

P4001A **Nonequilibrium atmospheric pressure plasma application for surface treatment of high density package substrate**

<sup>1</sup>Y. Iwata, <sup>1</sup>H. Sakamoto, <sup>2</sup>K. Takeda, <sup>2</sup>M. Hori

<sup>1</sup>IBIDEN Co., Ltd., Japan

<sup>2</sup>Nagoya University, Japan

P4002A **A ITO transparent antenna for IEEE 802.11b applications**

**Withdrawn**

<sup>2</sup>I. Tang, <sup>1</sup>H. Lin, <sup>1</sup>S. Li, <sup>3</sup>C. Li

<sup>1</sup>National University of Tainan, Taiwan

<sup>2</sup>National University of Tainan, Taiwan

<sup>3</sup>Nation Taiwan Ocean University, Taiwan

P4003A **Properties and performance of C-Si/Si QDs/organic heterojunction solar cells**

<sup>1</sup>Y. Wang, <sup>1</sup>D. Ichida, <sup>1</sup>G. Uchida, <sup>1</sup>H. Seo, <sup>12</sup>N. Itagaki, <sup>1</sup>K. Koga, <sup>1</sup>M. Shiratani

<sup>1</sup>Kyushu University, Japan

<sup>2</sup>Japan Science and Technology Agency, Japan

P4005A **Nanoscale surface engineering of silicon nanocrystals by atmospheric pressure microplasmas**

<sup>1</sup>V. Svrcek, <sup>2</sup>S. Mitra, <sup>2</sup>D. Mariotti, <sup>1</sup>K. Matsubara, <sup>1</sup>M. Kondo

<sup>1</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan

<sup>2</sup>University of Ulster, UK

P4006A **Energy conversion efficiency of Si nanoparticle/PEDOT:PSS quantum-dot solar cells**

<sup>1</sup>G. Uchida, <sup>1</sup>Y. Wang, <sup>1</sup>H. Seo, <sup>1</sup>D. Ichida, <sup>2</sup>K. Kamataki, <sup>13</sup>N. Itagaki, <sup>1</sup>K. Koga, <sup>1</sup>M. Shiratani

<sup>1</sup>Kyushu University, Japan

<sup>2</sup>Kyushu University, Japan

<sup>3</sup>Presto, Japan Science and Technology Agency, Japan

P4007A **Research on durability of the hydrophilic property of gas diffusion layer for polymer electrolyte fuel cell adapting atmospheric-pressure plasma treatment**

<sup>1</sup>M. Suzuki, <sup>1</sup>E. Murakami, <sup>1</sup>K. Kawata, <sup>2</sup>K. Takeda, <sup>2</sup>M. Hori

<sup>1</sup>Aichi Center for Industry and Science Technology, Japan

<sup>2</sup>Nagoya University, Japan

- P4008A     **Degradation of phorbol esters with an atmospheric pressure plasma jet**  
H. Matsuura, S. Komgmany, M. Furuta, K. Imamura, Y. Maeda, S. Okuda  
Osaka Prefecture University, Japan
- P4009A     **Removal of water pollutants by pulsed discharge plasma and observation of optical emission intensity at atmospheric pressure**  
<sup>1</sup>Y. Hayashi, <sup>1</sup>Wahyudiono, <sup>1,2</sup>S. Machmudah, <sup>1</sup>N. Takada, <sup>3</sup>K. Sasaki, <sup>1</sup>M. Goto  
<sup>1</sup>Nagoya University, Japan  
<sup>2</sup>Sepuluh November Institute of Technology, Indonesia  
<sup>3</sup>Hokkaido University, Japan
- P4010A     **Control of Al<sub>2</sub>O<sub>3</sub>/Ge interfacial structures by post oxidation technique using oxygen radical**  
<sup>1,2</sup>K. Kato, <sup>1</sup>S. Shibayama, <sup>1</sup>M. Sakashita, <sup>1</sup>W. Takeuchi, <sup>1</sup>N. Taoka, <sup>1</sup>O. Nakatsuka, <sup>1</sup>S. Zaima  
<sup>1</sup>Nagoya University, Japan  
<sup>2</sup>Research Fellow of JSPS, Japan
- P4011A     **Study on mechanism of ultrahigh speed synthesis of high crystallinity nanographene employing in-liquid plasma**  
<sup>1</sup>H. Kondo, <sup>1</sup>T. Hagino, <sup>1</sup>K. Ishikawa, <sup>2</sup>H. Kano, <sup>1</sup>M. Sekine, <sup>1</sup>M. Hori  
<sup>1</sup>Nagoya University, Japan  
<sup>2</sup>NU Eco Engineering, Japan
- P4012A     **Effect of activated species on plane-direction dependence of Si oxidation in O<sub>2</sub>/Ar mixture plasma**  
K. Takeda, M. Hori  
Nagoya University, Japan
- P4013A     **Cycle characteristics of lithium ion batteries using Si/SiC core-shell nanoparticle anode**  
<sup>1</sup>Y. Morita, <sup>1</sup>K. Kamataki, <sup>1</sup>G. Uchida, <sup>1</sup>Y. Kim, <sup>1</sup>H. Seo, <sup>1</sup>D. Yamashita, <sup>1,3</sup>N. Itagaki, <sup>1</sup>K. Koga, <sup>1</sup>M. Shiratani, <sup>2</sup>H. Nagano, <sup>2</sup>T. Ishihara  
<sup>1</sup>Kyushu University, Japan  
<sup>2</sup>Kyushu University, Japan  
<sup>3</sup>Presto, Japan Science and Technology Agency, Japan
- P4014A     **Fabricaton of stable N-type thin film transistors with Cs-encapsulated single-walled carbon nanotubes made by plasma irradiation method**  
Y. Abiko, T. Kato, R. Hatakeyama, T. Kaneko  
Tohoku University, Japan

