

Abstract and Information



May 29 – 31, 2024

Advanced ICT Research Institute

NICT

Kobe, Japan

13th International Symposium on Organic Molecular Electronics (ISOME2024)

May 29 to 31, 2024

Advanced ICT Research Institute, NICT

Kobe, Japan

Organized by

Technical Committee on Organic Molecular Electronics, Electronics Society (ES) of The
Institute of Electronics, Information and Communications Engineers (IEICE)

Sponsored by

The Institute of Electronics, Information and Communications Engineers (IEICE)
The Murata Science Foundation
Daiko Foundation

In cooperation with

Advanced ICT Research Institute, NICT
Molecular Electronics and Bioelectronics (M&BE), The Japan Society of Applied
Physics (JSAP)
Technical Committee on Dielectric and Electrical Insulation Materials, The Institute of
Electrical Engineers of Japan (IEEEJ)

Preface

I am happy to welcome you to the 13th International Symposium on Organic Molecular Electronics (ISOME2024) being held from May 29 to 31, 2024 at Advanced ICT Research Institute, National Institute of Information and Communications Technology (NICT) in Kobe, Japan. ISOME 2024 is welcoming you mainly on-site.

ISOME2024 is organized by the Technical Committee on Organic Molecular Electronics (OME), the Electronics Society (ES) of Institute of Electronics, Information and Communications Engineers (IEICE). This is the 13th ISOME in the series of the biannual conference that began in Nagoya University (Aichi) in 2000, continued in RIKEN (Saitama), Kyoto University (Kyoto), Saitama University (Saitama), University of Hyogo (Hyogo), Chiba University (Chiba), NTT Musashino R&D Center (Tokyo), Tokyo University of Agriculture and Technology (Tokyo), Niigata University (Niigata), Sun Messe Tosu (Saga), Aichi Institute of Technology (Aichi), Tokyo Institute of Technology (Kanagawa), and this Advanced ICT Research Institute, NICT (Hyogo).

On behalf of the organizing committee, I would like to express our sincere thanks to two plenary lectures of Prof. Takehiko Mori (Tokyo Institute of Technology) and Prof. Masanori Ozaki (Osaka University) and twelve invited speakers. This symposium has been the most important international conference of IEICE in the field of organic electronics. Since the size of the symposium is moderate, I expect the fruitful discussion among leading scientists with diverse backgrounds, plenty of knowledge, and interdisciplinary concepts. Authors at ISOME 2024 are encouraged to submit original contributed papers on the significant part of their work to the Special Section on “Recent Progress in Organic Molecular Electronics” in the IEICE Transactions on Electronics, to be published in June 2025.

This symposium is sponsored by IEICE, The Murata Science Foundation, and Daiko Foundation, is in corporation with Advanced ICT Research Institute, NICT, The Japan Society of Applied Physics (JSAP), Technical Committee on Dielectric and Electrical Insulation Materials, The Institute of Electrical Engineers of Japan (IEEEJ). I would like to express my sincere appreciation to all the committee members. The organizing committee express sincere thanks to all the participants. Finally, we hope all participants can enjoy the program of ISOME 2024 and be benefitted through exciting presentations.

May 29, 2024

Chair: Toshiki Yamada

National Institute of Information and Communications Technology

ISOME2024 Organizing Committee

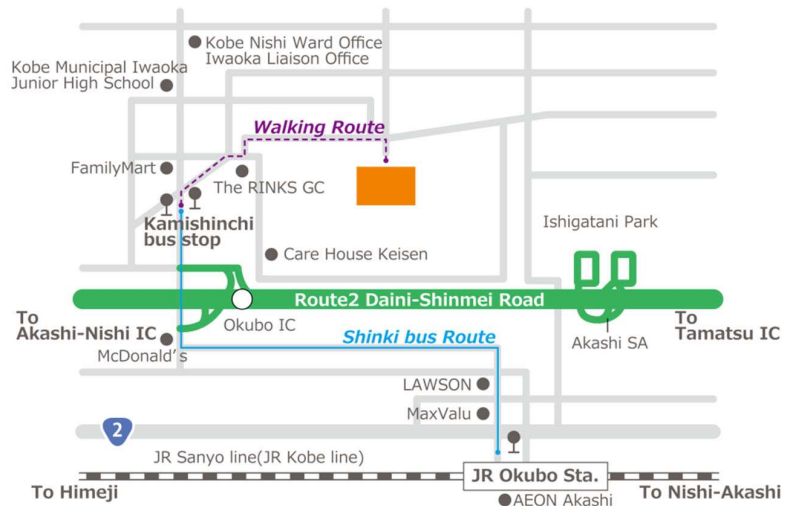
Chair	Toshiki Yamada (NICT)
Vice Chairs	Eiji Itoh (Shinshu Univ.) Akira Baba (Niigata Univ.)
Members	Yusuke Aoki (Mie Univ.) Takashi Amemiya (Yokohama Nat. Univ.) Yuko Ueno (Chuo University) Hirotake Kajii (Osaka Univ.) Kenichi Goushi (Kyushu Univ.) Morihiro Saito (Seikei Univ.) Masatoshi Sakai (Chiba Univ.) Koichi Sakaguchi (Saga Univ.) Toshihiro Shimada (Hokkaido Univ.) Hidenobu Shiroishi (Tokyo Nat. Col. Technol.) Sachiko Jonai (Niigata Univ.) Okihiro Sugihara (Utsunomiya Univ.) Yasushi Sobajima (Gifu Univ.) Dai Taguchi (Tokyo Tech) Yoko Tatewaki (Tokyo Univ. Agricul. & Technol.) Senku Tanaka (Kindai Univ.) Yumi Tanaka (Tokyo Univ. of Sci.) Hiroyuki Hasegawa (Shimane Univ.) Takeshi Fukuda (Sekisui Chemical CO., LTD) Masahiro Morimoto (Univ. of Toyama)
Advisors	Mitsumasa Iwamoto (Tokyo Tech) Hiroaki Usui (Tokyo Univ. Agricul. & Technol.) Yutaka Ohmori (Osaka Univ.) Keizo Kato (Niigata Univ.) Kazuhiro Kudo (Chiba Univ.) Hiroyuki Sasabe (Chitose Inst. Sci. & Technol.) Kuniaki Tanaka (Chiba Univ.) Yutaka Majima (Tokyo Tech) Naoki Matsuda (AIST) Tatsuo Mori (Aichi Inst. Technol.) Katsumi Yoshino (Shimane Inst. Indus. Technol.)
Local Committee Members	Toshiki Yamada (NICT) Hirotake Kajii (Osaka Univ.)
Secretariat	Toshihiko Kaji (Tokyo Univ. Agricul. & Technol.) Kazuya Tada (Univ. of Hyogo) Yoshiyuki Seike (Aichi Inst. of Tech.) Shyam sudhir Pandey (Kyutech) Dai Taguchi (Tokyo Tech)

