Program
Monday, June 26, 2017
Hougaku Hall

13:00 - 13:10 Opening Remarks
Yuji Yoshida (AIST, Japan)

13:10 - 13:50 Plenary Lecture
PL-1 (Plenary Lecture)
13:10 - 13:50 Charge and spin transport physics of organic semiconductors
Henning Sirringhaus (University of Cambridge, UK) …040

13:50 - 14:10 Break

Monday, June 26, 2017
Hougaku Hall

14:10 - 16:15 Topical Session 6 (Iontronics)

K-T6-001 (Keynote)
14:10 - 14:50 Interfacing with the brain using organic electronics
George Malliaras (École des Mines de St. Étienne, France) …042

O-T6-001
14:50 - 15:05 Tunable ion adsorption kinetics on a nanoscale transistor towards iontronics applications
Nicolas Clement (NTT Basic Research Laboratories, Japan) …043

K-T6-002 (Keynote)
15:05 - 15:45 Electrolyte gated transistors with floating gates as biosensors
C. Daniel Frisbie (University of Minnesota, USA) …044

O-T6-002
15:45 - 16:00 Electrochemically stable electron-injection electrode for organic electrochemical transistors
Hidekazu Shimotani (Tohoku University, Japan) …045

O-T6-003
16:00 - 16:15 New type of energy harvester with electric double layer electrets
Shimpei Ono (Central Research Institute of Electric Power Industry, Japan) …046

16:15 - 17:10 Break and Poster Viewing
Monday, June 26, 2017
Koryu Hall

14:10 - 16:10 Session D (Bio-electronics, Bio-analysis and Bio-interfaces)

I-D-001 (Invited)
14:10 - 14:40 Development of micro/nano patterning methods for motor proteins and endothelial cells for their biophysical studies
Ryuji Yokokawa (Kyoto University, Japan) ....048

I-D-002 (Invited)
14:40 - 15:10 Biomimetic engineering for biosensing and bioscience
Tatsuro Goda (Tokyo Medical and Dental University, Japan) ....049

O-D-001
15:10 - 15:25 Design of bio-nano interfaces by self-assembled peptides and two-dimensional nanomaterials
Yuhei Hayamizu (Tokyo Institute of Technology, Japan) ....050

O-D-002
15:25 - 15:40 An ultra-thin LED light source with excitation filters for an implantable imaging devices
Kiyotaka Sasagawa (Nara Institute of Science and Technology, Japan) ....051

O-D-003
15:40 - 15:55 Cellular internalization of microparticles and its dependence on their surface properties
Noritaka Kato (Meiji University, Japan) ....052

O-D-004
15:55 - 16:10 Molecularly imprinted cavities prepared using specific ligands for high selective recognition of target proteins
Yuri Kamon (Kobe University, Japan) ....053

16:10 - 17:10 Break and Poster Viewing

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ANA Crowne Plaza, Room Ootori

17:10 - 19:10 Poster Presentation
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9:15 - 9:55  Plenary Lecture

PL-2 (Plenary Lecture)
9:15 - 9:55  Biological principles for ultra-energy saving
Toshio Yanagida (Osaka University, Japan)  ...056

9:55 - 10:30  Break and Photo

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10:30 - 12:25  Topical Session 2 (Biosensing Technologies for Diagnostics)

K-T2-001 (Keynote)
10:30 - 11:10  Watching cancers evolve by liquid biopsy
Takahiro Ochiya (National Cancer Center Research Institute, Japan)  ...058

O-T2-001
11:10 - 11:25  Light-induced acceleration of molecular recognition for DNA detection
Takuya Iida (Osaka Prefecture University, Japan)  ...059

O-T2-002
11:25 - 11:40  On-site and reliable enumeration of total viable bacterial count in pasteurized milk using ‘DEP-On-Go’ sensor
Madhu Biyani (BioDevice Technology Ltd., Japan)  ...060

O-T2-003
11:40 - 11:55  Development of a SNP typing in the low ionic PCR condition
Fumie Takei (National Defense Medical College, Japan)  ...061

O-T2-004
11:55 - 12:10  Extremely sensitive quartz crystal microbalance gas detector using silver ion polyelectrolyte container
Seimei Shiratori (Keio University, Japan)  ...062

O-T2-005
12:10 - 12:25  Development of an amperometric sensor for vancomycin-monitoring using molecularly imprinted polymer
André C. Ferreira (Shibaura Institute of Technology, Japan)  ...063

12:25 - 13:40  Lunch
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Koryu Hall

10:30 - 12:30 Session B (Organic Devices)

I-B-001 (Invited)
10:30 - 11:00 Organic field-effect-transistor driven by electronic phase transition
Hiroshi M. Yamamoto (Institute for Molecular Science, Japan) ...