- P4015A     **Into the insights of polymer functionalization by ultrafine atmospheric pressure plasma jet**  
              <sup>1</sup>I. Motrescu, <sup>2</sup>M. Nagatsu  
              <sup>1</sup>Shizuoka University, Japan  
              <sup>2</sup>Shizuoka University, Japan
- P4016A     **Evaluation of etching effects due to H<sup>+</sup> ions on dust transport using local bias potential**  
              <sup>1</sup>K. Nishiyama, <sup>1</sup>M. Tateishi, <sup>1</sup>Y. Morita, <sup>1</sup>D. Yamashita, <sup>1</sup>K. Kamataki, <sup>1</sup>G. Uchida, <sup>1</sup>H. Seo, <sup>1</sup>N. Itagaki, <sup>1</sup>K. Koga, <sup>1</sup>M. Shiratani, <sup>2</sup>N. Ashikawa,  
              <sup>2</sup>S. Masuzaki, <sup>2</sup>K. Nishimura, <sup>2</sup>A. Sagara, <sup>2</sup>The LHD Experimental Group  
              <sup>1</sup>Kyushu University, Japan  
              <sup>2</sup>National Institute for Fusion Science, Japan
- P4017A     **The enhancement on the characteristics of the microplasma devices by using a cathode materials containing diamond coated Si nanostructure**  
              <sup>1</sup>I. Lin, <sup>2</sup>S. Lou, <sup>2</sup>C. Chen, <sup>1</sup>H. Cheng  
              <sup>1</sup>Tamkang University, Taiwan  
              <sup>2</sup>Yuan-Ze University, Taiwan
- P4018A     **Plasma nitriding for aluminium alloy of Al-Mg**  
              <sup>1</sup>S. Takashima, <sup>1</sup>M. Ito, <sup>1</sup>M. Hayakawa, <sup>2</sup>H. Yamamoto, <sup>2</sup>K. Yamakawa, <sup>2</sup>S. Den  
              <sup>1</sup>Nagoya Industries Promotion Corporation, Japan  
              <sup>2</sup>Katagiri Engineering Co., Ltd., Japan
- P4019A     **Observation of integrated optical emission intensity of pulsed laser ablation in supercritical CO<sub>2</sub> medium**  
              <sup>1,2</sup>S. Machmudah, <sup>1</sup>Wahyudiono, <sup>3</sup>N. Takada, <sup>4</sup>K. Sasaki, <sup>1</sup>M. Goto  
              <sup>1</sup>Nagoya University, Japan  
              <sup>2</sup>Sepuluh Nopember Institute of Technology, Indonesia  
              <sup>3</sup>Nagoya University, Japan  
              <sup>4</sup>Hokkaido University, Japan
- P4020A     **Rapid destruction of the rhodamine B using TiO<sub>2</sub> photocatalyst in the liquid phase plasma**  
              <sup>1</sup>H. Lee, <sup>2</sup>B. Kim, <sup>3</sup>S. Kim, <sup>1</sup>S. Jung  
              <sup>1</sup>Sunchon National University, Korea  
              <sup>2</sup>Chosun University, Korea  
              <sup>3</sup>Sejong University, Korea

- P4021A     **Characteristics of high pressure Ar+CH<sub>4</sub> nanosecond discharge plasmas for producing nanoparticles**  
    <sup>1</sup>K. Koga, <sup>1</sup>D. Yamashita, <sup>1</sup>G. Uchida, <sup>1</sup>M. Shiratani, <sup>2</sup>U. Czarnetzki  
    <sup>1</sup>Kyushu University, Japan  
    <sup>2</sup>Ruhr University Bochum, Germany
- P4022A     **Nanoparticle production using metal vapors and radicals in plasmas**  
**Withdrawn**     <sup>1</sup>J. Kim, <sup>1,2</sup>K. You, <sup>1</sup>S. You, <sup>1</sup>J. Lee, <sup>1</sup>D. Seong, <sup>1</sup>Y. Shin  
    <sup>1</sup>Korea Research Institute of Standards and Science, Korea  
    <sup>2</sup>Korea Advanced Institute of Science and Technology, Korea
- P4023A     **The role of graphite-like phase on the plasma illumination characteristics of the microplasma devices using diamond nanotips as cathodes**  
    <sup>1</sup>S. Lou, <sup>1</sup>C. Chen, <sup>2</sup>C. Chen, <sup>2</sup>C. Lee, <sup>3</sup>I. Lin  
    <sup>1</sup>Yuan-Ze University, Taiwan  
    <sup>2</sup>National Tsing-Hua University, Taiwan  
    <sup>3</sup>Tamkang University, Taiwan
- P4024A     **The role of graphene-like phase on enhancing the plasma illumination characteristics of the diamond-coated cylindrical cavities**  
    <sup>1</sup>S. Lou, <sup>1</sup>C. Chen, <sup>2</sup>H. Cheng, <sup>2</sup>I. Lin  
    <sup>1</sup>Yuan-Ze University, Taiwan  
    <sup>2</sup>Tamkang University, Taiwan
- P4025A     **Enhancing the plasma illumination characteristics through the utilization of N ion implanted hybrid structured ultrananocrystalline diamond films**  
    <sup>1</sup>S. Lou, <sup>1</sup>C. Chen, <sup>2</sup>K. Panda, <sup>2</sup>B. Sundaravel, <sup>3</sup>H. Chen, <sup>3</sup>I. Lin  
    <sup>1</sup>Yuan-Ze University, Taiwan  
    <sup>2</sup>Indira Gandhi Centre for Atomic Research, India  
    <sup>3</sup>Tamkang University, Taiwan
- P4027C     **Ge oxide growth by plasma oxidation of Ge substrates through Al<sub>2</sub>O<sub>3</sub> Layers**  
    <sup>1,2</sup>R. Zhang, <sup>1</sup>J. Lin, <sup>1</sup>M. Takenaka, <sup>1</sup>S. Takagi  
    <sup>1</sup>The University of Tokyo, Japan  
    <sup>2</sup>Nanjing University, China
- P4028C     **Enhancement of sol-gel reaction in catalyst-free mesoporous silica synthesis by solution plasma**  
    P. Pootawang, N. Saito  
    Nagoya University, Japan

