

## Asia-Pacific International Conference on Perovskite, Organic Photovoltaics and Optoelectronics (IPEROP20)

**Tsukuba-shi, Japan, 2020 January 20th - 22nd**

**Conference Chairs: Michio Kondo, Takurou Murakami and Martin A. Green**

### Conference Program

| January 20th - Day 1 (Monday)  |                                                                                                                                                                                                                                                                |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00 - 18:30                  | <b>Registration</b>                                                                                                                                                                                                                                            |
| 17:00 - 18:30                  | <b>Welcome reception</b>                                                                                                                                                                                                                                       |
| January 21st - Day 2 (Tuesday) |                                                                                                                                                                                                                                                                |
| 08:00 - 09:00                  | <b>Registration</b>                                                                                                                                                                                                                                            |
| 08:55 - 09:00                  | <b>Announcement of the day</b>                                                                                                                                                                                                                                 |
| 08:55 - 09:00                  | <b>Opening</b>                                                                                                                                                                                                                                                 |
|                                | <b>Session G1</b><br>Chair: Michio Kondo                                                                                                                                                                                                                       |
| 09:00 - 09:35<br>G1-K1         | <u>Alex Jen</u> ( <i>Department of Materials Science, City University of Hong Kong, Kowloon, HK</i> )<br>Development of Highly Efficient, Stable, and Environmentally Stable Perovskite Solar Cells and Their Integration with OPV                             |
| 09:35 - 09:45                  | Discussion                                                                                                                                                                                                                                                     |
| 09:45 - 10:10<br>G1-I1         | <u>Peter Chen</u> ( <i>Dept. Photonics, National Cheng Kung University</i> ), Yueh-Ya Chiu, Pei-Ying Lin, Itaru Raifuku, Shao-Tung Chang<br>Pseudohalide Perovskite Solar Cells                                                                                |
| 10:10 - 10:15                  | Discussion                                                                                                                                                                                                                                                     |
| 10:15 - 10:45                  | <b>Coffee Break</b>                                                                                                                                                                                                                                            |
|                                | <b>Session G2</b><br>Chair: Peter, Chao-Yu Chen                                                                                                                                                                                                                |
| 10:45 - 11:10<br>G2-I1         | <u>TAIHO PARK</u> ( <i>Pohang University of Science and Technology</i> )<br>Thermally Stable, Planar Hybrid Perovskite Solar Cells with High Efficiency                                                                                                        |
| 11:10 - 11:15                  | Discussion                                                                                                                                                                                                                                                     |
| 11:15 - 11:40<br>G2-I2         | <u>Tze Chien Sum</u> ( <i>Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore 637371, Singapore</i> )<br>Perovskite Hot Carrier Dynamics                                        |
| 11:40 - 11:45                  | Discussion                                                                                                                                                                                                                                                     |
| 11:45 - 12:10<br>G2-I3         | <u>Udo Bach</u> ( <i>ARC Centre of Excellence in Exciton Science, Department of Chemical Engineering, Monash University, Clayton, VIC, Australia</i> ), Wenxin Mao, Xiongfeng Lin, Siqi Deng<br>Single-Crystalline and Back-Contact Perovskite Optoelectronics |
| 12:10 - 12:15                  | Discussion                                                                                                                                                                                                                                                     |
| 12:15 - 12:40<br>G2-I4         | <u>Hiroko Yamada</u> ( <i>Nara Institute of Science and Technology - Japan</i> )<br>Engineering Thin Films of a Tetrabenzoporphyrin toward Efficient Charge-Carrier Transport                                                                                  |
| 12:40 - 12:45                  | Discussion                                                                                                                                                                                                                                                     |
|                                | <b>Industry talks</b>                                                                                                                                                                                                                                          |
| 12:45 - 12:50<br>talks-S1      | <u>Luca Sorbello</u> ( <i>Greatcell Solar</i> )<br>Hyperion a bright future for solar simulators: The Greatcell Solar Italia way                                                                                                                               |



