International Conference on Perovskite and Organic Photovoltaics and Optoelectronics (IPEROP19)

Kyōto-shi, Japan, 2019 January 27th - 29th
Conference Chairs: Hideo Ohkita, Atsushi Wakamiya and Mohammad Nazeeruddin

Conference Program

January 27th - Day 1 (Sunday)	
16:00 - 18:30	**Registration**
17:00 - 18:30	**welcome reception**
January 28th - Day 2 (Monday)	
08:00 - 09:00	**Registration**
08:50 - 08:55	**Announcement of the day**
08:55 - 09:00	**Opening**
	Session G1 Chair: Hideo Ohkita Room: Buzz Hall
09:00 - 09:35 G1-K1	James Durrant *(SPECIFIC IKC, College of Engineering, Swansea University, SA2 7AX, United Kingdom)* Charge carrier dynamics in organic and perovskite solar cells
09:35 - 09:45	Discussion
09:45 - 10:10 G1-O1	Juan Bisquert *(Institute of Advanced Materials (INAM), Universitat Jaume I, 12006 Castelló, Spain)* Dynamic response of perovskite solar cells: characterization of ionic effects and quantum efficiency
10:10 - 10:15	Discussion
10:15 - 10:45	**Coffee Break**
10:45 - 11:10 G1-I1	Yoshihiko Kanemitsu *(Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan)* Exciton physics of halide perovskite nanocrystals
11:10 - 11:15	Discussion
11:15 - 11:40 G1-I2	Tönu Pullerits *(Chemical Physics and NanoLund, Lund University, P.O. Box 124, 22100 Lund, Sweden)*, Kaibo Zheng, Ziqi Liang Ultrafast Spectroscopy of Perovskite Nanostructures
11:40 - 11:45	Discussion
11:45 - 12:10 G1-I3	Thuc-Quyen Nguyen *(Center for Polymers and Organic Solids and Department of Chemistry & Biochemistry, University of California, Santa Barbara, CA 93106, USA)* Quantifying Charge Recombination in Solution-Processed Bulk Heterojunction Solar Cells
12:10 - 12:15	Discussion
12:15 - 12:40 G1-I4	Itaru Osaka *(Graduate School of Engineering, Hiroshima University)* Reducing the Photon Energy Loss in Polymer Solar Cells
12:40 - 12:45	Discussion
	Industry talk Chair: Atsushi Wakamiya
12:45 - 12:55 talk-S1	Kenji Tahara, Taro Tanabe *(Tokyo Chemical Industry, Japan.)* TCI Industry talk
13:00 - 14:30	**lunch**

	Session G2 Chair: Atsushi Wakamiya Room: Buzz Hall
14:30 - 14:55 G2-O1	Chi-Huey Nga, Kengo Hamada, Daisuke Hirotani, Akmal Kamarudin, Qing Shen, Satoshi Iikubo, Kenji Yoshino, Takashi Minemoto, Shuzi Hayase *(Kyushu Institute of Technology)* Perovskite solar cells consisting of mixed metal SnGe perovskite as light absorber and role of the Ge in the solar cell
14:55 - 15:00	Discussion
	Session A1 Chair: Christopher Case Room: Buzz Hall
15:00 - 15:25 A1-IS1	Taisuke Matsui *(Panasonic Corporation)*, Hiroshi Higuchi, Takashi Nishihara, Takayuki Negami Development of Perovskite Solar Cells toward Practical Use
15:25 - 15:30	Discussion
15:30 - 15:45 A1-O7	Yue Hu *(Wuhan National Laboratory for Optoelectronics, Huazhong University of Science and Technology)* The Printable Triple Mesoscopic Perovskite Solar Cell and System
15:45 - 16:00 A1-O6	Udo Bach *(ARC Centre of Excellence in Exciton Science, Department of Chemical Engineering, Monash University, Clayton, VIC, Australia)* Back-Contact and Dipole-Field Concepts and their Application to Perovskite Solar Cells
16:00 - 16:15 A1-O5	Teng Ma *(Advanced Institute for Materials Research (WPI-AIMR), Tohoku University, Sendai 980-8577, Japan)*, Ayumi Hirano-Iwata Structural evolution for highly efficient perovskite solar cells
16:15 - 16:45	**Coffee Break**
16:45 - 17:00 A1-O4	Sofia Masi *(Institute of Advanced Materials (INAM), Universitat Jaume I, 12071 Castelló, Spain)*, Iván Mora-Seró, Aurora Rizzo, Silvia Colella Perovskite nanocomposites for efficient solar cells
17:00 - 17:15 A1-O3	Andrea Listorti *(NANOTEC-CNR Istituto di Nanotecnologia, via per Arnesano, 73100 Lecce, Italy)* Organometal Halide Perovskites Template Growth for Highly Efficient Light-Emitting and Photovoltaic Devices
17:15 - 17:30 A1-O2	Ayumi Ishii *(PRESTO, Japan Science and Technology Agency (JST), 4-1-8 Honcho, Kawaguchi, Saitama 332-0012, Japan.)*, Tsutomu Miyasaka High sensitivity photodetector based on a metal complex hybridized structure with perovskite absorbers
17:30 - 17:45 A1-O1	Toshiro Matsuyama *(RATO (Research Association for Technology Innovation of Organic Photovoltaics), Japan)*, Christopher Fell, Giorgio Bardizza IEC Standardization Activity on Emerging PV Device Measurement (OPV, DSC and PSC)
	Session B1 Chair: Anita Ho-Baillie Room: Room 1
15:00 - 15:25 B1-IS1	Giulia Grancini *(Ecole polytechnique fédérale de Lausanne Institut des sciences et ingénierie chimiques EPFL SB ISIC SCI-SB-MN)* Engineering 2D/3D Hybrid Perovskites for Stable and Efficient Solar Cells
15:25 - 15:30	Discussion
15:30 - 15:45 B1-O7	Zhanglin Guo, Zhenhua Xu, Tingli Ma *(Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, 808-0196, Japan)* New 2D Materials for Highly Efficient Perovskite Solar Cells
15:45 - 16:00 B1-O6	Abhishek Thote *(Department of Mechanical Engineering, The University of Tokyo)*, Il Jeon, Yang Yang, Shigeo Maruyama, Yutaka Matsuo, Hirofumi Daiguji Highly Stable and Efficient 2D/3D Formamidinium-Lead-Iodide Inverted-Type Perovskite Solar Cells