P4029C **High sensitive VOCs sensor using a hydrophobic zeolite-based organic-inorganic hybrid compound suppressing moisture adsorption**

H. Yamawaki, Y. Taira, T. Inomata, Y. Funahashi, T. Ozawa, H. Masuda

Nagoya Institute of Technology, Japan

P4030C **Interaction of microwave with synthetic type-A zeolite containing water**

<sup>1</sup>M. Tanaka, <sup>1</sup>S. Takayama, <sup>2</sup>S. Sano

<sup>1</sup>National Institute for Fusion Science, Japan

<sup>2</sup>National Institute of Advanced Industrial Science and Technology, Japan

P4031C **Carbonated hydroxyapatite porous ceramics prepared by spark plasma sintering**

D. Kawagoe, T. Kaneko, A. Shinohara

Oyama National College of Technology, Japan

P4032C **Research of metallic titanium nanoparticle doping with liquid crystal**

**Withdrawn**

Y. Ha, H. Park, D. Seo

Yonsei University, Korea

P4033C **UV photodetectors based on TiO<sub>2</sub> nanorod arrays**

**Withdrawn**

<sup>1</sup>L. Ji, <sup>2</sup>Y. Hsiao, <sup>3</sup>J. Tsai, <sup>3</sup>T. Meen, <sup>4</sup>I. Tang

<sup>1</sup>National Formosa University, Taiwan

<sup>2</sup>National Nano Device Laboratories, Taiwan

<sup>3</sup>National Formosa University, Taiwan

<sup>4</sup>National University of Tainan, Taiwan

P4034C **Properties of aqueous dispersions of TiO<sub>2</sub> nanoparticles prepared by plasma on liquid surface: Effect of the multiplication of the plasma**

<sup>1</sup>M. Ito, <sup>1</sup>S. Takashima, <sup>1</sup>E. Asami, <sup>1</sup>T. Aoki, <sup>2</sup>M. Oka, <sup>2</sup>H. Asano, <sup>2</sup>M. Kitahara, <sup>2</sup>S. Nakata, <sup>3</sup>K. Yamaguchi, <sup>3</sup>Y. Murase

<sup>1</sup>Nagoya Industries Promotion Corporation, Japan

<sup>2</sup>Nippon Menard Cosmetic Co., Ltd., Japan

<sup>3</sup>Nagoya Municipal Industrial Research Institute, Japan

P4035C **Synthesis of cupric oxide nanowires on spherical surface by thermal oxidation method**

X. Li, N. Kishi, T. Soga

Nagoya Institute of Technology, Japan

P4036C **The effect of water-alcohol solvent on solution plasma processing**

<sup>1,2,4</sup>T. Ueno, <sup>1</sup>T. Sudare, <sup>1,2,3,4</sup>N. Saito

<sup>1</sup>Nagoya University, Japan

<sup>2</sup>Nagoya University, Japan

<sup>3</sup>Nagoya University, Japan

<sup>4</sup>JST-CREST, JST, Japan

P4037C **Effect of surfactant materials on the formation of carbon-coated ZnO nanorods by the pulsed plasma in water**

E. Omurzak, S. Takebe, T. Mashimo

Kumamoto University, Japan

P4038C **Synthesis of metal nanoparticles on plasma modified chitosan membranes**

**Withdrawn**

<sup>1</sup>W. Guan, <sup>2</sup>X. Shi, <sup>1</sup>J. Ruan

<sup>1</sup>Wuhan University, China

<sup>2</sup>Wuhan University, China

P4039C **Plasma-assisted preparation of Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> catalysts for dimethyl ether synthesis**

<sup>1</sup>T. Wei, <sup>1</sup>W. Yeh, <sup>2</sup>H. Lee, <sup>2</sup>M. Huang, <sup>1</sup>C. Shen

