

## CONTENTS

<b>X-ray Photoelectron Spectroscopic Analyses on the Corrosion-Resistant W-Cr-Ni Alloys in 12 M HCl .....</b>	<b>1</b>
Jagadeesh Bhattacharai	
<b>ZnO thin film prepared by a microwave heating technique .....</b>	<b>7</b>
Shinji Takahashi, Katsuki Shinohara, Katsuyuki Shiozaki and Masayuki Okuya	
<b>Synthesis of superconductor REBa<sub>2</sub>Cu<sub>4</sub>O<sub>8</sub> phase by molten hydroxide method .....</b>	<b>11</b>
Yuji Nagira, Takeshi Hara, Yasuji Yamada, Kiyoshi Kuroda and Shugo Kubo	
<b>Plasma optical emission spectroscopy in supercritical fluid for material synthesis process .....</b>	<b>15</b>
Yosuke Suga, Toshiyuki Watanabe	
<b>High yield synthesis of single-crystalline gold nanoplates using the metal ion-reducing bacteria .....</b>	<b>19</b>
Takashi Ogi, Norizou Saitoh, Toshiyuki Nomura, Yasuhiro Konishi	
<b>Nanoporous Nickel by Electrochemical Dealloying .....</b>	<b>23</b>
E. Rouya, J. J. Mallett, P. Salvi, M. Villa, M. Begley, R. G. Kelly, M. Reed, G. Zangari	
<b>Ionic Mass Transfer Rate Accompanying Pulsed Current Electrodeposition of Silver .....</b>	<b>27</b>
S. Kawai, Y. Fukunaka and S. Kida	
<b>Solution-Processed Multilayered Polymer Solar Cells Designed by Layer-by-Layer Assembly of Poly(p-phenylenevinylene)s with Dimethylsulfoxide .....</b>	<b>31</b>
Kohji Masuda, Yoshifumi Ikeda, Hideo Ohkita, Michihiro Ogawa, Hiroaki Benten and Shinzaburo Ito	
<b>Electrodeposition of tungsten from EMPyrCl-ZnCl<sub>2</sub> melts at 150°C .....</b>	<b>35</b>
Toshiyuki Nohira, Kan Kitagawa, Rika Hagiwara, Koji Nitta, Masatoshi Majima and Shinji Inazawa	
<b>Photoluminescence Properties of Scandia-Stabilized Zirconia .....</b>	<b>39</b>
Kan Hachiya and Junya Kondoh	
<b>Fundamental Research on Biomedical Application of Al-Mo-Ti Alloy Electrodeposited from AlCl<sub>3</sub>-1-Ethyl-3-methylimidazolium Chloride Melt .....</b>	<b>43</b>
Tetsuya Tsuda, Satoshi Arimoto, and Susumu Kuwabata	
<b>Direct Electrolytic Reduction of Amorphous SiO<sub>2</sub> Powder Refined from Diatomaceous Earth .....</b>	<b>47</b>
Yusaku Nishimura, Toshiyuki Nohira, Kouji Yasuda, Yasuhiro Fukunaka and Rika Hagiwara	
<b>Morphology transition in dendritic electrodeposition .....</b>	<b>51</b>
Elisabeth Chassaing, Graciela González, Kei Nishikawa, Michel Rosso	
<b>Microstructural Investigation of Modulated Structure in Electrolessly Deposited Co-P Films .....</b>	<b>55</b>
Naoki Fukumuro, Jin Nishiyama, Shinji Yae, and Hitoshi Matsuda	
<b>First Principles Study of Oxygen Incorporation Reactions in Oxides .....</b>	<b>59</b>
Timothy Holme, Fritz B. Prinz	
<b>Microstructure Formation within Films of Silicon using Electrochemical Anodization .....</b>	<b>69</b>
Joshua B. Ratchford, Mikiko Saito, and Takayuki Homma	
<b>Influence of displacement reaction on electrodeposition of noble metal particles on silicon .....</b>	<b>73</b>
Shinji Yae, Megumi Kawai, Takashi Matsuda, Naoki Fukumuro, and Hitoshi Matsuda	
