## Conference Program

### January 20th - Day 1 (Monday)
- 16:00 - 18:30 Registration
- 17:00 - 18:30 Welcome reception

### January 21st - Day 2 (Tuesday)
- 08:00 - 09:00 Registration
- 08:55 - 09:00 Announcement of the day
- 08:55 - 09:00 Opening
- 09:00 - 09:35 Session G1
  - **Alex Jen** *(Department of Materials Science, City University of Hong Kong, Kowloon, HK)*
  - 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 Session G1
  - **Peter Chen** *(Dept. Photonics, National Cheng Kung University)*, Yueh-Ya Chiu, Pei-Ying Lin, Itaru Raifuku,
  - Shao-Tung Chang
  - Pseudohalide Perovskite Solar Cells
- 10:10 - 10:15 Discussion
- 10:15 - 10:45 Coffee Break

### Session G2
- 10:45 - 11:10 **TAIHO PARK** *(Pohang University of Science and Technology)*
  - **G2-I1** Thermally Stable, Planar Hybrid Perovskite Solar Cells with High Efficiency
- 11:10 - 11:15 Discussion
- 11:15 - 11:40 **Tze Chien Sum** *(Division of Physics and Applied Physics, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore 637371, Singapore)*
  - Perovskite Hot Carrier Dynamics
- 11:40 - 11:45 Discussion
- 11:45 - 12:10 **Udo Bach** *(ARC Centre of Excellence in Exciton Science, Department of Chemical Engineering, Monash University, Clayton, VIC, Australia)*, Wenxin Mao, Xiongfeng Lin, Siqi Deng
  - Single-Crystalline and Back-Contact Perovskite Optoelectronics
- 12:10 - 12:15 Discussion
- 12:15 - 12:40 **Hiroko Yamada** *(Nara Institute of Science and Technology - Japan)*
  - **G2-I3** Engineering Thin Films of a Tetraphenylporphyrin toward Efficient Charge-Carrier Transport
- 12:40 - 12:45 Discussion
- 12:45 - 12:55 Industry talk
- 13:00 - 14:30 Lunch

### Session A1
14:30 - 14:55 Shigeohiko Mori (Corporate Research & Development Center, Toshiba Corporation), Haruhi Ohka, Hideyuki A1-IS1
Film-Based Large-area Perovskite Photovoltaic Module Development
14:55 - 15:00 Discussion
15:00 - 15:15 DIMITRIOSS RAPATPI (College of Engineering, Swansea University, Bay Campus, Swansea SA1 8EN UK), VASIL A1-O4
STOITCHKOV, SIMONE MEROI, CARYS WORSLEY, ADAM POCKET, DAVE WORSLEY, MATTHIEW 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 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) A1-O5
Interfacial engineering for carbon-based perovskite solar cells
15:30 - 15:45 Ryos Ishikawa (Saitama University), Yuma Moriya, Keiji Ueno, Hajime Shirai A1-O6
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 Atshiki Kogo (Research Center for Photovoltaics (RCPV), National Institute of Advanced Industrial Science and Technology (AIST)), Tetsuhiko Miyadera, Masayuki Chikamatsu A1-O3
Composition tuning of organic-inorganic perovskite crystals by post-treatment for high efficiency solar cells
16:30 - 16:45 Silver Hamill Turren Cruz (Young Investigator Group Active Materials and interfaces for stable perovskite solar cells, Helmholtz-Zentrum Berlin für Materialien und Energie), Antonio Abate A1-O2
Active Materials, multicomponent and Interfaces for Stable Perovskite Solar Cells
16:45 - 17:00 Ganbaatar Tumen-Uzii (OPERA, Kyushu University), Chuantang Qin, Toshinori Matsushima, Chihaya Adachi A1-O1
Detrimental Effect of Excess PbI2 on the Stability of Perovskite Solar Cells

Session B1

14:30 - 14:55 Ryota Arai (RICOH Co. Ltd.,) B1-IS1
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 Begimi Adilbekova (KSC, KAUST), Yuanbao Lin, Emre Yengel, Hendrik A. Faber, George Harrison, Yuliar B1-O1
Firdaus, Vincent Tung, Thomas D. Anthopoulos
Aqueous ammonia-based exfoliation of two dimensional MoS2 and WS2 and their application in non-fullerene organic solar cells
15:15 - 15:30 Yuliar Firdaus (King Abdullah University of Science and Technology (KAUST) - Saudi Arabia), Qiao He, B1-O2
Yuanbao Lin, Ferry Anggora 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 Emilie Planes, Lara Perrin, Manon Spalla, Muriel Matheron, Solenn Berson, Lionel Flandin (Univ. Grenoble Alpes, Univ. Savoie Mont Blanc, CNRS, Grenoble INP, LEPM, France) B1-O3
Some Aspect of the Stability of Flexible Organic Solar Cells
15:45 - 16:15 Coffee Break
16:15 - 16:30 Namrata Pant (Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi), B1-O4
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
Chun-Hsiao Kuan (National Taiwan University of Science and Technology), Ching-Fuh Lin
A Practicable Way Combining Advantages Of Thermal Evaporation And Solution Process To Control Reaction Of MAPbI3 To Fabricate High Crystallization Perovskite

