Program

November 18, 2024

16:00 – 18:00	Registration / Welcome Reception

November 19, 2024

08:30 – 09:00	Registration
09:00 – 09:20	Opening Remarks Hiroyoshi Naito (Osaka Metropolitan University)
	Chair: Gang LI (The Hong Kong Polytechnic University)
09:20 – 09:40	Development of Organic Semiconducting Materials for Organic Solar Cell *YunHi Kim (Gyeongsang National University, RIMA)
09:40 – 10:00	Development of C-Shaped *ortho*-Benzodipyrrole-based A-D-A type Nonfullerene Acceptors for High-Performance Organic Photovoltaics and Air-Stable, High-Electron-Mobility Transistors *Yen-Ju Cheng (National Yang Ming Chiao Tung University)
10:00 – 10:20	Development of π-Conjugated Polymers for Efficient Organic Photovoltaics *Itaru Osaka (Hiroshima University)
10:20 – 11:00	**Plenary**) Green-Processable Semiconducting Polymers for Photovoltaics *Taiho PARK (Pohang University of Science and Technology)
11:00 – 11:20	Coffee Break
	Chair: Le Yang (Institute of Materials Research & Engineering)
11:20 – 11:40	Narrowband Tetradentate Pt(II) Emitters for High-Performance Deep-Blue Phosphorescent OLEDs *Guijie Li (Zhejiang University of Technology)
11:40 – 12:00	Can Iridium(III) Carbene Complexes Be the Durable Blue OLED Phosphors? *Yun CHI, Jie Yan (City University of Hong Kong)
12:00 – 12:20	Electroluminescent Clusters: Filling the Gap *Hui Xu, Jianan Sun (Heilongjiang University)
12:20 – 13:40	Lunch
	Chair: Takashi Nagase (Osaka Metropolitan University)
13:40 – 14:20	**Featured Invited Talk**) Insights into Scientific Writing and Publishing *Natalie Lok Kwan Li (Nature Communications)
14:20 – 14:40	Non-Volatile Floating-Gate Photomemory with Ultrafast and Multi-Level Memory Behavior *Jung-Yao Chen (National Cheng Kung University)
14:40 – 15:00	Organic Single Crystal Growth by Naphthalene Flux Method and FET Characteristics *Toshihiro Shimada[1], Seiya Yokokura[1], Takashi Yanase[2] (1. Hokkaido University、2. Toho University)
15:00 – 15:20	Coffee Break

Chair: Seok-In Na (Jeonbuk National University)

15:20 – 15:40 Characteristics of Bifacial perovskite solar cells under various albedo conditions

*Chao-Yu Peter Chen[1,2,3], Ming-Xun Jiang[1,] Chen-Fu Lin[1] (1. Dept. Photonics, National Cheng Kung University, Tainan, Taiwan, 2. Hierarchical Green-Energy Materials (Hi-GEM) Research Center, National Cheng Kung University, Tainan, Taiwan, 3. Program on Key Materials, Academy of Innovative Semiconductor and Sustainable Manufacturing, National Cheng Kung University, Tainan, Taiwan)

15:40 – 16:00 Methylamine Post Treatment: Is it the Holy Grail of Large Area Perovskite Thin Film Fabrication?

*Tzu Chien Wei[1,2] (1. National Tsing-Hua University， 2. Academia Sinica)

16:00 – 16:20 Enhancing Stability in Halide Perovskite Photovoltaics Through Interface Optimization via ZOOM

*Zonglong Zhu (Department of Chemistry, City University of Hong Kong)

16:20 – 16:40 Fabrication of highly efficient perovskite solar cells in high humidity air

*Lixin Xiao (Peking University)

16:40 – 17:00 Coffee Break

Chair: Furong Zhu (Hong Kong Baptist University)

17:00 – 17:20 Developing Gas Sensing Technology for Detecting Agricultural Nitrogen Pollution

*Hsiao-Wen Zan[1,2]， Chih-Lu Chiang[2]， Yu-Yu Huang[3]， Li-Yin Chen[1]， Hsin-Fei Meng[4] (1. Department of Photonics, National Yang Ming Chiao Tung Univ. (NYCU), Taiwan， 2. Institute of Pioneer Semiconductor Innovation, National Yang Ming Chiao Tung Univ., Taiwan， 3. Taiwan Agriculture Research Institute, Ministry of Agriculture, Executive Yuan, Taiwan， 4. Institute of Physics, National Yang Ming Chiao Tung Univ., Taiwan)

17:20 – 17:40 Enhancing Organic Semiconductor-Based Gas Sensors for Low Hardware Demand Applications

*Li-Yin Chen[1]， Hsiao-Wen Zan[1]， Hsin-Fei Meng[2] (1. Department of Photonics, National Yang Ming Chiao Tung University， 2. Institute of Physics, National Yang Ming Chiao Tung University)

17:40 – 18:00 Fabrication of Polymeric Grating Prism-based Dual-mode Miniature Surface Plasmon Resonance Sensor