13:00 - 14:30 **lunch**

### Session A1

Chair: Tze-Chien Sum

- 14:30 - 14:55  
A1-IS1 Shigehiko Mori (*Corporate Research & Development Center, Toshiba Corporation*), Haruhi Ohka, Hideyuki Nakao, Akio Amano, Kenji Todoru  
Film-Based Large-area Perovskite Photovoltaic Module Development
- 14:55 - 15:00 Discussion
- 15:00 - 15:15  
A1-O3 DIMITRIOS RAPTIS (*College of Engineering, Swansea University, Bay Campus, Swansea SA1 8EN UK*), VASIL STOITCHKOV, SIMONE MERONI, CARYS WORSLEY, ADAM POCKET, DAVE WORSLEY, MATTHEW CARNIE, TRYSTAN WATSON  
Enhancing Fully Printable Mesoscopic Perovskite Solar Cells Performance by Increasing Carbon Electrode Conductivity with the Use of Metallic Grids.
- 15:15 - 15:30  
A1-O4 Fanning MENG, Zhu Zhang, Tingli MA (*Kyushu Institute of Technology, Graduate School of Life Science and Systems Engineering, 2-4 Hibikino, Wakamatsu-ku, Kitakyushu-shi, 808-0196, Japan*)  
Interfacial engineering for carbon-based perovskite solar cells
- 15:30 - 15:45  
A1-O5 Ryo Ishikawa (*Saitama University*), Yuma Moriya, Keiji Ueno, Hajime Shirai  
Fabrication of perovskite thin-film solar cells with fluorinated passivation layer using a simple one-step spin-coating method without an antisolvent.
- 15:45 - 16:15 **Coffee Break**
- 16:15 - 16:30  
A1-O2 Atsushi Kogo (*Research Center for Photovoltaics (RCPV), National Institute of Advanced Industrial Science and Technology (AIST)*), Tetsuhiko Miyadera, Masayuki Chikamatsu  
Composition tuning of organic-inorganic perovskite crystals by post-treatment for high efficiency solar cells
- 16:30 - 16:45
- 16:45 - 17:00  
A1-O1 Ganbaatar Tumen-Ulzij (*OPERA, Kyushu University*), Chuanjiang Qin, Toshinori Matsushima, Chihaya Adachi  
Detrimental Effect of Excess PbI<sub>2</sub> on the Stability of Perovskite Solar Cells

### Session B1

Chair: Taiho PARK

- 14:30 - 14:55  
B1-IS1 Ryota Arai (*RICOH Co. Ltd.*)  
Organic Energy-Harvesting Devices and Modules for Self-Sustainable Power Generation under Ambient Indoor Lighting Environments
- 14:55 - 15:00 Discussion
- 15:00 - 15:15  
B1-O1 Begimai Adilbekova (*KSC, KAUST*), Yuanbao Lin, Emre Yengel, Hendrik A. Faber, George Harrison, Yuliar Firdaus, Vincent Tung, Thomas D. Anthopoulos  
Aqueous ammonia-based exfoliation of two dimensional MoS<sub>2</sub> and WS<sub>2</sub> and their application in non-fullerene organic solar cells
- 15:15 - 15:30  
B1-O2 Yuliar Firdaus (*King Abdullah University of Science and Technology (KAUST) - Saudi Arabia*), Qiao He, Yuanbao Lin, Ferry Anggoro Ardy Nugroho, Emre Yengel, Ahmed H. Balawi, Frederic Laquai, Christoph Langhammer, Feng Liu, Martin Heeney, Thomas D. Anthopoulos  
Organic Tandem Solar Cells with 15% Efficiency Employing Novel Wide Bandgap Nonfullerene Acceptor
- 15:30 - 15:45  
B1-O3 Emilie Planes, Lara Perrin, Manon Spalla, Muriel Matheron, Solenn Berson, Lionel Flandin (*Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, Grenoble INP, LEPMI, France*)  
Some Aspect of the Stability of Flexible Organic Solar Cells
- 15:45 - 16:15 **Coffee Break**
- 16:15 - 16:30  
B1-O4 Namrata Pant (*Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi*), Masatoshi Yanagida, Yasuhiro Shirai, Kenjiro Miyano  
Investigating the Effect of Nickel Oxide on the Crystallisation, Optoelectronic Properties and Performance of Perovskite Solar Cells



