

Program

Monday, March 16, 2009

Room A

9:30 – 9:40	Opening Remark
9:40 – 10:20	Plenary Lecture
10:20 – 10:30	Coffee Break
10:30 – 12:15	Session A (Organic Devices, Molecular Electronics)
12:15 – 14:00	Lunch Session (Short Presentations for Young-Scientist Poster Award)
14:00 – 15:45	Session A (Organic Devices, Molecular Electronics)
15:45 – 16:00	Coffee Break
16:00 – 17:30	Session A (Organic Devices, Molecular Electronics)

Room B

11:00 – 12:15	Session C (Liquid Crystal, Polymers, and Other Soft-Materials)
12:15 – 14:00	Lunch
14:00 – 15:15	Session C (Liquid Crystal, Polymers, and Other Soft-Materials)
15:15 – 15:30	Coffee Break
15:30 – 17:15	Session D (Biomolecular Electronics and Bioanalysis)

Banquet Room

18:00 – 20:00	Banquet
---------------	---------

Tuesday, March 17, 2009

Room A

9:40 – 10:20	Plenary Lecture
10:20 – 10:30	Coffee Break

10:30 – 12:00 **Session B (Fabrication Technique and Characterization)**
12:00 – 13:45 **Lunch Session**
 (Short Presentations for Young-Scientist Poster Award)
14:00 – 15:15 **Session B (Fabrication Technique and Characterization)**
15:15 – 15:30 **Coffee Break**
15:30 – 17:15 **Session E (Nanocarbon and Nanotechnology)**

Poster Room

17:30 – 19:30 **Poster Session**

Invited and Oral Presentations

Monday, March 16, 2009

Room A

9:30 – 9:40 Opening Remark

Keiichi Kaneto (*Kyushu Inst. Tech., Japan*)

9:40 – 10:20 Plenary Lecture

Chairperson: Kazuhiro Kudo (*Chiba Univ., Japan*)

PI-1

9:40 -10:20

Charge carrier generation and recombination in organic semiconductor devices

Tetsuo Tsutsui (*Kyushu Univ., Japan*)

--- 35

10:20 – 10:30

Coffee Break

10:30 – 12:15 Session A (*Organic Devices, Molecular Electronics*)

Chairpersons: Tetsuya Taima (*AIST., Japan*)

Jun-ichi Taketani (*Osaka Univ., Japan*)

A-I1

10:30 – 11:00

Highly Efficient Porphyrin-based Dye-Sensitized Solar Cells

Eric Wei-Guang Diao (*National Chiao Tung Univ., Taiwan*)

--- 36

A-O1

11:00 – 11:15

Organic-based hybrid nanostructures and their bio/optical applications (*Requested Paper*)

Jinsoo Joo (*Korea Univ., Korea*)

--- 37

A-O2

11:15 – 11:30

Transient current behavior in nano-linked molecular-bridge systems: what causes applied-pulse deformation?

Takashi Nakayama (*Chiba Univ., Japan*)

--- 38

A-O3

11:30 – 11:45

Organic Inverter using Monolithically Stacked Static Induction Transistors

Hiroyuki Iechi (*Ricoh Co. Ltd., Japan*)

--- 39

A-O4

11:45 – 12:00

Subthreshold characteristics depending on contact interface in organic field-effect transistors

Masataka Kano (*Dai Nippon Printing Co. Ltd., Japan*)

--- 40

A-05

- 12:00 – 12:15 Extending of Light Absorption Region Based on Excitation Transfer between Semiconducting Layers for Organic Photovoltaic Cells
Musubu Ichikawa (*Shinshu Univ., Japan*) --- 41

12:15 – 14:00 Lunch Session**(Short Presentations for Young-Scientist Award)**

Chairperson: Musubu Ichikawa (*Shinshu Univ., Japan*)

14:00 – 15:45 Session A (Organic Devices, Molecular Electronics)

Chairpersons: Chihaya Adachi (*Kyushu Univ., Japan*)
Takao Someya (*Univ. of Tokyo, Japan*)

A-I2

- 14:00 – 14:30 Novel approaches for OLEDs and organic lasers
Chihaya Adachi (*Kyushu Univ., Japan*) --- 42

A-O6

- 14:30 – 14:45 Ink formulation and printing technique for OTFTs (*Requested Paper*)
Noriyuki Kawashima (*SONY Corporation, Japan*) --- 43

A-O7

- 14:45 – 15:00 Low voltage operation of n-type organic field-effect transistors with ionic liquids
Takafumi Uemura (*Osaka Univ., Japan*) --- 44

A-O8

- 15:00 – 15:15 Photo-controlled Organic Thin Film Transistors Using Soluble π -Conjugated Molecules
Mi Yeon Cho (*Korea Univ., Korea*) --- 45

A-O9

- 15:15 – 15:30 Degradation of polymer light-emitting diodes probed by impedance spectroscopy
Hiroyoshi Naito (*Osaka Pref. Univ., Japan*) --- 46

A-O10

- 15:30 – 15:45 A higher resistance for hole injection induced by copper phthalocyanine interlayer in organic light-emitting diodes
Yutaka Noguchi (*Chiba Univ., Japan*) --- 47

15:45 – 16:00 Coffee Break**16:00 – 17:30 Session A (Organic Devices, Molecular Electronics)**

Chairpersons: Eric Wei-Guang Diao (*National Chiao Tung Univ., Taiwan*)
Hiroyoshi Naito (*Osaka Pref. Univ., Japan*)

A-I3

16:00 – 16:30 Stretchable skin-like large-area sensors using printed organic transistors
Takao Someya (*Univ. of Tokyo, Japan*) --- 48

A-O11

16:30 – 16:45 Organic thin-film transistors fabricated by printing process
(Requested Paper)
Osamu Kina (*Japan Chemical Innovation Inst., Japan*) --- 49

A-O12

16:45– 17:00 Large-Scale Fabrication and Operation of sub10-nm-Channel, Vertical Molecular Transistors
Shachar Richter (*Tel Aviv Univ., Israel*) --- 50

A-O13

17:00 – 17:15 Tandem Organic Photovoltaic Cells Based on Small-molecular-weight Semiconductors
Tetsuya Taima (*AIST, Japan*) --- 51