16:00 - 16:15 B1-O5	Feng Liu, Chao Ding, Yaohong Zhang, Shuzi Hayase, Taro Toyoda, Qing Shen *(The University of Electro-Communications, Japan)*, Jincheol kim, Jae S. Yun, Myung Hyun Ann, Sang Eun Yoon, Jong H. Kim, Nochang Park Phase-Stable CsPbI3 Perovskite Quantum Dots Achieving Near 100% Absolute Photoluminescence Quantum Yield and Applications in Solar Cells
16:15 - 16:45	**Coffee Break**
16:45 - 17:00 B1-O4	Pei-Ying Lin *(Department of Photonics, National Cheng Kung University, 70101 Tainan, Taiwan, ROC)*, Ming-Hsien Li, Yu-Hsien Chiang, Po-Shen Shen, Peter Chen Functional inorganic selective contact layers for perovskite solar cell application
17:00 - 17:15 B1-O3	Ajay Jena *(1Toin Univeristy of Yokohama, Kanagawa, Japan)*, Ashish Kulkarni, Masashi Ikegami, Tsutomu Miyaska Stabilization of Black Photoactive Phase of CsPbI3 by Eu Inclusion for All-inorganic Perovskite Solar Cells
17:15 - 17:30 B1-O2	DHRUBA B. KHADKA *(International Center for Young Scientists (ICYS), National Institute for Materials Science (NIMS), 1-1 Namiki, Tsukuba, Ibaraki 305-0044, Japan)*, Yasuhiro Shirai, Masatoshi Yanagida, Kenjiro Miyano Exploring the Effect Induced by Hole Transport Layers in Inverted Halide Perovskite Solar Cells
17:30 - 17:45 B1-O1	Thanh-Tuan Bui *(University of Cergy-Pontoise)*, Maria Ulfa, Federica Maschietto, Alistar Ottochian, Mai-Phuong Nghiêm, Ilaria Ciofini, Fabrice Goubard, Thierry Pauporté Dendritic core carbazole-based hole transporting materials for perovskite solar cells: molecular design, photovoltaic performance and impact of hole transporters and doping on the electrical response of the photovoltaic devices
	Session C1 Chair: Itaru Osaka Room: Room 2
15:00 - 15:25 C1-IS1	Kyungkon Kim *(Ewha Womans University)* Semitransparent Organic Solar Cells Utilizing Fabry-Perot Color Filter Electrodes
15:25 - 15:30	Discussion
15:30 - 15:45 C1-O7	Mitsuharu Suzuki *(Nara institute of science and technology)*, Ken-ichi Nakayama, Hiroko Yamada Photoprecursor Approach for Preparing Organic Photovoltaic Active Layers Having the Right Material in the Right Place
15:45 - 16:00 C1-O6	Valerie Mitchell *(University of Melbourne, School of Chemistry & Bio21 Institute)*, David Jones Block copolymer design for morphology control in organic photovoltaics
16:00 - 16:15 C1-O5	Chao Wang *(RIKEN Center for Emergent Matter Science)* The Control of the Positions of Fullerene Acceptors Relative to Polymer Main Chains in Mixed BHJs and Its Effect on OPV Performance
16:15 - 16:45	**Coffee Break**
16:45 - 17:00 C1-O4	Tomokazu Umeyama *(Kyoto University)*, Hiroshi Imahori Isomer Separations of [70]PCBM for Organic Photovoltaic Applications
17:00 - 17:15 C1-O3	Stavros Athanasopoulos *(Departamento de Física, Universidad Carlos III de Madrid, Avenida Universidad 30, Leganés 28911, Madrid, Spain)*, Mehdi Ansari-Rad Global Theory of Equilibrium and Nonequilibrium Exciton Dynamics in Disordered Semiconductors
17:15 - 17:30 C1-O2	Hiroyuki Ichikwa, Itaru Osaka, Hiroyuki Yoshida *(Graduate School of Engineering, Chiba University)* Energy of Charge Separation States in High-Efficiency Polymer Solar Cell with Low Energy Loss
17:30 - 17:45 C1-O1	Pavlo Perkhun *(Aix Marseille Univ, CNRS UMR 7325, CINaM, Marseille, France)*, Elena Barulina, Sadok Ben Dkhil, Pascal Pierron, Jean-Jacques Simon, Christine Videlot-Ackermann, Olivier Margeat, Birger Zimmermann, Uli Würfel, Jörg Ackermann Digital Printing of High Efficiency Polymer Solar Cells Based on Non-Fullerene Acceptors
17:45 - 18:45	**Poster Session**
19:25 - 22:00	**Social dinner**

