

## CONTENTS

#042 Design of Mass Transport Surface Using Self-Oscillating Gel .....	171
Yoko Murase, Reiji Takeshima and Ryo Yoshida	
#043 Fabrication of Micropatterned Thermo-responsive Gel Array with Ordered Honeycomb Surface and Inverse Opal Structure .....	175
Yasuhiro Maeda and Ryo Yoshida	
#044 Local Condensation of Artificial Raft Domains under Light Irradiation in Supported Lipid Bilayer of PSM-DOPC-Cholesterol System .....	179
Toru Ujihara, Shoya Suzuki, Yoji Yamauchi, Ryugo Tero and Yoshikazu Takeda	
#044 Shape Transformation of Adsorbed Vesicles on Oxide Surfaces: Effect of Substrate Material and Photo-Irradiation .....	183
Ryugo Tero, Toru Ujihara and Tsuneo Urisu	
#045 High-Sensitive Analysis of Oligopeptide-Induced Cell Penetration Using Phospholipid Polymer Nanoparticles Containing Quantum Dots .....	189
Yusuke Goto, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai, and Kazuhiko Ishihara	
#046 Super-hydrophilic silicone hydrogels composed of interpenetrating polymer networks with phospholipid polymer .....	193
Takanori Shimizu, Tomohiro Konno, Madoka Takai and Kazuhiko Ishihara	
#047 Antithrombogenic Surface Constructed by Block-type Phospholipid Polymer and Segmented Polyurethane .....	197
Yoshiharu Asanuma, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai, and Kazuhiko Ishihara	
#048 Stabilization of Bioconjugated Phospholipid Polymer Nanometer Scaled Structures for Highly-sensitive Immunoassay .....	201
Kazuki Nishizawa, Tomohiro Konno, Madoka Takai, and Kazuhiko Ishihara	
#049 A Novel Interface for High-Sensitive Immunoassay Using Orientation Controlled Protein A and Non-biofouling Phospholipid Polymer Surface .....	205
Nobuyuki Tajima, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai, Kazuhiko Ishihara	
#050 Antithrombogenic/Cytocompatible Heterogeneous Functioned Polymer Membrane for Hybrid Artificial Organs .....	209
Hirota Kawai, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai, and Kazuhiko Ishihara	
#051 The Detection of Antigen-Antibody Recognition on an Array Chip by Surface Plasmon Field-Enhanced Fluorescence Imaging (SPFI) .....	213
Y. Nishizawa, R. Tomimori, K. Tawa, K. Kiyosue, T. Taguchi, and T. Nakaoki	
#052 Effects of Applied Voltage on the Size of Phase-Separated Domains in DMPS-DOPC Lipid Binary Bilayers Supported on SiO <sub>2</sub> /Si Substrates .....	217
Yoji Yamauchi, Toru Ujihara, Ryugo Tero, Yoshikazu Takeda	
#053 Synthesis and characterization of zinc oxide from absorption of carbon dioxide .....	221
Pao-Chi Chen and Jun Jie Wu	
#054 Comparison of Indium-Tin-Oxide Transparent Conducting Films Fabricated By Spray CVD Using Different Tin Chlorides ...	225
Yutaka Sawada, Takeshi Kondo, Takeshi Aoyama and Riko Ozao	
#055 Distribution of Hydride in Titanium Determined by X-Ray Diffraction-Enhanced Imaging Method with Asymmetric Reflection Analyzer .....	229
Kaoru Mizuno, Takashi Kanai, Kei-ichi Hirano and Hiroyuki Okamoto	
#056 Synthesis of New Brownmillerite Type Compounds Ba <sub>2</sub> (Sc, M') <sub>2</sub> O <sub>5</sub> (M'=Lu, Yb, Tm or Er), Ba <sub>2</sub> (Zn <sub>1/2</sub> M' <sub>1/2</sub> ) <sub>2</sub> O <sub>5</sub> (M'=Ce, Zr or Hf), Ba <sub>2</sub> (Zn <sub>2/3</sub> , M' <sub>1/3</sub> ) <sub>2</sub> O <sub>5</sub> (M'= Ta or Nb), and Ba <sub>2</sub> (Zn <sub>3/4</sub> W <sub>1/4</sub> ) <sub>2</sub> O <sub>5</sub> and Their Crystal-Chemical Properties .....	233
