

December 14 (Wednesday)

- 08:00-09:00 **Registration**
- 09:00-09:10 **Opening remarks**
 Iwao Hosako (Director general of Advanced ICT Research institute, NICT)
 Mitsumasa Iwamoto (Tokyo Institute of Technology)
 Chair : Toshiki Yamada (NICT)
- 09:10-09:50 **Plenary Lecture 1**
 Chair : Takashi Kobayashi (Osaka Prefecture University)
- 09:10-09:50 **<PL-1> BULK AND INTERFACIAL ELECTRONIC STRUCTURES OF ORGANIC SEMICONDUCTORS STUDIED BY PHOTOEMISSION-RELATED TECHNIQUES: ENERGY LEVEL ALIGNMENT, GAP STATES, AND CARRIER STATES**
 (Invited) °Hisao Ishii^{1,2,3}
¹Center for Frontier Science, Chiba University, Japan
²Graduate School of Advanced Integration Science, Chiba University, Japan
³Molecular Chirality Research Center, Chiba University, Japan
- 09:50-11:30 **Soft material physics and applications in electronics**
 Chair : Kiyooki Usami (Osaka Sangyo University)
- 09:50-10:20 **<S5-I-1> Nanosheet Synthesis in Hyperswollen Lyotropic Lamellar Phase**
 (Invited) °Yoshiaki Uchida¹
¹Graduate School of Engineering Science, Osaka University, Japan
- 10:20-10:40 **Break**
- 10:40-11:10 **<S5-I-2> Transcription drives phase separation in chromatin brush**
 (Invited) °Tetsuya Yamamoto¹, Helmut Schiessel²
¹National Composite Center, Nagoya University, Japan
²Instituut-Lorentz for Theoretical Physics, the Netherland
- 11:10-11:30 **<S5-O-2> The Mechanism Behind Beauty: Golden Ratio Appears in Red Blood Cell Shape**
 Xue-Jun Zhang¹, °Zhong-Can Ou-Yang¹
¹CAS Key Laboratory of Theoretical Physics, Institute of Theoretical Physics, Chinese Academy of Sciences, China
- 11:30-11:40 **Intermission**
- 11:40-13:10 **Lunch**
- 11:45-12:35 **Short Presentation**
 Chair : Takashi Nagase (Osaka Prefecture University)
- 13:10-14:30 **Molecular photonics and nanophotonics**
 Chair : Toshiki Yamada (NICT)
- 13:10-13:40 **<S3-I-1> A versatile laser -driven THz source based on organic crystals for spectroscopic and nonlinear THz applications**
 (Invited) °Christoph P. Hauri¹
¹Paul Scherrer Institute/Ecole Polytechnique Federale de Lausanne SwissFEL, Switzerland
- 13:40-14:00 **<S3-O-1> Terahertz wave generation from electro-optic polymer devices using a 1.5- μ m-band pulsed laser**
 °Takahiro Kaji¹, Toshiki Yamada¹, Shingo Saito¹, Isao Morohashi¹, Yukihiro Tominari¹, Isao Aoki¹, Shukichi Tanaka¹, Akira Otomo¹
¹Advanced ICT Research Institute, National Institute of Information and Communications Technology (NICT), Japan
- 14:00-14:30 **<S3-I-2> CHIP-LEVEL OPTICAL INTERCONNECTION USING HIGH PERFORMANCE PHOTONIC POLYMERS**
 (Invited) °Okiihiro Sugihara¹, Freddy Susanto Tan¹, Hidetaka Terasawa¹, Mieko Masaka¹
¹Utsunomiya Univeristy, Japan
- 14:30-15:40 **Molecular photonics and nanophotonics**
 Chair : Takahiro Kaji (NICT)

Conference Program

- 14:30-14:50 <S3-O-2>* **Spiral shaped MZI modulator using EO polymer**
°Hiromu Sato¹, Shiyoshi Yokoyama^{1,2}
¹Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Japan
²Institute for Materials Chemistry and Engineering, Kyushu University, Japan
- 14:50-15:20 <S3-I-3> (Invited) **Optically Pumped Lasing from Single-crystal Microcavities of Oligomeric and Hybrid Materials**
°Hisao Yanagi¹
¹Graduate School of Materials Science, Nara Institute of Science and Technology (NAIST), Japan
- 15:20-15:40 <S3-O-3>* **Dipole surface plasmon mediated tuning of optoelectronic properties ZnO thin films for UV and visible light detection**
°Tejendra Dixit¹, Vipul Singh¹, I.A. Palani²
¹Molecular and Nanoelectronics Research Group (MNRG), Department of Electrical Engineering, IIT Indore, India
²Mechatronics and Instrumentation Lab, Department of Mechanical Engineering, IIT indore, India
- 15:40-16:00 **Break**
- 16:00-17:30 **Bioelectronics and nanointerface fabrication**
Chair : Shukichi Tanaka (NICT)
- 16:00-16:30 <S6-I-1> (Invited) **Advanced nc-AFM/KPFM investigations of functional π -conjugated self-assemblies**
°Benjamin Grévin¹
¹UMR5819 SPrAM CEA-CNRS-UGA, France
- 16:30-17:00 <S6-I-2> (Invited) **STM MOLECULAR ARCHITECTING USING SINGLE ATOMS, SINGLE ORGANIC MOLECULES, AND GRAPHENE NANORIBBONS**
°Toyo Kazu Yamada¹
¹Graduate School of Advanced Integration Science, Chiba University, Japan
- 17:00-17:30 <S6-I-3> (Invited) **Molecular recognition imaging at nanoscales**
Takashi Nyu¹, Tatsuhiko Maekawa¹, Kasinan Suthiwanich¹, °Tomohiro Hayashi¹
¹Department of Materials Science and Engineering, School of Materials and Chemical Technology, Tokyo Institute of Technology, Japan
- 17:30-17:50 **Fundamentals of organic and molecular devices: Characterization and device physics**
Chair : Shukichi Tanaka (NICT)
- 17:30-17:50 <S1-O-1> **Hole/Electron Hopping through Ultrathin Peptide Film Using Cyclic β -peptide Nanotube as Scaffold**
Yuki Tabata¹, Hirotaka Uji¹, °Shunsaku Kimura¹
¹Department of Material Chemistry, Graduate School of Engineering, Kyoto University, Japan
- 17:50-18:00 **Intermission**
- 18:00-19:30 **Poster Session 1**
Chair : Takashi Nagase (Osaka Prefecture University)
- <P1-1>* **Thermal Phase Transition and Carrier Transport Properties in Binary Blend System of Non-peripherally Octahexyl-substituted Phthalocyanine Analogues**
°Dai Nakagawa¹, Chika Nakano¹, Masashi Ohmori¹, Akihiko Fujii¹, Masanori Ozaki¹, Yo Shimizu²
¹Division of Electrical, Electronic and Information Engineering, Graduate School of Engineering, Osaka University, Japan
²National Institute of Advanced Industrial Science and Technology, Kansai Center, Japan
- <P1-2> **Simulation of Static and Dynamic Behavior of Majority Logic Gate made of Tetranuclear Ru Complex**
°Ken Tokunaga¹, Yusuke Takeno²
¹Division of Liberal Arts, Center for Promotion of Higher Education, Kogakuin University, Japan
²Department of Applied Chemistry, Faculty of Engineering, Kogakuin University, Japan

