

Oral session

Monday, 22

Chair: Hisao Ishii (Chiba Univ., Japan)

9:00 **PL 01** Setting up the new efficiency limit of OLEDs
Chang-Ki Moon, Sei-Yong Kim, Kwon-Hyeon Kim, Jang-Joo Kim
Seoul National University, Korea

9:45 **I01** Solution-processed flexible transparent electrodes for organic electronic devices
Youngu Lee
Daegu Gyeongbuk Institute of Science and Technology (DGIST), Korea,

10:15 **O01** Solvent-free liquid molecular semiconductors and their applications in organic optoelectronics
J.C. Ribierre^{1,2}, J.H. Kim¹, M. Inoue¹, Z. Li¹, S. Méry³, C. Adachi^{1,2}
¹Kyushu University, Japan, ²Adachi Molecular Exciton Engineering Project, ERATO, JST, Japan, ³CNRS-Université de Strasbourg, France

Break(10:30~11:00)

Chair: Youngu Lee (DGIST, Korea)

11:00 **I02** Low-energy inverse photoemission study of organic semiconductors for organic photovoltaic cells
Hiroyuki Yoshida
Kyoto University, Japan

11:30 **O02** Direct Observation of Negative Carrier States at Polarized Organic Semiconductor Surfaces Studied by High Sensitivity Photoemission and Photoelectron Yield Spectroscopy
Hiroumi. Kinjo¹, Hyunsoo Lim¹, Yusuke Ozawa¹, Tomoya Sato¹, Yutaka Noguchi², Yasuo Nakayama¹, Hisao Ishii^{1,3}
¹Graduate School of Advanced Integration Science, Chiba University, Japan, ²Meiji University, Japan, ³Center for Frontier Science, Chiba University, Japan

11:45 **O03** Crystallization on a Floating Substrate: A Key to Monitor Local Supersaturation Levels
Viktor Fischer, Olaf Karthaus
Chitose Institute of Science and Technology, Japan

12:00 **I03** Highly Efficient Organic Photovoltaics with Carbon Nanotubes
Ju Min Lee^{1,2}, Hyung Il Park^{1,2}, Sang Ouk Kim^{1,2}
¹Institute for Basic Science (IBS), ²KAIST, Korea

Lunch(12:30~14:00)

Chair: Sang Ouk Kim (IBS, KAIST, Korea)

- 14:00 **O04** Charge formation dynamics and efficiency in organic photovoltaic
Yutaka Moritomo¹, Kouhei Yonezawa¹, Takeshi Yasuda²
¹University of Tsukuba, Japan, ²NIMS, Japan
- 14:15 **O05**
- 14:30 **O06** Sensing Characteristics of Au- and Nb- Modified ZnO/P3HT Composite Films as NO₂ Gas Sensors
Sukon Phanichphant¹, Anurat Wisitsoraat², Chanitpa Khantha³, Viruntachar Kruefu^{4*}
¹Chiang Mai University, Thailand, ²Nanoelectronics and MEMS Laboratory, Thailand, ³King Mongkut's University of Technology, Thailand, ⁴Maejo University, Thailand
- 14:45 **I04** Photon upconversion based on triplet-triplet annihilation in hydrophobic DNA
Hideki Kawai
Shizuoka University, Japan

Break(15:15~15:45)

Chair: Hideki Kawai (Shizuoka Univ., Japan)

- 15:45 **I05** Protein detection on graphene derivative surface
Kazuaki Furukawa, Yuko Ueno
NTT Basic Research Labs., Japan
- 16:15 **O07** Fabrication of Ag and Au mixed nanoparticles and their biosensing applications
Daisuke Tanaka, Keisuke Imazu, Koichi Okamoto, Kaoru Tamada
Kyushu University, Japan
- 16:30 **O08** Electrochemistry in organic electronics : Learn of ions
Mitsuyoshi Onoda
University of Hyogo, Japan
- 16:45 **O09** 3D-Patterning of waveguide polymeric and upconversion luminescent layers for flexible transparent displays
Satoshi Watanabe¹, Takeo Asanuma¹, Hiroshi Hyodo², Kohei Soga¹, Mitsuyoshi Matsumoto¹
¹Tokyo University of Science, Japan, ²Tohoku University, Japan

PA001-Poster Presentation (17:30~19:00)

Tuesday, 23

Chair: Han Young Woo (Pusan National Univ., Korea)

- 9:00 **I06** Recent Progress in Research on Organic Nanocrystals: Encapsulation and CT-Complexes Cases
Hidetoshi Oikawa, Tsunenobu Onodera
IMRAM, Tohoku University, Japan
- 9:30 **I07** Multimolecule-Integration into Photonic Nanoparticles: A New Strategy for Theragnosis
Schoon Kim
Korea Institute of Science and Technology (KIST)
- 10:00 **O10** Transient absorption anisotropy spectroscopy to reveal energy migration among dye molecules in dye-sensitized solar cells
Kenji Sunahara^{1,2}, Hiroyuki Matsuzaki¹, Akihiro Furube^{1,2*}
¹AIST, Japan, ²University of Tsukuba, Japan
- 10:15 **O11** Rapid Fabrications of Flexible Dye-Sensitized Solar Cells by Ultrasonic Spray Coating Technology
Hyun-Gyu Han¹, Hasitha C. Weerasinghe^{2,3}, Kwang Min Kim,¹ Eung Lee¹, Yi-Bing Cheng⁴, David J. Johnes², Andrew B. Holmes^{2,3}, Tae-Hyuk Kwon^{1*}
¹Ulsan National Institute of Science and Technology (UNIST), Korea, ²University of Melbourne, Australia, ³Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia, ⁴Monash University, Australia
- Break(10:30~11:00)**
- Chair: Akihiro Furube (AIST,Japan)**
- 11:00 **I08** Wave Packet Dynamical Calculations for Charge Transport of Disordered Organic Semiconductors
Hiroyuki Ishii^{1,2}, Nobuhiko Kobayashi¹, Kenji Hirose³
¹University of Tsukuba, Japan ²PRESTO, JST, Japan ³NEC Corporation, Japan.
- 11:30 **I09** Semi-crystalline photovoltaic polymers: Molecular design, synthesis and structure-property relationship
Han Young Woo
Pusan National University, Korea
- 12:00 **O12** Miscibility of PCBM into a Non-peripheral-type of Liquid Crystalline Phthalocyanine Semiconductors towards a Well-Organized BHJ Active Layer in Organic Photovoltaics
Yo Shimizu¹, Yukimasa Matsuda¹, Yumi Higuchi¹, Daiju Okuda^{1,2}, Takaya Nakao^{1,2}, Lydia Sosa-Vargas¹, Akihiko Fujii³, Masanori Ozaki³
¹Research Institute for Ubiquitous Energy Devices, AIST, Japan, ²Ryukoku University, Japan, ³Osaka University, Japan