January 29th - Day 3 (Tuesday)

08:55 - 09:00	**Announcement of the day**
	Session G3 Chair: Atsushi Wakamiya Room: Buzz Hall
09:00 - 09:35 G3-K1	Seok Sang Il *(School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan. Korea)* Additive Engineering for Highly Efficient and Stable Perovskite Solar Cells
09:35 - 09:45	Discussion
09:45 - 10:10 G3-I1	Christopher Case *(Oxford Photovoltaics, Oxford, OX5 1QU, United Kingdom)* What's the story with Shockley and Queisser
10:10 - 10:15	Discussion
10:15 - 10:45	**Coffee Break**
10:45 - 11:10 G3-I2	Michael Saliba *(Adolphe Merkle Institute, University of Fribourg, CH-1700 Fribourg, Switzerland)* The versatility of polyelemental perovskite compositions
11:10 - 11:15	Discussion
11:15 - 11:40 G3-I3	Kwanghee Lee *(Gwangju Institute of Sicence & Technology (GIST))* Highly Efficient, Burn-In Loss-Free, Large-Area Perovskite Photovoltaic Modules Achieved via Metal-Filamentary Nanoelectrodes
11:40 - 11:45	Discussion
11:45 - 12:10 G3-I4	Maksym Kovalenko *(Institute of Inorganic Chemistry, Department of Chemistry and Applied Bioscience, ETH Zurich, 8093 Zurich, Switzerland)* Highly luminescent lead halide perovskite nanocrystals: genesis, properties and applications
12:10 - 12:15	Discussion
12:15 - 12:40 G3-I5	Yongsheng Chen *(Nankai University)* A-D-A Type Oligomer Like Molecules for High Performance OPV
12:40 - 12:45	Discussion
	Industrial talk Chair: Atsushi Wakamiya
12:45 - 12:55 talk-S1	Yanek Hebting *(Greatcell Solar)* Greatcell Solar presentation
13:00 - 14:30	**Lunch**
	Session A2 Chair: Yue Hu Room: Buzz Hall
14:30 - 14:55 A2-IS1	Anita Ho-Baillie *(Australian Centre for Advanced Photovoltaics, School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney 2052, Australia)* Strategies for improving performance, reducing toxicity and improving stability for perovskite solar cells
14:55 - 15:00	Discussion
15:00 - 15:15 A2-O1	Mehrdad Najafi *(TNO partner in Solliance, High Tech Campus 21, 5656 AE Eindhoven, The Netherlands.)*, Dong Zang, Valerio Zardetto, Herbert Lifka, Wiljan Verhees, Hero 't Mannetje, Henri Fledderus, Francesco Di Giacomo, Jürgen Hüpkes, Paul Poodt, Yulia Galagan, Stefan Luxembourg, Gianluca Coletti, Bart Geerligs, Hans Linden, Sjoerd Veenstra, Ronn Andriessen Highly Efficient and Stable Rigid Perovskite/Si and Flexible Perovskite/CIGS 4-Terminal Tandems
15:15 - 15:30 A2-O2	Feng Yang *(Department of Electrical and Computer Engineering,Sungkyunkwan University, Suwon, Gyeonggi, 16419, Republic of Korea)*, Junkai Yang, Kwang-Su Kim, Dong-Won Kang, Yong-Sang Kim Air-Fabricated Organic/Perovskite Tandem Solar Cells with Less Hysteresis
15:30 - 15:45 A2-O3	Nga Phung *(Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, 12489 Berlin, Germany)*, Antonio Abate, Daniele Meggiolaro, Filippo De Angelis, Roberto Felix Duarte, Marcus Bär The impact of metal ions doping on the defect chemistry of methylammonium lead iodide