- <P1-3>* **Effect of solvent evaporation time on molecular order of organic thin film fabricated by electrospray deposition**
 °Asuki Toda¹, Kazuya Takahira¹, Takeshi Fukuda¹, Daiki Kuzuhara², Noriyuki Yoshimoto²
¹Department of Functional Materials Science, Saitama University, Japan
²Department of Materials Science and Engineering, Faculty of Engineering, Iwate University, Japan
- <P1-4> **Optical properties of dendrimers exhibiting thermally activated delayed fluorescence**
 °Kenta Ishiharaguchi¹, S. Haseyama¹, A. Niwa¹, T. Nagase^{1,2}, T. Kobayashi^{1,2}, K. Albrecht³, K. Yamamoto³, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²The Research Institute for Molecular Electronic Devices, Osaka Prefecture University, Japan
³Laboratory for Chemistry and Life Science Institute of Innovative Research, Tokyo Institute of Technology, Japan
- <P1-5>* **Microscopic observation of photovoltaic effect in IZO/P3HT:PCBM/PEDOT:PSS/ Au solar cell by EFISHG and LBIC measurements**
 °Tomoyasu Hirano¹, Dai Taguchi¹, Takaaki Manaka¹, Mitsumasa Iwamoto¹
¹Department of Physical Electronics, Tokyo Institute of Technology, Japan
- <P1-6> **Trap filling effect on carrier transport in fluorene co-polymer thin film studied by photo-luminescence decay imaging**
 °Takaaki Manaka¹, Fumika Fujii¹, Dai Taguchi¹, Mitsumasa Iwamoto¹
¹Department of Electrical and Electronic Engineering, Tokyo Institute of Technology, Japan
- <P1-7>* **Mobile liquid-substrate for self-assembly of solution-processable poly (5-carboxyindole): Enhancement in charge transport characteristics**
 °Richa Mishra¹, Shyam S. Pandey², Rajiv K. Pandey¹, Rajiv Prakash¹
¹School of Materials Science and Technology, Indian Institute of Technology, Banaras Hindu University, India
²Graduate School of Life Science and Systems Engineering, Department of Biological Functions Engineering, Kyushu Institute of Technology, Japan
- <P1-8> **Density Functional Theory (DFT) Study on the Radical-Functionalized Graphenes and Fullerenes**
 °Hiroshi Kawabata¹, Tetsuji Iyama¹, Hiroto Tachikawa¹
¹Division of Applied Chemistry, Graduate School of Engineering, Hokkaido University, Japan
- <P1-9>* **Photochemical Tethering of Organic/Inorganic Interface Using Thiol-ene Chemistry**
 Paul B. A. Advincula¹, Rigoberto C. Advincula¹, °Takaki Saito², Hiroaki Usui²
¹Case Western Reserve University, USA
²Tokyo University of Agriculture and Technology, Japan
- <P1-10> **Density Functional Theory (DFT) Study on the Interaction of Hydrogen Atom with Carbon Materials**
 °Hiroto Tachikawa¹, Tetsuji Iyama¹
¹Division of Applied Chemistry, Graduate School of Engineering, Hokkaido University, Japan
- <P1-11>* **Effect of Monomer Supply on Molecular Orientation of Vapor-Deposited Polyimide**
 °Takatoshi Yamazaki¹, Chanya Mahapun¹, Hiroaki Usui¹
¹Tokyo University of Agriculture and Technology, Japan
- <P1-12> **Oriented thin films of mixture of PTB7 and PCBM prepared by friction transfer method**
 °Nobutaka Tanigaki¹, Toshiko Mizokuro¹, Tetsuhiko Miyadera², Yousei Shibata², Tomoyuki Koganezawa³
¹Inorganic Functional Materials Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Japan
²Research Center for Photovoltaics, National Institute of Advanced Industrial Science and Technology (AIST), Japan
³Japan Synchrotron Radiation Research Institute (JASRI), SPring-8, Japan
- <P1-13>* **Evaluation of carrier mobility in Au/pentacene/polyimide/ITO diodes by using time-of-flight and electric-field-induced optical second-harmonic generation measurements**
 °Masashi Sunaga¹, Dai Taguchi¹, Takaaki Manaka¹, Mitsumasa Iwamoto¹
¹Department of Electrical and Electronic Engineering, Tokyo Institute of Technology, Japan
- <P1-14>* **Improvement of Adhesion of Metal and PTFE by Vapor-Deposited Epoxy Polymer**
 °Taku Kawamura¹, Yuji Komuro¹, Koichi Momose¹, Hiroaki Usui¹
¹Tokyo University of Agriculture and Technology, Japan