A-O14

17:15 – 17:30 Comparative study on structural properties of P3HT and P3HT:PCBM thin films by using synchrotron x-ray diffraction
Takeaki Sakurai (*Univ. of Tsukuba, Japan*) --- 52

Room B**11:00 – 12:15 Session C (Liquid Crystals, Polymers, and Other****Soft-Materials)**

Chairpersons: Yo Shimizu (AIST., Japan)

Hiroshi Moritake (National Defence Acad., Japan)

C-I1

10:30 – 11:00 Liquid crystals and liquid crystal composites with interesting optoelectronic and photonic properties
Heinz-Siegfried Kitzerow (*Univ. Paderborn, Germany*) --- 53

C-O1

11:00 – 11:15 Block Copolymer Templating Processes For Highly Ordered Nanostructured Materials *(Requested Paper)*
Motonori Komura (*Tokyo Inst. of Tech., Japan*) --- 54

C-O2

11:15 – 11:30 Surface morphology of radiation-grafted binary copolymers measured in buffer solution under swelling condition
Takashi Isoshima (*RIKEN., Japan*) --- 55

C-O3

11:30 – 11:45 All optical poling of disperse red dyes in amorphous ferroelectric polymers
Atsushi Sugita (*Shizuoka Univ., Japan*) --- 56

11:45 – 14:00 Lunch

14:00 – 15:15 Session C (Liquid Crystals, Polymers, and Other

Soft-Materials)

Chairpersons: Masahiro Funahashi (*Univ. of Tokyo, Japan*)

Kiyoaki Usami (*Osaka Ind. Univ., Japan*)

C-O4

14:00 – 14:15 Self-organized Colloidal crystals in capillary with fibers junction
Ming Wang (*Nanjing Normal Univ., China*) --- 57

C-O5

14:15 – 14:30 Solid state electrochemical transistor based on π -conjugated polymer
nanosheet
Jun Matsui (*Tohoku Univ., Japan*) --- 58

C-O6

14:30 – 14:45 New discotic liquid crystalline semiconductors of triphenylene with
peripherally attached fluorinated phenyl groups
Yo Shimizu (*AIST., Japan*) --- 59

C-I2

14:45 – 15:15 Electro-optics of nano-structured chiral liquid crystals
Hirotsugu Kikuchi (*Kyushu Univ., Japan*) --- 60

15:15 – 15:30 Coffee Break

15:30 – 17:15 Session D (Biomolecular Electronics and Bioanalysis)

Chairpersons: Takashi Tokuda (*NAIST., Japan*)

Kenji Arinaga (*Fujitsu Laboratories Ltd., Japan*)

D-I1

15:30 – 16:00 Reading Neurons by light: a New Photonic Neuron Interface
S. J. Kim (*Seoul National Univ., Korea*) --- 61

D-O1

16:00 – 16:15 Biomolecular Memory Device Composed of Cytochrome c on
Self-Assembled 11-MUA Layer
Junhong Min (*Sogang Univ., Korea*) --- 62

D-O2

16:15– 16:30 Two-Dimensional Crystallization of Protein Molecules at a Liquid
Surface from a Three-Phase Contact Line
Yasuhiro Ikezoe (*RIKEN, Japan*) --- 63

D-O3

16:30 – 16:45	DNA and Protein Separations by Nanopillar Array Structures <u>Noritada Kaji</u> (<i>Nagoya Univ., Japan</i>)	--- 64
D-O4		
16:45 – 17:00	Simulation of ISFET Flatband Voltage Shift due to DNA Immobilization and Hybridization using Full 3D Finite Element Method <u>Shigeyasu Uno</u> (<i>Nagoya Univ., Japan</i>)	--- 65
D-O5		
17:00 – 17:15	Novel Biosensing Scheme Based on DNA Strands <u>Kenji Arinaga</u> (<i>Fujitsu Laboratories Ltd., Japan</i>)	--- 66

Invited and Oral Presentations

Tuesday, March 17, 2009

Room A

9:40 – 10:20 Plenary Lecture

Chairperson: Kaoru Tamada (Tohoku Univ., Japan)

PI-2		
9:40 -10:20	Polyelectrolyte Multilayer Films - A General Approach to Biofunctional Devices <u>Gero Decher</u> (<i>Univ. Louis Pasteur, France</i>)	--- 67

10:20 – 10:30 Coffee Break

10:30 – 12:15 Session B

(Fabrication Technique and Characterization)

Chairpersons: Tetsuya Taima (AIST., Japan)
Masaya Mitsuishi (Tohoku Univ., Japan)

B-I1		
10:30 – 11:00	Direct patterning on active polymer films by photon mode <u>Eunyoung Kim</u> (<i>Yonsei Univ., Korea</i>)	--- 68
B-O1		
11:00 – 11:15	Micropatterning of organic semiconductors by selective lift off method using Epoxy stamp <u>Zhe Wang</u> (<i>Kyushu Univ., Japan</i>)	--- 69

- B-02**
11:15 – 11:30 Grating structure formation and erasure in a glass substrate through corona charging process
Daisuke Sakai (*AIST, Japan*) --- 70
- B-03**
11:30 – 11:45 Fabrication and characterization of metal(core)- π -conjugated polymer (shell) hybridized nanostructure by microwave irradiation
Akito Masuhara (*Tohoku Univ., Japan*) --- 71
- B-04**
11:45 – 12:00 Sublimation of organic molecular crystals: Surface evaporation and physical vapor growth mechanism
Toshihiro Shimada (*Univ. of Tokyo., Japan*) --- 72

12:00 – 13:45 Lunch Session

(Short Presentations for Young-Scientist Award)

Chairperson: Masahiro Hiramoto (Institute of Molecular Science, Japan)

13:45 – 14:15 Session B

(Fabrication Technique and Characterization)

Chairpersons: Rigoberto C. Advincula (*Univ. of Houston, USA*)
Akira Baba (*Niigata Univ., Japan*)

