

International Conference on Perovskite Thin Film Photovoltaics (ABXPV)

Barcelona, Spain, 3-4 March 2016

Chairs: Nam-Gyu Park and Emilio Palomares

Conference Program

3 March– Day 1 Thursday	
7.30-8.45 Registration	
8.45-9.00 Opening	
Plenary Room: A2+A3 Chair: Nam-Gyu Park	
09.00	<u>Anders Hagfeldt</u>
G1.I1	The Versatility of Mesoscopic Solarcells
09.30	<u>Saiful Islam</u>
G1.I2	Ionic Transport and Intrinsic Point Defects in Hybrid Halide Perovskites
10.00	<u>Prashant Kamat</u>
G1.I3	Role of Halide Ions in the Making of Organic Lead Halide Perovskites
10.30	Coffee Break
11.00	
Plenary Room: A2+A3 Chair: Anders Hagfeldt	
11.00	<u>Pablo Docampo</u>
G1. 14	A Short- and Long-term View on Perovskite Optoelectronics
11.30	<u>Tom Aernouts</u>
G1. 15	Perovskite based PV Modules for Stand-alone and Mechanically Stacked Applications
12.00	<u>Hayase Shuzi</u>
G1.I6	Sn based Perovskite Solar Cells
12.30	<u>Germà Garcia-Belmonte</u>
G1.O1	Ionic Charging and Reactivity at Interfaces in Hybrid Lead Halide Perovskites
12.45	<u>Lioz Etgar</u>
G1.O2	Highly Efficient Hole Conductor Free Perovskite based Solar Cells
13.00- 15.00	Lunch Time
Session A: Room A2+A3 Chair: Prashant Kamat	
15.00	<u>Silvia Colodrero</u>
A1.O1	Efficient Hybrid Organic-Inorganic Perovskite Solar Cells Incorporating Different Conjugated Polymers as Hole Transporting Materials
15.15	<u>Paul Pistor</u>

A1.02	Multi-wavelength Raman Spectra of Methyl Ammonium Lead Halides: Sample Characterization and Degradation
15.30	<u>Emanuele Smecca</u>
A1.03	Experimental and Theoretical Study of CH ₃ NH ₃ PbI ₃ Degradation under Air, Nitrogen and Vacuum Condition
15.45	<u>Henk Bolink</u>
A1.04	Fullerene Imposed High Voc in Evaporated Perovskite based Solar Cells
16.00	<u>Teresa S. Ripolles</u>
A1.05	High-efficient Cesium Perovskite Solar Cells Influenced by Perovskite Crystal Structure and Hole Transport Material
16.15	<u>Seigo Ito</u>
A1.06	Material Exchange Property of Organo Lead Halide Perovskite with Hole-Transporting Materials
16.30	<u>Po-Shen Shen</u>
A1.07	Low Pressure Hybrid Chemical Vapor-assisted Perovskite Crystallization for Efficient Solar Cells Application
16.45	<u>Andrew Pearson</u>
A1.08	Oxygen Degradation in Mesoporous Al ₂ O ₃ / CH ₃ NH ₃ Pb _{3-x} Cl _x Perovskite Solar Cells - Kinetics and Mechanisms
17.00	Industry talk
17.00	<u>Saule</u>
17.07	<u>Dyesol</u>

Session B: Room A1

Chair: Annamaria Petrozza

15.00	<u>Juan Antonio Anta</u>
B1.01	Universal Features of Electron Dynamics in Solar Cells with TiO ₂ Contact: from Dye Solar Cells to Perovskite Solar Cells
15.15	<u>Philip Calado</u>
B1.02	Transients of the Transient Photovoltage Studies: Probing the Mechanisms underlying Hysteresis in Perovskite Solar Cells
15.30	<u>Antonio Guerrero</u>
B1.03	Coordination Chemistry Limits Crystallization of Lead Halide Perovskites
15.45	<u>Ignasi Burgués-Ceballos</u>
B1.04	Solvent Engineering to Control the Morphology of Hybrid Organic-Inorganic Halide Perovskites
16.00	<u>Mikael Kepenekian</u>
B1.05	Electronic, Optoelectronic and Spin Properties of 3D and Layered Hybrid Perovskites
16.15	<u>Eline M.Hutter</u>
B1.06	Thermal Ionization of Impurities Determines the Charge Carrier Dynamics in Methylammonium Lead Iodide
16.30	<u>María C. Gélvez-Rueda</u>
B1.07	Charge Mobility and Recombination Dynamics in Hybrid Halide Perovskites
16.45	<u>Florian Staub</u>