<b>Magnesium silicide film on a silicon substrate prepared by electrochemical method in LiCl-KCl .....</b>	<b>77</b>
Takuya Goto, Kan Hachiya and Rika Hagiwara	
<b>Generation of Plasmas in Multiphase Medium .....</b>	<b>81</b>
Kunihide Tachibana and Tatsuru Shirafuji	
<b>Development of Photochemical DNA/RNA Manipulation Toward Its Application for Nanotechnology .....</b>	<b>85</b>
Kenzo Fujimoto, Hideaki Yoshino, Tomoko Ohtake, Yoshinaga Yoshimura, and Isao Saito	
<b>Structural and Functional Regulation of Self-Assembled Molecular Membrane formed by Amphiphilic Graft Peptide .....</b>	<b>91</b>
Masahiro Higuchi, Kenji Nagata, and Takatoshi Kinoshita	
<b>Temperature Dependence of Dielectric Constant with Different Poling Fields in Lead Magnesium Niobate-Lead Titanate Single crystal .....</b>	<b>95</b>
Noriko Yamamoto, Yohachi Yamashita, Kazuhiro Itsumi and Yasuharu Hosono	
<b>Depth-Resolved XAFS Analysis of SrTiO<sub>3</sub> Thin Film .....</b>	<b>99</b>
Yasuhiro Yoneda, Hajime Tanida, Masafumi Takagaki, Tomoya Uruga	
<b>X-ray Diffraction from the Ferroelectric Fluctuation and Domain Walls of Barium Titanate .....</b>	<b>103</b>
Yasuhiro Yoneda, Yoshiki Kohmura, Yoshio Suzuki	

<b>Effect of Cd Dopant on Dielectric Properties of CaCu<sub>3</sub>Ti<sub>4</sub>O<sub>12</sub> .....</b>	<b>107</b>
A. Onodera, M. Takesada, and S. Hiramatsu	
<b>High Pressure and Temperature Synthesis of Bi-based Perovskite (Bi<sub>0.5</sub>Na<sub>0.5-x</sub>Li<sub>x</sub>)TiO<sub>3</sub> .....</b>	<b>111</b>
Masanori Fukunaga, Yasuhiro Yoneda, Ryota Fukuyama, Hiroyuki Saitoh, Naoshi Ikeda and Yoshinori Katayama	
<b>Apatite Deposition on Serum Protein-Adsorbed Polystyrene Surfaces under Body Fluid Conditions .....</b>	<b>115</b>
Mineo Hashizume, Yuri Sakamoto, Atsushi Sakai, Hisao Matsuno, and Takeshi Serizawa	
<b>Studies on Allergic Substance Elimination by RF Plasma Treatment .....</b>	<b>119</b>
Yoshihito Yagyu, Akira Hikida, Nobuya Hayashi, Hiroharu Kawasaki, Tamiko Ohshima and Yoshiaki Suda	
<b>Preparation of poly(2-methacryloyloxyethyl phosphorylcholine)/hydroxyapatite hybrid matrix .....</b>	<b>123</b>
Yasuo Toyomoto, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai and Kazuhiko Ishihara	
<b>Glycoprotein recognition for cell capturing on artificial lectin surface .....</b>	<b>127</b>
Aya Saito, Tomohiro Konno, Hiroki Ikake, Kimio Kurita, and Kazuhiko Ishihara	
<b>Surface Enrichment of Hydrophilic or Hydrophobic Segment for Fine Biointerfaces .....</b>	<b>131</b>
Kazuhisa Terao, Junji Watanabe and Yoshiyuki Ikeda	
<b>Effect of Well-Defined Polymer Brush Surface on Adsorption Force of Bovine Serum Albumin.....</b>	<b>135</b>
Tomoaki NAKANISHI, Yuuki INOUE, Ryosuke MATSUNO, Madoka TAKAI1,2 , and Kazuhiko ISHIHARA	
<b>Photo-Induced Formation of Hydroxyapatite on Titanium Oxides in Simulated Body Fluid .....</b>	<b>139</b>
Masato Ueda, Hiroki Sai, Yoshinori Arachi, Hiroyuki Takeshita, Masahiko Ikeda, Michiharu Ogawa	