Miwa Saito, Shigeharu Ito, Toshio Takayama and Hiroshi Yamamura	
#057 Oxide-ion conduction and dielectric relaxations in Ca-stabilized ZrO <sub>2</sub> .....	237
Yuhji Yagi, Toshio Takayama, Hiroshi Yamamura	
#058 Analytical Investigation of Inclusions Related to Acicular Ferrite Formation in Steel Weld Metal.....	241
Tomonori Yamada, Hidenori Terasaki and Yu-ichi Komizo	
#060 Thermoelectric Properties of Perovskite-Type Related Compounds Ca-Mn-O Systems .....	245
H. Kawakami, H. Noda, M. Sugimoto, T. Takayama and H. Yamamura	
#061 Trends in Eco-materials and Products as Observed through Studies on a Web Database, Eco-MCPS .....	249
H. Ishida, R. Ozao, T. Utsumi, Y. Shinohara, K. Halada, Y. Nishimoto	
#062 Densification and Grain Growth of Indium-Tin-Oxide and Indium Oxide Thin Films Fabricated by Dip Coating Process .....	253
Yoshiyuki Seki, Seiji Hiratsuka, Meihan Wang, Shigeyuki Seki, Kouichi Haga, Toshikazu Nishide and Yutaka Sawada	
#063 Plasma Chemistry in Pulsed Electrical Discharge in Liquid .....	257
Selma Mededovic Thagard, Kazunori Takashima and Akira Mizuno	
#064 Ozone Synthesis Using Streamer Discharge Produced by ns Pulse Voltage under Atmospheric Pressure .....	263
Koichi Takaki, Seiji Mukaigawa, Tamiya Fujiwara, and Tomio Go	

<b>#065 Measurement of Heat Flux Applied from Atmospheric Pressure Plasma Jets to Substrate Using a LiNbO<sub>3</sub> Laser Interferometer</b>	<b>267</b>
T. Shimokawara, S. Mukaigawa, Y. Shida, K. Takahashi, K. Takaki, T. Fujiwara	
<b>#066 Optimization of Circuit Parameter on Capacitor Discharge Joining System</b>	<b>271</b>
N. Yamagishi, Y. Shida, K. Takahashi, S. Mukaigawa, K. Takaki, T. Fujiwara	
<b>#067 Synthesis of Spherical Photocatalyst LiTaO<sub>3</sub> Particles for Overall Water-splitting</b>	<b>275</b>
Koichiro Ueda, Koji Tomita, Kazumi Fujita, V. Petrykin, Masato Kakihana	
<b>#068 Photocatalytic Patterning using Nano-Colloidal Anatase in Aqueous Solution Process</b>	<b>279</b>
Koji Tomita, Kazuhiro Yamamoto, Kazumi Fujita, Valery Petrykin and Masato Kakihana	
<b>#069 Cathodic electrodeposition of ZnO and CuSCN thin films in the presence of glutathione</b>	<b>283</b>
Lina Sun and Tsukasa Yoshida	
<b>#070 Attenuation of Side Branching in Locally Modulated Dendrite under Phase-Field Simulation</b>	<b>287</b>
Hitoshi Ishido, Masato Takeuchi, Shigeo Kotake and Yasuyuki Suzuki	
<b>#071 Theoretical Study on Leakage Current in MOS with High-K Dielectric Stack: Effects of In-plane-Longitudinal Kinetic Energy Coupling and Anisotropic Masses</b>	<b>291</b>
Khairurrijal, Fatimah A. Noor, Mikrajuddin Abdullah, Sukirno, and Seiichi Miyazaki	
<b>#072 Annealing Behavior of La<sub>2</sub>O<sub>3</sub> Thin Film Deposited on Si (001) Substrate Studied by Spherical Aberration Corrected TEM/STEM</b>	<b>297</b>
Shin Inamoto, Jun Yamasaki, Eiji Okunishi, Kuniyuki Kakushima, Hiroshi Iwai, and Nobuo Tanaka	
<b>#073 Control of Dislocations and Sn Precipitations for Fabrication of Tensile-strained Ge on Ge<sub>1-x</sub>Sn<sub>x</sub> Buffer Layer</b>	<b>301</b>
Yosuke Shimura, Norimasa Tsutsui, Osamu Nakatsuka, Akira Sakai, and Shigeaki Zaima	