B1.08	Understanding the Time-resolved Photoluminescence in Perovskite Absorber Materials for Photovoltaic Applications
17.15 – 19.00	Poster Session and Exhibition
20:30 – 22:30	Social dinner
4 March– Day 2 Friday	
	Plenary Room: A2+A3 Chair: Emilio Palomares
09.00 G2.I1	<u>Filippo De Angelis</u> Mobile Ions in Organo Halide Perovskites: Dynamics and Electronic Properties
09.30 G2.I2	<u>Wolfgang Tress</u> Charge Carrier Recombination in Perovskite Solar Cells
10.00 G2.I3	<u>Annamaria Petrozza</u> Interface Engineering in Metal Halides Perovskites: from Molecules to Devices
10.30 - 11.00	Coffee break
	Plenary Room: A2+A3 Chair: Antonio Guerrero
11.00 G2. 14	<u>Alex Jen</u> An Integrated Approach Combining Compositional and Interfacial Material Engineering to Improve the Performance and Stability of Perovskite Solar Cells
11.30 G2. 15	<u>Hyun Suk Jung</u> Efficient Electron Collecting Nanomaterials in Perovskite Solar Cells
12.00 G2.I6	<u>Trystan Watson</u> Designing the Fabrication Routes for Perovskite Modules
12.30 G2.O1	<u>Hongwei Han</u> Stable Fully Printable Perovskite Solar Cells based on Triple Mesoscopic Layers
12.45 G2.O2	<u>ArieZaban</u> Origin of the Open Circuit Potential in Perovskite Solar Cells with a Mesoporous TiO ₂ Scaffold
13.00- 15.00	Lunch time
	Session A: Room A2+A3 Chair: Wolfgang Tress
15.00 A2.O1	<u>Cecile Charbonneau</u> Impact of the Porosity and Surface Chemistry of TiO ₂ Mesoporous Films on the Crystallization of Lead-halide Perovskite Films and Performance of Solar Cells
15.15 A2.O2	<u>Satoshi Uchida</u> The Origin of Hysteresis in I-V Curve for Planar Structure Perovskite Solar Cells Rationalized with Surface Boundary Induced Capacitance Model
15.30	<u>Ana Flavia Nogueira</u> Enhancing Surface Stability of CsPbX ₃ (X=Cl, Br, I) Perovskite Quantum Dots for Optoelectronic

A2.03	<u>Applications</u>
15.45	<u>Erik Johansson</u>
A2.04	Bismuth Perovskites for Solar Cells
16.00	<u>Mukundan Thelakkat</u>
A2.05	Air-stable Perovskite towards Highly Reproducible and Efficient Solar Cells
16.15	<u>Hugh Hillhouse</u>
A2.06	Quasi-fermi Level Splitting and Stability of Combinatorial Libraries of High Bandgap Hybrid Perovskites and their Use in Tandem Solar Cells with CIGS
16.30	<u>Yulia Galagan</u>
A2.07	Towards Roll-to-roll Processing of Perovskite Solar Cells
16.45	<u>Sebastian Pont</u>
A2.08	Critical Degradation Analysis of Mixed Ion Perovskites in Controlled Light, Humidity and Atmospheric Conditions
17.00	<u>Achilleas Savva</u>
A2.09	Planar Perovskite-based Solar Cells Incorporating Doped Metal Oxides in the Back Electrode

Session B: Room A1

Chair: Etgar Lioz

15.00	<u>Gerrit Boschloo</u>
B2.01	Long-lived Photoinduced Absorption Effects in Perovskite Solar Cells: Correlation between Electric Fields and Ion Movements
15.15	<u>Tom Savenije</u>
B2.02	Opto-electronic Properties of Ultra-smooth CH ₃ NH ₃ PbI ₃ Films Made by Physical Vapour Deposition
15.30	<u>Martin Neukom</u>
B2.03	Physics of Perovskite Solar Cells: from Microseconds to Minutes
15.45	<u>Gabriel Lozano</u>
B2.04	Optical Design of Perovskite Solar Cells
16.00	<u>Juan F. Galisteo-López</u>
B2.05	Environmental Effectson the Photophysics of CH ₃ NH ₃ PbI ₃
16.15	<u>Ferdinand Grozema</u>
B2.06	Charge and Excited State Dynamics in 2D Halide Perovskites
16.30	<u>Nicolas Renaud</u>
B2.07	Impact of Dipole Organization on Optoelectronic Properties: a Computational Approach
16.45	<u>Jan-Christoph Hebig</u>
B2.08	Organic Inorganic Hybrid Bismuth Perovskites
17.00	<u>Syedali Emami</u>
B2.09	Laser Assisted Glass-Glass Encapsulation for Perovskite Solar Cells

