

CONTENTS

Symposium of Fabrication, Characterization and Application of Molecular Thin Films

Preface	303
Control of J-aggregates in the Merocyanine-containing LB Films by Hydrothermal Treatments	305
Hiroko Moshino, Shoukaku Hasegawa, Syuji Mouri, Yasuhiro F. Miura and Michio Sugi	
A Morphological Study on the Changes in Texture of the Merocyanine-containing LB Films Induced by Hydrothermal Treatments	309
Shoukaku Hasegawa, Hiroko Moshino, Syuji Mouri, Yasuhiro F. Miura and Michio Sugi	
A Comparative Study of Hydrothermal and Dry-heat Treatments in the Merocyanine-containing LB Films	313
Michio Sugi, Hiroko Moshino, Shoukaku Hasegawa, Syuji Mouri and Yasuhiro F. Miura	
Humidity Sensing Using Surface Plasmon Excitation in Fluorescent Microsphere Films	317
Yutaka Kobayashi, Makoto Fukushima, Yasuo Ohdaira, Kazunari Shinbo, Keizo Kato and Futao Kaneko	
Characteristics of Dye-Sensitized Solar Cells Using Various Dyes	321
Shoji Furukawa, Keijiro Okada, Tomohiro Ohno, Hiroki Sato, Hidetaka Ohta, Hiroshi Iino, Hitoshi Arakawa and Takashi Yasuda	
Study on Compatibility of Fullerene C₆₀ Derivative with Polymers and Estimation of Electron Trapping Ability	325
Tomohito Ide, Kou Yamada, Reiko Yoshimura, Tsukasa Tada, Hideyuki Nishizawa, Kenji Todoroki and Shigeru Machida	
Preparation of Carbon Nanofiber Emitters for Field Emission Display using Organic Thin Films	329
Masato Yoshikuni, Shinji Ide, Nobuyuki Iwata and Hiroshi Yamamoto	
Ambipolar Carrier Transport in Amorphous Bis(triazinyl)arenes and Their Application in OLED	333
Hidenori Aihara, Naoko Yanai, Tetsu Yamakawa, Tsuyoshi Tanaka and Masaru Sato	
Study on Structure and Electrical Properties of Alkylammonium-Au(dmit)₂ LB Films	337
Yuuta Ito, Takaharu Seki, Kiyotaka Hayashi, Masaaki Kitao, Haruki Matsui, Yasuhiro F. Miura and Michio Sugi	
Correlation between the Conductance and Infrared Spectra of the Alkylammonium-Au(dmit)₂ LB Films	341
Haruki Matsui, Yasuhiro F. Miura and Michio Sugi	
Electrical Properties of M(dmit)₂-Alkylammonium LB films in the FET Structure	345
Yoko Tatewaki, Hitoshi Ohnuki and Keiichi Ikegami	
Solid-state Structure and Formation of Organized Molecular Films for Comb Copolymer Containing N-vinylcarbazole	349
Hiroko Hoshizawa, Ryosuke Masuya, Toru Masuko and Atsuhiko Fujimori	
Solid-state Structure of Fluorinated Comb Copolymer and Molecular Orientation of Its Organized Molecular Film	353
Satoshi Kobayashi, Ryosuke Masuya, Toru Masuko and Atsuhiko Fujimori	
Structural Estimation of Organized Molecular Films for Comb Copolymer Containing N-vinylcarbazole	357
Atsuhiko Fujimori, Hiroko Hoshizawa, Ryosuke Masuya and Toru Masuko	
 <i>Symposium of Self-Assembled Materials: Synthesis and Application VIII</i>	
Preface	361
Optical Control of Microphase Separated Nanostructures in Polystyrene-Based Liquid Crystalline Diblock Copolymer Thin Film	363
Yuichi Morikawa, Takeshi Kondo, Shusaku Nagano and Takahiro Seki	
Effect of Water on Nano-rheology of Dioctylphthalate Confined between Surfaces Coated with Long Alkyl Chains	367
Yoshisada Kayano, Hiroshi Sakuma and Kazue Kurihara	

Surface Modification of Peptide Nanofiber by Using Antigen-Antibody Interaction	371
Tomoyuki Koga, Ryo Murakami and Nobuyuki Higashi	