- B-I2**
13:45 – 14:15 Nanopatterning, Electropatterning, and Nanocharging of Ultrathin Films for Devices
Rigoberto C. Advincula (*Univ. of Houston, USA*) --- 73
- B-O5**
14:15 – 14:30 Formation of Ordered Self-Assembled Monolayers of Octylthiocyanates on Au(111) by Vapor Phase Deposition
Jaeyeun Noh (*Hanyang Univ., Korea*) --- 74
- B-O6**
14:30 – 14:45 Electronic structures of MoO₃ on F8BT interfaces ionic liquids
Yasuo Nakayama (*Chiba Univ., Japan*) --- 75
- B-O7**
14:45 – 15:00 Fabrication of Structurally Well-Ordered Hybrid Polymer Nanoassemblies for Plasmon-Enhanced Second Harmonic Generation
Miki Ishifuji (*Tohoku Univ., Japan*) --- 76
- B-O8**
15:00 – 15:15 Multimode Surface Plasmon Excitations on Metallic Diffraction Gratings/Organic Thin Films
Akira Baba (*Niigata Univ., Japan*) --- 77

15:15 – 15:30 Coffee Break

15:30 – 17:15 Session E (Nanocarbon and Nanotechnology)

Chairpersons: Kenji Hata (*AIST, Japan*)

Hideo Kishida (*Nagoya Univ., Japan*)

E-I1

15:30 – 16:00 Super Growth for Highly Efficient CNT Synthesis, Applications, and Devices
Kenji Hata (*AIST, Japan*) --- 78

E-O1

16:00 – 16:15 Electronic Properties of Nanographene (*Requested Paper*)
Kazuyuki Takai (*Tokyo Inst. of Tech., Japan*) --- 79

E-O2

16:15– 16:30 Graphene on 6H-SiC(0001): epitaxial growth and surface transfer doping (*Requested Paper*)
Wei Chen (*National Univ. of Singapore, Singapore*) --- 80

E-O3

16:30 – 16:45 Carbon nanotube based biosensors to detect dynamic biological activities of living cells (*Requested Paper*)
Peng Chen (*Nanyang Tech. Univ., Singapore*) --- 81

E-O4

16:45 – 17:00 Graphene-on-Silicon (GOS) as an emerging research material (*Requested Paper*)
Maki Suemitsu (*Tohoku Univ., Japan*) --- 82

E-O5

17:00 – 17:15 Non-volatile Resistance Switching Effect using Nanogap Junctions
Yasuhisa Naitoh (*AIST., Japan*) --- 83

Poster Presentations (Room A)

17:30-19:30, Tuesday, March 17, 2009

Session A (Organic Devices, Molecular Electronics)

A-P1 Kazuo Tominaga (*Kyushu Inst. of Tech., Japan*) --- 85
Electrochemical activity of polyaniline at neutral solution

- A-P2** Yih-Chien Chen (*Lunghwa Univ. of Sci. and Tech., Taiwan*) --- 86
The Characteristics of $\text{Ca}_{1-x}\text{Mg}_x\text{La}_4\text{Ti}_5\text{O}_{17}$ dielectric Resonator
- A-P3** Takashi Terasawa (*Toyama Industrial Technology Center, Japan*) --- 87
Surface Reforming of Organic Thin Film by Plasma and Improvement of Conversion Efficiency on Solar Cell Composed of Conducting Polymer/Hematoporphyrin/ C_{60}
- A-P4** Kyu Hwang Yeon (*Chungbuk National Univ., Korea*) --- 88
Coherent quantum interference of excitonic wave in a chlorophyll chain
- A-P5** Daisuke Baba (*Kyushu Univ., Japan*) --- 89
An Effect of Active Layer Structure on Performance of Organic Thin-film Solar Cells
- A-P6** Ramajothi Jayaraman (*Aichi Inst. of Tech., Japan*) --- 90
Optical Bistability of Poly(3-octylthiophene)/ Polymethylmethacrylate Composite Thin Film
- A-P7** Kazuhiro Kudo (*Chiba Univ., Japan*) --- 91
High-Speed Operation of Vertical Type Organic Transistors with Step-Edge Structure
- A-P8** Takeshi Yasuda (*NIMS, Japan*) --- 92
Triarylamine-Based Amorphous Polymers for Organic Field-effect Transistors
- A-P9** Tomohiko Mori (*TOYOTA Central R&D Labs., Japan*) --- 93
Alcohol sensors based on organic thin-film transistors with chemically modified dielectric interfaces
- A-P10** Hiroki Moritou (*Osaka Univ., Japan*) --- 94
Fabrication of zinc oxide nanopillars and its application to organic photovoltaic cells based on conducting polymer and fullerene
- A-P11** Yoshiaki Kashimura (*NTT Basic Research Laboratories, Japan*) --- 95
Transistor properties of novel organic conducting polymer incorporating a tetrathiafulvalene unit in its backbone
- A-P12** Weng On Yah (*Kyushu Univ., Japan*) --- 96
Molecular Aggregation State and Photovoltaic Properties of Chlorophyll Doped Conducting Poly(hexylthiophene)/MCM-41 Nanocomposites
- A-P13** Hideki Kawai (*Shizuoka Univ., Japan*) --- 97
Emission properties of Yb(III) complexes containing phosphine oxide derivatives
- A-P14** Tetsuro Hori (*Osaka Univ., Japan*) --- 98
Improvement of Organic Solar Cells with Interpenetrating Heterojunction Structure by Insertion of MoO_3 Buffer Layer and Vapor Treatment