<sup>1</sup>Chung Yuan University, Taiwan

<sup>2</sup>Institute of Nuclear Energy Research, Taiwan

P4040C **Laser wavelength effect on size and morphology of silicon nanoparticles prepared by laser ablation in liquid**

P. Chewchinda, O. Odawara, H. Wada

Tokyo Institute of Technology, Japan

P4041C **The effect of unintentional impurity related vibrational modes in ZnO thin films**

**Withdrawn**

<sup>1</sup>M. Subramanian, <sup>1,2</sup>Z. Zulkifli, <sup>1</sup>M. Tanemura

<sup>1</sup>Nagoya Institute of Technology, Japan

<sup>2</sup>Universiti Teknologi MARA, Malaysia

P4042C **Electrical properties of metal-oxide nano-particles embeded in ZnO layer on the Pt/glass substrate after 0.2 MeV electron beam irradiation**

<sup>1</sup>D. Lee, <sup>1</sup>D. Kim, <sup>1</sup>S. Pak, <sup>1</sup>E. Kim, <sup>2</sup>B. Lee

<sup>1</sup>Hanyang University, Korea

<sup>2</sup>Korea Atomic Energy Research, Korea

- P4043C     **Fe<sub>3</sub>O<sub>4</sub> nanoparticles preparation by pulsed plasma in liquid**  
              <sup>1</sup>Z. Kelgenbaeva, <sup>2</sup>E. Omurzak, <sup>1</sup>Z. Abdullaeva, <sup>3</sup>S. Sulaimankulova, <sup>4</sup>T. Mashimo  
              <sup>1</sup>Kumamoto University, Japan  
              <sup>2</sup>Kumamoto University, Japan  
              <sup>3</sup>National Academy of Science, Kyrgyzstan  
              <sup>4</sup>Kumamoto University, Japan
- P4044C     **Controlled synthesis of magnetic Fe-Ni alloy nanoparticles by polyol method**  
              K. Oguri, M. Shima  
              Gifu University, Japan
- P4045C     **Growth characteristics of copper oxide nanowires by thermal oxidation treatment of copper in the air**  
              N. Yokouchi, K. Maeda, H. Sato  
              Mie University, Japan
- P4046C     **Optical and magnetic properties of hydrothermally synthesized Al-doped ZnO nanorods**  
              <sup>1</sup>T. Lin, <sup>2</sup>S. Young, <sup>1</sup>C. Kung, <sup>2</sup>H. Chen, <sup>2</sup>M. Kao, <sup>3</sup>L. Horng, <sup>3</sup>Y. Shih, <sup>4</sup>J. You  
              <sup>1</sup>National Chung Hsing University, Taiwan  
              <sup>2</sup>Hsiuping University of Science and Technology, Taiwan  
              <sup>3</sup>National Changhua University of Education, Taiwan  
              <sup>4</sup>Hsiuping University of Science and Technology, Taiwan
- P4047C     **Preparation of CdSe nanoparticles using hydrothermal assisted reverse micelles**  
              K. Liu, J. Kim, S. Park  
              Gachon University, Korea
- P4048C     **Formation of ZnO nanorods by the pulsed plasma in subcritical water**  
              <sup>1</sup>S. Takebe, <sup>1</sup>E. Omurzak, <sup>2</sup>M. Goto, <sup>1</sup>T. Mashimo  
              <sup>1</sup>Kumamoto University, Japan  
              <sup>2</sup>Nagoya University, Japan
- P4049C     **A visible-blind TiO<sub>2</sub> nanowire photodetector**  
              S. Wang, T. Tsai, S. Chang  
              National Cheng Kung University, Taiwan

- P4050C **TiO<sub>2</sub> nanowires UV photodetectors with Ir schottky contacts**  
T. Tsai, S. Chang  
National Cheng Kung University, Taiwan
- P4051C **Characterization of electronic emission through Au/Si-nanocolumnar structures by conducting-probe atomic force microscopy**  
<sup>1</sup>D. Takeuchi, <sup>1</sup>K. Makihara, <sup>2</sup>M. Ikeda, <sup>1</sup>S. Miyazaki, <sup>3</sup>H. Kaki, <sup>3</sup>T. Hayashi  
<sup>1</sup>Nagoya University, Japan  
<sup>2</sup>Hiroshima University, Japan  
<sup>3</sup>Nissin Electric Co., Ltd, Japan
- P4052C **Charging and magnetizing characteristics of Co nanodots formed by remote H<sub>2</sub>-plasma induced migration**  
<sup>1</sup>R. Fukuoka, <sup>1</sup>K. Makihara, <sup>2</sup>M. Ikeda, <sup>1</sup>S. Miyazaki  
<sup>1</sup>Nagoya University, Japan  
<sup>2</sup>Hiroshima University, Japan
- P4053C **Synthesis of nanoparticles for the detection of organophosphorous compounds**  
Y. Yang, Y. Jhai, W. Kuo, W. Wang, M. Wang  
Nation Taiwan University of Science and Technology, Taiwan
- P4054C **Functional carbon nanowalls by microwave plasma enhanced chemical vapor deposition. The case of templates for bismuth nanoparticles growth**  
<sup>1</sup>G. Rius, <sup>2</sup>P. Jagdale, <sup>3</sup>M. Yoshimura, <sup>1</sup>O. Eryu, <sup>2</sup>A. Tagliaferro  
<sup>1</sup>Nagoya Institute of Technology, Japan  
<sup>2</sup>Politecnico Torino, Italy  
<sup>3</sup>Toyota Technological Institute, Japan
- P4055C **Diamond nano-structuring by reactive Ion etching (RIE) method in O<sub>2</sub>/CF<sub>4</sub> Plasma.**  
<sup>1</sup>K. Srinivas, <sup>1</sup>K. Sankaran, <sup>2</sup>J. Kurian, <sup>1</sup>N. Tai, <sup>1</sup>C. Lee, <sup>2</sup>I. Lin, <sup>1</sup>K. Leou  
<sup>1</sup>NTHU, Taiwan  
<sup>2</sup>Tamkang University, Taiwan
- P4056C **Preparation rate of Y<sub>2</sub>O<sub>3</sub>:Er,Yb nanoparticles by laser ablation in liquid**  
T. Nunokawa, Y. Onodera, A. Gubarevich, O. Odawara, H. Wada  
Tokyo Institute of Technology, Japan