- 16:30 - 16:45 **Teng Ma** (*Advanced Institute for Materials Research (WPI-AIMR), Tohoku University, Sendai 980-8577, Japan*),  
B1-O5 Ayumi Hirano-Iwata  
Boosting the performance of back-contact perovskite solar cells by enlarging crystal size
- 16:45 - 17:00 **Chun-Hsiao Kuan** (*Graduate Institute of Photonics and Optoelectronics, National Taiwan University, Taipei, No.  
1, Sec. 4, Roosevelt Road, 10617, Taiwan*), Ching-Fuh Lin  
B1-O6 A Practicable Way Combining Advantages Of Thermal Evaporation And Solution Process To Control Reaction  
Of MAPbI<sub>3</sub> To Fabricate High Crystallization Perovskite

### Session C1

Chair: Udo Bach

- 14:30 - 14:55 **Jung-Yao Chen** (*National Chung Cheng University, TW*)  
C1-IS1 Non-Volatile Photomemory with a Ultrafast and Multi-Level Memory Behavior
- 14:55 - 15:00 Discussion
- 15:00 - 15:15 **Mohamad I. Nugraha** (*King Abdullah University of Science and Technology (KAUST) - Saudi Arabia*), Emre  
C1-O1 Yarali, Yuliar Firdaus, Yuanbao Lin, Nimer Wehbe, Abdulrahman El-Labban, Emre Yengel, Thomas D.  
Anthopolous  
Rapid Photonic Curing for the Fabrication of Strongly-Confined Colloidal Quantum Dot Transistors with High  
Carrier Mobility
- 15:15 - 15:30 **Saikat Bhaumik** (*Institute of Chemical Technology- IndianOil Odisha Campus*)  
C1-O2 Broadband emission from zero-dimensional Cs<sub>4</sub>PbI<sub>6</sub> perovskite nanocrystals
- 15:30 - 15:45 **Ayumi Ishii** (*Graduate School of Engineering, Toin University of Yokohama*), Tsutomu Miyasaka  
C1-O3 Highly Efficient Near-Infrared Luminescence of Yb(III) doped Perovskite Thin Films for Light-Emitting Device  
Applications
- 15:45 - 16:15 **Coffee Break**
- 16:15 - 16:30 **Ellie Tanaka** (*School of Chemistry, University of Edinburgh*), Hannes Michaels, Marina Freitag, Neil Robertson  
C1-O4 Strategies Towards Efficient and Cost-effective Dye-sensitized Solar Cells
- 16:30 - 16:45 **Vishwesh Venkatraman** (*Norwegian University of Science and Technology (NTNU)*), John de Mello  
C1-O5 Accelerated Design of Photovoltaic Dyes Using Materials Informatics

### 17:05 - 18:45 Poster Session

### 19:30 - 22:00 Social dinner

## January 22nd - Day 3 (Wednesday)

### 08:55 - 09:00 Announcement of the day

### Session G3

Chair: Hideo Ohkita

- 09:00 - 09:35 **Shuzi Hayase** (*i-Powered Energy System Reserach Center, The University of Electro-Communications*)  
G3-K1 Perovskite solar cells with wide band gap and narrow band gap
- 09:35 - 09:45 Discussion
- 09:45 - 10:10 **Takayuki Negami** (*Panasonic Corporation*), Hiroshi Higuchi, Takashi Nishihara, Ryusuke Uchida, Teruaki  
G3-O1 Yamamoto, Taisuke Matsui, Yukihiro Kaneko  
PEROVSKITE PHTOVOLTAIC MODULES FABRICATED by INK JET PRINTING
- 10:10 - 10:15 Discussion