- A-P15** Hiroaki Yonemura (*Kyushu Univ., Japan*) --- 99
Potential Dependence of Magnetic Field Effects on Photoelectrochemical Reaction of Modified Electrodes with Porphyrin-Viologen Linked Compounds
- A-P16** Kazuo Takimiya (*Hiroshima Univ., Japan*) --- 100
Air-Stable Solution-Processed Ambipolar Organic Field-Effect Transistors Based on Dicyanomethylene-Substituted Terheteroquinoid Derivative
- A-P17** Hiroki Mori (*Hiroshima Univ., Japan*) --- 101
Novel Hole-transporting Materials Based on [1]Benzothieno[3,2-b]benzothiophenes: Properties and Application to OLED devices
- A-P18** Suguru Mototani (*Aichi Inst. of Tech., Japan*) --- 102
Relationship of Third-Order Nonlinear Optical Characteristics and the Morphologies of Poly(3-alkylthiophene) (P3AT) Thin-Films Fabricated by Cast Method
- A-P19** Shinsei Mizuta (*Shimane Univ., Japan*) --- 103
An inversion of photocurrent direction in a heterojunction cell of iodine-doped Ni-phthalocyanine and pristine C₆₀
- A-P20** Vipul Singh (*Kyushu Inst. of Tech., Japan*) --- 104
Factors affecting the intrachain excitons in Poly (alkylthiophene) thin films.
- A-P21** Yuki Shigee (*Nara Inst. of Sci. and Tech., Japan*) --- 105
Organic light-emitting field-effect transistor with channel waveguide structure
- A-P22** Hiroshi Wada (*Tokyo Inst. of Tech., Japan*) --- 106
Carbon electrodes for organic field-effect transistors
- A-P23** Zhaokui Wang (*Univ. of Toyama, Japan*) --- 107
Improvement of Lifetime in Organic Light Emitting Devices with a Mixed Single Layer
- A-P24** Kyohei Nakano (*Tokyo Inst. of Tech., Japan*) --- 108
TFT and bulk mobilities in liquid crystalline quaterthiophene derivatives
- A-P25** Jun Kang (*Kumoh National Inst. of Tech., Korea*) --- 109
Programmable organic memory devices using organic charge transfer complexes
- A-P26** Jun Kang (*Kumoh National Inst. of Tech., Korea*) --- 110
Fluorene-based alternating polymers for organic solar cells and light-emitting diodes
- A-P27** Ju Yeol Cho (*Kumoh National Inst. of Tech., Korea*) --- 111
Photo-curable organic insulators for organic thin film transistors
- A-P28** Shohei Ishihara (*Kyushu Inst. of Tech., Japan*) --- 112

Study of poly(3-alkylthiophene) and Fullerene Bulkhetero Junction Solar cells
- Thickness Dependence of PEDOT:PSS on the Performance-

- A-P29** Ken-ichi Nakayama (*Yamagata Univ., Japan*) --- 113
Electron injection and transport properties of phenazine compounds with fused rings
- A-P30** Ju-Won Seo (*Kumoh National Inst. of Tech., Korea*) --- 114
Multiporphyrin conjugates for versatile photoelectronic Materials
- A-P31** Yuki Noda (*Hokkaido Univ., Japan*) --- 115
Charge Transport Behavior of Hybrid Structures between Gold Nanoparticles and TTF Derivatives
- A-P32** Arun Singh (*Banaras Hindu Univ., India*) --- 116
Influence of Synthesis Conditions on Electronic and Junction Properties of Polyanthranilic Acid - Clay Nanocomposites with Aluminum
- A-P33** Khairul Anuar Mohamad (*Muroran Inst. of Tech., Japan*) --- 117
Effect of Photoresponse on Poly(3-hexylthiophene)/Fullerene Layers in Organic TFTs for Nonvolatile Memory Devices
- A-P34** Yoshimasa Bando (*Tokyo Inst. of Tech., Japan*) --- 118
OFET materials based on cycloalkane-capped tetrathiapentalene (TTP) derivatives
- A-P35** Hiroaki Fukunaga (*Kyushu Univ., Japan*) --- 119
Double-insulated Organic EL devices with ITO nanoparticles
- A-P36** Senku Tanaka (*Shimane Univ., Japan*) --- 120
Improvement in power conversion efficiency of a Zn-phthalocyanine/C₆₀ organic photovoltaic cell using a lithium phthalocyanine insertion layer
- A-P37** Masakazu Yamagishi (*Osaka Univ., Japan*) --- 121
Air-stable n-channel organic single-crystal field-effect transistors
- A-P38** Jong Sun Choi (*Seoul National Univ., Korea*) --- 122
Growth Control of Pentacene Film for Field-Effect Transistors
- A-P39** Tung-Huei Ke (*National Taiwan Univ., Taiwan*) --- 123
Highly efficient light emitting transistor with multifunctional electrodes
- A-P40** Emi Nakamoto (*Osaka Pref. Univ., Japan*) --- 124
Suppression of G-band in fluorenone-containing polyfluorene
- A-P41** Masato Furukawa (*Kobe Univ., Japan*) --- 125
Structure correlation between thin film structure and polling process on ferroelectric

molecular films

- A-P42** Yuji Kishida (*Osaka Univ., Japan*) --- 126
Characterization of the Hysteresis Behavior of Organic TFTs
- A-P43** Hisashi Tanaka (*AIST, Japan*) --- 127
Electrochemical and physical property of thin film fabricated with nanoparticle ink of Prussian blue-type complexes
- A-P44** Toshihiro Yamanari (*AIST, Japan*) ---128
Effect of buffer layers on the stability of polymer-based organic solar cells
- A-P45** Shigetaka Uenishi (*Kyoto Univ., Japan*) --- 129
Photopatterning of Nitrophenyl-Terminated Self-Assembled Monolayers
- A-P46** Shayam Pandey (*Kyushu Inst. of Tech., Japan*) --- 130
Synthesis and Characterization of Squaric acid based NIR Dyes for their application towards Dye Sensitized Solar Cells
- A-P47** Jin Woo Lee (*Korea Univ., Korea*) --- 131
Electrical and optical characteristics of light-emitting rubrene nanowires
- A-P48** Takahiro Fujii (*Chiba Univ., Japan*) --- 132
Analysis of Interface Trap-State Density in Pentacene TFTs Using In-Situ Field-Effect Thermally-Stimulated-Current Method
- A-P49** Yosuke Kitajima (*Aichi Inst. of Tech., Japan*) --- 133
Quaterthiophene-OFET Prepared by Solution-Method
- A-P50** Mingxiu Zhao (*Kyoto Univ., Japan*) --- 134
Self-assembled monolayers of ferronene derivatives on hydrogen-terminated Si(111) formed by visible light irradiation
- A-P51** Saori Yamashita (*Kobe Univ., Japan*) --- 135
Investigation of polarization reversal and its fatigue mechanism of ferroelectric oligomer with organic electrode
- A-P52** Sung Hwan Cho (*Hanyang Univ., Korea*) --- 136
Electrical bistability mechanisms of organic bistable devices fabricated utilizing Ni_{1-x}Fe_x self-assembled nanoparticles arrays embedded in a polyimide layer
- A-P53** Dong Ick Son (*Hanyang Univ., Korea*) --- 137
Electrical bistabilities and memory mechanisms of organic bistable devices fabricated utilizing CdSe/ZnS nanoparticles embedded in polystyrene and poly(4-vinylphenol) hybrid composites