Development of Renewable Surface Modification Technique utilized the Self-Assembling of β-Sheet Peptide	375
Makoto Hattori, Hidenori Yokoi, Masayoshi Tanaka and Takatoshi Kinoshita	
Stimuli induced Structural Control of Sequential Alternating Amphiphilic Peptide coated Gold Nanoparticle Assemblies	379
Kae Ushiba, Masahiro Higuchi and Masami Kawaguchi	
Synthesis and Physicochemical Properties of Perfluorinated Organic Gelators	383
Yuki Morita, Tomomi Hirakawa, Yuya Matsue, Hiroaki Okamoto, Kazuo Kasatani, Shunsuke Takenaka and Hidetoshi Kita	
Minimization of the Metal-Support Interaction by Using Ru Nanoparticles for Ammonia Synthesis	387
Ioan Balint and Akane Miyazaki	
Preparation and Characterization of the Inorganic-Polyvinyl Alcohol Layered Nanocomposites	391
K. Kobayashi, H. Tian and H. Tagaya	
Control of Linearly and Circularly Polarized Fluorescences on Photoresponsive Liquid Crystalline and Chiral Conjugated Polymer	395
Hiroyuki Hayasaka, Kazuya Tamura and Kazuo Akagi	
 <i>Symposium of Recent Progress in Nano-structured Materials</i>	
Preface	399
Isolation of Anatase Crystallites from Anatase-Rutile Mixed Particles by Dissolution with Aqueous Hydrogen Peroxide and Ammonia	401
Bunsho Ohtani, Yasunobu Azuma, Ding Li, Tatsuhiko Ihara and Ryu Abe	
Conductance Measurement of Metal Nano Contacts at Mechanically Controllable Break Junctions in Solution	405
Nobuo Sekiguchi, Manabu Kiguchi and Kei Murakoshi	
Preparation of Anisotropic Metal Dimer Array on Glass Substrate Showing Intense Surface-Enhanced Raman Scattering	409
Mai Takase, Yoshitaka Sawai, Hideki Nabika and Kei Murakoshi	
Permeation Behavior of Gas Molecules in Ultramicropore of Molecular Sieving Carbon Membranes	413
H. Okabe, H. Takagi, H. Hatori, A. Suzuki and T. Terai	
Electrochemical Growth of ZnO/eosinY Hybrid Thin Film	417
Daisuke Komatsu, Jingbo Zhang, Tsukasa Yoshida and Hideki Minoura	
Extraction of Hexadecyltrimethylammonium Bromide from Gold Nanorod Solutions: Adsorption of Gold Nanorods on Anionic Glass Surfaces	421
Kanako Honda, Hirofumi Kawazumi, Sunao Yamada, Naotoshi Nakashima and Yasuro Niidome	
Synthesis of Novel Bis(terpyridyl)benzene Derivatives as Organic Modules in Organic-Metallic Hybrid Polymers ...	425
Masayoshi Higuchi, Yuhki Otsuka and Dirk G. Kurth	
Thermal Stability and Magnetic Property of Ni-Co-P Hollow Microfibers Prepared by Electroless Plating	429
Hirokazu Oda, Tomohiro Shimazu, Tomokazu Iyoda and Masaru Nakagawa	
Electronic Structure of Alkyl-Passivated Si Nanoparticles: Synchrotron-Radiation Photoemission Study	433
Tadafumi Kamikake, Masaki Imamura, Yoshiaki Murase, Akinori Tanaka and Hidehiro Yasuda	
Direct Synthesis of Partially Ordered FePt Nanoparticles	437
Masafumi Nakaya, Masayuki Kanehara and Toshiharu Teranishi	
Luminescence Properties of Er and Si Nanoparticles Co-doped Aluminum Silicate Thin Films	441
Kimihisa Matsumoto, Eiji Takeda, Kenji Imakita, Minoru Fujii and Shinji Hayashi	

Structure of Porous Si Formed by Metal-Particle (Pt, Pd) Enhanced HF Etching	445
Shinji Yae, Makoto Abe, Tatsunori Kawagishi, Kentarou Suzuki, Naoki Fukumuro and Hitoshi Matsuda	
Microscopic Structure of Separately Accommodated Porphyrins and Viologens in Mesoporous Silica and Titania Nanosheet Hybrid Films	449
