IPEROP·23
23rd - 24th January, 2023
KOBE · Japan

PEROVSKITE AND ORGANIC PHOTOVOLTAICS AND OPTOELECTRONICS

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Asia-Pacific International Conference on Perovskite, Organic Photovoltaics and Optoelectronics (IPEROP23)

Kobe, Japan, 2023 January 22nd - 24th
Conference organizers: Seigo Ito, Maria Antonietta Loi, Hideo Ohkita and Atsushi Wakamiya

Conference Program

January 22nd - Day 1 (Sunday) 1	
17:00 - 19:00	**Registration**
17:15 - 19:00	**Welcome drink**
January 23rd - Day 2 (Monday) 2	
08:00 - 09:00	**Registration**
08:45 - 09:00	**Opening**
	Session 1A Chair: Maksym Kovalenko
09:00 - 09:45 1A-K1	James Ryan *(Department of Chemistry, Swansea University, Singleton Park, Swansea SA2 8PP, UK)* New Fields for Organic Semiconductors
09:45 - 10:15 1A-I1	ThucQuyen Nguyen *(Center for Polymers & Organic Solids, University of California Santa Barbara, Santa Barbara, California 93106, United States)* Current Challenges of Organic Solar Cells
10:15 - 10:45 1A-I2	Agustin O Alvarez, David Carvajal, elena Mas-Marza, Francisco Fabregat-Santiago *(Institute of Advanced Materials (INAM), Universitat Jaume I (UJI), Avenida de Vicent Sos Baynat, s/n, 12071 Castelló de la Plana, Castellón, Spain.)* Combining Small Perturbation Techniques in photovoltaic and photoelectrochemical systems
10:45 - 11:15	**Coffee Break**
	Session 1B Chair: Francisco Fabregat-Santiago
11:15 - 11:45 1B-I1	Maksym Kovalenko *(ETH Zürich, Department of Chemistry and Applied Biosciences, Switzerland)* Precision engineering of luminescent lead-halide quantum dots: from single photons to coherent collective states
11:45 - 12:15 1B-I2	Marina Freitag *(School of Natural and Environmental Sciences, Newcastle University, UK)* Ambient Photovoltaics for Self-Powered and Self-Aware IoT
12:15 - 12:20 1B-S1	Taro Tanabe *(Tokyo Chemical Industry)* Tokyo Chemical Industry - Industry talk
12:20 - 12:50 1B-I3	Takurou Murakami *(National Institute of Advanced Industrial Science and Technology, Japan.)* Interface Materials and Technologies for Perovskite Solar Cells
12:50 - 12:55 1B-S2	Luca Sorbello *(Greatcell Solar Italia)* Hyperion IV a new generation of versatile led solar Simulators for Perovskite research by Greatcell energy
12:55 - 13:25 1B-I4	Yoshihiko Kanemitsu *(Institute for Chemical Research, Kyoto University, Gokasho, Uji, Kyoto 611-0011, Japan.)* Probing halide perovskite photocarrier dynamics with nonlinear optical spectroscopy
13:25 - 15:00	**Lunch break**
	Session 1C1 Chair: Marina Freitag
15:00 - 15:30 1C1-IS1	Lara PERRIN *(Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, Grenoble INP, LEPMI, 38000 Grenoble, France)*, Mirella AL KATRIB, Emilie PLANES Electrodeposited Perovskites for Photovoltaic Application
15:30 - 15:45 1C1-O1	Shuya Fujita, Hikaru Kobayashi, Mikito Suto, Ryuki Tsuji, Seigo Ito, Sho Kitano, Hiroki Habazaki *(Hokkaido University, Japan)* Cathodic Deposition of TiO2 Electron Transport Layers on FTO and ITO Substrates
15:45 - 16:00 1C1-O2	Ryuki Tsuji *(University of Hyogo, Department of Materials and Synchrotron Radiation Engineering, Graduate School of Engineering)*, Kenichirou Tanaka, Kota Oishi, Takaya Shioki, Seigo Ito Effect of Graphite and Carbon Black in Carbon Back Contacts of Carbon-based Multi-Porous-Layered-Electrode Perovskite Solar Cells
16:00 - 16:15 1C1-O3	Sreeram Valsalakumar *(Environment and Sustainability Institute, Faculty of Environment, Science and Economy, University of Ex-eter, Penryn Campus, Cornwall, TR10 9FE, U.K)*, Shubhranshu Bhandari, Justin Hinshelwood, Tapas Mallick, Senthilarasu Sundaram Effect of tunable morphology in Cerium Oxide as an electron transport layer on the performance of low-temperature processed carbon-based perovskite solar cells.
16:15 - 16:30 1C1-O4	Masahide Kawaraya *(Kanagawa Institute of Industrial Science and Technology (KISTEC))*, Daisuke Aoki, Tomoyuki Tobe, Hidenori Saito, Shinichi Magaino Prediction Method for Power Generation of Perovskite Solar Cells for Practical Use
	Session 1C2 Chair: Takurou Murakami
15:00 - 15:30 1C2-IS1	Takeru Bessho *(Research Center for Advanced Science and Technology (RCAST), The University of Tokyo 4-6-1 Komaba, Meguro-ku, Tokyo 153-8904, Japan)* Amelioration of Semi-Transparent Perovskite Solar Cell and its application to 4-terminal Tandem Structure with CIGS
15:30 - 15:45 1C2-O1	Yakun He *(Institute of Materials for Electronics and Energy Technology (i-MEET), Friedrich-Alexander-Universität Erlangen-Nürnberg, Martensstrasse 7, 91058 Erlangen, Germany)*, Ning Li, Thomas Heumüller, Jonas Wortmann, Benedict Hanisch, Anna Aubele, Sebastian Lucas, Guitao Feng, Xudong Jiang, Weiwei Li, Peter Bäuerle, Christoph Brabec Analyzing industrial figure of merit for single-component organic solar cells