- A-P54** Wataru Takashima (*Kyushu Inst. of Tech., Japan*) --- 138
Sensing application of MIS capacitor with gas-adsorptive polymer gate
- A-P55** Naoki Matsuoka (*Nara Inst. of Sci. and Tech., Japan*) --- 139
Characterization of gain-narrowed emission from biphenyl-capped thiophene single crystals
- A-P56** Ikuzo Kanazawa (*Tokyo Gakugei Univ., Japan*) --- 140
Anomalous optical properties in Half-filled Layered Organic Conductors
- A-P57** Hisao Iino (*Kyushu Univ., Japan*) --- 141
Organic Field-Effect Transistors with Fluoropolymer/High-k Polymer Bialyer Gate Dielectric
- A-P58** Tatsuya Ohashi (*Univ. of Tsukuba, Japan*) --- 142
Effect of organic buffer layer on the structural and electrical properties of lead phthalocyanine based photovoltaic cells
- A-P59** Hiroshi Kawabata (*Kyoto Univ. Japan*) --- 143
Crystal Orbital Overlap Population Analysis on the Fused Hetero-acene Polymer
- A-P60** Koji Sagane (*Kyushu Univ., Japan*) --- 144
Organic Field Effect Transistors of Polydiacetylene Derivatives Fabricated by ESDUS technique
- A-P61** Takuya Matsumoto (*Osaka Univ., Japan*) --- 145
Conduction through biomolecular arrays
- A-P62** Yutaka Ie (*Osaka Univ., Japan*) --- 146
Synthesis, Properties, and Photovoltaic Performances of Branched Oligothiophenes Bearing Naphthalene Bis(dicarboximide) Groups
- A-P63** Shinya Kano (*Tokyo Inst. of Tech. and Univ. of Tsukuba, Japan*) --- 147
Coulomb blockade on Au nanoparticle toward room temperature operation of single electron transistor
- A-P64** Kazuhiro Yamamoto (*NICT, Japan*) --- 148
Near-infrared superfocusing of surface plasmons in gold-coated dielectric cones for molecular excitation
- A-P65** Ryohei Kobayashi (*Saitama Univ., Japan*) --- 149
Organic Photoconductive Device with Fluorene-Silole Mixed Layer
- A-P66** Satoshi Miyagawa (*Univ. of Tsukuba, Japan*) --- 150
OFET type photorewritable memory using photochromic interface layer

- A-P67** Kunihiro Mitsutake (*Canon Inc., Japan*) --- 151
Theoretical study of structures and electronic states of helical polyacetylene
- A-P68** Won Tae Kim (*Hanyang Univ., Korea*) --- 152
Electrical bistabilities and memory mechanisms of organic bistable devices fabricated utilizing Ag nanoparticles embedded in a polymethyl methacrylate polymer layer
- A-P69** Sung Dae Ahn (*Hanyang Univ., Korea*) --- 153
Effect of exciplex on the color stabilization and the color purity of organic light-emitting devices fabricated utilizing a 4,4',4''-tris(2-methylphenyl-phenylamino)triphenylamine hole transporting layer
- A-P70** Kwang Seop Lee (*Hanyang Univ., Korea*) --- 154
Luminance efficiency and color stabilization of blue organic light-emitting devices fabricated utilizing a 4,7-diphenyl-1,10-phenanthroline electron transport layer containing an ultra thin trap layer
- A-P71** Hoon-Kyu Shin (*Keimyung University, Korea*) --- 155
Study on odd-even effect of peripheral alkyl chains in self-assembled monolayers of alkyl viologen
- A-P72** Noriyoshi Takahota (*Osaka Univ., Japan*) --- 156
Improvement of transient response in organic light-emitting diodes using phosphorescent and fluorescent materials
- A-P73** Ryotaro Takata (*Osaka Univ., Japan*) --- 157
Investigation of Transient Properties of Organic Light-emitting Diodes utilizing β phase Polyfluorene
- A-P74** Tetsuhiko Miyadera (*AIST., Japan*) --- 158
Dynamic bias stress instability of pentacene thin film transistors
- A-P75** Gyu-Chae Choi (*Dong-A University, Korea*) --- 159
Study on Efficiency Improvement of Organic Light Emitting Diodes by Aquaregia and RCA Treatments on ITO Electrode
- A-P76** Ji-Yoon Lee (*Dong-A University, Korea*) --- 160
Measurements of electrical property of G2-9Ph LB films containing phenyl group
- A-P77** Jean Charles Ribierre (*RIKEN, Japan*) --- 161
Film morphology and field-effect transistor performance of solution-processed ambipolar quinoidal oligothiophenes
- A-P78** Tetsuya Aoyama (*RIKEN, Japan*) --- 162
Anisotropic field-effect transistor characteristics of oriented bisazomethine dye