<b>#074 Formation of Uniaxial Tensile-strained Ge by Using Micro-patterning of Ge/Si<sub>1-x</sub>Ge<sub>x</sub>/Si Structures</b>	<b>305</b>
Takuya Mizutani, Osamu Nakatsuka, Akira Sakai, Hiroki Kondo, and Shigeaki Zaima	
<b>#075 Electron Charged States of Pt-silicide Nanodots as Evaluated by Using an AFM/Kelvin Probe Technique</b>	<b>309</b>
Katsunori Makihara, Kazuhiro Shimano, Mitsuhiro Ikeda, Akio Ohta, Seiichi Higashi and Seiichi Miyazaki	
<b>#076 Nanocrystalline diamond particles dispersed by solutions</b>	<b>313</b>
Kazuyuki Sudoh, Kenji Hirakuri, Kohki Fujioka, Noriyoshi Manabe and Kenji Yamamoto	
<b>#077 The Effect of SiO<sub>2</sub> Thickness on the Nucleation and Growth of ZnO Nanostructures</b>	<b>317</b>
M. Z. Sahdan, S. A. Kamaruddin, M. H. Mamat, M. Alfah, Z. Khusaimi, Hashim Saim, U.M. Noor, A. Z. Ahmed, S. Abdullah, M. Rusop	
<b>#078 Low Damage Sputter Deposition of ITO Films on Organic Light Emitting Films</b>	<b>321</b>
Hao Lei, Keisuke Ichikawa, Yoichi Hoshi, Meihan Wang, Yutaka Sawada, Takayuki Uchida	
<b>#079 A Simple Method to Monitor the Flux of the Neutral Free-Radical Beam Produced by Laser Photo-Deionization of a Negative Ion Beam</b>	<b>325</b>
Keiji Hayashi, Daisuke Tanaka, Harumi Araki, Tomoki Maruyama, Daisuke Matsumura, Kazuho Toyoda and Noriyuki Tsuji	
<b>#080 Effect of micro MoS<sub>2</sub> powder mixed dielectric fluid on surface quality and material removal rate in micro-EDM processes</b>	<b>329</b>
Gunawan Setia Prihandana, Muslim Mahardika, M. Hamdi and Kimiyuki Mitsui	
<b>#081 Template Synthesis for Stimuli-Responsive Angle Independent Structural Colored Smart Materials</b>	<b>333</b>
Mohammad Harun-Ur-Rashid, Abu Bin Imran, Takahiro Seki, Yukikazu Takeoka, Masahiko Ishii and Hiroshi Nakamura	
<b>#082 Expanded temperature range of cholesteric blue phase by three dimensional network structures</b>	<b>339</b>
Masayoshi Ojima, Takeshi Noma, Hiroaki Asagi, Akihiko Fujii, Masanori Ozaki and Hirotsugu Kikuchi	
<b>#083 Catalytic Action of Atmospheric Water Vapor on the Thermal Decomposition of Synthetic Hydrozincite</b>	<b>343</b>
Nobuyoshi Koga, Tomoyuki Tatsuoka, Yuu Tanaka and Shuto Yamada	
<b>#084 Intergrain Magnetoresistance Effect in Polycrystalline La<sub>0.7</sub>Sr<sub>0.3</sub>MnO<sub>3</sub> Films</b>	<b>347</b>
J. Zhong, F. Kato, T. Oka, Y. Takeda, and H. Asano	
<b>#085 Synthesis and Properties of Silicon-containing Polymers Having Cyclic Silphenylenesiloxane Moieties</b>	<b>351</b>
Keita Noguchi, Eiichi Akiyama, Hitoshi Ito, Yu Nagase	
<b>#086 Preparation of LiMn<sub>2</sub>O<sub>4</sub> Films by RF Magnetron Sputtering Method</b>	<b>355</b>
Masaaki Isai, Koichi Nakamura, Takayuki Hosokawa, Satoshi Sakai, and Shunsuke Hosoe	
<b>#087 Chemically Cross-Linking Effects on the Sorption of Heavy Metal Ions to Hydrogels of Cyanobacterial Megamolecules, Sacran</b>	<b>359</b>
Maiko Okajima-Kaneko, Shinji Miyazato and Tatsuo Kaneko	
<b>#088 Self-Assembled Silicate Nanolayers by Geonics</b>	<b>363</b>
H. Yamada, K. Tamura, C.S. Pascua, S. Yokoyama and T. Hatta	
<b>#089 A New Amorphous Aluminum-Silicate : High Performance Adsorbent for Water Vapor and Carbon Dioxide</b>	<b>367</b>
Masaya Suzuki, Ryosuke Nakanishi, Keiichi Inukai, Masaki Maeda, Syuntaro Hiradate and Katsuhiko Tsukimura	