Advanced ICT Research Institute (Kobe), NICT

Access

[Location]

588-2, Iwaoka, Nishi-ku, Kobe, Hyogo
651-2492, Japan
Tel: +81-78-969-2100
Fax: +81-78-969-2200



◆ By Train

From JR Nishi-Akashi Station

By Taxi It takes 20min and costs about 2,000-Yen



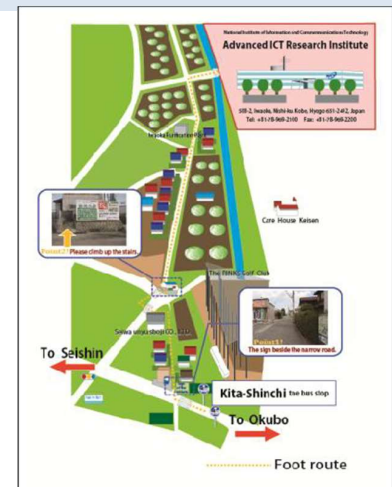
From JR Okubo Station

By Bus

Please go out from North-Exit of the station, and take Shinkai-Bus from No.3 Aboard buses bound for “Kami-Iwaoka / Seishin-Chuou Station”.

Caution: do not get on the bus via “Akita”, even if it is bound for “Kami-Iwaoka / Seishin-Chuou Station”.

Please get it off at “Kami-shinchi”, (It takes approximately 15min.), and it takes 10min from the bus stop to Advanced ICT Research Institute on foot.



Foot Route Map
(from Kami-shinchi bus stop)

◆ 2F conference room in Main building of Advanced ICT Research Institute (Kobe)



- You find the main building when you enter the main gate to Advanced ICT Research Institute (Kobe), NICT.
- Please enter through the main entrance of the main building (yellow arrow).
- Please go up the stairs to 2F conference room.

General Information

Scope and Topics

The symposium covers various aspects of organic materials that are related to electronic applications, including insulators, semiconductors, conductors, optic materials, magnetic materials, and biomaterials. Their applications extend to such fields as transistors, memories, displays, photovoltaics, optical devices, energy devices, sensors, actuators, and bioelectronics. The topics related to basic physics and chemistry, material development, process technologies, devices and applications are covered in this symposium. The ISOME 2024 aims to bring up new buds on the research of these issues.

Date and Venue

Date: May 29 – May 31, 2024

Venue: Advanced ICT Research Institute, National Institute of Information and Communications Technology (588-2 Iwaoka, Kobe, Hyogo, Japan 651-2492)

Registration

Registration fee is 25,000 JPY (Regular) and 10,000 JPY (Student).

Banquet fee: 5,000 JPY (Regular) and 5,000 JPY (Student)

[Registration form and related information are available on the ISOME2024 website.]

Submission to IEICE Transactions on Electronics

The authors of accepted papers will also be requested to submit manuscripts for the Special Section on “Recent Progress in Organic Molecular Electronics” in the IEICE Transactions on Electronics by June 1, 2024. The special section is scheduled to appear in the issue published in June 2025. The paper should be either Full Papers (up to 8 printed pages) or Brief Papers (up to 4 printed pages). Manuscripts should be prepared according to the submission guideline for IEICE Transactions.

Information for Presentation

Plenary Speakers: 40 minutes (including discussion)

Invited Speakers: 25 minutes (including discussion)

Oral Presentation: 15 minutes (including discussion)

Poster Presentation: 120 minutes, Poster Session at evening on May 29

Banquet

Symposium Banquet will be held from 19:30 to 21:30 on May 30 at HOTEL SETRE MAIKO KOBE.