- <P1-15> **Organic Photovoltaic Cell Using Size-Controlled ZnO Nano-Rod Structures**
Yudai Uratani¹, °Takeshi Fukuda¹
¹Department of Functional Materials Science, Saitama University, Japan
- <P1-16>* **Low temperature growth of nanostructured ZnO in water for hybrid organic-inorganic solar cells**
°Christian Mark Pelicano¹, Jennifer Damasco Ty¹, Hisao Yanagi¹
¹Graduate School of Materials Science, Nara Institute of Science and Technology, Japan
- <P1-17> **Effect of humidity on the characteristics of perovskite layers and photovoltaic properties**
°Hyunwoong Seo¹, Naho Itagaki¹, Kazunori Koga¹, Masaharu Shiratani¹
¹Kyushu University, Japan
- <P1-18>* **Organic Thin-film Solar Cell Utilizing Binary-blended Donor Material of Non-peripheral Octahexylphthalocyanine and Its Analogue**
°Kento Fujita¹, Dai Nakagawa¹, Quang-Duy Dao¹, Akihiko Fujii¹, Masanori Ozaki¹, Yo Shimizu²
¹Division of Electrical, Electronic and Information Engineering, Graduate School of Engineering, Osaka University, Japan
²National Institute of Advanced Industrial Science and Technology, (AIST), Kansai Center, Japan
- <P1-19>* **Optical properties and dispersion energy parameters of spin coated tetra-tert-butyl zinc phthalocyanine thin films**
°Amr Attia Abuelwafa^{1,2}, Md. Shamimul Haque Choudhury¹, Ichiko Yamada³, Shinya Kato¹, Naoki Kishi¹, Norio Shibata³, Tetsuo Soga¹
¹Electrical and Mechanical Engineering Department, Nagoya Institute of Technology, Japan
²Physics Department, Faculty of Science, South Valley University, Egypt
³Department of Electrical and Electronic Engineering, Suzuka National College of Technology, Japan
- <P1-20> **Carrier dynamics in graphene-gold nanostructure systems by femtosecond near-IR pump-probe spectroscopy**
°Atsushi Yamada¹, Yasunori Kutsuma¹, Tetsuro Katayama¹, Wang Li¹, Tadaaki Kaneko¹, Naoto Tamai¹, Takahiro Kaji²
¹Kwansei Gakuin Univ., Japan
²National Institute of Information and Communications Technology, Japan
- <P1-21>* **High Q-factor Ring Resonator Realized in Silicon Nitride and Oxynitride Waveguides Technology**
°Xiaoyang Cheng¹, Shiyoshi Yokoyama¹
¹Interdisciplinary Graduate School of Engineering and Science, Kyushu University, Japan
- <P1-22> **Organic Memory Devices: A Complementary Mechanism for Regulation of Conductance of Switching Device**
Giriraj Vyas¹, Parveen Dagar¹, °Satyajit Sahu¹
¹Indian Institute of Technology, Jodhpur, Department of Physics, India
- <P1-23>* **Fluoranthene Derivatives as Blue Fluorescent Materials for Non-Doped Organic Light-Emitting Diodes**
°Shiv Kumar¹, Yogesh Patil², Deepak Kumar³, °Satish Patil³
¹Department of Chemical Engineering, Indian Institute of Technology Kanpur, India
²Department of Chemistry, University of Alabama, USA
³Solid State and Structural Chemistry Unit, Indian Institute of Science, India
- <P1-24> **Interfacial charges and electroluminescence in bilayer organic light-emitting diodes with different hole transport materials**
°Shuri Sato¹, Masashi Takata¹, Makoto Takada¹, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²Research Institute for Molecular Electronic Devices, Osaka Prefecture University, Japan
- <P1-25>* **Fabrication of Glass-sandwich-type Device Utilizing Liquid Crystalline Phthalocyanine and the Photovoltaic Properties**
°Toshiki Usui¹, Yuya Nakata¹, Banoukepa Gilles De Romeo¹, Akihiko Fujii¹, Masanori Ozaki¹, Yo Shimizu²
¹Division of Electrical, Electronic and information Engineering, Graduate School of Engineering, Osaka University, Japan
²National Institute of Advanced Industrial Science and Technology (AIST), Kansai Center, Japan

- <P1-26> **Measurement accuracy improvement of organic position-sensitive detector**
^oTaichiro Morimune¹, Asuma Kida¹, Hirotake Kajii²
¹Department of Electronic Systems Engineering, National Institute of Technology, Kagawa College, Japan
²Graduate School of Engineering, Osaka University, Japan
- <P1-27>* **Organic thin film transistors based on solution processed films of benzodithiophene-dimers modified with hexyl groups**
^oTakeshi Hirota¹, Hitoshi Toake¹, Hideji Osuga², Kazuyuki Uno¹, Ichiro Tanaka¹
¹Department of Applied Physics, Wakayama University, Japan
²Department of Chemistry, Wakayama University, Japan
- <P1-28>* **Investigation of the effect of the ultra-thin dipole layer and oxide nanosheet electron buffer layers on the device performance of inverted polymer-based light emitting diodes**
^oTaichi Hasebe¹, Eiji Itoh¹, Katsutoshi Fukuda²
¹Department of Electrical and Computer Engineering, Shinshu University, Japan
²Kyoto University, Japan
- <P1-29>* **Organic p-n heterojunction for negative differential resistance transistor**
^oKazuyoshi Kobashi^{1,2}, Ryoma Hayakawa¹, Toyohiro Chikyow¹, Yutaka Wakayama^{1,2}
¹International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science, Japan
²Department of Chemistry and Biochemistry, Faculty of Engineering, Kyushu University, Japan
- <P1-30>* **Study of ambipolar carrier behavior in F8BT light-emitting transistors by using electric-field-induced optical second-harmonic generation and time-resolved EL imaging**
^oKoji Hatano¹, Dai Taguchi¹, Takaaki Manaka¹, Mitsumasa Iwamoto¹
¹Department of Physical Electronics, Tokyo Institute of Technology, Japan
- <P1-31>* **Coherent spectral modulation induced by nuclear wavepacket motion in an ultrafast intermolecular electron transfer reaction system.**
^oYusuke Yoneda¹, Shohei Nambu¹, Eisuke Takeuchi¹, Hiroshi Miyasaka¹, Yutaka Nagasawa^{2,3}
¹Graduate School of Engineering Science, Osaka University, Japan
²College of Life Sciences, Ritsumeikan University, Japan
³PRESTO, Japan Science and Technology Agency (JST), Japan
- <P1-32> **Phase Transition of Anhydrous Octyl-Glucoside from Lamellar to Isotropic induced by Electric and Magnetic Fields**
^oAkihiko Sugimura¹, Hock-Seng Nguan², Matior Rahman², Rauzah Hashim², Herbert Zimmermann³
¹Department of Information Systems Engineering, Osaka Sangyo University, Japan
²Centre of Fundamental and Frontier Science of Self-Assembly, Department of Chemistry, University of Malaya, Malaysia
³Max-Planck-Institut für Medizinische Forschung, Department of Biophysics, Germany
- <P1-33>* **The preparation of Fe-3.5Si-4.5Cr magnetic core with insulating layer of hexamethylsilazane for power inductor**
^oKwonbeen Kim¹, Jongsung Kim¹
¹Department of Chemical & Biological Engineering, Gachon University, Korea
- <P1-34> **Improvement photo-stability of organic electro-optic polymers using atomic layer deposition**
^oYukihiro Tominari¹, S. Tanaka¹, I. Aoki¹, A. Otomo¹
¹Advanced ICT Research Institute, National Institute of Information and Communications Technology, Japan
- <P1-35>* **Orientation Characteristics in Ribbon Shaped Floating Thin-Films of Conjugated Polymers Prepared by Dynamic FTM**
^oAtul Tripathi¹, Manish Pandey¹, Shyam. S. Pandey¹, Shuzi Hayase¹, Wataru Takashima¹, Shuichi Nagamatsu²
¹Graduate School of Life Sciences and System Engineering, Kyushu Institute of Technology, Japan
²Department of Computer Science and Electronics, Kyushu Institute of Technology, Japan