15:45 - 16:00 1C2-O2	Romika Sharma *(School of Materials Science and Engineering, Nanyang Technological University, 50 Nanyang Technological University, Singapore 639798, Singapore)*, Qiannan Zhang, Linh Lan Nguyen, Tze Chien Sum, Martial Duchamp, Yeng Ming Lam Insights about air induced structural changes in perovskite thin films using transmission electron microscopy and optical measurements
16:00 - 16:15 1C2-O3	Antonio Cabas Vidani *(Fluxim AG, 8400 Winterthur, Switzerland)*, Sandra Jenatsch, Radha Kothandraman, Fan Fu, Arno Gadola, Simon Züfle, Beat Ruhstaller Ageing of high-bandgap perovskite for all thin-film tandem flexible solar cell devices
16:15 - 16:30 1C2-O4	Xinhui Luo *(State Key Laboratory of Metal Matrix Composites, Shanghai Jiao Tong University, Shanghai 200240, People's Republic of China.)*, Hiroshi Segawa, Liyuan Han Effective Passivation with Self-Organized Molecules for Perovskite Photovoltaics
	Session 1C3 Chair: Takumi Yamada
15:00 - 15:30 1C3-IS1	Hyun Suk Jung *(School of Advanced Materials Science and Engineering, Sungkyunkwan University, Republic of Korea)* Exploring Materials and Process for Commercially Viable Perovskite Solar Cells
15:30 - 15:45 1C3-O1	Maryna Bodnarchuk *(Laboratory for Thin Films and Photovoltaics, Empa-Swiss Federal Laboratories for Materials Science and Technology, Dübendorf 8600, Switzerland)*, Ihor Cherniukh, Taras Sekh, Alex Travesset, Rainer Mahrt, Thilo Stoeferle, Mariia Svyrydenko, Viktoriia Morad, Gabriele Raino, Rolf Erni, Maksym Kovalenko Structural and Compositional Engineering of Superlattices Comprising Halide Perovskite Nanocubes
15:45 - 16:00 1C3-O2	Anna Grobelny, Zhongjin Shen *(Laboratory of Photonics and Interfaces (LPI), Institute of Chemical Sciences & Engineering, École Polytechnique Fédérale de Lausanne, Lausanne 1015, Switzerland)*, Felix T. Eickemeyer, Szczepan Zapotoczny, Shaik M. Zakeeruddin, Michael Grätzel Molecularly Tailored Photosensitizer with an Efficiency of 13.2% for Dye-Sensitized Solar Cells
16:00 - 16:15 1C3-O3	Amy Neild *(Energy Materials Laboratory, Newcastle University, Newcastle upon Tyne, NE1 7RU, England)*, Elizabeth Gibson, Pablo Docampo Developing Tandem Solid-State DSCs
16:15 - 16:30 1C3-O4	Richard Murdey *(Institute for Chemical Research, Kyoto University, Japan)*, Yasuhisa Ishikura, Yuko Matsushige, Shuaifeng Hu, Jorge Pascual, Minh Anh Truong, Tomoya Nakamura, Atsushi Wakamiya Halide segregation and the operational stability of monolayer-based p-i-n perovskite solar cells
16:30 - 18:00	**Poster session**
19:30 - 21:30	**Social Dinner**