Contact

Website: <https://www.ieice.org/~ome/ISOME/Welcome.html>

Email: info_isome2024@ml.nict.go.jp

ISOME2024 Schedule

	May 29 (Wednesday)	May 30 (Thursday)	May 31 (Friday)
	Registration (12:00-17:00)	Registration (8:30-17:00)	Registration (8:30-10:00)
Morning	Registration	Plenary Lecture (9:00-9:40) PL-2 <i>M Ozaki</i> break Session 3 (9:50-11:10) (Invited) I3-1 <i>A Otomo</i> (Invited) I3-2 <i>Y-J Pu</i> O3-1 <i>K Goushi</i> O3-2 <i>S Gupta</i> break Session 4 (Student Oral) (11:20-12:20) O4-1 <i>J B Kaore</i> O4-2 <i>Y Takayama</i> O4-3 <i>D Han</i> O4-4 <i>S Miyake</i>	Session 8 (9:00-10:05) (Invited) I8-1 <i>T Fukuda</i> (Invited) I8-2 <i>H Suzuki</i> O8-1 <i>S K Mavileti</i> break Session 9 (10:20-11:30) (Invited) I9-1 <i>P Chandra</i> O9-1 <i>T Matsui</i> O9-2 <i>T Shimada</i> O9-3 <i>K RB Singh</i> Closing Ceremony (11:40-11:55) <i>E Itoh</i>
Afternoon	Opening Remarks (13:30-13:40) <i>T Yamada</i> Plenary Lecture (13:40-14:20) PL-1 <i>T Mori</i> break Session 1 (14:35-15:15) (Invited) I1-1 <i>H-W Lin</i> O1-1 <i>Y Seike</i> break Session 2 (15:30-16:35) (Invited) I2-1 <i>Y Tanaka</i> (Invited) I2-2 <i>M Matsunaga</i> O2-1 <i>D Taguchi</i>	Session 5 (13:30-14:40) (Invited) I5-1 <i>V Singh</i> O5-1 <i>Takahiro Kaji</i> O5-2 <i>E Itoh</i> O5-3 <i>K Tada</i> break Session 6 (14:55-16:30) (Invited) I6-1 <i>Y Majima</i> (Invited) I6-2 <i>T Matsumoto</i> O6-1 <i>M Hiramoto</i> O6-2 <i>Toshihiko Kaji</i> O6-3 <i>Q Wei</i> Break Session 7 (16:45-17:40) O7-1 <i>Y Ueno</i> O7-2 <i>Priyanka</i> (Invited) I7-1 <i>K Yoshida</i>	
Evening	Poster Session (17:00-19:00)	Banquet (19:30- 21:30) HOTEL SETRE MAIKO	

ISOME2024 Program

May 29 (Wednesday) Registration 12:00-17:00

Opening Remarks (13:30)

13:30-13:40 Welcome Address

Conference Chair

Toshiki Yamada

Advanced ICT Research Institute, NICT, Japan

Plenary Lecture 1

Chairperson: Dr. Toshiki Yamada (NICT)

13:40-14:20 PL-1 (Invited)

Materials and Properties of Ambipolar Organic Transistors

Takehiko Mori

Department of Materials Science and Engineering, Tokyo Institute of Technology, Japan

14:20-14:35 coffee break

Session 1

Chairperson: Prof. Tatsuo Mori (Aichi Institute of Technology)

14:35-15:00 I1-1 (Invited)

Halide perovskite and organic memristors

Hao-Wu Lin

Department of Materials Science and Engineering, National Tsing Hua University, Taiwan

15:00-15:15 O1-1

Characteristics of Inverse-structured Perovskite Solar Cells with Bragg Reflectors

Yuya Isogawa¹, Keishiro Goshima¹, Yusuke Ichino¹, Noriyuki Taoka¹, Tatsuo Mori¹,
Yoshiyuki Seike^{1,2}

¹*Electrical and Electronics Engineering Course, Graduate School of Engineering,
Aichi Institute of Technology, Japan*

²*la quaLab LLC., Japan*

15:15-15:30 coffee break

Session 2

Chairperson: Prof. Yusuke Aoki (Mie University)

15:30-15:55 I2-1 (Invited)

Enhancing the Photostability of Vibrational Energy Harvesters Based on Polar Organic Semiconductors

Yuya Tanaka

Graduate School of Science and Technology, Gunma University, Japan

15:55-16:20 I2-2 (Invited)

Transparent and stretchable triboelectric nanogenerator based on carbon nanotubes for self-powered wearable devices

Masahiro Matsunaga

Institute of Materials and Systems for Sustainability, Nagoya University, Japan

16:20-16:35 O2-1

Electrical power transmission from poly(vinyl alcohol) films as dipolar-energy-based triboelectric generators

Dai Taguchi, Takaaki Manaka, Mitsumasa Iwamoto

Tokyo Institute of Technology, Japan

Poster Session 17:00-19:00

* Please see the poster program on the latter page from P. 14.

May 30 (Thursday)

Registration 8:30-17:00

Plenary Lecture 2

Chairperson: Prof. Hirotake Kajii (Osaka University)

9:00-9:40 PL-2 (Invited)

Highly oriented π -conjugated polymer thin films via liquid crystalline aggregation states

Masanori Ozaki

Osaka University, Japan

9:40-9:50 coffee break

Session 3

Chairperson: Prof. Sachiko Jonai (Niigata University)

9:50-10:15 I3-1 (Invited)

Optical phased array using EO polymers from visible to NIR

Akira Otomo, Takahiro Kaji, Toshiki Yamada

National Institute of Information and Communications Technology, Japan

10:15-10:40 I3-2 (Invited)

Luminescence of the Molecules with Double Excitation Character

Yong-Jin Pu

Riken, Japan

10:40-10:55 O3-1

Triplet dynamic model in organic solid-state lasers using thermally activated delayed fluorescence emitters under continuous-wave excitation

A. Abe, K. Goushi, A.S.D. Sandanayaka, R. Komatsu, T. Fujihara, M. Mamada, C. Adachi

Center for Organic Photonics and Electronics Research (OPERA),

Kyushu University, Japan

10:55-11:10 O3-2

FRET-Based Far-Red Squaraine Probe for Chymotrypsin Detection

Shekhar Gupta, Priyanka, Sai Kiran Mavileti, Shyam S. Pandey, Tamaki Kato

Graduate School of Life Science and Systems Engineering,

Kyushu Institute of Technology, Japan

11:10-11:20 coffee break

Session 4 (Student Oral Session)

Chairperson: Prof. Yoshiyuki Seike (Aichi Institute of Technology)

11:20-11:35 O4-1

Plasmonic Effect of Silver Nanoparticle Concentration in PM6:Y7 Organic Solar Cell

Joseph Baki Kaore¹, Sachiko Jonai^{1,2}, Akira Baba^{1,2}, Kazunari Shinbo^{1,2}, Keizo Kato^{1,2}

