & Electrical Engineering - University College London)*, Fan Cui, Jiang Wu Protective nanostructure for an efficient and stable water-splitting GaAs photoanode
223	Andrea Rubino *(Multifunctional Optical Materials Group, Instituto de Ciencia de Materiales de Sevilla, Consejo Superior de Investigaciones Científicas-Universidad de Sevilla)*, Miguel Anaya, Mauricio Calvo, Juan Galisteo, Hernan MIguez Highly emissive hybrid MAPbX3 perovskite nanocrystals flexible films
224	David Tiede *(Instituto de Ciencia de Materiales de Sevilla (ICMS-CSIC))*, Juan F. Galisteo-López, Miguel Anaya, Mauricio E. Calvo, Hernán Míguez Post-fabrication halide treatment in CH3NH3PbBr3 single crystals as a means to improve its photoluminescence
225	Claire Greenland *(Department of Physics and Astronomy, University Of Sheffield)*, Sai Rajendran, Onkar Game, David Lidzey Temperature-dependent charge carrier dynamics in (FAPbI3) 0.85 (MABr)0.15 thin films
226	Arvydas Ruseckas *(School of Physics and Astronomy, University of St. Andrews)*, Scott J. Pearson, Gordon J. Hedley, Ifor D.W. Samuel Charge recombination via polymer triplet state in PTB7:fullerene blends
227	Anastasiia Glushkova *(EPFL SB IPHYS LPMC, Lausanne, CH-1015, Switzerland)*, Alla Arakcheeva, Phil Pattison, Marton Kollar, Pavao Andricevic, Balint Nafradi, Laszlo Forro, Endre Horvath Influence of the organic cation disorder on photoconductivity in ethylenediammonium lead iodide, NH3CH2NH2NH3PbI4
228	Alberto Viñas *(University of Copenhagen)*, Jonas Lissau, Henrik Gotfredsen, Martyn Jevric, Mogens Brønsted Nielsen, Theis Sølling Irreversible Energy Transfer in Fullerene Derivatives: through-Space Energy Transfer for Triplet Harvesting
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