Session C1

14:30 - 14:55 Jung-Yao Chen (National Chung Cheng University, TW)
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. Anthropoulus
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 Cs4PbI6 perovskite nanocrystals

15:30 - 15:45 Ayumi Ishi (Graduate School of Engineering, Toin University of Yokohama), Tsutomu Miyasaka

15:45 - 16:15 Coffee Break

16:15 - 16:30 Eille 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 Highly Efficient Near-Infrared Luminescence of Yb(III) doped Perovskite Thin Films for Light-Emitting Device Applications

16:45 - 17:00 Poster Session

19:30 - 22:00 Social dinner

January 22nd - Day 3 (Wednesday)

08:55 - 09:00 Announcement of the day

Session G3

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 PHOTOVOLTAIC MODULES FABRICATED by INK JET PRINTING

10:10 - 10:15 Discussion

10:15 - 10:45 Coffee Break

Session G4

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

11:10 - 11:15 Discussion

11:15 - 11:40 Kai Zhu (National Renewable Energy Laboratory Denver)
G4-I2 Defect Passivation in Polycrystalline Perovskites for Efficient Tandem Solar Cells

11:40 - 11:45 Discussion
### Session A2

**14:30 - 14:55**  
**Eric Wei-Guang Diau** *(National Chiao Tung University Hsinchu, Taiwan)*  
**A2-IS1** Lead-free Perovskites for Applications of Photovoltaics and Photocatalysis

**14:55 - 15:00** Discussion

**15:00 - 15:15**  
**Muhammad Akmal Kamarudin** *(i-Powered Energy System Reserach Center, The University of Electro-Communications)*, Daisuke Hirotani, Zhen Wang, Kengo Hamada, Kohei Nishimura, Qing Shen, Satoshi likubo, Takashi Minemoto, Kenji Yoshino, Shuzi Hayase  
**A2-O1** Lead-free tin halide perovskite solar cells beyond 10 % efficiency

**15:15 - 15:30**  
**Hairen Tan** *(Nanjing University)*  
**A2-O2** Efficient and stable monolithic all-perovskite tandem solar cells

**15:30 - 15:45**  
**Ashish Kulkarni** *(Graduate School of Engineering, Toin University of Yokohama, 1614, Kurogane-cho, Aoba, Yokohama, Kanagawa, Japan 225-8503), Ajay Jena, Tsutomu Miyasaka*  
**A2-O3** Investigation of Optoelectronic Properties and Photovoltaic Performance of Efficient Bismuth and Antimony based Mixed Lead-Free Halide Materials

**15:45 - 16:15** Coffee Break

**16:15 - 16:30**  
**Adam Wright** *(University of Oxford, Department of Physics, Clarendon Laboratory, Parks Road, Oxford, OX13PU, UK)*  
**A2-O4** Band-tail trapping in FAPbI3 perovskite

**16:30 - 16:45**  
**Yajun Gao** *(King Abdullah University of Science and Technology (KAUST) - Saudi Arabia)*, Kai wang, mingcong wang, Jafar Khan, Ahmed Balawi, Stefaan Wolf, Frederic Laquai  
**A2-O5** Revealing the Impact of Cesium/Rubidium Incorporation on the Photophysics of Multiple-Cation Lead Halide Perovskites

**16:45 - 17:00**  
**Satoshi Uchida** *(Research Center for Advanced Science and Technology (RCAS), The University of Tokyo, Japan)*, Ludmila Cojocaru, Hiromi Tobita, Viraji Jayaweera, Shoji Kaneko, Hiroshi Segawa  
**A2-O6** Evaluation of interface junction capacitance of perovskite solar cells by direct current measurement

### Session B2

**14:30 - 14:55**  
**Takeru Bessho** *(Research Center for Advanced Science and Technology, The University of Tokyo, Japan)*  
**B2-IS1** Material Amelioration of Organometal Halide Perovskite by Potassium-doping and Its Efficient Photovoltaics

**14:55 - 15:00** Discussion

**15:00 - 15:15**  
**Ana Flavia Nogueira** *(LNES, Unicamp)*  
**B2-O1** Facets of multicomponent halide perovskites

**15:15 - 15:30**  
**Cheng-Hung Hou** *(Research Center for Applied Sciences, Academia Sinica, Taipei, Taiwan, Shu-Han Hung, B2-O2**  
**Jing-Jong Shyue, Pi-Tai Chou**  
**B2-O2** Revealing Performance Governing Factors of Perovskite Solar Cells via Artifact-Free ToF-SIMS Depth Profiles
15:30 - 15:45 Lara Perrin (LEPMI / CNRS UMR 5279 / Université Savoie Mont Blanc), Manon Spalla, Emilie Planes, Muriel B2-O3 Matheron, Solenn Berson, Lionel Flandin
Gold electrode mitigation impact: elucidation of both degradation and safeguard mechanisms in a mixed-ion perovskite solar device