Conference Program

- <P1-36>* **Amperometric Glucose Biosensor Based on Hydrothermally Grown ZnO Nanostructures**
M. Shukla¹, °Tejendra Dixit¹, Pramila¹, Vipul Singh¹, I.A. Palani²
¹Molecular and Nanoelectronics Research Group (MNRG), Department of Electrical Engineering, IIT Indore, India
²Mechatronics and Instrumentation Lab, Department of Mechanical Engineering, IIT Indore, India
- <P1-37> **Efficient differential photocurrent generation in waveguide-type bacteriorhodopsin (bR) photocells**
°Toshiki Yamada¹, Yoshihiro Haruyama¹, Katsuyuki Kasai¹, Takahiro Kajii¹, Yukihiko Tominari¹, Shukichi Tanaka¹, Akira Otomo¹
¹National Institute of Information and Communications Technology, Japan
- <P1-38>* **Photophysical Characterization and BSA Interaction of Direct Ring Carboxy Functionalized Symmetrical Squaraine Dyes**
°Maryala Sai Kiran¹, Shyam S. Pandey¹, Shuzi Hayase¹, Tamaki Kato¹
¹Graduate School of LSSE, Kyushu Institute of Technology, Japan
- <P1-39> **Au nano-particle dispersed water solution without surfactant by solution plasma processing for SERS platform**
°Naoki Matsuda¹, Hiroataka Okabe¹
¹Advanced Manufacturing Research Institute, AIST, Japan
- <P1-40>* **Estimation of the number of quantum dots immobilized on an ultra-flat Au surface**
°Hiroki Ito¹, Atsushi Iio¹, Hiroyuki Sakaue¹, Hitoshi Suzuki¹
¹Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan
- <P1-41> **Optical-Flow Sensing Characteristics of a Bacteriorhodopsin-Based Bipolar Photosensor Array**
°Katsuyuki Kasai¹, Hiroyuki Hasegawa¹, Toshiki Yamada¹, Makoto Akiba¹, Yukihiko Tominari¹, Takahiro Kajii¹, Shukichi Tanaka¹, Akira Otomo¹, Yoshiko Okada-Shudo²
¹Advanced ICT Research Institute, National Institute of Information and Communications Technology, Japan
²The University of Electro-Communications, Japan
- <P1-42> **THE INFLUENCE OF SHORT RANGE CORRELATION ON THE PHONON CONFINEMENT OF A SINGLE ZNO NANOWIRE**
°Sheng Yun Wu¹, Po -Hsun Shih¹
¹Department of Physics, National Dong Hwa University, Taiwan
- <P1-43>* **Characterization of organic thin film growth using quartz crystal microbalance: Effect of polar interactions between substrate and long-chain molecule**
°Ryosuke Matsubara¹, Haruki Takeda¹, Takahiro Abe¹, Atsushi Kubono¹
¹Department of Electronics and Materials Science, Shizuoka University, Japan

December 15 (Thursday)

- 08:00-09:00 **Registration**
- 09:00-09:40 **Plenary Lecture 2**
Chair : Kazuhiro Kudo (Chiba University)
- 09:00-09:40 <PL-2> **Organic semiconductors: from materials design to device applications**
°Karl Leo¹
¹Dresden Integrated Center for Applied Physics and Photonics (IAPP), Technische Universität Dresden, Germany
- 09:40-10:50 **Organic semiconductor devices and applications**
Chair : Masatoshi Sakai (Chiba University)
- 09:40-10:10 <S4-I-1> **Printed Integrated Circuits and power sources with Ultimate Thinness**
(Invited) °Kenjiro Fukuda^{1,2}, Takao Someya^{1,3}
¹RIKEN, Japan
²Japan Science and Technology Agency, PRESTO, Japan
³The University of Tokyo, Japan
- 10:10-10:30 <S4-O-1>* **Polymer-based organic field-effect transistor arrays fabricated on highly hydrophobic gate insulator surfaces by flow-coating**
°Kirill Bulgarevich^{1,2}, Kazushi Miki^{1,2}, Kenji Sakamoto¹, Takeo Minari¹, Takeshi Yasuda¹
¹National Institute for Materials Science (NIMS), Japan
²Faculty of Pure and Applied Sciences, University of Tsukuba, Japan