Poster Contribution

3 March– Day 1 Thursday

17.00-19.00 Poster session

P1	Lucia Navarro, <u>Valero G. Alfonso</u> , Elena Mas-Marzá, Francisco Fabregat-Santiago Alternative Configuration for Perovskite Solar Cell
P2	<u>Marine E.F. Bouduban</u> , Andrès Burgos Caminal, Rachele Ossola, Jacques-E. Moser Photoinduced Electron Transfer at the Surface of MAPbBr ₃ Perovskite Colloidal Nanoparticles
P3	<u>Jia-Shin Chen</u> , Po-Shen Shen, Yu-Hsien Chiang, Ming-Hsien Li, Peter Chen Efficient Methylammonium Lead Iodide and Formamidinium Lead Iodide Perovskite Solar Cells by Low Pressure Chemical Vapor Deposition
P4	Emilio Juarez-Perez, Esteban Climent-Pascual, Alicia de Andrés, Carmen Munuera, Iván Mora-Seró, Juan Bisquert, <u>Carmen Coya</u> Influence of the Substrate on Photoluminescence Properties of Solution-processed CH ₃ NH ₃ PbI ₃ -xCl _x Thin Films
P5	<u>Morteza Eslamian</u> , Fatemeh Zabihi Ultrasonic Substrate Vibration-assisted Drop-casting and Spray Coating as Versatile Scalable Techniques for the Fabrication of Thin Films in Perovskite Solar Cells
P6	<u>Silvia Leticia Fernandes</u> , A. Véron, F. A. Nüesch, C.F.O. Graeff, E.Longo, M.A. Zaghete Influence of the Thickness of Nb ₂ O ₅ Blocking Layer on the Performance of Perovskite Solar Cells
P8	Gee Yeong Kim, Bich Phuong Ngyuen, Juran Kim, Hye-Jin Jin, <u>William Jo</u> , Byeong Jo Kim, Hyun Suk Jung, Dae Han Kim, Sung Ryul Pae, Byungha Shin Roles of Grain Boundaries in Carrier Transport of CH ₃ NH ₃ Pb(I,Br) ₃ Perovskite Solar Cells
P9	<u>Lukas Kegelmann</u> , Steve Albrecht, Lars Korte, Dieter Neher, Bernd Rech Perovskite Absorber and Device Characteristics for Different Low-temperature Processed Electron Transport Materials
P10	<u>Claudia Lermer</u> , Susanne Birkhold, Igor L. Moudrakovski, Lukas Schmidt-Mende, Bettina V. Lotsch Towards Low-dimensional Hybrid Perovskites with Fluorinated Spacers
P11	Yegraf Reyna, Manuel Salado, Samrana Kazim, Amador Pérez, Shahzada Ahmad, <u>Monica Lira-Cantu</u> Stability of Perovskite Solar Cells Following the ISOS-O-2 Protocol: Outdoor Testing in Barcelona, Spain (41.30 °N, 2.09 °W)
P12	<u>Pilar Lopez-Varo</u> , Luca Bertoluzzi, Juan Antonio Jimenez-Tejada, and Juan Bisquert Modeling Capacitive Effects on the Hysteresis of Perovskite Solar Cells
P13	<u>Sudeep Maheshwari</u> , Nicolas Renaud, Tom Savenije, Ferdinand Grozema Impact of Dipole Orientation on the Band Gap of Perovskites: A Density Functional Study
P14	Marta Sans, Jose M. Marin-Beloqui, Emilio Palomares, <u>Eugenia Martinez-Ferrero</u> Inorganic Nanoparticles for the Construction of Solution Processed Perovskite-based Solar Cells
P15	Rafael S. Sanchez, <u>Elena Mas-Marzá</u> Light-induced Effects on Spiro-OMeTAD Films and Hybrid Lead Halide Perovskite Solar Cells
P16	Rick Hamilton, <u>Torben Nielsen</u> M-LMS Mercury Lab Management System for PV Device Data Analysis
P17	<u>Ana Flavia Nogueira</u> , Gabriela Gava Sonai, Kati Miettunen, Armi Tiihonen, Peter Lund Quasi-solid Cobalt Electrolyte with PEO Based Polymer for Dye Sensitized Solar Cells
P18	Alejandra Castro Chong, Karen Valadez Villalobos, David Meneses Rodriguez, Oscar Arés Muzio, <u>Gerko Oskam</u>

	Preparation of Compact TiO ₂ Blocking Layers for Application in Perovskite-based Solar Cells
P19	<u>Arun Paraecattil</u> , Jelissa Risse, Joel Teuscher, Ahmad Zadeh, Jacques Moser Ultrafast Electro-Modulated Differential Absorption Spectroscopy and THz Spectroscopic Investigation of Carrier Dynamics in CH ₃ NH ₃ PbI ₃ Perovskite Films
P21	Erik Ahlswede, Daniela Mueller, <u>Moritz Schultes</u> , Cordula Wessendorf CdS as a Suitable Electron Conductive Interlayer for Perovskite Solar Cells
P22	<u>Leyla Shooshtari</u> , Antonio Guerrero, Raheleh Mohammadpour, Azam Irajizad, Juan Bisquert Investigation of Cuprous Oxide (Cu ₂ O) as Hole Transport Layer in Hybrid Lead Halide Perovskite Solar Cells
P23	<u>Marco Stella</u> Roll-to-Roll Processes for Photovoltaic Device Printing at Eurecat
P24	<u>Philip Walsh Atkins</u> , Christopher Eames, M. Saiful Islam Perovskite Halides: What Are the Defect and Ion Migration Properties?
P25	<u>Yi Wang</u> , Xi-Cheng Ai Quantitative Expression of Multiple-trap Limited Charge Recombination in Meso-structured Perovskite Solar Cells
P26	<u>Scot Wheeler</u> , Daniel Bryant, Jenny Nelson, James Durrant Origin of the Open-Circuit Voltage of Planar Hybrid Perovskite Photovoltaics from Transient Optoelectronic Analysis