January 24th - Day 3 (Tuesday) 3	
08:55 - 09:00	**Announcement of the day**
	Session 2A Chair: Nam-Gyu Park
09:00 - 09:45 2A-K1	Henry Snaith *(University of Oxford)* Talk of Henry Snaith
09:45 - 10:15 2A-I1	Shuzi Hayase *(Info-Powered Energy System Research Center (i-PERC), The University of Electro-Communications, Japan)* Perovskite solar cells consisting of Tin
10:15 - 10:45 2A-I2	Anita Ho-Baillie *(The University of Sydney)* Perovskite Tandem Solar Cells (Invited)
10:45 - 11:15	**Coffee Break**
	Session 2B Chair: Henry Snaith
11:15 - 11:45 2B-I1	Tsutomu Miyasaka *(Toin University of Yokohama, Graduate School of Engineering, 1614 Kuroganecho, Aoba, Yokohama, 225-8503, Japan)* Materials and interface engineering for inorganic halide perovskite photovoltaics
11:45 - 12:15 2B-I2	Subodh Mhaisalkar *(School of Materials Science and Engineering, Nanyang Technological University, 50 Nanyang Technological University, Singapore 639798, Singapore)*, Nripan Mathews, Tze Chien Sum, Teck Ming Koh, Annalisa Bruno High performance devices with slot-die coating and thermal evaporation routes
12:15 - 12:20 2B-S1	Madeleine Justianto *(LayTec AG, Seesener Straße, 10-13, Berlin, Germany)* In-situ monitoring of perovskite formation during spin-coating and evaporation processes
12:20 - 12:50 2B-I3	Liyuan Han *(State Key Laboratory of Metal Matrix Composites, Shanghai Jiao Tong University, Shanghai 200240, People's Republic of China.)* Perovskite solar cells: from efficiency to stability
12:50 - 12:55 2B-S2	Natalie Lok Kwan Li *(Springer Nature Limited)* Nature Communications: A Fully Open Access Multidisciplinary Journal From Nature Portfolio
12:55 - 13:25 2B-I4	Hyunjung Shin *(Department of Energy Science, Sungkyunkwan University, Suwon, South Korea)* Crystallization Kinetics of a-FAPbI3-based Perovskite Solar Cells and High Stability Enabled by ALD (Atomic Layer Deposition)
13:25 - 15:00	**Lunch break**
	Session 2C1 Chair: Subodh Mhaisalkar
15:00 - 15:30 2C1-IS1	Qing Shen *(The Univ. of Electro-Commun)*, Yusheng Li, Hua L, Shota Yajima, Chao Ding Hot carrier cooling and extraction dynamics of perovskite quantum dots
15:30 - 15:45 2C1-O1	Ryo Ishikawa *(Saitama University)*, Hajime Shirai Fabrication of uniform electron transport layer on textured transparent conducting film using polyelectrolyte and colloidal particles and its application to perovskite solar cells
15:45 - 16:00 2C1-O2	Matteo Pitaro *(Photophysics and OptoElectronics Group, Zernike Institute for Advanced Materials, University of Groningen, Nijenborgh 4, 9747 AG Groningen, The Netherlands)*, Javier Sebastian Alonso, Lorenzo Di Mario, Karolina Tran, Malin Johansson, Erik Johansson, Maria Antonietta Loi Carbazole Based Self-assembly Monolayers for Highly Efficient Sn/Pb- based Perovskite Solar Cells
16:00 - 16:15 2C1-O3	Fatemeh Zargar *(IMO-IMOMEC)*, Hans-Gerd Boyen, Derese Desta, Momo Safari, An Hardy, Julia Zillner, Erik Ahlswede, Koen Vandewal, Melissa Van Landeghem, Philip Schulz, Javid Hajhemati The Effect of Phenylethylammonium Halides Additives for Lead-Free Perovskite Solar Cells
16:15 - 16:30 2C1-O4	Shuanglong Wang *(Max Planck Institute for Polymer Research)*, Sabine Frisch, Heng Zhang, Okan Yildiz, Mukunda Mandal, Naz Ugur, Beomjin Jeong, Charusheela Ramanan, Denis Andrienko, Hai Wang, Mischa Bonn, Paul Blom, Milan Kivala, Wojciech Pisula, Tomasz Marszalek Grain Engineering for Improved Charge Carrier Transport in Two-Dimensional Lead-Free Perovskite Field-Effect Transistors
	Session 2C2 Chair: Anita Ho-Baillie
15:00 - 15:30 2C2-IS1	Atsushi Kogo *(National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba)* Crystal Growth Management of CuSCN for Perovskite Solar Cells
15:30 - 15:45 2C2-O1	DHRUBA B. KHADKA *(Photovoltaic Materials Group, Center for GREEN Research on Energy and Environmental Materials, National Institute for Materials Science (NIMS), Tsukuba, Japan)*, Yasuhiro SHIRAI, Masatoshi YANAGIDA, KENJIRO MIYANO Surface Passivation with Multifunctional Fluoroarene Molecule for High-Efficiency and Stable MA-Free Perovskite Solar Cells
15:45 - 16:00 2C2-O2	Andreas Schiller, Sandra Jenatsch *(Fluxim AG, 8400 Winterthur, Switzerland)*, Stijn Lammar, Renàn Escalante, Balthasar Blülle, Antonio J. Riquelme, Gerko Oskam, Juan A. Anta, Beat Ruhstaller Analysis and Quantification of Ionic Charge Carriers in Perovskite Solar Cells
16:00 - 16:15 2C2-O3	Natalie Flores-Diaz *(Newcastle University)*, Marina Freitag Hybrid Photocapacitors for Ambient-Light Applications
16:15 - 16:30 2C2-O4	Yoji Torii, Itaru Raifuku *(Nara Institute of Science and Technology)*, Yukiharu Uraoka Hysteresis-free perovskite solar cells under LED illumination
	Session 2C3 Chair: Hyunjung Shin
15:00 - 15:30 2C3-IS1	Akinori Saeki *(Osaka University, Japan)* Exploring Lead and Tin Perovskite Solar Cells by Microwave Conductivity and Machine Learning
15:30 - 15:45 2C3-O1	Nagalingam Rajamanickam *(Institute of Chemical Research of Catalonia (ICIQ), Tarragona – 43007, Spain)*, Eugenia Martinez-Ferrero, Emilio Palomares Bandgap engineering on hybrid organic-inorganic halide-based perovskites solar cells: Effect of Mn doping