¹*Graduate School of Science and Technology, Niigata University, Japan*

²*Interdisciplinary Research Center for Carbon-Neutral Technologies,*

Niigata University, Japan

11:35-11:50 O4-2

Improvement of Narrow-Band Emission in Insulated AC-Driven Organic Light-Emitting Devices with Semiconductor Mirror Incorporating Conductive Polymer PEDOT:PSS

Yuto Takayama, Hirotake Kajii, Masahiko Kondow

Osaka University, Japan

11:50-12:05 O4-3

Hopping conduction in Au deposited PCBM crystal

Dong Han, Takashi Yamada, Hiroshi Ohoyama, Takuya Matsumoto

Department of Chemistry, Graduate School of Science, Osaka University, Japan

12:05-12:20 O4-4

Formation of Triple-cation Perovskite Thin Films by Bar-Coating Method: Effects of Substrate Temperature and Sweep Speed

Shogo Miyake¹, Akihiko Fujii^{1,2}, Masanori Ozaki¹

¹*Graduate School of Engineering, Osaka University, Japan*

²*Faculty of Engineering, Osaka Institute of Technology, Japan*

12:20-13:30 Lunch

Session 5

Chairperson: Prof. Shyam sudhir Pandey (Kyushu Institute of Technology)

13:30-13:55 I5-1 (Invited)

Strategies Towards Realization of Self Biased Hybrid Photodetectors

Tejswini K Lahane, Jitesh Agrawal, Vipul Singh

Indian Institute of Technology Indore, India

13:55-14:10 O5-1

Fabrication of 375-GHz-band antenna-coupled optical modulators using electro-optic polymer waveguides and non-coplanar patch antennas

Takahiro Kaji¹, Kota Miyake², Shintaro Hisatake², Isao Morohashi¹, Toshiki Yamada¹, Akira Otomo¹

¹*Advanced ICT Research Institute and Beyond 5G Research and Development Promotion Unit,*

National Institute of Information and Communications Technology (NICT), Japan

²*Department of Electrical, Electronic and Computer Engineering Gifu University, Japan*

14:10-14:25 O5-2

Stable, ultra-fast vertical polyimide capacitive-type humidity sensors by CNT gas permeable electrodes and hydrophobic underlayer

Eiji Itoh, Jotaro Iguchi, Yasuhiro Aruga

Department of Electrical and Computer Engineering, Shinshu University, Japan

14:25-14:40 O5-3

Effect of precursor thread on the fabrication of electroactive supercoiled polymer artificial muscles

Kazuya Tada

Department of Electrical Materials and Engineering, University of Hyogo, Japan

14:40-14:55 coffee break

Session 6

Chairperson: Prof. Masahiro Morimoto (University of Toyama)

Prof. Senku Tanaka (Kindai University)

14:55-15:20 I6-1 (Invited)

Single-molecule transistors based on heteroepitaxial spherical Au/Pt nanogap electrodes

Yutaka Majima

Tokyo Institute of Technology, Japan

15:20-15:45 I6-2 (Invited)

In-material physical computation utilizing nonlinear electron transfer: Resonant tunneling and path-dependent hopping in molecular systems

Takuya Matsumoto

Graduate School of Science, Osaka University, Japan

15:45-16:00 O6-1

Acceptor doping to rubrene single crystal by thermal diffusion

M. Hiramoto¹, K. Yabuya¹, S. Izawa^{1,2}

¹*Institute for Molecular Science, Japan*

²*Tokyo Institute of Technology, Japan*

16:00-16:15 O6-2

Vacuum Deposition of C₆₀ Thin Films to formulate the Effect induced by Co-evaporant

Michihiro Nakayama¹, Tetsu Katayama¹, Toshihiko Kaji^{1,2}

¹*Department of Applied Physics, Tokyo University of Agriculture and Technology, Japan*

²*Department of Applied Physics & Chemical Engineering,*

Tokyo University of Agriculture and Technology, Japan

16:15-16:30 O6-3

Doping Control in Organic Semiconductors Using Photobase Generators

Qingshuo Wei¹, Shohei Horike²

¹*National Institute of Advanced Industrial Science and Technology (AIST), Japan*

²*Kobe University, Japan*

16:30-16:45 coffee break

Session 7

Chairperson: Prof. Kenichi Goushi (Kyushu University)

16:45-17:00 O7-1

Interaction of giant vesicles containing pyrene-modified lipids with graphene substrates

Ayato Kaneko, Yuko Ueno

Graduate School of Science and Engineering, Chuo University, Japan

17:00-17:15 O7-2

Design and Synthesis of Trypsin Enzyme Specific Probe by the Squaraine Dye-Peptide Conjugate

Priyanka, Shekhar Gupta, Shyam S. Pandey, Tamaki Kato

*Graduate School of Life Science and Systems Engineering,
Kyushu Institute of Technology, Japan*

17:15-17:40 I7-1(Invited)

Electrically driven polymer laser pumped by OLED

Kou Yoshida¹, Junyi Gong¹, Alexander L. Kanibolotsky^{2,3}, Peter J. Skabara²,
Graham A. Turnbull¹, Ifor D. W. Samuel¹

¹*School of Physics and Astronomy, University of St Andrews, UK*

²*WestCHEM, School of Chemistry, University of Glasgow, Glasgow, UK*

³*Institute of Physical-Organic Chemistry and Coal Chemistry, Kyiv, Ukraine*

19:30-21:30 Banquet

May 31 (Friday)

Registration 8:30-10:00

Session 8

Chairperson: Prof. Yuko Ueno (Chuo University)

9:00-9:25 I8-1(Invited)

Development of a rapid and extremely sensitive digital immunoassay for Norovirus detection

Takashi Fukuda, Masato Yasuura

AIST, Japan

9:25-9:50 I8-2(Invited)

Microfluidic technologies for artificial cell studies

Hiroaki Suzuki

Chuo University, Japan

9:50-10:05 O8-1

Fluorescence Detection of Neutrophil Elastase by Peptide-Squaraine Dye Conjugate

Sai Kiran Mavileti¹, Galyna Bila^{2,3}, Rostyslav Bilyy Jr³, Valentyn Utko^{2,3},