- 10:30-10:50 **<S4-O-2>*** **Remarkable enhancement in the carrier transport of thiophene based conjugated polymers: Synergistic influence of orientation and blending**
 °Manish Pandey¹, Shyam. S. Pandey¹, Reeturaj Pandey¹, Shuzi Hayase¹, Wataru Takashima¹, Shuichi Nagamatsu²
¹Graduate School of Life Sciences and System Engineering, Kyushu Institute of Technology, Japan
²Department of Computer Science and Electronics, Kyushu Institute of Technology, Japan
- 10:50-11:10 **Break**
- 11:10-11:50 **Bioelectronics and nanointerface fabrication**
 Chair : Hitoshi Suzuki (Hiroshima University)
- 11:10-11:30 **<S6-O-1>** **M intermediate accumulation analysis of bacteriorhodopsin reconstituted with three partial peptides**
 °Yutaka Tsujiuchi¹, Hiroshi Masumoto², Takashi Goto³
¹Department of Material Science and Engineering, Akita University, Japan
²Frontier Research Institute for Interdisciplinary Sciences, Tohoku University, Japan
³Institute for Materials Research, Tohoku University, Japan
- 11:30-11:50 **<S6-O-2>** **Efficient Glass Surface Functionalization with Peptide-Fluorophore Conjugate for Protein Bio-Chip Applications**
 °Shyam S. Pandey¹, Tamaki Kato¹, Norikazu Nishino¹
¹Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Japan
- 11:50-12:00 **Intermission**
- 12:00-13:30 **Lunch**
- 12:00-12:50 **Short Presentation**
 Chair : Takashi Kobayashi (Osaka Prefecture University)
- 13:30-14:50 **Energy harvesting materials and devices**
 Chair : Takeshi Fukuda (Saitama University)
- 13:30-14:00 **<S2-I-1>** **Organic Inorganic Hybrid Solar Cells based on Colloidal Quantum Dots Towards High-Efficiency Near-Infrared Photovoltaics**
 (Invited)
 °Takaya Kubo¹, Haibin Wang¹, Jotraro Nakazaki¹, Hiroshi Segawa^{1,2}
¹Research Center for Advanced Science and Technology, The University of Tokyo, Japan
²Department of General System Studies, Graduate School of Arts and Sciences, The University of Tokyo, Japan
- 14:00-14:30 **<S2-I-2>** **Nanoscale Control for Next-Generation Photovoltaics**
 (Invited)
 °Byungwoo Park¹, Taehyun Hwang¹, Byungho Lee¹, Sangheon Lee¹, Jinhyun Kim¹
¹WCU Hybrid Materials Program, Department of Materials Science and Engineering, Research Institute of Advanced Materials, Seoul National University, Korea
- 14:30-14:50 **<S2-O-1>** **Perovskite solar cells-Architecture of hetero interfaces**
 Y. Ogomi¹, R. Teresa¹, Q. Shen², T. Toyoda², K. Yoshino³, T. Minemoto⁴, S. Pandey¹, T. Ma¹, D. Hirotani¹, S. Moritani¹, K. Hamada¹, °Shuzi Hayase¹
¹Kyushu Institute of Technology, Japan
²The University of Electrocommunications, Japan
³University of Miyazaki, Japan
⁴Ritsumeikan University, Japan
- 14:50-15:10 **Break (Group Photo)**
- 15:10-16:40 **Energy harvesting materials and devices**
 Chair : Takaaki Manaka (Tokyo Institute of Technology)
- 15:10-15:40 **<S2-I-3>** **Giant Seebeck Effect in Organic Semiconductors – Toward Revolutionary Simple Thermoelectric Generators –**
 (Invited)
 °Masakazu Nakamura¹, Hirotaka Kojima¹, Takeshi J. Inagaki²
¹Nara Institute of Science and Technology, Japan
²Butsuryo College of Osaka, Japan

15:40-16:00	<S2-O-2>*	Field-effect modulation of Seebeck coefficient of carbon nanotube by ferroelectric dipole ^o Shohei Horike ¹ , Yasuko Koshiba ¹ , Masahiro Morimoto ¹ , Kenji Ishida ¹ , Takeshi Saito ² ¹ Department of Chemical Science and Engineering, Graduate School of Engineering, Kobe University, Japan ² Nanomaterials Research Institute, National Institute of Advanced Industrial Science and Technology, Japan
16:00-16:20	<S2-O-3>*	Molecular Design and Synthesis of Functional π-Conjugated Small Molecules for Solution-Processed Organic Solar Cells ^o K Narayanaswamy ¹ , Surya Prakash Singh ¹ ¹ Inorganic & Physical Chemistry Division, CSIR- Indian Institute of Chemical Technology, India
16:20-16:40	<S2-O-4>	Analysis of Annealing Effect for Molybdenum Oxide on The Organic Photovoltaic Cell Using Impedance Spectroscopy ^o Toshifumi Kobori ¹ , Takeshi Fukuda ² , Norihiko Kamata ² ¹ Canon Electronics Inc., Japan ² Department of Funational Materials Science, Saitama University, Japan
16:40-16:50	Intermission	
16:50-18:20	Poster Session 2	Chair : Takashi Kobayashi (Osaka Prefecture University)
	<P2-1>*	Probing triboelectric charges by electric field induced optical second harmonic generation measurement ^o Dai Taguchi ¹ , Takaaki Manaka ¹ , Mitsumasa Iwamoto ¹ ¹ Department of Electrical and Electronic Engineering, Tokyo Institute of Technology, Japan
	<P2-2>	α-(BEDT-TTF)₂I₃ Phase Transition Field-Effect Transistor using Lamination Contact Electrode ^o Yugo Okada ¹ , Takahiro Ueda ¹ , Daiki Yamamoto ¹ , Hiroshi Yamauchi ¹ , Masatoshi Sakai ¹ , Kazuhiro Kudo ¹ ¹ Graduate School of Engineering, Chiba University, Japan
	<P2-3>*	Role of PtOEP in the Performance and Impedance Spectroscopic for PCPDTBT: PCBM Solar Cells ^o Amr Attia Abuelwafa ^{1,2} , Mahmoud Dongol ² , Mahmoud El-Nahass ³ , Tetsuo Soga ¹ ¹ Electrical and Mechanical Engineering Department, Nagoya Institute of Technology, Japan ² Physics Department, Faculty of Science, South Valley University, Egypt ³ Physics Department, Ain Shams University, Egypt
	<P2-4>	Aggregation States of Organic Dye Molecules in Organic – Inorganic Hybrid Films Studied by Near-Field and Far-Field Fluorescence Spectroscopy ^o Mari Ishihara ¹ ¹ Hyogo Prefectural Institute of Technology, Japan
	<P2-5>*	Negative Capacitance in Organic Solar Cells Observed by Displacement Current Measuerment ^o Koji Shimizu ¹ , Yuya Tanaka ^{1,2} , Yutaka Noguchi ³ , Hisao Ishii ^{1,2,4} ¹ Graduate School of Advanced Integration Science, Chiba University, Japan ² Center for Frontier Science, Chiba University, Japan ³ School of Science & Technology, Meiji University, Japan ⁴ Molecular Chirality Research Center, Chiba University, Japan
	<P2-6>	A relationship between active layer thickness and carrier lifetime in P3HT:PCBM inverted organic photovoltaics ^o Soushi Nakami ¹ , Takashi Kobayashi ^{1,2} , Takashi Nagase ^{1,2} , Hiroyoshi Naito ^{1,2} ¹ Department of Physics and Electronics, Osaka Prefecture University, Japan ² The Research Institute for Molecular Electronic Devices, Osaka Pref. Univ., Japan
	<P2-7>*	MIS-CELIV measurment for Evaluating Hole Mobility in Organic Semiconductors ^o Chiho Katagiri ¹ , Ken-ichi Nakayama ^{1,2,3} ¹ Department of Organic Materials Engineering, Yamagata University, Japan ² Research Center for Organic Electronics, Yamagata University, Japan ³ Graduate School of Engineering, Osaka University, Japan