15:45 - 16:15 Coffee Break

16:15 - 16:30 Shinichi Magano (Kanagawa Institute of Industrial Science and Technology, Kawasaki, Japan), Hidenori Saito, B2-O4 Daisuke Aoki, Tomoyuki Tobe
Standardization of Measurement Protocols for Photovoltaic Devices Exhibiting Complex Current Response to Applied Voltage

16:30 - 16:45 Raghayeh Imani (Faculty of Mechanical Engineering Czech Technical University in Prague Technicka 4, 166 07 Prague 6 Czech Republic)
Ultrafast Dynamical Phenomena in Lead Halide Perovskite Materials: Theoretical RT-TDDFT Study

16:45 - 17:00 Jun-Yu Huang (National Taiwan University of Science and Technology), En-Wen Chang, Yuh-Renn Wu B2-O6 Analysis of Hysteresis Effect and Modeling of Ion Migration in Perovskite Solar Cells

**Session C2**

14:30 - 14:55 Yoichi Aoki (Toray Industries, Inc.), Shuhei Yamamoto, Daisuke Kitazawa C2-1S1 Wireless sensor nodes with organic solar cells
14:55 - 15:00 Discussion

**ELHAM REZASOLTANI** (Department of Physics and Centre for Plastic Electronics, Imperial College London, C2-O1 London, SW7 2AZ, UK), Anne Gilbert, Jun Yan, Xavier Rodriguez, Mohammed Azzouzi, Sachetan Tuladhar, Andrew Wadsworth, Iain Mcculloch, Mariano Campoy, Jenny Nelson
Correlating the Phase Behavior with the Device Performance in Binary P3HT: NFA Blend Using Optical Probes of Microstructure

15:15 - 15:30 **SAFAKATH KARUThEDATH** (King Abdullah University of Science and Technology (KAUST) - Saudi Arabia), C2-O2 Julien Gorenflo, Anastasia Markina, Yuliar Firdaus, Ahmed H. Balawi, Thomas D. Anthopoulos, Denis Andrienko, Frédéric Laquai
Importance of Energetic Driving Force for Efficient Charge Separation in Non-fullerenes Organic Solar Cells

15:30 - 15:45 **Jun Yan** (Department of Physics and Centre for Plastic Electronics, Imperial College London, London, SW7 2AZ, UK), Elham Rezasoltani, Mohammed Azzouzi, Florin D. Eisner, Anne A. Y. Gilbert, Jenny Nelson
Relating Microstructure Behaviour to Charge Transfer States Properties and Energy Losses in Organic Bulk Heterojunction Solar Cells

15:45 - 16:15 Coffee Break

16:15 - 16:30 **Zhengfei Wei** (SPECIFIC, College of Engineering, Swansea University, Bay Campus, Swansea, SA1 8EN, UK), C2-O4 Benjamin Smith, Amira Way, Vasil Stoichkov, Francesca De Rossi, Harrison Ka Hin Lee, Jérémy Barbé, Wing C. Tsui, Justin Searle, David Worsley, Trystan Watson
Room-temperature Processed Transparent Conductive Oxides For Efficient And Semi-transparent Perovskite And Organic Solar Cells

16:30 - 16:45 **Mario Leonards** (Institute of Chemistry, Academia Sinica, Nankang, Taipei 11529 Taiwan), Chen-Hsiung Hung C2-O5 The Effect of Light-Harvesting Property of Oxasmaragdyrin and Its Impact as Hole Transporting Material in Perovskite Solar Cell

16:45 - 17:00 **Ece Aktas** (Institute of Chemical Research of Catalonia-The Barcelona Institute of Science and Technology (ICIO-BIST), Avda. Països Catalans 16, 43007 Tarragona, Spain), Jesús Jiménez-López, Emilio Palomares C2-O6 Self-Assembled Hole Transporting Monolayer to Improve PIN Type Perovskite Solar Cell Performance

**Session G5**

17:00 - 17:40 **Henry Snaith** (University of Oxford, Department of Physics, Clarendon Laboratory, Parks Road, Oxford, OX13PU, UK)
Perovskite solar cells: materials, devices and industrialization

17:40 - 17:45 Discussion
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<td>Graft-Tuning of Optoelectronic Properties of Single-Walled Carbon Nanotubes</td>
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<td>Molecular Design of Organic Hole-transporting Materials for Perovskite Solar Cells</td>
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