Tatsuto Yui, Tsutomu Kajino, Takako Tsuchino, Ken-ichi Okazaki, Tsukasa Torimoto, Yoshiaki Fukushima and Katsuhiko Takagi	
 <i>Symposium of Frontier of Nano-Materials Based on Advanced Plasma Technologies</i>	
Preface	453
Generation of Osmotic Pressures through a Molecular Recognition Ion Gating Membrane	455
Taichi Ito and Takeo Yamaguchi	
Blue Luminescent Silicon Nanocrystals Fabricated by Microplasma Jet	459
Tomohiro Nozaki, Kenji Sasaki, Tomohisa Ogino and Ken Okazaki	
Electrical Characteristics of Lightly-Doped Si Films Crystallized by Thermal Plasma Jet Irradiation	465
Takuya Yorimoto, Seiichiro Higashi, Hiroataka Kaku, Tatsuya Okada, Hideki Murakami, Seiichi Miyazaki, Masato Maki and Toshiyuki Sameshima	
Spatial Profile of Deposition Rate of a-Si:H Films in Multi-Hollow Discharge Plasma Chemical Vapor Deposition ...	469
W. M. Nakamura, Disuke Shimokawa, Hiroomi Miyahara, Kazunori Koga and Masaharu Shiratani	
Effects of Substrate Temperature on Adsorption of Hydrocarbon Species Generated in Methane Plasma	473
Masanori Shinohara, Ken Cho, Yoshinobu Matsuda, Hiroshi Fujiyama, Keishi Okamoto and Tatsuyuki Nakatani	
Evaluation of the Removal Efficiency of Organic Impurities by ECR Plasma Based on the ATR-FTIR Analysis	477
Chongmu Lee, Wangwoo Lee, Hojin Kim, Youngjoon Cho and Hyoun Woo Kim	
Suppression of Super High-Energy Species by VHF-DC Superimposed Magnetron Sputter Plasma	481
Yohei Sakashita, Yusuke Takagi, Takeshi Kato, Hiroataka Toyoda, Satoshi Iwata, Shigeru Tsunashima and Hideo Sugai	
Nano Underlayer Effect on the CoFe Magnetic Film for GHz Frequency Use	485
Makoto Munakata, Osamu Zaima, Shin-ichi Aouki, Masatoshi Ohkoshi and Hiroharu Kawasaki	
Low-Temperature Growth of GaN Film by Near-Atmospheric Plasma-Assisted Chemical Vapor Deposition	489
Takahiro Nagata, Yoshiki Sakuma, Jyunichiro Anzai, Shyunsuke Kunugi, Tsuyoshi Uehara and Toyohiro Chikyow	
Effect of Pressure on Inductively-Coupled Plasmas Sustained with Multiple Low-Inductance Internal-Antenna Units	493
Kosuke Takenaka, Yuichi Setsuhara, Kazuaki Nishisaka and Akinori Ebe	
Meters-Scale Large-Area Plasma Sources with Multiple Low-Inductance Antenna Units for Next-Generation Flat-Panel Display Processing	497
Daisuke Tsukiyama, Kousuke Takenaka, Yuichi Setsuhara, Kazuaki Nishisaka and Akinori Ebe	
Transport of Nano-particles in Amplitude Modulated RF Discharges	501
Shinya Iwashita, Kazunori Koga and Masaharu Shiratani	
Modification of Nanoparticle Films with Inductively-Coupled High-Pressure RF Plasmas	505
Kosuke Takenaka, Hiroaki Nakayama, Yuichi Setsuhara, Hiroya Abe and Kiyoshi Nogi	
In-flight Melting of Granulated Powders in Thermal Plasmas for Glass Production	509
Yaochun Yao, Md. M. Hossain, Yasuko Oyamatsu, Takayuki Watanabe, Fuji Funabiki and Tetsuji Yano	
Synthesis of Carbon Nanofibers Using Carbon Monoxide DC Plasma at Room Temperature	513
Shinsuke Mori, Masanobu Fukuya and Masaaki Suzuki	
Solubilization of Carbon Nanotubes Using Microplasma Generated in Water	517
Junya Suehiro and Kiminobu Imasaka	
Tribological Characteristics of Ultra-thin DLC Films Prepared by Filtered Cathodic Vacuum Arc	523
Nobuto Yasui, Hiroshi Inaba, Nobuyoshi Kasahara, Hiroya Murakami and Naoto Ohtake	