15:45 - 16:15	**Coffee Break**
16:15 - 16:30 A2-O4	Hyung Do Kim *(Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Japan)*, Atsushi Wakamiya, Hideo Ohkita Open-Circuit Voltage Loss in Organic–Inorganic Halide Perovskite Solar Cells
16:30 - 16:45 A2-O5	Ashish Kulkarni *(Graduate School of Engineering, Toin University of Yokohama, 1614, Kurogane-cho, Aoba, Yokohama, Kanagawa, Japan 225-8503)*, Ajay Jena, Masashi Ikegami, Tsutomu Miyasaka Highly Stable and Efficient Silver-bismuth Halide Material for Lead-free Perovskite Solar Cells
	Session B2 Chair: Michael Saliba Room: Room 1
14:30 - 14:55 B2-IS1	Marina Leite *(University of Maryland)* Probing Perovskites' Stability at the Nanoscale
14:55 - 15:00	Discussion
15:00 - 15:15 B2-O1	Ana Flavia Nogueira *(Institute of Chemistry, University of Campinas – UNICAMP)*, Rodrigo Szostak, Helio Tolentino, Raul Freitas Synchrotron radiation applied to the characterization of perovskite films: morphology, structure and composition
15:15 - 15:30 B2-O2	Tetsuhiko Miyadera *(Research Center for Photovoltaics (RCPV), National Institute of Advanced Industrial Science and Technology (AIST))*, Yuto Auchi, Kohei Yamamoto, Noboru Ohashi, Tomoyuki Koganezawa, Yuji Yoshida, Masayuki Chikamatsu Crystallization control and real-time analysis of organolead-halide perovskite by IR-laser deposition
15:30 - 15:45 B2-O3	Sagar M. Jain *(SPECIFIC IKC, College of Engineering, Swansea University)*, Jinhyun Kim, Ilknur B. Pehlivan, Tomas Edvinsson, James R. Durrant Effect of Interface Engineering and Origin of High Current in Planar Inverted Perovskite Solar cells
15:45 - 16:15	**Coffee Break**
16:15 - 16:30 B2-O4	Jiewei Liu *(Institute for Chemical Research, Kyoto University, Uji, Kyoto 611-0011, Japan)*, Masashi Ozaki, Shinya Yakumaru, Taketo Handa, Ryosuke Nishikubo, Yoshihiko Kanemitsu, Akinori Saeki, Yasujiro Murata, Richard Murdey, Atsushi Wakamiya Realizing Efficient and Reproducible Lead-free Perovskite Solar Cells with Purified Precursor Materials and Modified Solution Process
16:30 - 16:45 B2-O5	Xiao Liu *(Photovoltaic Materials Group, Center for Green Research on Energy and Environmental Materials, National Institute for Materials Science (NIMS))*, Takeshi Noda, Liyuan Han Highly Stable Lead Free Perovskite Solar Cells by Additive Engineering
16:45 - 17:00	
	Session C2 Chair: Tõnu Pullerits Room: Room 2
14:30 - 14:55 C2-IS1	Yasuhiro Tachibana *(RMIT University)* Interfacial Charge Transfer and Transport Dynamics in Lead Halide Perovskite Solar Cells
14:55 - 15:00	Discussion
15:00 - 15:15 C2-O4	Andrzej Sienkiewicz *(ADSresonances SARL, Route de Genève 60B, CH-1028, Prèverenges, Switzerland)*, Konstantins Mantulnikovs, Márton Kollár, Endre Horváth, László Forró Reversible wavelength-dependent photo-bleaching in free-standing polycrystalline films of MAPbI3 monitored under the intense visible light flux
15:15 - 15:30 C2-O5	Akinori Saeki *(Department of Applied Chemistry, Graduate school of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan.)* Photon Upconversion through a Cascade Process of Two-Photon Absorption in CsPbBr3 and Triplet-Triplet Annihilation in Organic Molecules
15:30 - 15:45 C2-O1	Peter Chen *(Department of Photonics, National Cheng Kung University)* The Photovoltaics and Nonlinear optical properties of 2D/3D Hybrid Perovskite

15:45 - 16:15	**Coffee Break**
16:15 - 16:30 C2-O2	Masoumeh Keshavarz *(Molecular Imaging and Photonics, Department of Chemistry, Katholieke Universiteit Leuven, Celestijnenlaan 200F, 3001 Leuven, Belgium)*, Steffen Wiedmann, Robert Küchler, Haifeng Yuan, Elke Debroye, Maarten Roeffaers, Johan Hofkens Shedding Light on Optoelectronic Structure Rationalization and Photophysical Pathways in Lead Halide Perovskites - a Single Crystal Story
16:30 - 16:45 C2-O3	Julian Steele *(Centre for Surface Chemistry and Catalysis, KU Leuven, Celestijnenlaan 200F, Leuven, 3001, Belgium)*, Masoumeh Keshavarz, Elke Debroye, Haifeng Yuan, Johan Hofkens, Maarten Maarten Single Perovskite or Double Perovskite: What's the Difference?
	Session G4 Chair: Hideo Ohkita Room: Buzz Hall
16:45 - 17:10 G4-O1	Tsutomu Miyasaka *(Toin University of Yokohama, Graduate School of Engineering)* Compositional engineering of cost efficient durable perovskite solar cells
17:10 - 17:15	Discussion
17:15 - 17:40 G4-I1	Hiroshi Segawa *(Graduate School of Arts and Sciences, The University of Tokyo, Komaba 3-8-1, Tokyo 153-8902, Japan.)* Material Engineering toward High Performance Perovskite Solar Cells
17:40 - 17:45	Discussion
17:45 - 18:00	**Closing ceremony and poser awards**