I-B-002 (Invited)
11:00 - 11:30 Structural and materials design of thermoelectric fabrics using carbon nanotubes for wearable energy harvesters
Masakazu Nakamura (Nara Institute of Science and Technology, Japan) ...

O-B-001
11:30 - 11:45 Spin-pump-induced spin transport in thermally evaporated pentacene films
Eiji Shikoh (Osaka City University, Japan) ...

O-B-002
11:45 - 12:00 Copper(II) ion detection by an extended-gate type organic transistor
Tsuyoshi Minami (The University of Tokyo, Japan) ...

O-B-003
12:00 - 12:15 Development of a flexible dual-gate organic pressure sensor
Heisuke Sakai (Japan Advanced Institute of Science and Technology, Japan) ...

O-B-004
12:15 - 12:30 Carbazole dendrimers as multifunctional emitters for solution processed multilayered organic light-emitting diode
Kenichi Matsuoka (Kyushu University, Japan) ...

12:30 - 13:40 Lunch

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13:40 - 15:50 Topical Session 5 (Molecular Interfaces)

K-T5-001 (Keynote)
13:40 - 14:20 Controlling the electronic structure at interfaces in opto-electronic devices with functional molecules
Norbert Koch (Humboldt-Universität zu Berlin, Germany) ...

I-T5-001 (Invited)
14:20 - 14:50 Molecular understanding of organic-organic interfaces
Denis Andrienko (Max Planck Institute for Polymer Research, Germany) ...

O-T5-001
14:50 - 15:05 Origin of the orientation dependence of energy levels in molecular thin films: Impact of electrostatic interaction
Hiroyuki Yoshida (Chiba University, Japan) ...

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O-T5-002
15:05 - 15:20 Impact of orientation polarization in OLEDs studied by displacement current measurement and high-sensitivity photoemission
Hisao Ishii (Chiba University, Japan)

O-T5-003
15:20 - 15:35 Electronic and structural properties of donor-acceptor type conjugated polymers: DFT and ESR studies
Yukihiro Shimoi (AIST, Japan)

O-T5-004
15:35 - 15:50 Induced crystallization and polymorphism of [6,6]-phenyl-C61-butyric acid methyl ester in thin films by surface segregated monolayers
Seiichiro Izawa (Institute for Molecular Science, Japan)

15:50 - 16:10 Break

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13:40 - 15:40 Topical Session 1 (Single Cell Measurements and Manipulations)

I-T1-001 (Invited)
13:40 - 14:10 Reconstitution and recording Ion channel activities in artificially formed cell membranes
Ayumi Hirano-Iwata (Tohoku University, Japan)

O-T1-001
14:10 - 14:25 Heterogeneous response and adaptation of antibiotic-stressed clonal population of bacteria
Miki Umetani (The University of Tokyo, Japan)

I-T1-002 (Invited)
14:25 - 15:55 Extreme imaging for large-scale single-cell analysis
Keisuke Goda (The University of Tokyo, Japan)

O-T1-002
14:55 - 15:10 Engineering neuronal circuits on nanowire scaffolds
Vincent R. Daria (Australian National University, Australia)

I-T1-003 (Invited)
15:10 - 15:40 CMOS-based integrated opto-electric neural interface devices
Takashi Tokuda (Nara Institute of Science and Technology, Japan)

15:40 - 16:10 Break
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16:10 - 18:20 Topical Session 3 (Singlet Fission)

K-T3-001 (Keynote)
16:10 - 16:50 Singlet fission: on the way to enhancing solar cells efficiencies
Alexandre Cheminal (University of Cambridge, UK)  ...088

O-T3-001
16:50 - 17:05 Singlet fission in conjugated polymers
Yasunari Tamai (Kyoto University, Japan)  ...089

O-T3-002
17:05 - 17:20 Organic light-emitting diodes using symmetric donor-acceptor-type delayed fluorescence emitters
Katsuyuki Shizu (Kyoto University, Japan)  ...090

I-T3-001 (Invited)
17:20 - 17:50 Quantum dynamical aspects in biophysical systems and their applications for investigating molecular materials
Akihito Ishizaki (National Institutes of Natural Sciences, Japan)  ...091