*Akira Baba[1]， Wisansaya Jaikeandee[1]， Chutiparn Lertvachirapaiboon[2]， Kazunari Shinbo[1]， Keizo Kato[1]， Sanong Ekgasit[3] (1. Niigata University， 2. National Nanotechnology Center (NANOTEC), National Science and Technology Development Agency， 3. Chulalongkorn University)

November 20, 2024

Chair: Bo Ram Lee (Sungkyunkwan University)

09:00 – 09:20 High-Performance Solar Cells Based on Low Bandgap Organic Perovskite Quantum Dots

*Sung-Yeon Jang (Ulsan National Institute of Science and Technology (UNIST))

09:20 – 09:40 Novel Organic Moieties for Functional Halide Perovskites and Their Devices

*Hao-Wu Lin (National Tsing Hua University)

09:40 – 10:00 Pervoskite Ink Engineering for Slot-die Coating Based Photovoltaics

*Seok-In Na (Professional Graduate School of Flexible and Printable Electronics, Department of Flexible and Printable Electronics, Jeonbuk National University)

10:00 – 10:40 **Plenary**) Scalable fabrication of perovskite solar cells via magnetron sputtering

*Dechun Zou (Peking University)

10:40– 11:00 Coffee Break

	Chair: Hui Xu (Heilongjiang University)
11:00-11:20	Methyl Effect of Thermally Activated Delayed Fluorescent Emitters on Blue Organic Light-emitting Diodes *Chin-Yiu Chan (City University of Hong Kong)
11:20 – 11:40	Heavy-atom Effect Promotes Multi-Resonance TADF Emitters *Chuluo Yang, Yuxuan Hu, Jingsheng Miao, Xiaosong Cao (Shenzhen University)
11:40 – 12:00	Highly efficient invisible electroluminescence from organic light-emitting diodes *Hajime Nakanotani (Center for Organic Photonics and Electronics Research (OPERA), Kyushu University)
12:00 – 12:20	Utilization of Thermally Stimulated Delayed Fluorescence in Organic Scintillators *Masanori Koshimizu[1], Yuichi Kitamoto[2], Taiyo Kanenari[1], Atsushi Sato[2], Tetsutaro Hattori[2], Shuichi Oi[2], Takayuki Yanagida[3], Yutaka Fujimoto[2], Keisuke Asai[2] (1. Shizuoka University, 2. Tohoku University, 3. Nara Institute of Science and Technology)
12:20 – 13:40	Lunch
	Chair: Toshihiro Shimada (Hokkaido University)
13:40 – 14:20	**Plenary**) Organic Thermoelectric Device Utilizing CT Interface as Charge Generation by Harvesting Thermal Energy *Chihaya Adachi (Center for Organic Photonics and Electronics Research (OPERA), Kyushu University)
14:20 – 14:40	Organic/Hybrid Thermoelectric Materials and Devices *Cheng-Liang Liu (National Taiwan University)
14:40 – 15:00	Giant Seebeck Effect > 0.1 V/K in Organic/Polymer Semiconductors *Masakazu Nakamura (Nara Institute of Science and Technology)
15:00 – 15:20	Coffee Break
	Chair: Li-Yin Chen (National Yang Ming Chiao Tung University)
15:20 – 15:40	Bio-Inspired Micro/Nanostructures for Skin-like Sensors *Hyunhyub Ko (Ulsan National Institute of Science and Technology)
15:40 – 16:00	Biosensors based on flexible organic electrochemical transistors *Feng YAN (The Hong Kong Polytechnic University)
16:00 – 16:20	A Monolithic Organic Tactile Synapse Using Piezo-Ionics for Neuro-Robotics *Do Hwan Kim (Hanyang University)
16:20 – 16:40	Coffee Break
	Chair: Itaru Osaka (Hiroshima University)
16:40 – 17:00	Theoretical insight into how to reduce non-radiative voltage loss in organic solar cells *Xiankai Chen (Soochow University)
17:00 – 17:20	Development of large-area organic photovoltaics by control of nanoscale morphology *Hae Jung Son (Korea Institute of Science and Techanology)
17:20 – 17:40	Organic Solar Cells towards Performance and Applications *Gang Li (Hong Kong Polytechnic University)
17:40 – 18:00	Improving Thermal/Photo/Underwater-Stability of Polymer Solar Cells by Interface Engineering *Chu-Chen Chueh (National Taiwan University)
18:30 – 20:30	Poster session

Chair: Jianxin Tang (Macau University of Science and Technology)

09:00 – 09:20 Bipolar Metal Oxide Carrier Transport Layers for Efficient Perovskite Solar Cells

*Chih Wei Chu, Mriganka Singh, Anjali Thakran (Academia Sinica)

09:20 – 09:40 Organic host blend perovskite nanocrystal light-emitting diodes

*Takayuki Chiba (Yamagata University)

09:40 – 10:00 Passivation Strategies for Mitigating Defect Challenges in Halide Perovskite Light-Emitting Diodes

*Bo Ram Lee (Sungkyunkwan University)

10:00 – 10:40 **Plenary**) Printable Organic and Perovskite Solar Cells for Clean Energy

*Alex K-Y. Jen (Dept. of Materials Science & Engineering, City University of Hong Kong)