- P4057C **Critical field of  $\text{Sn}_{1-x}/\text{Si}_x$  composite cluster prepared by a plasma-gas-condensation used hard-landing method**  
<sup>1</sup>Y. Kurokawa, <sup>1</sup>T. Hihara, <sup>2</sup>K. Sumiyama  
<sup>1</sup>Nagoya Institute of Technology, Japan  
<sup>2</sup>Tokyo Denki University, Japan
- P4058C **Silver nanoparticles obtained by laser ablation using different stabilizers**  
<sup>1</sup>O. Olea-Mejia, <sup>2</sup>M. Camacho-Lopez, <sup>1</sup>R. Vilchis-Nestor, <sup>2</sup>R. Lopez-Castañares, <sup>2</sup>O. Olea-Cardoso  
<sup>1</sup>UAEM, México  
<sup>2</sup>UAEM, México
- P4059C **Novel synthesis of metal nitride and carbide by solution plasma**  
T. Inishi, T. Ban, Y. Ohya  
Gifu University, Japan
- P4060C  **$\beta\text{-Ga}_2\text{O}_3$  nanowires-based humidity sensors prepared on u-GaN substrate**  
Y. Feng, T. Tsai, S. Chang  
National Cheng Kung University, Taiwan
- P4061C **GaN nanowires by nitride processes on  $\text{Ga}_2\text{O}_3$  nanowires for field emission application**  
T. Chen, T. Tsai, S. Chang  
National Cheng Kung University, Taiwan
- P4062C **Effect of multi-layered structure and annealing on the photothermal effects of  $\text{SiO}_2\text{-Ag}$  and  $\text{TiO}_2\text{-Ag}$  thin films**  
**Withdrawn** <sup>1</sup>J. Hsieh, <sup>1</sup>Y. Su, <sup>2</sup>S. Liu, <sup>3</sup>C. Li  
<sup>1</sup>Ming Chi University of Technology, Taiwan  
<sup>2</sup>National Normal University, Taiwan  
<sup>3</sup>National Central University, Taiwan
- P4063C **Self-assembled ZnO nano-structures grown by radio-frequency magnetron sputtering**  
E. Jung, H. Kang  
Chosun University, Korea
- P4064C **Electrical bistabilities of organic bistable devices based on colloidal  $\text{CuInS}_2$  quantum dots embedded in a poly (N-vinylcarbazole) layer**  
<sup>1</sup>H. Park, <sup>2</sup>D. Yun, <sup>3</sup>S. Kim, <sup>1,2</sup>T. Kim  
<sup>1</sup>Hanyang University, Korea  
<sup>2</sup>Hanyang University, Korea  
<sup>3</sup>Ajou University, Korea

- P4065C     **Synthesis and characterization of mesoporous TiO<sub>2</sub> nanoparticles using base catalyst sol-gel method for dye-sensitized solar cells**  
J. Yang, K. Kim, C. Bark, H. Choi  
Gachon University, Korea
- P4066C     **Atmospheric pressure plasma-assisted flux coating method for calcium apatite crystal layers**  
H. Wagata, K. Sakurai, S. Oishi, K. Teshima  
Shinshu University, Japan
- P4067C     **Characteristic of polymers synthesized by mechanochemical solid-state polymerization**  
<sup>1</sup>N. Doi, <sup>1</sup>Y. Sasai, <sup>1</sup>S. Kondo, <sup>2</sup>Y. Yamauchi, <sup>3</sup>M. Kuzuya  
<sup>1</sup>Gifu Pharmaceutical University, Japan  
<sup>2</sup>Matsuyama University, Japan  
<sup>3</sup>Chubu Gakuin University, Japan
- P4068C     **Preparation of Zn-doping TiO<sub>2</sub> particle/passivating layer and their applications in dye-sensitized solar cells**  
T. Eom, K. Kim, C. Bark, H. Choi  
Gachon University, Korea
- P4069C     **Evolution of microstructures in self-catalytic synthesis of Ga<sub>2</sub>O<sub>3</sub> nano-burrs grown by RF magnetron sputtering**  
S. Park, H. Kang  
Chosun University, Korea
- P4070C     **Effects of sputtered ZnO seed layers on the characteristics of ZnO nano-wires synthesized by hydro-thermal process**  
J. Kim, H. Kang  
Chosun University, Korea
- P4071C     **Effect of the electrolyte concentration on the fabrication of gold nanoparticles**  
<sup>1</sup>T. Mizutani, <sup>2</sup>Y. Abe, <sup>2</sup>H. Hamaguchi, <sup>2</sup>H. Nameki, <sup>3</sup>S. Yagi  
<sup>1</sup>Nagoya University, Japan  
<sup>2</sup>Aichi Center for Industry and Science Technology, Japan  
<sup>3</sup>Nagoya University, Japan