Poster Contribution

003	Maryam Sajedi *(Helmholtz-Zentrum Berlin für Materialien und Energie GmbH, 12489 Berlin, Germany)*, Dmitry Marchenko, Maxim Krivenkov, Andrei Varykhalov, Jaime Sánchez-Barriga, Oliver Rader Analysis of electronic bands in metal halide perovskite single crystals via angule-resolved photoelectron spectroscopy
012	Hong Duc Pham *(School of Chemistry, Physics and Mechanical Engineering, Queensland University of Technology (QUT), 2 George Street, Brisbane, QLD-4001, Australia)*, Sagar Jain M., Jinhyun Kim, Sergei Manzhos, Krishna Ferron, Durrant James R., Sonar Prashant Boosting the performance and stable mesoporous perovskite solar cells by using novel dopant-free quinacridone-based hole transporting materials
013	Raphaëlle Belchi *(NIMBE, CEA, CNRS, Université Paris-Saclay, CEA Saclay 91191 Gif-sur-Yvette, France)*, Aurélie Habert, Nathalie Herlin-Boime, Johann Bouclé IMPROVING PEROVSKITE SOLAR CELLS PERFORMANCE by USING HIGH QUALITY TiO2/GRAPHENE-BASED NANOCOMPOSITES as ELECTRON TRANSPORT LAYER
014	Jueming Bing *(The University of New South Wales)*, Jincheol Kim, Meng Zhang, Jianghui Zheng, Daseul Lee, Yongyoon Cho, Xiaofan Deng, Cho Fai Jonathan Lau, Yong Li, Martin A. Green, Shujuan Huang, Anita W. Y. Ho-Baillie The Impact of Dynamic Two-step Solution Process on Film Formation of Cs0.15(MA0.7FA0.3)0.85PbI3 Perovskite and Solar Cell Performance
015	Yung-Chung Chen *(Department of Chemical and Materials Engineering, National Kaohsiung University of Science and Technology)*, Guan-Wei Huang, Yuan-Jay Chang T-shaped Dibenzofulvene-based Organic Dyes for Dye-sensitized Solar Cells
028	Zhanglin Guo *(Kyushu Institute of Technology, Japan)*, Zhenhua Xu, Siowhwa Teo, Chu Zhang, Tingli Ma Surface passivation: an efficient method to reduce the energy loss of all-inorganic CsPbIBr2 perovskite solar cells
035	Hye Ri Jung *(Department of Physics, Ewha Womans University)*, Bich Phuong Nguyen, William Jo Halide-Dependent Optoelectronic Properties of Organolead Perovskite Crystals
041	Zhen Wang, Akmal Kamarudin Muhammad, Shuzi Hayase *(Kyushu Institute of Technology, Japan)* Interfacial Sulfur Functionalization Anchoring SnO2 and CH3NH3PbI3 for Enhanced Stability and Trap Passivation in Perovskite Solar Cells

045	Konstantins Mantulnikovs *(Laboratory of Physics of Complex Matter, École Polytechnique Fédérale de Lausanne, CH-1015 Lausanne, Switzerland)*, Anastasiia Glushkova, Márton Kollár, László Forró, Endre Horváth, Andrzej Sienkiewicz Differential Response of the Photoluminescence and Photocurrent of Polycrystalline CH3NH3PbI3 and CH3NH3PbBr3 to the Exposure to Oxygen and Nitrogen
047	Md. Emrul Kayesh *(Photovoltaic Materials Group, Center for Green Research on Energy and Environmental Materials, National Institute for Materials Science (NIMS))*, Kiyoto Matsuishi, Towhid H. Chowdhury, Ryuji Kaneko, Said Kazaoui, Jae-Joon Lee, Takeshi Noda, Ashraful Islam Co-additive Engineering with Bifunctional Additive for Enhanced Performance and Improved Stability of Sn-based Perovskites Solar Cells
048	Abduheber Mirzehmet *(Graduate School of Advanced Integration Science, Chiba University, Japan)*, Hiroyuki Yoshida Elements of Uppermost Surface of Solution Processed-Perovskite Film Studied by Electron Spectroscopies
050	Fengjiu Yang *(Institute of Advanced Energy, Kyoto University)*, Jiewei Liu, Yuhei Miyauchi, Atsushi Wakamiya, Kazunari Matsuda Superior Bending Durability of Flexible Perovskite Solar Cells Using Metal Oxide Electron Transport Layer
057	Chieh-Ting Lin *(Department of Chemistry and Centre for Plastic Electronics, Imperial College London, Exhibition Road, London SW7 2AZ, U.K)*, Jinhyun Kim, Sebastian Pont, Francesca De Rossi, Jenny Baker, Jonathan Ngiam, Trystan Watson, Martyn McLachlan, James Durrant Probing the Enhanced Stability Against Oxygen Induced Photodegradation by Selection of Transport Layer and Defect Passivation
060	Satoshi Iikubo *(Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, 808-0196, Japan)*, Kumiko Yamamoto, Jun Yamasaki, Shoya Kawano, Shuzi Hayase Thermodynamic Properties in Organic-inorganic Hybrid Perovskite
062	Xuewen Yin *(State Key Laboratory of New Ceramics & Fine Processing, School of Materials Science and Engineering, Tsinghua University, Beijing 100084, P. R. China.)*, Hong Lin Highly Efficient Inverted Perovskite Solar Cells Based on Self–assembled Graphene Derivatives
078	Siowhwa Teo *(Graduate School of Life Science and System Engineering, Kyushu Institute of Technology, 2-4 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka, 808-0196, Japan.)*, Zhanglin Guo, Zhenhua Xu, Chu Zhang, Tingli Ma Improved Efficiency and Stability Performances of A Nickel-Oxide Based Inverted Perovskite Solar Cell by Lanthanum Doping
082	Khursheed Ahmad *(Indian Institute of Technology Indore)*, Shaikh M Mobin Toluene assisted two-step deposition method for the fabrication of lead free perovskite solar cells
085	Fu Yang *(Graduate School of Life Science and System Engineering, Kyushu Institute of Technology, 2-4 Hibikino, Wakamatsu-ku, Kitakyushu, Fukuoka, 808-0196, Japan.)*, Gaurav Kapil, Muhammad Akmal Kamarudin, Daisuke Hirotani, Chi Huey Ng, Yaohong Zhang, Qing Shen, Shuzi Hayase Solvent engineering method for CsPb1-xGexI2Br perovskite with high phase stability and photovoltaic performance
086	Chi Huey Ng *(Kyushu Institute of Technology, Graduate School of Life Science and Systems Engineering, 2-4 Hibikino, Wakamatsu-ku, Kitakyushu-shi, 808-0196, Japan)*, Satoshi Iikubo, Qing Shen, Kenji Yoshino, Takashi Minemoto, Shuzi Hayase Suppressed Trap Densities and Excellent Carrier Dynamics of Germanium-Doped Lead Free Perovskites Revealed by Thermally Stimulated Current
093	Maria João Brites *(Laboratório Nacional de Energia e Geologia, LNEG/UER, Lisboa, Portugal)*, M. Alexandra Barreiros, Victoria Corregidor, Luis C. Alves, Joana V. Pinto, Manuel J. Mendes, Elvira Fortunato, Rodrigo Martins, João Mascarenhas Ultra-Fast Low-Temperature Crystallization of Solar Cell Graded Formamidinium-Cesium Mixed-Cation Lead Mixed-Halide Perovskites Using a Reproducible Microwave-Based Process
094	Takeyuki Sekimoto *(Panasonic Corporation)*, Taisuke Matsui, Takashi Nishihara, Ryusuke Uchida, Takashi Sekiguchi, Takayuki Negami Analysis of light-induced degradation of organic-inorganic halide perovskite solar cell using multiple techniques