Partial Reduction of TiO₂ without Form Transformation Using Non-thermal Plasma	527
Yoon-Keun Chae, Shinsuke Mori and Masaaki Suzuki	
Development and Characterization of Thermolectron Enhanced Microplasma Devices for the Generation of Plasmas in Micro-sized Capillaries	531
Sven Stauss, Hiroyuki Miyazoe, Masaki Sai and Kazuo Terashima	
A Unified Numerical Model of Oxygen Plasma Jet at Atmospheric Pressure	535
Manabu Tanaka, Shinichi Tashiro, Masakazu Shibahara, Kazushi Tanaka, Yoshimi Sano and Naoyoshi Akiyoshi	
Dependence of Energy Source Properties of Tube Cathode Arc on Cathode Shape	539
Takahiro Tamaki, Shinichi Tashiro, Manabu Tanaka, Mitsuyoshi Nakatani and Yosuke Yamazaki	
Observation of Anode Boundary Layer of Plasma Torch	543
Kenji Waki, Shinichi Tashiro and Manabu Tanaka	
 <i>Symposium of Frontier of Biointerfaces</i>	
Preface	547
Preparation of Au Electrodes Modified with Self-assembled Monolayers of Functional Metal Complexes	549
Hideki Masuda	
Preparation of Biointerface on Nanoparticles Surface by Atom Transfer Radical Polymerization	555
Ryosuke Matsuno and Kazuhiko Ishihara	
Electrical Detection of Drug Transport at Cell Membrane using Oocyte-Based Field Effect Devices	559
Toshiya Sakata and Yuji Miyahara	
Adsorption of Microorganisms using the Fe^{III}-Artificial Siderophore-Modified Au Electrode Surface	563
Tomohiko Inomata, Hiroshi Eguchi, Yasuhiro Funahashi, Tomohiro Ozawa and Hideki Masuda	
Surface Nanopatterning of Phosphorylcholine Unit by Well-Defined Block Copolymer Containing 2-Methacryloyloxyethyl Phosphorylcholine	567
Ji Hun Seo, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai and Kazuhiko Ishihara	
Construction of His6-Protein A/PEG Co-Immobilized Surface for High-performance Protein Sensing	571
Yuki Hoshino, Ryuichiro Kimura, Joe Chiba, Keitaro Yoshimoto and Yukio Nagasaki	
Preparation of Self-Assembled Monolayer of Dinuclear Iron Complex on Au Electrode and Its Reaction with Molecular Dioxygen	575
Yuya Hayashi, Tomohiko Inomata, Kazuma Shinozaki, Yasuhiro Funahashi, Tomohiro Ozawa and Hideki Masuda	
Nanoscale Surface Grafting with Phospholipid Polymer to Lubricate Polypropylene Surface	579
Kazuhiko Kitano, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai and Kazuhiko Ishihara	
Electron Transfer Reactions of Cytochrome c Using the Mixed Monolayer Au Electrode Composed of Co^{III} Complex and Hydroxyl-Terminated Alkanethiols	583
Isao Takahashi, Tomohiko Inomata, Daisuke Tsujimoto, Yasuhiro Funahashi, Tomohiro Ozawa and Hideki Masuda	
Nanostructured Biointerface Using Phospholipid Polymer for Highly Sensitive Immunoassays	587
Kazuki Nishizawa, Tomohiro Konno, Madoka Takai and Kazuhiko Ishihara	
Electron Transfer Reactions of C-type Cytochromes with the Self-Assembled Monolayer of the Optically Active Co^{III} Complexes on Au	591
Chika Nishijima, Isao Takahashi, Tomohiko Inomata, Yasuhiro Funahashi, Tomohiro Ozawa and Hideki Masuda	
Bioadhesion of Polyion Complex(PIC) Hydrogels Composed of Amphiphilic Phospholipid Polymers	595
Mizuna Kimura, Madoka Takai and Kazuhiko Ishihara	
Characterization of Phospholipid Polymer Hydrogel for Immobilizing Enzyme	599
Jun Yamaguchi, Tomohiro Konno, Madoka Takai and Kazuhiko Ishihara	