Tetsuya Narimatsu¹, Shekhar Gupta¹, Tamaki Kato¹, Rostyslav Bilyy^{2,3},

Shyam S. Pandey¹

¹*Graduate School of Life Science and System Engineering,*

Kyushu Institute of Technology, Japan

²*Danylo Halytsky Lviv National Medical University, Ukraine*

³*Lectinotest R&D, Ukraine*

10:05-10:20 coffee break

Session 9

Chairperson: Prof. Dai Taguchi (Tokyo Institute of Technology)

10:20-10:45 I9-1(Invited)

Nanobioengineering for Point-of-Care Diagnostic Sensors and Devices

Pranjal Chandra

Indian Institute of Technology (BHU) Varanasi, India

10:45-11:00 O9-1

Development of low-cost 3D-printable optical sectioning structured illumination microscope

Tatsunosuke Matsui

Graduate School of Engineering, Mie University, Japan

11:00-11:15 O9-2

Crystal Growth of Large Organic Molecules by Naphthalene Flux Method

Toshihiro Shimada, Suo Jeon, Takuma Yuki, Hiroki Waizumi, Seiya Yokokura

Hokkaido University, Japan

11:15-11:30 O9-3

Biosynthesis of Aluminum Oxide Nanoparticles via *Bauhinia Variegata* Blossom Extract for Efficient Electro-optical Applications

Kshitij RB Singh, Shyam S. Pandey

Graduate School of Life Science and Systems Engineering,

Kyushu Institute of Technology, Japan

Closing Ceremony

11:40-11:55 Award Ceremony and Closing Address

Chair of the Technical Committee on Organic Molecular Electronics, IEICE

Eiji Itoh

Shinshu University, Japan

Poster session program

May 29 (Wednesday) 17:00-19:00

- P-01 Dual Metal Ion Selective Sensing by Newly Designed NIR Sensitive Probes
Sushma Thapa¹, Shekhar Gupta¹, Lim Hong Ngee², Shyam S. Pandey¹
¹*Graduate School of Life Science and Systems Engineering,
Kyushu Institute of Technology, Japan*
²*Department of Chemistry, Faculty of Science, Universiti Putra Malaysia, Malaysia*
- P-02 Relationship between Morphology and Conductivity of PEDOT/PSS Thin Films Coated by Air Spray
Taishi Segawa¹, Yuta Kato¹, Kensei Ueyama², Yoshiyuki Seike^{2, 3}
¹*Asahi Sunac corporation, Japan*
²*Electrical and Electronics Engineering Course, Graduate School of Engineering,
Aichi Institute of Technology, Japan*
³*la quaLab LLC., Japan*
- P-03 Heavy Metals Detection Based on UiO-66-NH₂ Modified Gold Chip via Surface Plasmon Resonance (SPR) Technique
Wisansaya Jaikeandee¹, Chutiparn Lertvachirapaiboon², Kazunari Shinbo¹, Keizo Kato¹, Akira Baba¹
¹*Graduate School of Science and Technology and Faculty of Engineering,
Niigata University, Japan*
²*National Nanotechnology Center (NANOTEC),
National Science and Technology Development Agency (NSTDA), Thailand*
- P-04 Preliminary study on preparation of rubrene suspensions aqueous by reprecipitation method
Junki Takada, Kazuya Tada
Department of Electrical and Materials Engineering, University of Hyogo, Japan

- P-05 Vapor Deposition of Naphthalenediimides Having Polymerizable Units
Suguru Kuratomi¹, Satoshi Usui², Yoko Tatewaki¹, Hiroaki Usui¹
¹*Graduate School of Engineering,*
Tokyo University of Agriculture and Technology, Japan
²*Graduate School of Science and Technology, Niigata University, Japan*
- P-06 Thermoelectric properties of PEDOT:PSS composited with flexible polymers
Kota Matsuyuki, Shogo Baba, Naoki Kishi
Department of Electrical and Mechanical Engineering,
Nagoya Institute of Technology, Japan
- P-07 Process dependence in the electrical and mechanical properties of PEDOT:PSS based thermoelectric materials formed on stretchable fibers
Shinnosuke Matsui, Shohei Sakai, Naoki Kishi
Department of Electrical and Mechanical Engineering,
Nagoya Institute of Technology, Japan
- P-08 Fabrication and characterization of electromagnetic shielding materials consisting of softened polymer-nanocarbon composites
Fuma Kondo, Naoaki Yoshida, Tetsuo Soga, Naoki Kishi
Department of Electrical and Mechanical Engineering,
Nagoya Institute of Technology, Japan
- P-09 Investigating the Effect of Surfactants and High Boiling Point Solvents on the Thermoelectric Properties of PEDOT: PSS Freestanding Films
Rahman Md. Abdur, Shafayat Hossain, Naoki Kishi
Department of Electrical and Mechanical Engineering,
Nagoya Institute of Technology, Japan
- P-10 OFET Characteristics of p-Type Semiconductors Incorporating Diketopyrrolopyrrole and Thiadiazole-Quinoxaline
Naohiro Takahashi, Tomoki Nishiyama, Weng Weichun, Hirotaka Kitoh-Nishioka, Senku Tanaka, Takashi Okubo
Faculty of Science and Engineering, Kindai University, Japan