10:40 – 11:00 Coffee Break

Chair: Hao-Wu Lin (National Tsing Hua University)

11:00 – 11:20 Design of Electroactive Polymers with High Mechanical Properties for Intrinsically-Stretchable Electronics

*Bumjoon Kim (KAIST)

11:20 – 11:40 Design and synthesis of stretchable and self-healing polymers for hybrid human-motion sensing and energy harvesting

*Ho-Hsiu Chou (Department of Chemical Engineering, National Tsing Hua University)

11:40 – 12:00 Mechanical deformability and charge transport of organic semiconductors for stretchable electronics

*Kilwon Cho (Pohang University of Science and Technology)

12:00 – 12:20 Toward high definition and highly efficient quantum dot light-emitting diodes with deformable formfactors

*Moon Kee Choi (Ulsan National Institute of Science & Technology)

12:20 – 13:40 Lunch

Chair: Lixin Xiao (Peking University)

13:40 – 14:20 **Plenary**) A review in the initial development of p-i-n configuration and NiO_x electrode interlayer in organolead halide perovskite solar cells

*Tzung-Fang Guo[1,2], Peter Chen[1], Wei-Chih Lai[1] (1. Department of Photonics, National Cheng Kung University, Taiwan, 2. Research Center of Applied Sciences, Research Center of Critical Issues, Academia Sinica, Taiwan)

14:20 – 14:40 Synergetic Interface Engineering on Blue Perovskite Light-Emitting Diodes

*Jianxin Tang (Macau University of Science and Technology)

14:40 – 15:00 Phase management for pure red perovskite light-emitting diodes

*Chuanjiang Qin (Changchun Institute of Applied Chemistry, Chinese Academy of Sciences)

15:00 – 15:20 Coffee Break

Chair: Yi-Ting Lee (Soochow University)

15:20 – 15:40 Inverted Singlet and Triplet Materials for Organic Light-Emitting Diodes

*Naoya Aizawa (Osaka University)

15:40 – 16:00 The Origin of the Inverted Singlet and Triplet Excited States of Azaphenalene Molecules

*Yong-Jin Pu (RIKEN Center for Emergent Matter Science (CEMS))

16:00 – 16:20 Near-Infrared Luminescent Radical Materials and Devices

*Feng Li (State Key Laboratory of Supramolecular Structure and Materials, Chemistry College, Jilin University)

16:20 – 16:40 Spontaneous orientation polarization of fluoroalkyl-based polar molecules

*Masaki Tanaka (Tokyo University of Agriculture and Technology)

16:40 – 17:00 Coffee Break

	Chair: Chuluo Yang (Shenzhen University)
17:00 – 17:20	Triplet-triplet annihilation strategies in photon-upconversion and OLEDs *Le Yang (Institute of Materials Research and Engineering (IMRE), ASTAR)
17:20 – 17:40	Upconversion Emission for Blue Organic Light-Emitting Diode *Seiichiro Izawa (Institute of Science Tokyo)
17:40 – 18:00	Pyrene-Based Triplet-Triplet Annihilation Hosts with Enhanced Horizontal Orientation for Organic Light-Emitting Diodes *Yi-Ting Lee, Chiao-En Li, Ya-Lei Hu (Department of Chemistry, Soochow University, Taipei)
19:00 – 21:00	Conference Banquet

November 22, 2024

	Chair: Cheng-Liang Liu (National Taiwan University)
09:00 – 09:20	Blue-Emissive Quantum Dots: From Material Synthesis to Device Applications *Haizheng Zhong (Beijing Institute of Technology)
09:20 – 09:40	Highly Efficient Color Conversion Materials Using Organic Nano-dots *Jang Hyuk Kwon, Rasheeda Ansari (Organic Optoelectronic Device Lab (OODL), Department of Information Display, Kyung Hee University, Seoul)
09:40 – 10:00	Highly Horizontal Oriented Exciplex Host for High-Performance Eye-Protection White Organic Light-Emitting Diodes Denghui Liu, Mengke Li, *Shi-Jian Su (South China University of Technology)
10:00 – 10:20	Molecular Level Understanding of OLEDs based on Quantum Chemical Calculations, Multiscale Simulations, and NMR *Hironori Kaji (Kyoto Univ.)
10:20 – 11:00	**Plenary**) Organic LEDs: Where we go *Junji Kido (Yamagata University)
11:00 – 11:20	Coffee Break
	Chair: Chih-Wei Chu (Academia Sinica)
11:20 – 11:40	Organic Functional Electronics: Advancing Imaging Technologies for Invisible Light Detection *Shun-Wei Liu (Ming Chi University of Technology)
11:40 – 12:00	Seeing the Unseen – NIR Organic Photodetectors for Application in Non-Intrusive Detection *Furong Zhu (Hong Kong Baptist University)
12:00 – 12:20	Vertically Phase Separated Photomultiplication Organic Photodetectors with Ultrafast Dynamic Characteristics *Han Young Woo (Korea University)
12:20 – 12:40	Closing Ceremony
13:30-18:00	Conference Excursion

Poster

November 20, 2024