P4072C **Surface plasma resonant effect of gold nanoparticles on the photoelectrode of dye-sensitized solar cells**

**Withdrawn**

<sup>1</sup>T. Meen, <sup>1</sup>J. Tsai, <sup>2</sup>S. Chao, <sup>1</sup>T. Wu, <sup>3</sup>K. Wu, <sup>4</sup>L. Ji, <sup>5</sup>C. Huang

<sup>1</sup>National formosa University, Taiwan

<sup>2</sup>Hsiuping University of Science and Technology, Taiwan

<sup>3</sup>Southern Taiwan University of Technology, Taiwan

<sup>4</sup>National Formosa University, Taiwan

<sup>5</sup>Department of Applied Physics, National University of Kaohsiung, Taiwan

P4073C **The improvement on the electron transfer of dye-sensitized solar cell using vanadium doped TiO<sub>2</sub>**

<sup>1,2</sup>H. Seo, <sup>1</sup>Y. Wang, <sup>1</sup>D. Ichida, <sup>1</sup>G. Uchida, <sup>1</sup>N. Itagaki, <sup>1</sup>K. Koga, <sup>1,2</sup>M. Shiratani, <sup>3</sup>S. Nam, <sup>3</sup>J. Boo

<sup>1</sup>Kyushu University, Japan

<sup>2</sup>Kyushu University, Japan

<sup>3</sup>Sungkyunkwan University, Korea

P4074C **Dependence of V<sub>oc</sub> of a-Si:H solar cells on distance between discharge and substrate**

Y. Hashimoto, K. Hatozaki, D. Yamashita, K. Kamataki, G. Uchida, H. Seo, N. Itagaki, K. Koga, M. Shiratani

Kyushu University, Japan

P4075C **Effects of deposition temperature on properties of epitaxial ZnInON films for solar cells**

<sup>1</sup>K. Matsushima, <sup>1</sup>T. Hirose, <sup>1</sup>K. Kuwahara, <sup>1</sup>D. Yamashita, <sup>1</sup>G. Uchida, <sup>1</sup>H. Seo, <sup>1</sup>K. Kamataki, <sup>1</sup>K. Koga, <sup>1</sup>M. Shiratani, <sup>1,2</sup>N. Itagaki

<sup>1</sup>Kyushu University, Japan

<sup>2</sup>PRESTO, Japan

P4076C **Preparation and heat treatment of arc black and application to electric double layer capacitor**

<sup>1</sup>Y. Okabe, <sup>1</sup>Y. Suda, <sup>1</sup>H. Takikawa, <sup>1</sup>H. Tanoue, <sup>2</sup>H. Ue, <sup>3</sup>K. Shimizu

<sup>1</sup>Toyohashi University of Technology, Japan

<sup>2</sup>Tokai Carbon Co., Ltd., Japan

<sup>3</sup>Shonan Plastic Mfg. Co., Ltd., Japan

P4077C **Characterization of ruthenium dioxide-carbon nanotube nanocomposites grown on graphene for electrochemical capacitor**

<sup>1</sup>Y. Shih, <sup>1</sup>H. Liu, <sup>1</sup>Y. Huang, <sup>1,2</sup>Y. Huang, <sup>1,2</sup>K. Lee

<sup>1</sup>National Taiwan University of Science and Technology, Taiwan

<sup>2</sup>National Taiwan University of Science and Technology, Taiwan

P4078C **Oxygen plasma treatment of multi-walled carbon nanotubes dopants to prepare TiO<sub>2</sub>-based hybrid for enhancing performance of dye-sensitized solar cell anode**

<sup>1</sup>Y. Rhee, <sup>2</sup>J. Jin, <sup>1</sup>N. Min

<sup>1</sup>Korea University, Korea

<sup>2</sup>Korea University, Korea

P4079C **Sputter deposition of zinc-indium oxynitride semiconductors with narrow bandgap for excitonic transistors**

<sup>1,2</sup>N. Itagaki, <sup>1</sup>K. Matsushima, <sup>1</sup>T. Hirose, <sup>1</sup>K. Kuwahara, <sup>1</sup>D. Yamashita, <sup>1</sup>H. Seo, <sup>1</sup>K. Kamataki, <sup>1</sup>G. Uchida, <sup>1</sup>K. Koga, <sup>1</sup>M. Shiratani

<sup>1</sup>Kyushu University, Japan

<sup>2</sup>PRESTO, Japan Science and Technology Agency, Japan

P4080C **Luminescent properties of a novel blue-emitting ZnAl<sub>2</sub>O<sub>4</sub>:Ti nanocrystals**