- P-11 High performance, low cost inverted polymer-based light emitting diodes fabricated by meniscus coating and transfer printing techniques
Taisei Kamada, Masato Kato, Eiji Itoh
Department of Electrical and Computer Engineering, Shinshu University, Japan
- P-12 Wavelength tunable synaptic characteristics in organic transistor memories with organic semiconductor floating gates
Shusei Hattori¹, Takashi Kobayashi^{1,2}, Hiroyoshi Naito^{2,3}, Takashi Nagase^{1,2}
¹ *Department of Physics and Electronics, Osaka Metropolitan University, Japan*
² *The Research Institute for Molecular Electronic Devices, Osaka Metropolitan University, Japan*
³ *Department of Applied Chemistry, Osaka Metropolitan University, Japan*
- P-13 Enhanced performances of pentacene-based organic transistor memories using solution-processed organic floating-gate layers
Yuting Shi¹, Takashi Kobayashi^{1,2}, Hiroyoshi Naito^{2,3}, Takashi Nagase^{1,3}
¹ *Department of Physics and Electronics, Osaka Metropolitan University, Japan*
² *The Research Institute for Molecular Electronic Devices, Osaka Metropolitan University, Japan*
³ *Department of Applied Chemistry, Osaka Metropolitan University, Japan*
- P-14 Effects of alkyl side chains of soluble fullerene derivatives on the performance of upconversion organic light-emitting diodes
Kazuki Kojima¹, Moeto Okuda¹, Takashi Kobayashi^{1,2}, Hiroyoshi Naito^{2,3}, Takashi Nagase^{1,2}
¹ *Department of Physics and Electronics, Osaka Metropolitan University, Japan*
² *The Research Institute for Molecular Electronic Devices, Osaka Metropolitan University, Japan*
³ *Department of Applied Chemistry, Osaka Metropolitan University, Japan*
- P-15 Study on insertion effect of widegap hole transport layer in rubrene/fullerene solar cells
Yuki Ichise¹, Masahiro Morimoto², Shigeki Naka²
¹ *Graduate School of Science and Engineering, University of Toyama, Japan*
² *Faculty of Engineering, University of Toyama, Japan*

- P-16 High-mobility soluble fullerene-based n-channel organic transistors with poly(ethyleneimine) electron injection layers
Takashi Nagase^{1,2}, Takuya Ohashi¹, Takashi Kobayashi^{1,2}, Hiroyoshi Naito^{2,3}
¹ *Department of Physics and Electronics, Osaka Metropolitan University, Japan*
² *The Research Institute for Molecular Electronic Devices, Osaka Metropolitan University, Japan*
³ *Department of Applied Chemistry, Osaka Metropolitan University, Japan*
- P-17 Investigation of acceptor layer in inverted organic multifunction diodes
Kento Kobayashi¹, Masahiro Morimoto², Shigeki Naka²
¹ *Graduate School of Science and Engineering, University of Toyama, Japan*
² *Faculty of Engineering, University of Toyama, Japan*
- P-18 Preparation and Electrical Properties of Crystalline Rubrene Thin Films with Underlayer
Yuya Honda¹, Masahiro Morimoto², Shigeki Naka²
¹ *Graduate School of Science and Engineering, University of Toyama, Japan*
² *Academic Assembly Faculty of Engineering, University of Toyama, Japan*
- P-19 The effect of introducing gold nanoparticles into the transport layer of non-fullerene organic solar cells
Sachiko Jonai, Akira Baba
Graduate school of Science and Technology, Niigata University, Japan
- P-20 Fabrication of phthalocyanine-based single crystals by electrochemical methods and their physical properties
Taichi Oribe^{1,2}, Hiroyuki Hasegawa^{1,2}, Toshiki Yamada², Akira Otomo², Tomoyuki Akutagawa³
¹ *Graduate School of Natural Science and Technology, Shimane University, Japan*
² *Advanced ICT Research Institute, National Institute of Information and Communications Technology, Japan*
³ *Institute of Multidisciplinary Research for Advanced Materials, Tohoku University, Japan*
- P-21 All solid Flexible Light-Induced Self-Written Optical Interconnection
Hayato Kakurai, Hidetaka Terasawa, Keisuke Kondo, Okihito Sugihara
Graduate School of Regional Development and Creativity, Utsunomiya University, Japan

- P-22 Fabrication of Light-Induced Self-Written Optical Waveguide Using 2.0 μm Laser Light
Mizuki Shiba, Yuta Sasaki, Hidetaka Terasawa, Keisuke Kondo, Okihiro Sugihara
Graduate School of Regional Development and Creativity, Utsunomiya University, Japan
- P-23 Fabrication and Optical Properties of Conductive Film Mirrors with Multilayer Stack
Structures towards Blue Organic Light-Emitting Devices
Hirotake Kajii, Yuto Takayama, Yugo Ashida, Takeru Einaga, Masahiko Kondow
Graduate School of Engineering, Osaka University, Japan
- P-24 Multilevel, Non-volatile, and Flexible Organic Memristors using Layer-by-Layer
Coating of Oriented Floating Films
Shubham Sharma, Shyam S. Pandey
*Graduate School of Life Science and Systems Engineering,
Kyushu Institute of Technology, Japan*
- P-25 Basic study of a method for supplying drugs by making microneedles warmed by
ultrasonic heating
Koki Miyano, Shoya Ishii, Nanako Itaya, Satomitsu Imai
*Department of Precision Machinery Engineering, College of Science and Technology,
Nihon University, Japan*
- P-26 Surface plasmon resonance-enhanced photoelectrochemical flexible biosensor using
PEDOT:PSS thin film with AuNPs on PDMS grating substrate
Charin Seesomdee, Sachiko Jonai, Kazunari Shinbo, Keizo Kato, Akira Baba
Graduate School of Science and Technology, Niigata University, Japan
- P-27 Fabrication of a laser-directed electrochemical paper analytical device and its
deployment for multi-functional electrochemical sensing
Supratim Mahapatra, Rohini Kumari, Pranjal Chandra
*Laboratory of Bio-Physio Sensors and Nano-bioengineering,
School of Biochemical Engineering, Indian Institute of Technology (BHU) Varanasi, India*