- <P2-8> Development of Organic Electronics Material Based on C_3 -Symmetric Molecule**
^oYoshiaki Nakano¹, Yoshiki Oe¹, Manabu Ishikawa¹, Hideki Yamochi¹, Mikio Uruichi²
¹Department of Chemistry, Graduate School of Science, Kyoto University, Japan
²Research Center of Integrative Molecular Systems (CIMoS), Institute for Molecular Science, Japan
- <P2-9>*** **Analysis of dynamical characteristics of organic field-effect transistors by device simulation**
^oYu Suenaga¹, Takashi Nagase^{1,2}, Takashi Kobayashi^{1,2}, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²The Research Institute for Molecular Electronic Devices, Osaka Prefecture University, Japan
- <P2-10> Photoluminescence Properties of Polymorphic Modifications of Low-Molecular-Weight Poly(3-hexylthiophene)**
^oTakashi Kobayashi^{1,2}, Keita Kinoshita¹, Akitsugu Niwa¹, Takashi Nagase^{1,2}, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²The Research Institute for Molecular Electronic Devices, Osaka Prefecture University, Japan
- <P2-11>*** **An impedance spectroscopy study of electronic transport properties in inverted organic light emitting diodes**
^oMakoto Takada¹, Takashi Nagase^{1,2}, Takashi Kobayashi^{1,2}, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²The Research Institute for Molecular Electronic Devices, Osaka Prefecture University, Japan
- <P2-12> An Electroabsorption Study on Polyfluorene-Based Copolymers**
^oTakashi Kobayashi^{1,2}, Satoshi Ikame¹, Shuichi Murakami³, Takashi Nagase^{1,2}, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²The Research Institute for Molecular Electronic Devices, Osaka Prefecture University, Japan
³Technology Research Institute of Osaka Prefecture, Japan
- <P2-13>*** **Development of Kelvin probe apparatus for liquid sample**
^oHiroaki Uchiyama¹, Yuya Tanaka^{1,2}, ^oHisao Ishii^{1,2,3}
¹Graduate School of Advanced Integration Science, Chiba University, Japan
²Center for Frontier Science, Chiba University, Japan
³Molecular Chirality Research Center, Chiba University, Japan
- <P2-14>*** **High-Sensitivity UV Photoemission of intrinsic and doped OLED films**
^oJunki Yamazaki¹, Tomoya Sato¹, Yuya Tanaka^{1,2}, Hisao Ishii^{1,2,3}
¹Graduate School of Advanced Integration Science, Chiba University, Japan
²Center for Frontier Science, Chiba University, Japan
³Molecular Chirality Research Center, Chiba University, Japan
- <P2-15> Photocatalytic effect on the stability of dye-sensitized solar cells under UV irradiation**
^oHyunwoong Seo¹, Daisuke Sakamoto¹, Naho Itagaki¹, Kazunori Koga¹, Masaharu Shiratani¹
¹Kyushu University, Japan
- <P2-16>*** **Impact of anti-solvent dripping on the film morphology of tin halide perovskite**
^oTaishi Noma¹, Dai Taguchi¹, Takaaki Manaka¹, Mitsumasa Iwamoto¹
¹Department of Electrical and Electronic Engineering, Tokyo Institute of Technology, Japan
- <P2-17> Charge carrier lifetimes of solution-processed organic solar cells determined under open-circuit conditions**
^oTakuya Sugiyama¹, M. Nakashima², J. Ohshita², T. Nagase^{1,3}, T. Kobayashi^{1,3}, Hiroyoshi Naito^{1,3}
¹Osaka Pref. Univ., Japan
²Hiroshima Univ., Japan
³RIMED, Japan
- <P2-18>*** **Dye-Sensitized Solar Cells utilizing Far-red Sensitive Dyes in Combination with Cobalt Complex based Redox Electrolyte**
^oAnusha Pradhan¹, Maryala Saikiran¹, Gaurav Kapil¹, Shyam S. Pandey¹, Shuzi Hayase¹
¹Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Japan
- <P2-19>*** **Observation of Grating-Coupled Long-Range Surface Plasmon Resonance Transmission Light and Its Use for Sensors**
^oHiroshi Nakajyo¹, Kazunari Shinbo¹, Naoki Obata¹, Chutiparn Lertvachirapaiboon¹, Yasuo Ohdaira¹, Akira Baba¹, Keizo Kato¹, Futao Kaneko¹
¹Graduate School of Science and Technology and Center for Transdisciplinary Research, Niigata University, Japan