thin-film

- A-P79** Takeshi Yamao (*Kyoto Inst. of Tech., Japan*) --- 163
Improved FET characteristics of an n-type semiconducting thiophene/phenylene co-oligomer
- A-P80** Daichi Watanabe (*Osaka Univ., Japan*) --- 164
Preparation of Mechanically Controllable Break Junctions with A Silicon Bending Beam for Single Molecule Conductance Measurement
- A-P81** Tomonori Ikegami (*Osaka Univ., Japan*) --- 165
Preparation of layered-type organic spin-valve devices with $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$
- A-P82** Daisuke Barada (*Utsunomiya Univ. and AIST, Japan*) --- 166
Retardagraphy on azobenzene film
- A-P83** Yusuke Harada (*Osaka Univ., Japan*) --- 167
Estimation of Carrier Lifetime in Pentacene Thin Films by Low-frequency Noise Measurements
- A-P84** Tatsuo Mori (*Nagoya Univ., Japan*) --- 168
Effect of Alq₃ layer for DPVBi-based OLEDs with hole-blocking materials
- A-P85** Kentaro Yamato (*Kyushu Inst. of Tech., Japan*) --- 169
Electrochemomechanical properties of polypyrrole film polymerized in ionic liquids
- A-P86** Masayuki Chikamatsu (*AIST, Japan*) --- 170
Fabrication of solution-processed n-type organic thin-film transistors based on a long chain alkyl-substituted C₆₀ derivative
- A-P87** Akira Ohno (*Tokyo Inst. of Tech., Japan*) --- 171
Effect of energetic disorder due to Carrier-Dipole Interaction in the Layer Structure of Molecular Alignment with Orientational Order
- A-P88** Shinya Oku (*Kyushu Inst. of Tech., Japan*) --- 172
Electronic Characteristics of p- and n-type Flexible Organic FETs
- A-P89** Yoko Tomita (*Chiba Univ., Japan*) --- 173
Metal-atom diffusion in organic solids: graphen and acetylene prototypes
- A-P90** Jung Hun Lee (*Univ. of Tokyo*) --- 174
Electric instability of pentacene thin film transistors under the various ambient

Session B

(Fabrication technique and Characterization)

- B-P1** Takeomi Morita (*Kyushu Inst. of Tech., Japan*) --- 176
Ambipolar characteristics of field effect transistors based on Poly(3-hexylthiophene) and fullerene derivative bilayer films.
- B-P2** Akihiro Tomioka (*Osaka Electro-Commun. Univ., Japan*) --- 177
Dewetting-Assisted Formation of Novel Fluorescent Aggregate of Rhodamines: Comparison with J- and H-Aggregates
- B-P3** Olaf Karthaus (*Chitose Inst. of Sci. and Tech., Japan*) --- 178
Honeycomb Films as Biomineralization Scaffolds
- B-P4** Koji Otsuka (*Tohoku Univ., Japan*) --- 179
Interactions between Silver nanoparticle arrays and Metal thin films
- B-P5** Mana Saito (*Tohoku Univ., Japan*) --- 180
Tuning of localized plasmon resonance in 2D nano-sheet composed of Ag nanoparticles
- B-P6** Masakazu Muroyama (*SONY Corp., Japan*) --- 181
Polymeric film deposition by coevaporation of polymerizable monomer and initiator
- B-P7** Toshiki Yamada (*NICT, Japan*) --- 182
Time-correlated single photon counting system and modified objective unit for studying fluorescence emitters under high vacuum conditions
- B-P8** Ai Matsui (*Osaka Kyoiku Univ., Japan*) --- 183
Selective metal deposition on photopolymer films
- B-P9** P.S. Pa (*National Taipei Univ. of Education, Taiwan*) --- 184
Fabrication Characterization of Solar-Cells Silicon-Wafers Using A Circular-Rhombus Tool
- B-P10** Yusuke Sesumi (*Osaka Kyoiku Univ., Japan*) --- 185
Light-controllable selective metal deposition on photochromic surfaces
- B-P11** Koichi Yuno (*Kyushu Univ., Japan*) --- 186
Orientation of Nanowires consisting of Polythiophene using Strong Magnetic Field
- B-P12** Shizuyasu Ochiai (*Aichi Inst. of Tech., Japan*) --- 187
Morphology-Analysis of Organic Thin Film Due to the Peak-Separation of the UV/Vis Spectrum

- B-P13** Satoshi Kera (*Chiba Univ., Japan*) --- 188
Evolution of the 3d-derived states in transition metal-phthalocyanine films
- B-P14** Kentaro Hiraishi (*Tohoku Univ., Japan*) --- 189
Fabrication and characterization of charge-transfer complex (Cu-TCNQ) nanocrystals.
- B-P15** Hiroyuki Sugimura (*Kyoto Univ., Japan*) --- 190
Alkanethiol self-assembled monolayers formed on Si substrates
- B-P16** Eunyoung Kim (*Yonsei Univ., Korea*) --- 191
Opto-electrochemical sensor from conductive polymer film
- B-P17** Taisuke Kumagai (*Shizuoka Univ., Japan*) --- 192
Ordered Structures and Properties of Polyurea Thin Films Prepared by Vapor Deposition Polymerization
- B-P18** Takaya Ito (*Shizuoka Univ., Japan*) --- 193
In-situ Study on the Initial Growth Stage in Vapor Deposition of Organic Thin Film
- B-P19** Kazuya Tada (*Univ. of Hyogo., Japan*) --- 194
Measurement of electrical current during electrophoretic deposition of conjugated polymer
- B-P20** Masao Kanda (*Kyoto Univ., Japan*) --- 195
Precise arrangement of gold nanoparticles using scanning probe lithography
- B-P21** Eisuke Ito (*RIKEN, Japan*) --- 196
Surface potential switching of Au-deposited *p*-sexiphenyl film controlled by visible light irradiation
- B-P22** Takayuki Miyamae (*AIST, Japan*) --- 197
Surface characterization of Alkylsiloxane Monolayers Prepared by Chemical Vapor Adsorption
- B-P23** Satoshi Ikebukuro (*Kyoto Univ., Japan*) --- 198
FM-AFM/KFM investigations on phase-separated self-assembled monolayers of alkanethiol and amide-containing alkanethiol
- B-P24** Soichi Nishimura (*Kobe Univ., Japan*) --- 199
Vacuum dependence on evaporation of organic molecules using TG/DTA measurements
- B-P25** Makoto Karakawa (*AIST, Japan*) --- 200
Poly(3-hexylthiophene) field-effect transistors fabricated by slide-coating method