- P-28 CdSe Quantum Dot Single Electron Transistors based on Heteroepitaxial Spherical (HS) Au/Pt Nanogap Electrodes
Xu Xin¹, Yin Dongbao¹, Seiichiro Izawa¹, Masaki Saruyama², Toshiharu Teranishi², Yutaka Majima¹
¹ *Laboratory for Materials and Structures, Institute of Innovative Research, Tokyo Institute of Technology, Japan*
² *Institute for Chemical Research, Kyoto University, Japan*
- P-29 Solvent Extraction Using Two-fluid Spray After Perovskite Layer Deposition
Kensei Ueyama¹, Yuki Ikumi¹, Tatsuo Mori¹, Yusuke Ichino¹, Noriyuki Taoka¹, Taishi Segawa³, Mikio Kato³, Ryosuke Usui³, Keiji Miyachi³, Yoshiyuki Seike^{1,2}
¹ *Graduate School of Engineering, Aichi Institute of Technology, Japan*
² *la quaLab LLC, Japan*
³ *Asahi Sunac corporation, Japan*
- P-30 Fabrication of Highly Oriented Thin-Films of NR-P3HT with Pronounced J-aggregation by Friction Transfer Method
Kumar Vivek Gaurav¹, Safalmani Pradhan¹, Shubham Sharma¹, Shuichi Nagamatsu², Shyam S. Pandey¹
¹ *Graduate School of Life Science and System Engineering, Kyushu Institute of Technology, Japan*
² *Department of Computer Science and Electronics, Kyushu Institute of Technology, Japan*
- P-31 Implication of Surface Passivation on the In-plane Charge Transport in the Oriented Thin Films of P3HT
Nisarg Hirens Purabiarao, Kumar Vivek Gaurav, Shubham Sharma, Shyam S. Pandey
Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology, Japan
- P-32 Effect of Alignment Process on the Surface Polarization Configuration of Ferroelectric Nematic Liquid Crystals
Hirokazu Kamifuji¹, Kazuma Nakajima¹, Mahiro Nakase¹, Yuji Tsukamoto¹, Hirotsugu Kikuchi², Masanori Ozaki¹
¹ *Graduate School of Engineering, Osaka University, Japan*
² *Institute for Materials Chemistry and Engineering, Kyushu University, Japan*

- P-33 Layering Process of Thin Films with Dot Shapes using Inkjet Method
Kenshin Nakahama, Yusuke Ichino, Tatsuo Mori, Noriyuki Taoka, Yoshiyuki Seike
Graduate School of Engineering, Aichi Institute of Technology, Japan
- P-34 Improving the output of biofuel cells using lactic acid fuel by using two anode electrodes of LOD and LDH
Takekusu Muraoka, Kaito Tsujioka, Yuto Abe, Satomitsu Imai
Department of Precision Machinery Engineering, College of Science and Technology, Nihon University, Japan
- P-35 Output characteristics of biofuel cells using cellulose and cellobiose as fuel
 Takekusu Muraoka, Kazuki Iwata, Gou Watanabe, Satomitsu Imai
Department of Precision Machinery Engineering, College of Science and Technology, Nihon University, Japan
- P-36 Equivalent circuit parameter estimation of droplet-based electricity generator from current-voltage characteristics
 Daisuke Tajima, Yusuke Aoki
Graduate School of Engineering, Mie University, Japan
- P-37 Time Resolved Observation of Photogeneration and Recovery Process in Organic Solar Cell Observed with Time Domain Reflectometry
 Ryuichi Tokuyama¹, Haruki Nakashima¹, Zhang Ruoxue¹, Shintaro Fujii¹, Tatsuya Omori¹, Masatoshi Sakai¹, Hirofumi Mino²
¹ *Department of Electrical and Electronic Engineering, Chiba University, Japan*
² *Graduate School of Global and Transdisciplinary Studies, Chiba University, Japan*
- P-38 Fabrication of FACsPbI₃ film with vacuum deposition technique
Senku Tanaka
Faculty of Science and Engineering, Kindai University, Japan

- P-39 Chemically Engineered Unzipped Multiwalled Carbon Nanotube and rGO Nanohybrid for Ultrasensitive Picloram Detection in Rice Water and Soil Samples
Daphika S Dkhar, Rohini Kumari, Pranjali Chandra
*Laboratory of Bio-Physio Sensors and Nano-bioengineering,
 School of Biochemical Engineering, Indian Institute of Technology (BHU) Varanasi, India*
- P-40 Ionic liquid based fluorescent ammonia sensor: Interaction with ctDNA, theoretical investigation and application in live cell bioimaging
Ananya Srivastava¹, Gautam Kumar¹, Prabhat Kumar², S. Srikrishna², Vinod P. Singh¹
¹ *Department of Chemistry, Banaras Hindu University, India*
² *Department of Bio Chemistry, Banaras Hindu University, India*
- P-41 Fabrication of Visual Sensors via Inkjet Patterning and Their Functionality
Hiroyuki Hasegawa^{1,2}, Kairi Sakamoto^{1,2}, Katsuyuki Kasai², Toshiki Yamada², Shukichi Tanaka², Yoshiko Okada-Shudo³, Akira Otomo²
¹ *Faculty of Education, Shimane University, Japan*
¹ *Graduate School of Natural Science and Technology, Shimane University, Japan*
² *Advanced ICT Research Institute,
 National Institute of Information and Communications Technology, Japan*
³ *Graduate School of Informatics and Engineering,
 The University of Electro-Communications, Japan*