O-T3-003
17:50 - 18:05 Mechanism of singlet fission in π-stacked molecules: first principles calculations and quantum dynamics calculations
Hiroyuki Tamura (The University of Tokyo, Japan)  ...092

O-T3-004
18:05 - 18:20 Characterization of triplet pairs generated by singlet fission
Tomoaki Yago (Saitama University, Japan)  ...093

18:20 - 19:00 Break

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16:10 - 18:25 Session A (Materials, Fabrication and Characterization)

I-A-001 (Invited)
16:10 - 16:40 Single molecular junction towards single molecular electronics
Manabu Kiguchi (Tokyo Institute of Technology, Japan)  ...096

O-A-001
16:40 - 16:55 New fundamental effects in single-molecule circuitry
Albert C. Aragonès (Universitat de Barcelona, Spain)  ...097

O-A-002
16:55 - 17:10 Au nanoparticle single-electron transistor anchored by Sn-porphyrin self-assembled monolayer
Pipit U. Vivitasari (Tokyo Institute of Technology, Japan)  ...098
I-A-002 (Invited)  
17:10 - 17:40 Synthesis, structure and functions of coordination nanosheet (CONASH)  
Hiroshi Nishihara (The University of Tokyo, Japan)  

O-A-003  
17:40 - 17:55 Selective adsorption and sensing property of nano/microscale metal-organic framework materials  
Wei-Yin Sun (Nanjing University, China)  

O-A-004  
17:55 - 18:10 Study of trap-filling effect on carrier transport in fluorene co-polymer film by photo-luminescence decay imaging  
Takaaki Manaka (Tokyo Institute of Technology, Japan)  

O-A-005  
18:10 - 18:25 Study of the electrografting of two different diazonium salts on patterned gold electrodes  
Florian Lebon (Université Paris-Saclay, France)  

18:25 - 19:00 Break  

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19:00 - 21:00 Banquet
Wednesday, June 28, 2017
Hougaku Hall

9:30 - 10:10   Plenary Lecture

PL-3 (Plenary Lecture)
9:30 - 10:10  Atomic switch networks as a biomorphic architecture for cognitive technology
James K. Gimzewski (National Institute for Materials Science, Japan)  ...104

10:10 - 10:30  Break

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10:30 - 12:30  Topical Session 4 (Next Era Computing Contributed by M&BE)

I-T4-001 (Invited)
10:30 - 11:00  Signals, circuits, and architectures in non-von Neumann computation
Ferdinand Peper (NICT, Japan)  ...106

I-T4-002 (Invited)
11:00 - 11:30  Evolving functionality in nanomaterial networks
Wilfred G. van der Wiel (University of Twente, Netherlands)  ...107

O-T4-001
11:30 - 11:45  Complex dynamics and promise for neuromorphic computation in self-assembled atomic-switch networks
S. K. Bose (University of Canterbury, New Zealand)  ...108

I-T4-003 (Invited)
11:45 - 12:15  Network-based molecular electronics
Takuya Matsumoto (Osaka University, Japan)  ...109

O-T4-002
12:15 - 12:30  On the growing polymer neural networks
Megumi Akai-Kasaya (Osaka University, Japan)  ...110

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10:30 - 12:30  Session C (Energy Devices & Cells)

I-C-001 (Invited)
10:30 - 11:00  Photon upconversion based on molecular assemblies and nanomaterials
Nobuo Kimizuka (Kyushu University, Japan)  ...112

O-C-001
11:00 - 11:15  Organophotocatalyst
Keiji Nagai (Tokyo Institute of Technology, Japan)
I-C-002 (Invited)
11:15 - 11:45 Solution-processed hybrid solar cells using colloidal quantum dot molecules
Takaya Kubo (The University of Tokyo, Japan)

O-C-002
11:45 - 12:00 Control device structure to perform high efficient all-inorganic cesium perovskite solar cells
Teresa S. Ripolles (Kyushu Institute of Technology, Japan)

O-C-003
12:00 - 12:15 Hysteresis analysis of organolead halide perovskite solar cells by transient current measurement
Tetsuhiko Miyadera (AIST, Japan)

O-C-004
12:15 - 12:30 Investigation of control nano-structures and interface effects on planar perovskite solar
Fabricated by Solution-Process
Md. Shahiduzzaman (Kanazawa University, Japan)

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12:40 - 12:50 Closing Remarks
Hiroaki Usui (Tokyo University of Agriculture & Technology, Japan)