095 Ghada Ahmed *(King Abdullah University of Science and Technology (KAUST) Division of Physical Sciences and Engineering, Thuwal 23955-6900, Kingdom of Saudi Arabia)*, Jehad K. El-Demellawi,, Jun Yin, Jun Pan, Osman M. Bakr, Husam N. Alshareef, Omar F. Mohammed
Giant Photoluminescence Enhancement in CsPbCl3 Perovskite Nanocrystals by Simultaneous Dual-Surface Passivation

098 YA-HSIN HUANG *(Department of Photonics, National Cheng Kung University, 70101 Tainan, Taiwan, ROC)*
Effect of large cation- HAI of long carbon chain on double-cations perovskite

099 Said Kazaoui *(Research Center for Photovoltaics (RCPV), National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan)*, Ivan Turkevych, Sonya Kosar, Eugene Goodilin, Alexey Tarasov, Michael Graetzel
Reaction of Metallic Lead (Pb) and Polyiodide (MAI3) Opens New Route to Fabricate MAPbI3 Perovskite Solar Cells

100 SADOK BEN DKHIL *(Dracula Technologie)*, Florent Pourcin, Donia Fredj, Marie Chabrolle, Elena Barulina, Pavlo Perkhun, Olivier Margeat, Jörg Ackermann, Jérome Vernet, Brice Cruchon, Pascal Pierron
Towards Commercially Viable Printable high efficiency OPV modules for indoor applications

101 Nobuko Onozawa-Komatsuzaki *(National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan)*, Takashi Funaki, Takurou N Murakami, Atsushi Kogo, Said Kazaoui, Masayuki Chikamatsu, Hisashi Kanno
Effect of Aliphatic Fluorinated Additives on the Performance of Perovskite Solar Cells

103 Yueh-Ya Chiu *(Department of Photonics, National Cheng Kung University, Tainan 701, Taiwan, ROC.)*, Ming-Hsien Li, Peter Chen
Multi-cation Thiocyanate-Based pseudohalide perovskite solar cells with MASCN additive

104 Satoru Seto *(National Institute of Technology, Ishikawa College, Tsubata, Kahoku Ishikawa 929-0392, Japan)*, Yoshihiro Arima, Haruna Yamashita, Satoru Yamada
Direct conversion to MAPbI3 perovskite phase from PbI2 and MAI vapor by hot-wall method

106 Jianquan Zhang *(Department of Chemistry, Hong Kong University of Science and Technology, Hong Kong)*, He Yan
Ring-fusion of Non-fullerene Acceptors Based on Perylene Diimide towards Efficient Organic Solar Cells with Small Voltage Losses

107 Hong Lin *(State Key Laboratory of New Ceramics & Fine Processing, School of Materials Science and Engineering, Tsinghua University, Beijing 100084, P. R. China.)*, Jianhua Han
Enhancing the performance of perovskite solar cells by hybridizing quantum dots with CH3NH3PbI3

108 Yuta Shirogane *(Department of Applied Chemistry, Waseda University, Tokyo 169-8555, Japan)*, Takeo Suga, Kenichi Oyaizu, Hiroshi Segawa, Hiroyuki Nishide
A Flexible Perovskite Solar Cell Enabled by Perovskite Layer with Polymer-Scaffold

109 Thanh-Tuan BUI *(Laboratoire de Physicochimie des Polymeres et des Interfaces, Universite de Cergy-Pontoise)*
Triphenylamine-thienothiophene organic charge transport molecular materials: impact of arylamine substitution position on thermal, photolectrochemical and photovoltaic properties

110 GYU MIN KIM *(1Toin Univeristy of Yokohama, Kanagawa, Japan)*, TSUTOMU MIYASAKA
Determination of optoelectronic properties of perovskites by evaporation kinetics of DMSO depending on the perovskite compositions

112 Mayu Yamaguchi *(Department of Applied Chemistry, Waseda University, Tokyo, Japan)*, Takeo Suga, Kenichi Oyaizu, Hiroshi Segawa, Hiroyuki Nishide
Perovskite Precursor Solution Tuned with Polymer Addition for Effective Formation of the Photovoltaic Layer

113 Christopher Fell *(CSIRO Energy Centre, Australia)*, Blago Mihailov, Duck Benjamin, Gregory Wilson
Progress Toward Standardised Measurement Protocols for Perovskite Solar Cells