<b>Controlling cell functions by encapsulation with cyocompatible phospholipid polymer hydrogel .....</b>	<b>143</b>
Akira Fukuei, Tomohiro Konno and Kazuhiko Ishihara	
<b>Novel cyocompatible intracellular pH-imaging fluorescence probe composed of quantum dot and phospholipid polymer .....</b>	<b>147</b>
Kouichi Masuda, Ryosuke Matsuno, Tomohiro Konno, Madoka Takai and Kazuhiko Ishihara	
<b>Thin Films of the Insulating (001) CaCuO<sub>2</sub> Infinite-Layer with Low Roughness and Highly Uniform Morphology.....</b>	<b>151</b>
Kazuhiro Endo, Petre Badica, Hiroshi Kezuka, Tamio Endo and Hidehito Nanto	
<b>Synthesis and characterization of n-type and p-type thermoelectric oxides .....</b>	<b>155</b>
P. Mele, K. Matsumoto and K. Miyazaki	
<b>Optical Nonlinearity in NiFe<sub>2</sub>O<sub>4</sub> Nanoparticles .....</b>	<b>159</b>
Kishore Sridharan, Milan Agarwal, Jacob Philip, Tamio Endo, Reji Philip	
<b>Control of Electrical Conduction and Optical Absorption of Tungsten-Oxide Films with Oxygen Deficiencies.....</b>	<b>163</b>
Ryuji Sato, Masaaki Sugiyama, and Yoshihito Kunugi	
<b>Tetragonal Phase Change by Copper Solution in Nickel Oxide .....</b>	<b>167</b>
Tsuneo Suzuki, Takayuki Kamekawa, Tadachika Nakayama, Hisayuki Suematsu and Koichi Niihara	
<b>Optical Properties of Ga-Doped TiO<sub>2</sub> Films Prepared by Spin-Coating Method .....</b>	<b>171</b>
S. Sudou, K. Kado and K. Nakamura	
<b>Piezoresistance of Ga doped ZnO nanorods grown by hydrothermal deposition .....</b>	<b>175</b>
H.Takeuchi, H.Ito, K.Nojiri, S.Ono, and Y.Ichikawa	
<b>Electrical Properties of (Ba<sub>x</sub>Sr<sub>1-x</sub>)Ta<sub>2</sub>O<sub>6</sub> Thin Films Using Sol-Gel Method .....</b>	<b>177</b>
Li Lu, Masahiro Echizen, Takashi Nishida, Kiyoshi Uchiyama and Yukiharu Uraoka	
<b>Microstructure Analysis and Optimization of Sputter-Deposited Zinc Oxide Thin Films Used in Low-Emissivity Coatings for Energy Efficient Windows .....</b>	<b>181</b>
Kazuhiro Kato, Hideo Omoto and Atsushi Takamatsu	
<b>Local Deposition of Carbon Containing SiO<sub>x</sub> Synthesized Using Atmospheric Pressure Microplasma Jet .....</b>	<b>187</b>
Qingtao Pan, Yi Ding, and Hajime Shirai	
<b>Tight Bonding between Two Sheets of Biaxially Oriented Polyester Induced by Exposure to Oxygen-Implicated Plasma ...</b>	<b>191</b>
Miyoshi Yokura, Takuro Hayashi, Tatsuya Yoshii, Yoshihiko Yoshii, and Tamio Endo	
<b>Scanning SQUID Microscopy Observation of Grain Boundary Junction in Tri-Phase Epitaxy NdBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-δ</sub> Thin Film ...</b>	<b>195</b>
Shunichi Arisawa, Kyungsung Yun, Kazuya Mochiduki, Ienari Iguchi, Takeshi Hatano, Huabing Wang, and Akira Ishii	
<b>[3+2] Cycloaddition Reaction with Polymer-Supported Terpyridine Copper Complex in Water .....</b>	<b>197</b>
Toshimasa Suzuka, Kazumasa Ooshiro, Matsutake Higa, Kazuhito Ogihara, and Ken'yū Kina	