15:45 - 16:00 2C3-O2	Jihun Jeon *(Department of Polymer Chemistry, Kyoto University)*, Hyung Do Kim, Hideo Ohkita Effect of Charge Collection and Recombination on Fill Factor in All-Polymer Solar Cells
16:00 - 16:15 2C3-O3	Tomoya Nakamura *(Institute for Chemical Research, Kyoto University, Japan)*, Kento Otsuka, Shuaifeng Hu, Ruito Hashimoto, Taro Morishita, Taketo Handa, Takumi Yamada, Minh Anh Truong, Richard Murdey, Yoshihiko Kanemitsu, Atsushi Wakamiya Composition-Property Mapping in Bromide-Containing Tin Perovskite Prepared with High Purity Starting Materials
16:15 - 16:30 2C3-O4	Tianhao Wu *(Energy Materials and Surface Sciences Unit (EMSSU), Okinawa Institute of Science and Technology Graduate University (OIST), 1919-1 Tancha, Onna-son, Kunigami-gun, Okinawa 904-0495, Japan)*, Yabing Qi Elimination of Light-Induced Degradation at the Nickel Oxide-Perovskite Heterojunction towards Long-Term Operationally Stable Inverted Perovskite Solar Cells
16:30 - 17:00	**Coffee Break**
	Session 2D Chair: Tsutomu Miyasaka
17:00 - 17:30 2D-I1	Eric Wei-Guang Diau *(Department of Applied Chemistry, National Yang Ming Chiao Tung University, Hsinchu 300093, Taiwan)* Tin Perovskite Solar Cells
17:30 - 18:15 2D-K1	Nam-Gyu Park *(School of Chemical Engineering, Sungkyunkwan University (SKKU), KR)* Research directions in perovskite solar cells
18:15 - 18:30	**Closing**