114 Naho Kurahashi *(Graduate School of Material Science, Nara Institute of Science and Technology, Ikoma, Nara 630-0192, Japan)*, Fumio Sasaki, Hisao Yanagi
Optically Pumped Lasing of Organometal Halide Perovskites Grown in Microcapillary

115 Zeynep Dalkilic *(Department of Chemistry, Istanbul Technical University, Istanbul, 34469, Turkey.)*, Nilgun K. Yavuz, Ayfer K. Burat, Cheong B. Lee, Hyosung Choi
Development of New Phthalocyanine-Based Hole Transport Materials for High Efficient and Stable Perovskite Solar Cells

116	Ryosuke Nishikubo *(Department of Applied Chemistry, Graduate school of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan.)*, Akinori Saeki Ultrafast screening of lead-free perovskites and their optoelectronic properties
118	Tomohiro Fukuhara *(Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Japan)*, Masahiko Saito, Yasunari Tamai, Hyung Do Kim, Itaru Osaka, Hideo Ohkita Thickness Dependence of Fill Factors in Fluorinated Naphthobisthiadiazole-based Polymer Solar Cells
119	Takayuki Shimizu *(AISIN COSMOS R&D Co., Ltd., Kariya, Aichi 448-8650, Japan)*, Mitsuhiro Adachi, Akira Suzuki, Rie Watanabe, Mareedu Sreenivasu, Devoju Harinada Chary, Satish Bykkam, Katsuya Tsuchimoto, Junji Nakajima, Toshiyuki Sano, Shoichi Doi, Katsuyoshi Mizumoto Development of Large Size Perovskite Solar Cells Fabrication Technique by Spray Coating
120	Fanji Wang *(RIKEN Center for Emergent Matter Science)*, Keisuke Tajima Effects of end-on oriented polymer chains at the donor/acceptor interface in organic solar cells
121	Yu-An Chen *(Department of Photonics, National Cheng Kung University, Tainan 701, Taiwan, ROC.)*, Ming-Hsien Li, Peter Chen Photoluminescence mapping of 2D/3D perovskite film prepared by low pressure vapor assisted solution process
122	Yu-Chiung Lin *(Department of Photonics, National Cheng Kung University, Tainan 701, Taiwan, ROC.)*, Pei-Ying Lin, Chao-Yu Chen Porous Counter Electrode for Monolithic Dye-Sensitized Solar Cells Under Dim-light Applications
123	Shoya Kawano *(Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Kitakyushu, 808-0196, Japan)*, Satoshi Iikubo Lattice Dynamics of an Organic-Inorganic Hybrid Perovskite: a First-principles Study
124	Akihiro OKADA *(Department of Applied Chemistry, Waseda University, Japan)*, Yuta SHIROGANE, Takeo SUGA, Kenichi OYAIZU, Hiroshi SEGAWA, Hiroyuki NISHIDE One-step Preparation of the Perovskite Layer by Bar-coating of the Perovskite Ink
125	Giorgio Bardizza *(European Commission, Joint Research Centre (JRC), Ispra, Italy)*, Diego Pavanello, Harald Müllejans Analysis of the time response of perovskite solar cells toward more reliable spectral responsivity and I-V measurements
126	Jia-Yun Jhang *(Department of Photonics, National Cheng Kung University, Tainan 701, Taiwan, ROC.)*, Peter Chen, Ming-Hsien Li Mixed Cation in Tin-based Perovskite to enhance photoelectric properties
127	Tomoki Ohmura *(Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Japan)*, Shun Yamaguchi, Kota Tsujioka, Yasunari Tamai, Hideo Ohkita Energy Gap Dependence of Singlet Exciton Lifetimes in Non-Fullerene Acceptors
128	Bohee Hwang *(POSTECH)*, Jang-Sik Lee Methylammonium Bismuth Iodide-Based Multilevel Data Storage Memory Devices with Long-Term Stability
129	Kakaraparthi Kranthiraja *(Department of Applied Chemistry, Graduate school of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan.)*, Akinori Saeki Scalable non-fused wide band gap π-conjugated polymers for fullerene-free organic solar cells
130	Daisuke AOKI *(Kanagawa Institute of Industrial Science and Technology)*, Keita ANDO, Hidenori SAITO, Shinichi MAGAINO Optimal Procedure of MPPT method for Perovskite solar cells
131	Haibin Wang *(Research Center for Advanced Science and Technology (RCAST), The University of Tokyo, Tokyo, Japan)*, Takaya Kubo, Jotaro Nakazaki, Hiroshi Segawa Efficient Infrared PbS Quantum Dot Solar Cells toward the Bottom Subcell of Tandem Solar Cells
132	Kumiko Yamamoto *(Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology)*, Jun Yamasaki, Sasoshi Iikubo First-principles study of transport properties in Cs(Pb,Sn,Ge)I3