**Withdrawn**

M. Tsai, K. Tsai, Y. Chou

National Formosa University, Taiwan

P4081C **The effect of TiO<sub>2</sub> thin films thickness on the dye-sensitized solar cells**

**Withdrawn**

J. Tsai, W. Chong, T. Meen, T. Wu

National Formosa University, Taiwan

P4082C **Titania nanorod arrays grown on TiO<sub>2</sub>/SiO<sub>2</sub> composite layer by hydrothermal process for dye-sensitized solar cell application**

**Withdrawn**

J. Tsai, <sup>1</sup>M. Hon, <sup>2</sup>I. Leu

<sup>1</sup>National Cheng Kung University, Taiwan

<sup>2</sup>National University of Tainan, Taiwan

P4083C **Spectroscopic characterization of an oxidative intermediate species in a structurally distorted manganese(II) complex system**

<sup>1</sup>Y. Tsuji, <sup>1</sup>Y. Inagaki, <sup>1</sup>T. Inazumi, <sup>1</sup>Y. Wasada-Tsutsui, <sup>1</sup>T. Inomata, <sup>1</sup>T. Ozawa, <sup>1,2</sup>Y. Funahashi, <sup>1</sup>H. Masuda

<sup>1</sup>Nagoya Institute of Technology, Japan

<sup>2</sup>JST, PRESTO, Japan

P4084C **Fabrication of nanostructured ZnO films for the transparent field emission displays**

<sup>1,2</sup>Z. Zulkifli, <sup>1</sup>M. Subramanian, <sup>1</sup>M. Yusop, <sup>1</sup>Y. Hayashi, <sup>1</sup>M. Tanemura

<sup>1</sup>Nagoya Institute of Technology, Japan

<sup>2</sup>Universiti Teknologi Mara, Malaysia

P4085C **A Si nanowire photovoltaic device prepared by selective electroless etching**

**Withdrawn**

T. Lu, T. Tsai, S. Chang

National Cheng Kung University, Taiwan

P4086C **Use of carbon nanocoil as a catalyst support in direct methanol fuel cell**

<sup>1</sup>Y. Suda, <sup>1</sup>S. Kaida, <sup>1</sup>M. Ozaki, <sup>1</sup>H. Takikawa, <sup>1</sup>H. Tanoue, <sup>2</sup>H. Ue, <sup>3</sup>K. Shimizu

<sup>1</sup>Toyohashi University of Technology, Japan

<sup>2</sup>Tokai Carbon Co., Ltd., Japan

<sup>3</sup>Shonan Plastic Mfg. Co., Ltd., Japan

P4087C **Electrochemical evaluation of carbon nanowalls as electric double layer capacitor**

<sup>1</sup>K. Yoshida, <sup>1</sup>M. Hiramatsu, <sup>2</sup>H. Kondo, <sup>2</sup>M. Hori

<sup>1</sup>Meijo University, Japan

<sup>2</sup>Nagoya University, Japan

P4088C **Plasma surface modification of carbon nanowalls for biosensor application**

<sup>1</sup>M. Nagashima, <sup>2</sup>H. Watanabe, <sup>1</sup>M. Hiramatsu, <sup>2</sup>H. Kondo, <sup>2</sup>M. Hori

<sup>1</sup>Meijo University, Japan

<sup>2</sup>Nagoya University, Japan

P4089C **Mesoporous Ni-SDC cermet for reduced temperature solid oxide fuel cells**

S. Ma, S. Park

Gachon University, Korea

P4090C **Electric double layer capacitor properties of doped single-walled carbon nanotubes**

A. Al-Zubaidi, Y. Ishii, T. Matsushita, S. Yamada, S. Kawasaki

Nagoya Institute of Technology, Japan

P4091C **P-type graphene/hydrogenated amorphous carbon composite films synthesized by microwave surface wave plasma CVD for photovoltaic solar cells**

**Withdrawn**

<sup>1</sup>S. Adhikari, <sup>1</sup>H. Aryal, <sup>1</sup>M. Kayastha, <sup>1</sup>D. Ghimire, <sup>2</sup>S. Adhikary, <sup>1</sup>H. Uchida, <sup>1</sup>K. Wakita, <sup>1</sup>M. Umeno

<sup>1</sup>Chubu University, Japan

<sup>2</sup>Tribhuvan University, Nepal

P4092C **Physicochemical properties of polypyridine-Ru(II) complexes formed in a cage-type ligand**

<sup>1</sup>K. Oda, <sup>1</sup>T. Aoki, <sup>1</sup>Y. Wasada-Tsutsui, <sup>1</sup>T. Inomata, <sup>1</sup>T. Ozawa, <sup>1</sup>M. Shiotsuka, <sup>1,2</sup>Y. Funahashi, <sup>1</sup>H. Masuda