### Coffee Break

### Session G4

Chair: Shuzi Hayase

- 10:45 - 11:10 **Maria Antonietta Loi** (*University of Groningen - NL*)  
G4-I1 Highly performing tin-based perovskite solar cells: a focus on the thin film quality
- 11:10 - 11:15 Discussion



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|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:15 - 11:40                                | <u>Kai Zhu</u> ( <i>National Renewable Energy Laboratory Denver</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| G4-I2                                        | Defect Passivation in Polycrystalline Perovskites for Efficient Tandem Solar Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 11:40 - 11:45                                | Discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 11:45 - 12:10                                | <u>Quentin Jeangros</u> ( <i>École Polytechnique Fédérale de Lausanne (EPFL), Institute of Microengineering (IMT), Photovoltaics and Thin-Film Electronics Laboratory (PV-Lab), Switzerland</i> ), Florent Sahli, Peter Fiala, Ricardo A.Z. Razera, Daniel A. Jacobs, Fan Fu, Terry C.-J. Yang, Quentin Guesnay, Xin Yu Chin, Vincent Paratte, Gizem Nogay, Brett A. Kamino, Saeid Rafizadeh, Arnaud Walter, Soo-Jin Moon, Adriana Paracchino, Marion Dussouillez, Laura Ding, Mathieu Boccard, Sylvain Nicolay, Andrea Ingenito, Christophe Ballif |
| G4-I3                                        | A nanometric view on performance-loss mechanisms in perovskite/c-Si multi-junction solar cells                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 12:10 - 12:15                                | Discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 12:15 - 12:40                                | <u>Hideo Ohkita</u> ( <i>Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University, Japan</i> )                                                                                                                                                                                                                                                                                                                                                                                                                             |
| G4-I4                                        | Charge Recombination Losses in Perovskite Solar Cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 12:40 - 12:45                                | Discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Industry talks</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 12:45 - 12:50                                | Industry talk                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 13:00 - 14:30                                | <b>lunch</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Session A2</b><br>Chair: Kai Zhu          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 14:30 - 14:55                                | <u>Eric Wei-Guang Diao</u> ( <i>National Chiao Tung University Hsinchu, Taiwan</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| A2-IS1                                       | Lead-free Perovskites for Applications of Photovoltaics and Photocatalysis                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 14:55 - 15:00                                | Discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 15:00 - 15:15                                | <u>Muhammad Akmal Kamarudin</u> ( <i>i-Powered Energy System Reserach Center, The University of Electro-Communications</i> ), Daisuke Hirotani, Zhen Wang, Kengo Hamada, Kohei Nishimura, Qing Shen, Satoshi Iikubo, Takashi Minemoto, Kenji Yoshino, Shuzi Hayase                                                                                                                                                                                                                                                                                  |
| A2-O1                                        | Lead-free tin halide perovskite solar cells beyond 10 % efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 15:15 - 15:30                                | <u>Hairen Tan</u> ( <i>Nanjing University</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| A2-O2                                        | Efficient and stable monolithic all-perovskite tandem solar cells                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 15:30 - 15:45                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 15:45 - 16:15                                | <b>Coffee Break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 16:15 - 16:30                                | <u>Adam Wright</u> ( <i>University of Oxford, Department of Physics, Clarendon Laboratory, Parks Road, Oxford, OX13PU, UK</i> )                                                                                                                                                                                                                                                                                                                                                                                                                     |
| A2-O3                                        | Band-tail trapping in FAPbI <sub>3</sub> perovskite                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 16:30 - 16:45                                | <u>Yajun Gao</u> ( <i>King Abdullah University of Science and Technology (KAUST) - Saudi Arabia</i> ), Kai wang, mingcong wang, Jafar Khan, Ahmed Balawi, Stefaan Wolf, Frederic Laquai                                                                                                                                                                                                                                                                                                                                                             |
| A2-O4                                        | Revealing the Impact of Cesium/Rubidium Incorporation on the Photophysics of Multiple-Cation Lead Halide Perovskites                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 16:45 - 17:00                                | <u>Satoshi Uchida</u> ( <i>Research Center for Advanced Science and Technology (RCAST), The University of Tokyo, Japan</i> ), Ludmila Cojocaru, Hiromi Tobita, Viraji Jayaweera, Shoji Kaneko, Hiroshi Segawa                                                                                                                                                                                                                                                                                                                                       |
| A2-O5                                        | Evaluation of interface junction capacitance of perovskite solar cells by direct current measurement                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Session B2</b><br>Chair: Quentin Jeangros |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 14:30 - 14:55                                | <u>Takeru Bessho</u> ( <i>Research Center for Advanced Science and Technology, The University of Tokyo, Japan</i> )                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| B2-IS1                                       | Material Amelioration of Organometal Halide Perovskite by Potassium-doping and Its Efficient Photovoltaics                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 14:55 - 15:00                                | Discussion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 15:00 - 15:15                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 15:15 - 15:30                                | <u>Cheng-Hung Hou</u> ( <i>Research Center for Applied Sciences, Academia Sinica, Taipei, Taiwan.</i> ), Shu-Han Hung, Jing-Jong Shyue, Pi-Tai Chou                                                                                                                                                                                                                                                                                                                                                                                                 |
| B2-O1                                        | Revealing Performance Governing Factors of Perovskite Solar Cells via Artifact-Free ToF-SIMS Depth Profiles                                                                                                                                                                                                                                                                                                                                                                                                                                         |