- <P2-20> **Observation of Layer Thickness Profile in Nacre of Akoya Pearl Oysters**
 °Ryotaro Ozaki¹, Genki Watanabe¹, Kazunori Kadowaki¹, Kazushi Odawara²
¹Graduate School of Science and Engineering, Ehime University, Japan
²Fisheries Research Center, Ehime Research Institute of Agriculture, Forestry and Fisheries, Japan
- <P2-21>* **Improved thermal stability of electro-optic polymer waveguide by adamantyl poly(methyl methacrylate)**
 °Hiroki Miura¹, Kazuhiro Yamamoto¹, Shiyoshi Yokoyama¹
¹Interdisciplinary Graduate School of Engineering Sciences, Kyushu University, Japan
- <P2-22> **Fabrication of Organic Thin Film Transistor Array on Curved Surface**
 °Masatoshi Sakai¹, Kento Watanabe¹, Jynro Hayashi¹, Yugo Okada¹, Hiroshi Yamauchi¹, Kazuhiro Kudo¹, Yuta Hashimoto², Yuichi Sadamitsu²
¹Department of Electrical and Electronic Engineering, Chiba University, Japan
²Center for innovative research, Nippon Kayaku Co., Ltd., Japan
- <P2-23>* **Inverted Organic Solar Cells Enhanced by Grating-coupled Surface Plasmons and Waveguide Modes**
 °Kazuma Hara¹, Lertvachirapaiboon Chutiparn¹, Akira Baba¹, Kazunari Shinbo¹, Keizo Kato¹, Futao Kaneko¹
¹Graduate School of Science and Technology and Center for Transdisciplinary Research, Niigata University, Japan
- <P2-24> **Fabrication and characterization of OLEDs based on Eu(III)-polymer complexes**
 °J. Fukudome¹, M. Takada¹, T. Sugawara², S. Natori², Y. Hasegawa², T. Nagase^{1,3}, T. Kobayashi^{1,3}, Hiroyoshi Naito^{1,3}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²Faculty of Engineering, Hokkaido University, Japan
³The Research Institute for Molecular Electronic Devices, Osaka Prefecture University, Japan
- <P2-25>* **Evaluation of IGZO-TFT in Low In and Ga Ratio for Flexible Display**
 °Hikaru Tanaka¹, Hiroshi Yamauchi¹, Masatoshi Sakai¹, Yugo Okada², Masaaki Iizuka³, Kazuhiro Kudo¹
¹Graduate School of Engineering, Chiba University, Japan
²Center for Frontier Science, Chiba University, Japan
³Faculty of Education, Chiba University, Japan
- <P2-26> **Amplified Spontaneous Emission and EL Characteristics of 5'''-Bis(4-trifluoromethylphenyl)[2,2';5',2'';5''',2''']quaterthiophene Crystals**
 °Shohei Dokiya¹, Haruna Ishigami¹, Fumio Sasaki², Hisao Yanagi¹
¹Graduate School of Materials Science, Nara Institute of Science and Technology, Japan
²Electronics and Photonics Research Institute, National Institute of Advanced Industrial Science and Technology, Japan
- <P2-27>* **Improvement of Printed Organic Field Effect Transistors by the Ta₂O₅(high-k)/polymer bilayered thin film insulator and the carbon nanotube injector layers**
 °Jumpei Ueno¹, Eiji Itoh¹
¹Department of Electrical and Computer Engineering, Shinshu University, Japan
- <P2-28> **Effect of Spinning Rate on the Performance of Solution-Processed Dioctylbenzothienobenzothiophene-Based Top-Gate Organic Transistors**
 °Shoya Sanda¹, Takashi Nagase^{1,2}, Takashi Kobayashi^{1,2}, Kazuo Takimiya³, Yuichi Sadamitsu⁴, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²The Research Institute for Molecular Electronic Devices (RIMED), Osaka Prefecture University, Japan
³The Center for Emergent Matter Science (CEMS), RIKEN, Japan
⁴R&D Planning Division, Nippon Kayaku Co., Ltd., Japan
- <P2-29>* **Development of Organic Floating-Gate Nonvolatile Transistor Memory Based on Solution-Processed Organic Films**
 °Fumiya Shiono¹, Takashi Nagase^{1,2}, Takashi Kobayashi^{1,2}, Hiroyoshi Naito^{1,2}
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
²The Research Institute for Molecular Electronic Devices (RIMED), Osaka Prefecture University, Japan
- <P2-30>* **Fabrication of carbon nanotube polymer actuator using nanofiber sheet**
 °Hayato Kato¹, A. Shimizu¹, T. Sato¹, Masahito Kushida¹
¹Graduate School of Engineering, Chiba University, Japan

- <P2-31> **Chemical imidization of photo-aligned films of polyimide containing azobenzene in the backbone structure**
 °Kiyooki Usami¹, Natsumi Konishi¹, Kenji Sakamoto²
¹Department of Information Systems Engineering, Osaka Sangyo University, Japan
²National Institute for Materials Science, Japan
- <P2-32>* **Novel glassy-carbon thin films and their optical and electrical properties**
 °Hiroaki Uwabe¹, Koki Hasegawa¹, Takashi Yanase², Taro Nagahama², Toshihiro Shimada²
¹School of Chemical Sciences and Engineering, Hokkaido University, Japan
²Department of Engineering, Hokkaido University, Japan
- <P2-33> **Fabrication of electrowetting cells with nematic liquid crystals**
 °Takao Unate¹, Hiroyoshi Naito¹
¹Department of Physics and Electronics, Osaka Prefecture University, Japan
- <P2-34>* **Evaluation of Phase-separation Structures in Polymer blends by Means of Single-Molecule Tracking**
 °Hajime Fujita¹, Yuhei Arai¹, Syoji Ito¹, Hiroshi Miyasaka¹, Satoshi Takei², Masakazu Morimoto³, Masahiro Irie³
¹Graduate School of Engineering Science, Osaka University, Japan
²Graduate School of Engineering, Toyama Prefectural University, Japan
³Graduate School of Science, Rikkyo University, Japan
- <P2-35>* **Microscopic property of polymer thin films as revealed by three-dimensional single-molecule localization microscopy**
 °Kengo Hiratsuka¹, Yuhei Taga¹, Syoji Ito¹, Hiroshi Miyasaka¹, Satoshi Takei², Daichi Kitagawa³, Seiya Kobatake³
¹Graduate School of Engineering Science, Osaka University, Japan
²Faculty of Engineering, Toyama Prefectural University, Japan
³Graduate School of Engineering, Osaka City University, Japan
- <P2-36> **Nano-biosensor for sensing low-concentrations of hydrogen peroxide**
 °Mitsuyoshi Onoda¹
¹Graduate School of Engineering, University of Hyogo, Japan
- <P2-37>* **Polymerization of hexabromotriphenylene on Au(111) surface by annealing**
 °Toshiki Kataoka¹, Hiroyuki Sakaue¹, Hitoshi Suzuki¹, Yukihiro Tominari², Shukichi Tanaka²
¹Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan
²National Institute of Information and Communications Technology, Japan
- <P2-38> **Formation of Lipid Bilayer Suspended over Microwells on Al₂O₃ Surface**
 °Yoshiaki Kashimura¹, Azusa Oshima¹, Hiroshi Nakashima¹, Koji Sumitomo^{1,2}
¹NTT Basic Research Laboratories, NTT Corporation, Japan
²Department of Materials and Synchrotron Radiation Engineering, University of Hyogo, Japan
- <P2-39>* **Development of Label-free IgG Impedance Biosensor Using Parallel Plate Electrodes**
 °Yusuke Kusaka¹, Hitoshi Ohnuki¹, Kaiki Tsugimura¹, Hideaki Endo¹, Haiyun Wu¹, Mitsuru Izumi¹, Daiju Tsuya²
¹Graduate School of Marine Science and Technology, Tokyo University of Marine Science and Technology, Japan
²National Institute for Materials Science, Japan
- <P2-40>* **Oriented Antibody Immobilization on Self-assembled-monolayer Applied for Biosensing Application**
 °Kaiki Tsugimura¹, Hitoshi Ohnuki¹, Yusuke Kusaka¹, Hideaki Endo¹, Haiyun Wu¹, Mitsuru Izumi¹, Daiju Tsuya²
¹Graduate School of Marine Science and Technology, Tokyo University of Marine Science and Technology, Japan
²National Institute for Materials Science, Japan
- <P2-41> **INK-JET PRINTING OF BACTERIORHODOPSIN FOR BIOMIMETIC PHOTONIC DEVICES**
 °Hiroyuki Hasegawa¹, Katsuyuki Kasai¹, Yukihiro Tominari¹, Takahiro Kaji¹, Toshiki Yamada¹, Shukichi Tanaka¹, Akira Otomo¹, Yoshiko Okada-Shudo²
¹Advanced ICT Research Institute, National Institute of Information and Communications Technology (NICT), Japan
²Graduate School of Informatics and Engineering, The University of Electro-Communications, Japan