133	Takashi Funaki *(National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan)*, Nobuko Onozawa-Komatsuzaki, Atsushi Kogo, Masayuki Chikamatsu Evaluation of Triphenylamine Derivatives for Interfacial Modification in Perovskite Solar Cells -Effect of Substituents on Triphenylamine Moiety-
134	Dongguen Shin *(Institute of Physics and Applied Physics and van der Waals Materials Research Center, Yonsei University, 50 Yonsei-ro, Seodaemun-Gu, Seoul 03722, Republic of Korea)*, Donghee Kang, Jae Bok Lee, Jong-Hyun Ahn, Il-Wook Cho, Mee-Yi Ryu, Sang Wan Cho, Na Eun Jung, Hyunbok Lee, Yeonjin Yi Suppress the interfacial recombination between the MAPbI3 and PEDOT:PSS by mixing the nonionic surfactant
135	Takurou Murakami *(National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan)*, Myoung Kim, Ching-Chang Lin, Atsushi Kogo, Masayuki Chikamatsu, Hiroshi Segawa Characterization of Perovskite Solar Cells with Impedance Spectroscopy
136	Na Eun Jung *(Institute of Physics and Applied Physics and van der Waals Materials Research Center, Yonsei University, 50 Yonsei-ro, Seodaemun-Gu, Seoul 03722, Republic of Korea)*, Kwanwook Jung, Dongguen Shin, Donghee Kang, Hyunbok Lee, Yeonjin Yi The Study of Perovskite Stoichiometry and Charge Transport Materials for Light Emitting Diode via Vacuum Deposition
137	QI ZHANG *(State Key Laboratory of New Ceramics & Fine Processing, School of Materials Science and Engineering, Tsinghua University, Beijing 100084, P. R. China.)*, HONG LIN In-situ Growth of α-CsPbI3 Perovskite Nanocrystals on the surface of Reduced Graphene Oxide with enhanced Stability and Carrier Transport Property
138	Yasuhiro Murata *(Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Japan)*, Kento Yamaguchi, Yasunari Tamai, Hideo Ohkita Two-dimensional exciton diffusion dynamics in crystalline conjugated polymer thin films
139	Hidenori SAITO *(Kanagawa Institute of Industrial Science and Technology)*, Daisuke AOKI, Shinichi MAGAINO, Katsuhiko TAKAGI, Shuzi HAYASE Power generation behavior of Perovskite solar cell under the various conditions.
140	Kohshiroh MIDORI *(Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Japan)*, Tomohiro FUKUHARA, Yasunari TAMAI, Hideo OHKITA Hole Carrier Transport in Ternary Blend Polymer Solar Cells
141	Jeehong Park *(Institute of Physics and Applied Physics and van der Waals Materials Research Center, Yonsei University, 50 Yonsei-ro, Seodaemun-Gu, Seoul 03722, Republic of Korea)*, Donghee Kang, Dongguen Shin, Minju Kim, Jaehyun Yang, Hyunbok Lee, Yeonjin Yi Impact of Cesium Incorporation on Electronic Structures in Single Crystal MAPbI3
142	Donghee Kang *(Institute of Physics and Applied Physics, Yonsei University, 50 Yonsei-ro, Seodaemoon-Gu, Seoul 03722, Republic of Korea)*, Dongguen Shin, Junkyeong Jeong, Jisu Yoo, Kiwoong Kim, Hyunbok Lee, Yeonjin Yi Energetic and morphologic effects of CuSCN dopant on methylammonium lead iodide perovskite solar cells
143	Ai Sugie *(Graduate School of Science and Engineering, Chiba University, Japan)*, Weining Han, Hiroyuki Ichikawa, Hiroyuki Yoshida LUMO levels of non-fullerene acceptors in solid phase for organic solar cells
144	Md Shahiduzzaman *(Nanomaterials Research Institute, Kanazawa University, Kanazawa 920-1192, Japan)*, Sem Visal, Mizuki Kuniyoshi, Tetsuhiro Katsumata, Shinjiro Umezu, Masato Kakihana, Satoru Iwamori, Tetsuya Taima, Masao Isomura, Koji Tomita Low-Temperature Processed Brookite based TiO2 Phase Junction Electron Transport Layer for Efficient Planar Perovskite Solar Cells
145	Hironobu Yasuda *(University of Electro-communications)* OPTICAL PROPERTIES AND PHOTOEXCITED CARRIER DYNAMICS OF CsPb(IxBr1-x)3 PEROVSKITE QUANTUM DOTS

146	Yoshida Koji *(The Univ. of Electro-Commun)*, Chao Ding, Yang Zhang, Hironobu Yasuda, Taichi Kamisaka, Masayuki Hirata, Kenji Yoshino, Taro Toyoda, Shuzi Hayase, Qing Shen Effects of the acidity of iodide salts on the photovoltaic properties of the PbS CQDs solar cells
147	Yasuha Yoshihara *(The University of Electro-Communications, Japan)*, Taro Toyoda, Shuzi Hayase, Qing Shen Sb2S3 Solid State Solar Cells with Inverse Opal nanostructured TiO2
148	Junkai Yang, Feng Yang *(Department of Electrical and Computer Engineering, Sungkyunkwan University, Suwon, Gyeonggi, 16419, Republic of Korea)*, Xingye Zhang, Yong-Sang Kim A Low-Temperature Removable Package for Organic-inorganic Hybrid Perovskite Solar Cells Under Water
149	Emanuele Smecca *(CNR-IMM, Istituto per la Microelettronica e Microsistemi)*, Giovanni Mannino, Ioannis Deretzis, Salvatore Sanzaro, Antonino La Magna, Yohuei Numata, Tsutomu Miyasaka, Alessandra Alberti Structural and Optical Behaviour of MAPbI3Layers in Nitrogen and Humid Air
150	Saemi Takahashi *(Department of General System Studies, Graduate School of Arts And Science, The University of Tokyo, Japan)*, Satoshi Uchida, Hiroshi Segawa Control of Interface And Crystal Structures Toward Efficient Perovskite Solar Cells