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| 15:30 - 15:45<br>B2-O2                      | <u>Lara Perrin</u> ( <i>LEPMI / CNRS UMR 5279 / Université Savoie Mont Blanc</i> ), Manon Spalla, Emilie Planes, Muriel Matheron, Solenn Berson, Lionel Flandin<br>Gold electrode mitigation impact: elucidation of both degradation and safeguard mechanisms in a mixed-ion perovskite solar device                                                                                                                    |
| 15:45 - 16:15                               | <b>Coffee Break</b>                                                                                                                                                                                                                                                                                                                                                                                                     |
| 16:15 - 16:30<br>B2-O3                      | <u>Shinichi Magaino</u> ( <i>Kanagawa Institute of Industrial Science and Technology, Kawasaki, Japan</i> ), Hidenori Saito, Daisuke Aoki, Tomoyuki Tobe<br>Standardization of Measurement Protocols for Photovoltaic Devices Exhibiting Complex Current Response to Applied Voltage                                                                                                                                    |
| 16:30 - 16:45                               |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 16:45 - 17:00<br>B2-O4                      | <u>Jun-Yu Huang</u> ( <i>Graduate Institute of Photonics and Optoelectronics and Department of Electrical Engineering, National Taiwan University</i> ), En-Wen Chang, Yuh-Renn Wu<br>Analysis of Hysteresis Effect and Modeling of Ion Migration in Perovskite Solar Cells                                                                                                                                             |
| <b>Session C2</b><br>Chair: Lionel Flandin  |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 14:30 - 14:55<br>C2-IS1                     | <u>Yoichi Aoki</u> ( <i>Toray Industries, Inc.</i> ), Shuhei Yamamoto, Daisuke Kitazawa<br>Wireless sensor nodes with organic solar cells                                                                                                                                                                                                                                                                               |
| 14:55 - 15:00                               | Discussion                                                                                                                                                                                                                                                                                                                                                                                                              |
| 15:00 - 15:15<br>C2-O1                      | <u>ELHAM REZASOLTANI</u> ( <i>Department of Physics and Centre for Plastic Electronics, Imperial College London, London, SW7 2AZ, UK.</i> ), Anne Guilbert, Jun Yan, xabier Rodriguz, Mohammed Azzuzi, Sachetan Tuladhar, Andrew Wadsworth, Iain McCulloch, Mariano Campoy, Jenny Nelson<br>Correlating the Phase Behavior with the Device Performance in Binary P3HT: NFA Blend Using Optical Probes of Microstructure |
| 15:15 - 15:30<br>C2-O2                      | <u>SAFAKATH KARUTHEATH</u> ( <i>King Abdullah University of Science and Technology (KAUST) - Saudi Arabia</i> ), Julien Gorenflot, Anastasia Markina, Yuliar Firdaus, Ahmed H. Balawi, Thomas D. Anthopoulos, Denis Andrienko, Frédéric Laquai<br>Importance of Energetic Driving Force for Efficient Charge Separation in Non-fullerene Organic Solar Cells                                                            |