<sup>1</sup>Nagoya Institute of Technology, Japan

<sup>2</sup>JST, PRESTO, Japan

- P4093C     **The effect of photoelectrode by phosphor scattering layer for dye-sensitized solar cells**  
S. Shin, K. Kim, C. Bark, H. Choi  
Gachon University, Korea
- P4094C     **Biodiesel fuel synthesis with immobilized heteropolyacid catalysts**  
<sup>1</sup>S. Yamaguchi, <sup>1</sup>H. Hassan, <sup>1</sup>M. Shiraishi, <sup>2</sup>Y. Mieno, <sup>2</sup>T. Tsuda, <sup>1</sup>K. Ikushima, <sup>1</sup>H. Yahiro  
<sup>1</sup>Ehime University, Japan  
<sup>2</sup>Taiyo Oil Co., Ltd., Japan
- P4095C     **Cu<sub>2</sub>S thin films prepared by chemical bath deposition and its application to Cu<sub>2</sub>ZnSnS<sub>4</sub> (CZTS) solar cells**  
<sup>1</sup>C. Lin, <sup>2</sup>T. Hsueh, <sup>3</sup>Y. Chen, <sup>1</sup>S. Chen  
<sup>1</sup>National Yunlin University of Science and Technology, Taiwan  
<sup>2</sup>National Nano Device Laboratories, Taiwan  
<sup>3</sup>National Cheng Kung University, Taiwan
- P4096C     **In<sub>2</sub>S<sub>3</sub> using chemical bath deposition for *p*-si solar cells**  
<sup>1</sup>L. Ji, <sup>2</sup>Y. Hsiao, <sup>1</sup>Y. Chen, <sup>1</sup>W. Lin, <sup>1</sup>J. Lin  
<sup>1</sup>National formosa University, Taiwan  
<sup>2</sup>National Nano Device Laboratories, Taiwan
- P4097C     **Syntheses and characterization of asymmetric  $\beta$ -diketiminato iron complexes as a model of a nitrogenase active center**  
K. Ikeda, T. Suzuki, T. Ogawa, H. Masuda  
Nagoya Institute of Technology, Japan
- P4098C     **Possible superoxo intermediate structures of NiSOD active site**  
D. Nakane, T. Inomata, Y. Funahashi, T. Ozawa, H. Masuda  
Nagoya Institute of Technology, Japan
- P4099C     **Characterization of trinuclear iron complex bearing tris(beta-diketiminato) ligand**  
T. Ogawa, H. Masuda  
Nagoya Institute of Technology, Japan

P4100C **The properties of Mo thin film deposited by ion beam assist sputter for CIGS solar cell**

**Withdrawn**

<sup>1,2</sup>S. Cho, <sup>2,3</sup>H. Kim, <sup>2</sup>Y. Yun, <sup>2</sup>K. Song, <sup>4</sup>S. Lee, <sup>1</sup>P. Song

<sup>1</sup>Pusan National University, Korea

<sup>2</sup>Daegu Technopark, Korea

<sup>3</sup>Kyungpook National University, Korea

<sup>4</sup>Kyungwoon University, Korea

P4101C **Facile fabrication of electrode and electrolyte nanomaterials for lithium-ion rechargeable batteries by plasma-assited flux method**

K. Teshima, H. Wagata, Y. Mizuno, S. Oishi

Shinshu University, Japan

P4102C **The enhancement of poly(3,4-ethylene dioxythiophene):poly(styrenesulfonate) conductivity by using acid treatment**

K. Hwang, S. Nam, W. Jung, H. Seo, J. Boo

Sungkyunkwan University, Korea

P4103C **Preparation and characterization of novel iron complexes using SNS pincer-type thioamide ligands**

T. Suzuki, T. Ogawa, H. Masuda

Nagoya Institute of Technology, Japan

P4104C **Electrochemical hydrogenation of dinitrogen to ammonia using titanocene in ionic liquids containing FAP anion, [(C<sub>2</sub>F<sub>5</sub>)<sub>3</sub>PF<sub>3</sub>]<sup>-</sup>**

A. Katayama, T. Suzuki, T. Ogawa, H. Masuda

Nagoya Institute of Technology, Japan

P4105C **Synthesis of multinuclear copper complexes with different coordination environments**

T. Ochiai, Y. Shimizu, H. Masuda

Nagoya Institute of Technology, Japan

P4106C **The behaviour of crystal structure in material under microwave irradiation**

<sup>1</sup>S. Takayama, <sup>2</sup>S. Sano, <sup>3</sup>M. Sato

<sup>1</sup>National Institute for Fusion Science, Japan

<sup>2</sup>National Institute of Advanced Industrial Science and Technology, Japan

<sup>3</sup>Chubu University, Japan

P4107C **The effect of carrier injection stress on amorphous silicon layer by deep level transient spectroscopy**

<sup>1,2</sup>S. Lee, <sup>2</sup>J. Park, <sup>2</sup>C. Shin, <sup>2</sup>J. Yi, <sup>1</sup>C. Jeong

<sup>1</sup>Korea Institute of Industrial Technology, Korea

<sup>2</sup>Sungkyunkwan University, Korea

P4108C     **Fabrication and characterization of CdSe-dye co-sensitized solar cell with TiCl<sub>4</sub> surface treatment**

<sup>1</sup>M. Son, <sup>2,3</sup>H. Seo, <sup>1</sup>S. Kim, <sup>1</sup>S. Park, <sup>1</sup>J. Song, <sup>1</sup>K. Prbakar, <sup>1</sup>H. Kim

<sup>1</sup>Pusan National University, Korea

<sup>2</sup>Kyushu University, Japan

<sup>3</sup>Kyushu University, Japan

P4109C     **Field emission properties of spiral patten by screen printing**

C. Chang, H. Wu, W. Tsai

Tatung University, Taiwan