- B-P26** Yasuhiro Miura (*Toin Univ. of Yokohama, Japan*) --- 201
Fabrication and Characterization of Highly Conductive Au(dmit)₂ LB Films
- B-P27** Yusuke Kuroda (*Kobe Univ., Japan*) --- 202
Polarization reversal of friction-transferred uniaxially oriented P(VDF/TrFE) films
- B-P28** Nobutaka Tanigaki (*AIST, Japan*) --- 203
Preparation and Properties of Polyaniline Friction-Transferred Films
- B-P29** Akira Otomo (*NICT, Japan*) --- 204
Characterization and Excited-State Dynamics of Porphyrin Array Self-Assembled Monolayer
- B-P30** Yasuko Koshiba (*Kobe Univ., Japan*) --- 205
Fabrication and Evaluation of FET Characteristics of One-Dimensionally Oriented Fluorene-Thiophene Copolymer Thin Film
- B-P31** Jeong-Woo Choi (*Sogang Univ., Korea*) --- 206
Fabrication of Silicon Nanowire based Electronic Devices using Nanoimprint Lithography
- B-P32** Jack Lin (*Tokyo Inst. of Tech., Japan*) --- 207
Trap Density Effect on Carrier Propagation in Organic Field-Effect Transistors investigated by Impedance Spectroscopy
- B-P33** Masahiro Goto (*Osaka Univ., Japan*) --- 208
Raman Analysis on Perylene molecules onto Copper Substrates Fixed by Laser Induced Molecular Micro-Jet in Water
- B-P34** Ryota Kimura (*Osaka Univ., Japan*) --- 209
Dip-Pen Nanolithography of Organic Semiconductors on Silicon Oxide
- B-P35** Soichiro Suzuki (*Tokyo Inst. of Tech., Japan*) --- 210
Fabrication and Property of Metallic Nanocylinder Array Templated by Block Copolymer Scaffold
- B-P36** Shinya Matsumoto (*Yokohama National Univ., Japan*) --- 211
Structure, morphology and optical properties of thin films of two 2,3-dicyanopyrazine dyes
- B-P37** Takeshi Nagahiro (*Tohoku Univ., Japan*) --- 212
Characterization of photocatalytic activity of TiO₂ nanotube by localized plasmon band of silver nanosheet
- B-P38** Taesung Park (*Hanyang Univ., Korea*) --- 213

Formation of Highly Ordered Self-assembled Monolayers by π -Conjugated Tolaneithioacetates on Au(111).

B-P39 Inchang Choi (*Hanyang Univ., Korea*) --- 214
Formation and Structure of Dialkyl Sulfide Self-Assembled Monolayers on Au(111)

B-P40 Thomas Baumgärtel (*Univ. of Tech. Chemnitz, Germany*) --- 215
Influence of self assembled monolayers on the structuring of silicon by local anodic oxidation

B-P41 Thomas Baumgärtel (*Univ. of Tech. Chemnitz, Germany*) --- 216
Characterization of dye-functionalized nanostructures on silicon

B-P42 Yutaka Tsujiuchi (*Akita Univ., Japan*) --- 217
Surface structural comparison of composite film of bacteriorhodopsin and phosphatidylcoline fabricated on amorphous silicon dioxide, crystal silicon dioxide and hydrogenated amorphous silicon

B-P43 Sunao Yamada (*Kyushu Univ., Japan*) --- 218
Electrochemical Control of the Optical Property of the Conductive Films Consisting of Polythiophene and Gold Nanorods

B-P44 S. Takayama (*National Inst. for Fusion Sci., Japan*) --- 219
In-situ measurement of magnetization materials using by neutron scattering under microwave heating

Session C

(Liquid Crystals, Polymers, and Other Soft-Materials)

C-P1 Daichi Hamasuna (*Osaka Sangyo Univ., Japan*) --- 221
Deuterium NMR spectral lineshape for the nematic director distribution based on the multi-domain model

C-P2 Kiyooki Usami (*Osaka Sangyo Univ., Japan*) --- 222
Inclined alignment of liquid crystal molecules induced by photo-aligned films of azobenzene-containing-polyimide with side chain structures

C-P3 Hiroaki Ozawa (*Nagoya Univ., Japan*) --- 223
Preparation of supramolecular assemblies fabricated from simple porphyrin derivatives

C-P4 Junji Gonda (*Shizuoka Univ., Japan*) --- 224
Formation of Interfacial Layer between Liquid Crystal and Polymer Alignment Sublayer

- C-P5** Tatsunosuke Matsui (*Mie Univ., Japan*) --- 225
FDTD analysis of photon localization in strongly light scattering medium embedded in elastic media
- C-P6** Naoki Inoue (*Keio Univ., Japan*) --- 226
A surface relief grating formed by a refractive-index grating on an azobenzene-containing polymer
- C-P7** Hiroshi Moritake (*National Defence Acad., Japan*) --- 227
Analysis of Response Characteristics for Microstrip-line Type Microwave Phase Shifter Using Nematic Liquid Crystal
- C-P8** Hiroshi Moritake (*National Defence Acad., Japan*) --- 228
Comparison between Microwave and Light-wave Measurements for Nematic Liquid Crystal loaded CPW-FE Phase Shifter
- C-P9** Eunjoo Kim (*Hanyang Univ., Korea*) --- 229
Micro-patterning of Block Copolymer Photonic Gels
- C-P10** Heeyoel Baek (*Hanyang Univ., Korea*) --- 230
Discontinuous Changes of Photonic Band Gap in PS-b-P2VP Photonic Gels via Gel Collapse Transition
- C-P11** Hitoshi Ohgaki (*Osaka Sangyo Univ., Japan*) --- 231
Computer simulation of the Deuterium NMR spectra reflecting angular dependence of the linewidths
- C-P12** Hikaru Hashimoto (*Kyushu Inst. of Tech., Japan*) --- 232
Training effect of artificial muscles using polyaniline films
- C-P13** Hwang Kyosung (*Hanyang Univ., Korea*) --- 233
Effects of Quaternization on e-Tuning of Block Copolymer Photonic Gels
- C-P14** Keita Kinoshita (*Osaka Pref. Univ., Japan*) --- 234
Crystallization and optical properties of low molecular weight poly(3-hexylthiophene)
- C-P15** Minoru Morita (*Kumamoto Univ., Japan*) --- 235
Preparation and characterization of adhesive polymer films with silver nanoparticles
- C-P16** Sadahiro Masuo (*Kyoto Inst. of Tech., Japan*) --- 236
Photon Antibunching of Single Conjugated Polymer Chains in Solution
- C-P17** Hirosato Monobe (*AIST, Japan*) --- 237
Carrier Transports and Viscosity of Discotic Liquid Crystalline Photoconductors