Author Index

Abe A	O3-1	Hasegawa H	P-20, P-41
Abe Y	P-34	Hattori S	P-12
Adachi C	O3-1	Hiramoto M	O6-1
Agrawal J	I5-1	Hisatake S	O5-1
Akutagawa T	P-20	Honda Y	P-18
Aoki Y	P-36	Horike S	O6-3
Aruga Y	O5-2	Hossain S	P-09
Ashida Y	P-23		
		Ichino Y	O1-1, P-29, P-33
Baba A	O4-1, P-03, P-19,P-26	Ichise Y	P-15
Baba S	P-06	Iguchi J	O5-2
Bila G	O8-1	Ikumi Y	P-29
Bilyy R	O8-1	Imai S	P-25, P-34, P-35
Bilyy R Jr	O8-1	Ishii S	P-25
		Isogawa Y	O1-1
Chandra P	I9-1, P-27, P-39	Itaya N	P-25
		Itoh E	O5-2, P-11
Dkhar DS	P-39	Iwamoto M	O2-1
		Iwata K	P-35
Einaga T	P-23	Izawa S	O6-1, P-28
Fujihara T	O3-1	Jaikeandee W	P-03
Fujii A	O4-4	Jeon Suo	O9-2
Fujii S	P-37	Jonai S	O4-1, P-19, P-26
Fukuda T	I8-1		
		Kaji Takahiro	I3-1, O5-1
Gaurav KV	P-30, P-31	Kaji Toshihiko	O6-2
Gong J	I7-1	Kajii H	O4-2, P-23
Goshima K	O1-1	Kakurai H	P-21
Goushi K	O3-1	Kamada T	P-11
Gupta S	O3-2, O7-2, O8-1, P-01	Kamifuji H	P-32
		Kaneko A	O7-1
Han D	O4-3	Kanibolotsky AL	I7-1

Kasai K	P-41	Matsunaga M	I2-2
Kaore JB	O4-1	Matsuyuki K	P-06
Katayama T	O6-2	Mavileti SK	O3-2, O8-1
Kato K	O4-1, P-03, P-26	Mino H	P-37
Kato Masato	P-11	Miyachi K	P-29
Kato Mikio	P-29	Miyake K	O5-1
Kato T	O3-2, O7-2, O8-1	Miyake S	O4-4
Kato Y	P-02	Miyano K	P-25
Kikuchi H	P-32	Mori Takehiko	PL-1
Kishi N	P-06, P-07, P-08, P-09	Mori Tatsuo	O1-1, P-29, P-33
Kitoh-Nishioka H		Morimoto M	P-15, P-17, P-18
	P-10	Morohashi I	O5-1
Kobayashi K	P-17	Muraoka T	P-34, P-35
Kobayashi T	P-12, P-13, P-14, P-16		
Kojima K	P-14	Nagamatsu S	P-30
Komatsu R	O3-1	Nagase T	P-12, P-13, P-14, P-16
Kondo F	P-08	Naito H	P-12, P-13, P-14, P-16
Kondo K	P-21, P-22	Naka S	P-15, P-17, P-18
Kondow M	O4-2, P-23	Nakahama K	P-33
Kumar G	P-40	Nakajima K	P-32
Kumar P	P-40	Nakase M	P-32
Kumari R	P-27, P-39	Nakashima H	P-37
Kuratomi S	P-05	Nakayama M	O6-2
		Narimatsu T	O8-1
Lertvachirapaiboon C		Ngee LH	P-01
	P-03	Nishiyama T	P-10
Lahane TK	I5-1		
Lin HW	I1-1	Ohashi T	P-16
		Ohoyama H	O4-3
Mahapatra S	P-27	Okada-Shudo Y	P-41
Majima Y	I6-1, P-28	Okubo T	P-10
Mamada M	O3-1	Okuda M	P-14
Manaka T	O2-1	Omori T	P-37
Matsui S	P-07	Oribe T	P-20
Matsui T	O9-1	Otomo A	I3-1, O5-1, P-20, P-41
Matsumoto T	O4-3, I6-2	Ozaki M	PL-2, O4-4, P-32

		Tada K	O5-3, P-04
Pandey SS	O3-2, O7-2, O8-1, O9-3, P-01, P-24, P-30, P-31	Taguchi D	O2-1
		Tajima D	P-36
Pradhan S	P-30	Takada J	P-04
Priyanka	O3-2, O7-2	Takahashi N	P-10
Pu YJ	I3-2	Takayama Y	O4-2, P-23
Purabiarao NH	P-31	Tanaka Senku	P-38
		Tanaka Shukichi	P-41
Rahman MA	P-09	Tanaka T	P-10
		Tanaka Y	I2-1
Sakai M	P-37	Taoka N	O1-1, P-29, P-33
Sakai S	P-07	Tatewaki Y	P-05
Sasaki Y	P-22	Teranishi T	P-28
Sakamoto K	P-41	Terasawa H	P-21, P-22
Samuel IDW	I7-1	Thapa S	P-01
Sandanayaka ASD		Tokuyama R	P-37
	O3-1	Tsujioka K	P-34
Saruyama M	P-28	Tsukamoto Y	P-32
Seesomdee C	P-26	Turnbull GA	I7-1
Segawa T	P-02, P-29		
Seike Y	O1-1, P-02, P-29, P-33	Ueno Y	O7-1
Skabara PJ	I7-1	Ueyama K	P-02, P-29
Sharma S	P-24, P-30, P-31	Usui H	P-05
Shi Y	P-13	Usui R	P-29
Shiba M	P-22	Usui S	P-05
Shimada T	O9-2	Utka V	O8-1
Shinbo K	O4-1, P-03, P-26		
Singh KRB	O9-3	Waizumi H	O9-2
Singh V	I5-1	Watanabe G	P-35
Singh VP	P-40	Wei Q	O6-3
Soga T	P-08	Weng W	P-10
Srikrishna S	P-40		
Srivastava A	P-40	Xu X	P-28
Sugihara O	P-21, P-22		
Suzuki H	I8-2	Yabuya K	O6-1
		Yamada Takashi	O4-3

Yamada Toshiki	I3-1, O5-1, P-20, P-41
Yasuura M	I8-1
Yin D	P-28
Yokokura S	O9-2
Yoshida K	I7-1
Yoshida N	P-08
Yuki T	O9-2
Zhang R	P-37

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