- 12:15 **O13** Novel Naphtho[2,3-c]thiophene-4,9-dione-Based Copolymers as p-Type Semiconductors for Bulk-Heterojunction Organic Photovoltaic Devices
Jianming Huang¹, Yutaka Ie^{1,2}, Makoto Karakawa¹, Yoshio Aso¹
¹Osaka University, Japan, ²PRESTO, JST, Japan

Lunch(12:30~14:00)

PB001-Poster Presentation (14:00~15:30)

Chair: Hiroyuki Ishii (University of Tsukuba,Japan)

- 15:45 **I10** Electrolyte-gated thin film transistors for low-voltage cellular interface application
Myung-Han Yoon¹, Sujin Sung¹, Dong-Hee Kang¹, Sungjun Park¹, Il Kang², Yun-Hi Kim², Soon-Ki Kwon²
¹Gwangju Institute of Science and Technology (GIST), Korea, ²Gyeongsang National University, Korea
- 16:15 **O14** Temperature dependence of carrier transport in anisotropic organic semiconductor films studied by the TRM-SHG imaging
Takaaki Manaka, Kentaro Abe, Kohei Matsubara, Mitsumasa Iwamoto
Tokyo Institute of Technology, Japan
- 16:30 **O15** Delocalized regime of carriers in highly conducting polymers revealed by time-domain terahertz transmission spectroscopy
Takeya Unuma¹, Naruki Yamada¹, Arao Nakamura¹, Hideo Kishida¹, Seung-Chul Lee², Eun-Young Hong², Suck-Hyun Lee², O-Pil Kwon²
¹Nagoya University, Japan, ²Ajou University, Korea
- 16:45 **I11** Vertical Channel Organic Field-Effect Transistors Fabricated by Printing Process
Kazuhiro Kudo, Hiroshi Yamauchi, Shigakazu Kuniyoshi, Masatoshi Sakai
Chiba University, Japan

Chair: Yuji Yoshida (AIST,Japan)

- 17:15 **PL** Arranging Organic Molecules in Vacuum
02 Kiyoshi Yase
National Metrology Institute of Japan, AIST, Japan

Banquet & Mixer (18:30~21:00)

Wednesday, 24

Chair: Youngjong Kang (Hanyang Univ, Korea)

- 9:00 **I12** Thermoelectric Properties of Carbon Based Hybrid Composites
Hyunjung Lee
Kookmin University, Korea
- 9:30 **O16** Experimental Evidences of Giant Seebeck Coefficients over 0.1 V/K in Organic Semiconductors
R. Abe, K. Takahashi, M. Ito, H. Kojima, D. Kuzuhara, H. Yamada, R. Matsubara, M. Nakamura
Nara Institute of Science and Technology (NAIST), Japan
- 9:45 **O17** Simple Bar-Coating Process for Large Area, Transparent Organic Transistors and Integrated Circuits
Yong-Young Noh, Dongyoon Khim
Dongguk University, Korea
- 10:00 **O18** Patterning Technology for Organic Crystal Field-Effect Transistors
Yun Li^{1,2}, Yu Wang¹, Kazuhito Tsukagoshi², Yi Shi¹
¹Nanjing University, China, ²International Centre for Materials Nanoarchitectonics (WPI-MANA), NIMS, Japan
- 10:15 **O19** Fabrication of high-performance transistors using phenacene molecules
Yoshihiro Kubozono, Shino Hamao, Hidenori Goto, Hideki Okamoto
Okayama University, Japan

Break(10:30~11:00)

Chair: M. Nakamura (NAIST, Japan)

- 11:00 **I13** Microscopic Signature of Metallic State in Highly-Doped Semicrystalline Conducting Polymers
Hisaaki Tanaka, Shin-ichi Kuroda
Nagoya University, Japan
- 11:30 **O20** Optimizing contact resistance in organic field-effect transistors: beyond contact structure and materials
Chuan Liu¹, Yong Xu², Takeo Minari³, and Yong-Young Noh²
¹Sun Yat-sen University, China, ²Dongguk University, Korea, ³NIMS, Japan
- 11:45 **O21** Different types of gate dielectrics for the thin film transistors
Young Hun Kang, Jung Min Ko, Song Yun Cho, Changjin Lee^{*}
Korea Research Institute of Chemical Technology
- 12:00 **I14** Eutectic Crystallization of Organic Semiconductors
Jeyon Chung, Jueun Kim, Youngjong Kang
Hanyang University, Korea

Closing ceremony (12:30~12:40)