Session D (Biomolecular Electronics and Bioanalysis)

- D-P1** Hitoshi Muguruma (*Shibaura Inst. of Tech., Japan*) --- 239
Growth of Carbon Nanotube Thin Film for Enzyme Biosensor
- D-P2** Hayato Takahashi (*Shibaura Inst. of Tech., Japan*) --- 240
Protein Patterning Technique with Plasma Process
- D-P3** Kyosuke Minakawa (*NAIST, Japan*) --- 241
Development of Electrochemical CMOS chip for Artificial Synapse Device
- D-P4** Ayato Tagawa (*NAIST, Japan*) --- 242
Development of a multimodal CMOS device for sensing neural activities in deep brain
- D-P5** Sanshiro Shishido (*NAIST, Japan*) --- 243
CMOS sensor for the intrinsic-optical-signal imaging of the brain activity
- D-P6** Michiko Banno (*JAIST, Japan*) --- 244
Determination of trace elements in zirconium dioxide (ZrO₂) using liquid electrode plasma optical emission spectrometry (LEP-OES)
- D-P7** Ajeet Kaushik (*National Physical Laboratory, India*) --- 245
Nanostructured Fe₃O₄ Film based Impedimetric Cholesterol Biosensor
- D-P8** Megumi Fukuta (*NAIST, Japan*) --- 246
Development of substrates for ferritin placement without contaminants
- D-P9** Keisuke Gohda (*Kyoto Univ., Japan*) --- 247
Effect of Covalent Immobilization on Antibody Monolayer Structure
- D-P10** Hiromi Kimura-Suda (*Perkin Elmer Japan, Co., Ltd., Japan*) --- 248
Characterization of Rickets Bone by FTIR imaging
- D-P11** Keiko Kawano (*Japan Sci. and Tech. Agency, Japan*) --- 249
In-situ X-ray Reflectivity Measurement of Ultra thin NIPAAm Gel Films
- D-P12** Yosuke Tsuchida (*Tokyo Univ. of Tech., Japan*) --- 250
Analysis of Photoisomerization Reactions of Retinoids Using NMR
- D-P13** Yuji Kagohashi (*Nagoya Univ., Japan*) --- 251
Application of Silicon Nitride by Catalytic Chemical Vapor Deposition (Cat-CVD) to CMOS ISFET Sensor LSI
- D-P14** Junichi Tsukada (*Nagoya Univ., Japan*) --- 252

Integrated Bio-Photosensor with Extended-gate Source-Drain Follower on a Chip

- D-P15** Kiyomasa Sugimoto (*Nagoya Univ., Japan*) --- 253
Capacitance Sensor Array Based on Charge Based Capacitance Measurement for DNA Detection
- D-P16** Young-Soo Kwon (*Dong-A Univ., Korea*) --- 254
Physical and Morphological Changes of HepG2 Cell onto Quartz Crystal by Various Concentration of Paraquat
- D-P17** Jeong-Woo Choi (*Sogang Univ., Korea*) --- 255
Fabrication of cell chip using RGD oligopeptide for the detection of neurotransmitter in PC12 cells
- D-P18** Naoki Matsuda (*AIST, Japan*) --- 256
Heme Protein Electron Transfer Reaction on ITO Electrodes
- D-P19** Takashi Nakayama (*Chiba Univ., Japan*) --- 257
Energy-level alignment, ionization, and hole transfer of bio-amino acids at protein/semiconductor junctions
- D-P20** Rajiv Prakash (*Banaras Hindu Univ., India*) --- 258
A label-free genosensor based on DNA hybridization technique

Session E (Nanocarbon and Nanotechnology)

- E-P1** Masanobu Naito (*NAIST, Japan*) --- 260
Stiffness- and Conformation-Dependent Polymer Wrapping onto Single-Walled Carbon Nanotubes
- E-P2** Xiaochen Dong (*Nanjing Univ. of Posts and Telecommun., China*) --- 261
Doping Single-Layer Graphene with Aromatic Molecules Probed by Raman Spectroscopy and Electrostatic Force Microscopy
- E-P3** Young Ki Hong (*Korea Univ., Korea*) --- 262
Electron-beam irradiation on polymer nanomaterials
- E-P4** Dongliang Fu (*Nanyang Tech. Univ., Singapore*) --- 263
DNA sensing by carbon nanotube based field-effect transistors and two-terminal resistors and its detection sensitivity enhancement
- E-P5** Takayuki Miyamae (*AIST, Japan*) --- 264
Surface characterization of Alkylsiloxane Monolayers Prepared by Chemical Vapor Adsorption

E-P6	<u>Mi Suk Kim</u> (<i>Korea Univ., Korea</i>)	--- 265
Organic-based Light-emitting Hybrid Nanoparticles		
E-P7	<u>Hiroto Tachikawa</u> (<i>Hokkaido Univ., Japan</i>)	--- 266
Direct ab-initio MD study of the Diffusion of Alkali ions on Nanocarbon materials		
E-P8	<u>Atsushi Ando</u> (<i>AIST, Japan</i>)	--- 267
Nanocharacterization of graphene sheets by SPM and nanogap FETs		
E-P9	<u>Shigeaki Abe</u> (<i>Hokkaido Univ., Japan</i>)	--- 268
A direct MD Study on Graphene-water interaction system		
E-P10	<u>Takeshi Saito</u> (<i>AIST, Japan</i>)	--- 269
Transparent Thin Films of Single-wall Carbon Nanotubes Deposited by Dry-Process		
E-P11	<u>Eiji Itoh</u> (<i>Shinshu Univ., Japan</i>)	--- 270
Patterning of polyimide/CNT composite and its electrical properties		
E-P12	<u>Hiroshi Suga</u> (<i>AIST, Japan</i>)	--- 271
Dependence of Electrode Area on Nanogap Switch Effect		
E-P13	<u>Tetsuji Iyama</u> (<i>Hokkaido Univ., Japan</i>)	--- 272
DFT Study of Graphene-hydrogen Interaction System		
E-P14	<u>Shunsuke Odaka</u> (<i>AIST, Japan</i>)	--- 273
Epitaxial graphene transistor on vicinal SiC substrate		