- <P2-42> **Growth Properties of Nano-Carbon Composites Processed by Chemical Vapour Deposition in Ultra High Vacuum**
 °Shukichi Tanaka¹, Yukihiro Tominari¹, Hitoshi Suzuki²
¹Advanced-ICT Research Institute, National Institute of Information and Communications Technology, Japan
²Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan
- <P2-43> **Effect of High Pressure on Resistance in Au(dmit)₂ LB Films**
 °Yasuhiro F. Miura¹, Hiroyuki Hasegawa², Kiyoshi Torizuka³, Yoshiya Uwatoko³
¹Toin University of Yokohama, Japan
²KARC, National Institute of Information and Communications Technology (NICT), Japan
³Institute for Solid State Physics, University of Tokyo, Japan

18:20-18:30 **Intermission**

18:30-20:00 **Banquet**

December 16 (Friday)

08:00-09:00 **Registration**

09:00-09:40 **Plenary Lecture 3**

Chair : Shyam S. Pandey (Kyushu Institute of Technology)

09:00-09:40 <PL-3> **Disclotic Liquid Crystals: Past, Present and Future**

°Sandeep Kumar¹
¹Raman Research Institute, India

09:40-10:30 **Fundamentals of organic and molecular devices: Characterization and device physics**

Chair : Kazuhiro Marumoto (University of Tsukuba)

09:40-10:10 <S1-I-1> **Combined Electromagnetic Spectroscopy: a Unique Non-Contact Technique Probing Charge Carrier Transport @ Interfaces of Organic Semiconductor Devices**
 (Invited)

°Shu Seki¹
¹Department of Molecular Engineering, Kyoto University, Japan

10:10-10:30 <S1-O-2> **Half-metallicity in “pristine-like” graphene by first-principles method**

°Mary Clare Sison Escaño¹
¹Tenure-Track Program for Innovative Research, Graduate School of Engineering, University of Fukui, Japan

10:30-10:50 **Break**

10:50-11:50 **Fundamentals of organic and molecular devices: Characterization and device physics**

Chair : Takashi Nagase (Osaka Prefecture University)

10:50-11:10 <S1-O-3> **Observation of Large Magnetoresistance in Single Radical Molecular Junctions**

°Ryoma Hayakawa¹, Mohammad Amin Karimi², Elke Scheer², Jannic Wolf³, Thomas Huhn³, Martin Sebastian Zöllner⁴, Carmen Herrmann⁴
¹International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science, Japan
²Department of Physics, University of Konstanz, Germany
³Department of Chemistry, University of Konstanz, Germany
⁴Institute for Inorganic and Applied Chemistry, University of Hamburg, Germany

11:10-11:30 <S1-O-4>* **Electrical properties of benzendithiolate molecular electronic devices with multilayer graphene electrodes**

°Yeonisk Jang¹, Hyunhak Jeong¹, Dongku Kim¹, Wang-Taek Hwang¹, Jun-Woo Kim¹, Takhee Lee¹
¹Department of Physics and Astronomy, Seoul National University, Korea

11:30-11:50 <S1-O-5>* **Visualizing charge distribution in pentacene ferroelectric field-effect transistor by charge modulated reflectance topography**

°Takako Otsuka¹, Dai Taguchi¹, Takaaki Manaka¹, Mitsumasa Iwamoto¹
¹Department of Physical Electronics, Tokyo Institute of Technology, Japan

11:50-12:10 **Soft material physics and applications in electronics**

Chair : Takashi Nagase (Osaka Prefecture University)

Conference Program

11:50-12:10	<S5-O-1>	Controllable crystal structure using highly ordered liquid crystal phase and its organic transistor application °Hiroaki Iino ¹ , Jun-ichi Hanna ¹ ¹ Imaging Science and Engineering Research Center, Tokyo Institute of Technology, Japan
12:10-13:40	Lunch	
13:40-15:40	Organic semiconductor devices and applications	Chair : Hiroyoshi Naito (Osaka Prefecture University)
13:40-14:10	<S4-I-2> (Invited)	Recently-Developed Highly Efficient Organic LEDs: Molecular Design and Analysis of Devices °Hironori Kaji ¹ ¹ Institute for Chemical Research, Kyoto University, Japan
14:10-14:30	<S4-O-3> *	Analyzing of the Relation between Two-dimensional Electric Fields and Accumulated Charge Density in Organic Light-emitting Diodes using a Novel Microscopic EFISHG Measurement °Atsuo Sadakata ¹ , D. Taguchi ² , T. Manaka ² , M. Iwamoto ² ¹ Department of Electrical Engineering and Information Technology, Kyushu Sangyo University, Japan ² Department of Physical Electronics, Tokyo Institute of Technology, Japan
14:30-15:00	<S4-I-3> (Invited)	Mesoscopic Tin-rich Mixed-halide Perovskite Solar Cells with Carbon Counter Electrode °Eric Wei-Guang Diao ¹ ¹ Department of Applied Chemistry and Institute of Molecular Science, National Chiao Tung University, Taiwan
15:00-15:20	<S4-O-4>	Write-once-read-many Multi-bit Memory Organic Field Effect Transistor using Poly(vinyl cinammate) as Charge Trapping Layer °Cuong Manh Tran ¹ , Heisuke Sakai ¹ , Tatsuya Murakami ¹ , Hideyuki Murata ¹ ¹ Japan Advanced Institute of Science and Technology (JAIST), Japan
15:20-15:40	<S4-O-5>	Development of highly stable non-invasive ammonia sensor for the detection of sub-ppm level concentration of ammonia Praveen Kumar Sahu ¹ , Manish Pandey ² , Chandan Kumar ¹ , Shyam S. Pandey ² , Wataru Takashima ² , V. N. Mishra ¹ , °Rajiv Prakash ³ ¹ Department of Electronics Engineering, Indian Institute of Technology (Banaras Hindu University), India ² Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Japan ³ School of Materials Science and Technology, Indian Institute of Technology (Banaras Hindu University), India
15:40-16:00	Closing remarks	Toshiki Yamada (NICT)
15:40-16:00	Award ceremony	Chair : Takaaki Manaka (Tokyo Institute of Technology)