| 15:30 - 15:45<br>C2-O3                      | <u>Jun Yan</u> ( <i>Department of Physics and Centre for Plastic Electronics, Imperial College London, London, SW7 2AZ, UK.</i> ), Elham Rezasoltani, Mohammed Azzouzi, Flurin D. Eisner, Anne A. Y. Guilbert, Jenny Nelson<br>Relating Microstructure Behaviour to Charge Transfer States Properties and Energy Losses in Organic Bulk Heterojunction Solar Cells                                                      |
| 15:45 - 16:15                               | <b>Coffee Break</b>                                                                                                                                                                                                                                                                                                                                                                                                     |
| 16:15 - 16:30<br>C2-O4                      | <u>Zhengfei Wei</u> ( <i>SPECIFIC, College of Engineering, Swansea University, Bay Campus, Swansea, SA1 8EN, UK</i> ), Benjamin Smith, Amirah Way, Vasil Stoichkov, Francesca De Rossi, Harrison Ka Hin Lee, Jérémy Barbé, Wing C. Tsoi, Justin Searle, David Worsley, Trystan Watson<br>Room-temperature Processed Transparent Conductive Oxides For Efficient And Semi-transparent Perovskite And Organic Solar Cells |
| 16:30 - 16:45<br>C2-O5                      | <u>Mario Leonardus</u> ( <i>Institute of Chemistry, Academia Sinica, Nankang, Taipei 11529 Taiwan</i> ), Chen-Hsiung Hung<br>The Effect of Light-Harvesting Property of Oxasmaragdyrin and Its Impact as Hole Transporting Material in Perovskite Solar Cell                                                                                                                                                            |
| 16:45 - 17:00<br>C2-O6                      | <u>Ece Aktas</u> ( <i>Institute of Chemical Research of Catalonia-The Barcelona Institute of Science and Technology (ICIQ-BIST), Avda. Països Catalans 16, 43007 Tarragona, Spain</i> ), Jesús Jiménez-López, Emilio Palomares<br>Self-Assembled Hole Transporting Monolayer to Improve PiN Type Perovskite Solar Cell Performance                                                                                      |
| <b>Session G5</b><br>Chair: Takuro Murakami |                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 17:00 - 17:40<br>G5-K1                      | <u>Henry Snaith</u> ( <i>University of Oxford, Department of Physics, Clarendon Laboratory, Parks Road, Oxford, OX13PU, UK</i> )<br>Perovskite solar cells: materials, devices and industrialization                                                                                                                                                                                                                    |
| 17:40 - 17:45                               | Discussion                                                                                                                                                                                                                                                                                                                                                                                                              |

17:45 - 18:00 Closing ceremony and poster awards

## Poster Contribution

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| 021 | <u>Said KAZAOUI</u> ( <i>Research Center for Photovoltaics (RCPV), National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan</i> )<br>KI Post-Treatment Improves the Performances of Perovskite Solar Cells |
| 036 | Zeinab El Moussawi, Ali Nourdine, <u>Lionel Flandin</u> ( <i>Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, Grenoble INP, LEPMI, France</i> )<br>Graft-Tuning of Optoelectronic Properties of Single-Walled Carbon Nanotubes        |
| 060 | <u>Chongyang Xu</u> ( <i>Department of Nano-Physics, Gachon University</i> ), Eun-Cheol Lee<br>Morphology control of SnO <sub>2</sub> layer for efficient perovskite solar cells through a solvent engineering strategy                   |