

Poster Session 2

March 4(Tue) 13:00-14:30

04pP01 **Structure Observation of Enzyme Embedded In Plasma-Polymerized Film and Its Biosensor Performance**

Y. Kase, H. Muguruma

Shibaura Institute of Technology, Japan

04pP02 **Sterilization of Fuzarium Oxysporum by Non-Equilibrium Plasma Irradiation**

¹Y. Mori, ¹S. Seki, ¹S. Yasui, ²H. Terazoe, ²K. Shoji

¹Nagoya Institute of Technology, Japan

²Central Research Institute of Electric Power Industry, Japan

04pP03 **Soil Sterilization with Ozone Generated by Surface Dielectric Barrier Discharge for Agricultural Application**

¹T. Nagatomo, ¹K. Takigawa, ¹Y. Yamasaki, ¹T. Sakai, ¹F. Mitsugi, ¹T. Ikegami, ²K. Ebihara,

³S. Aoqui, ⁴K. Nagahama

¹ Kumamoto University, Japan

² Environment and Energy Laboratory, Japan

³ Sojo University, Japan

⁴ Sojo University,Japan

04pP04 ~~Investigating the Effect of O₂ Plasma on Chloroplasts Separation from Plant Leaves Using A Microfluidics~~
<Withdrawn> ~~Microfluidics~~

M. S. Hung, Y. D. Shae

National Tsing Hua University, Taiwan

04pP05 **Vibrational Analysis of Biological Samples Treated with Atmospheric Pressure Plasma Using Multiplex Oherent Anti-Stokes Raman Scattering Microspectroscopy**

¹H. Kato, ¹T. Ohta, ²K. Takeda, ¹H. Hashizume, ²M. Hori, ¹M. Ito

¹ Meijo University ,Japan

² Nagoya University, Japan

04pP06 **One-Step Lysozyme Immobilization by an Aerosol Assisted Atomospheric-Pressure Plasma Deposition**

Y. W. Yang, G. Camporeale, E. Sardella, G. Dilecce, F. Palumbo, P. Favia, J. S. Wu

¹ National Chiao Tung University, Taiwan

² Università Degli Studi Di Bari, Italy

³ Istituto Di Metodologie Inorganiche E Dei Plasmi, CNR, Italy

ISPlasma2014/IC-PLANTS2014 March 2- 6, 2014 Nagoya, Japan

04pP07

Emission Characteristics of Metallic Elements in Solution using Non-Equilibrium Atmospheric Pressure Microplasma

¹J. Kularatne, ²T. Ohta, ¹J. Jolibois, ²M. Ito, ²H. Takemura, ³H. Kano, ¹H. Kondo, ¹K. Ishikawa,
¹M. Sekine, ¹M. Hori

¹Nagoya University, Japan

²Meijo University, Japan

³Nu Eco Engineering Co. Ltd., Japan

04pP08

Internal Sterilization of A Narrow Tube by ECR Plasma

¹K. Hara, ¹A. Yonesu, ²N. Hayashi

¹ University of The Ryukyus, Japan

² Kyushu University, Japan

04pP09

Sterilization of Fruits Surface Using Non-Thermal Atmospheric Pressure Plasma Produced by Surface Discharges

¹K. Sugimoto, ¹A. Yonesu, ²N. Hayashi

¹ University of The Ryukyus ,Japan

² Kyushu University, Japan

04pP10

Modification of Polymeric Membranes with Biomimetic Materials by Atmospheric-Pressure Plasmas

H. L. Shih, T. C. Wei

Chung-Yuan University, Taiwan

ISPlasma2014/IC-PLANTS2014 March 2- 6, 2014 Nagoya, Japan

- 04pP11 **Experimental Investigation of Cell Adhesion And Proliferation on Polylactide Surface Using A Nitrogen-Based Atmospheric-Pressure Planar Dielectric Barrier Discharge Jet With Short Electrodes**
K. Y. Cheng, Y. W. Yang, G. C. Liao, J. S. Wu
National Chiao Tung University, Taiwan
- 04pP12 **Growth Enhancement of Plants Due to Plasma Atmospheric Pressure Irradiation to Seeds in Liquid**
¹T. Sarinont, ¹K. Koga, ²S. Kitazaki, ²N. Hayashi, ¹M. Shiratani
¹ Kyushu University, Japan
² Kyushu University, Japan
- 04pP13 **Enhanced Hydroxyl Radical Generation of An Argon-Based Atmospheric-Pressure Plasma Jet for Sterilization**
¹Z. H. Lin, ²K. C. Liao, ¹C. T. Liu, ¹Y. W. Yang, ¹J. S. Wu
¹National Chiao Tung University, Taiwan
²National Taiwan University, Taiwan
- 04pP14 **Surface Anti-Fouling Layer Prepared by Plasma Ion Implantation Grafting of Poly (2-Ethyl-2-Oxazoline)**
S. C. Chen, M. Jiywang
National Taiwan University of Science And Technology

ISPlasma2014/IC-PLANTS2014 March 2- 6, 2014 Nagoya, Japan

04pP15

Effect of Cell Differentiation on BMP-2 Mimetic Peptide Imobilization on The Plasma-Functionalized 3-D Extruded PCL Scaffolds

¹G. S. Shin, ¹T. Y. Bak, ¹Y. M. Ko, ²S. W. Yang, ¹B. H. Kim

¹Chosun University, Korea

²Chosun University, Korea

04pP16

The Comparision of Protein Loading Efficiency on 3 D PCL Scaffolds with Respect To Plasma Modification Including Etching and Deposition Technique

S. W. Myung, H. S. Roh, Y. S. Hwang, Y. H. Hwang, B. H. Kim

Chosun University, Korea

04pP17

Effects of Oxygen Radical Treatment in Liquid Phase on Inactivation of E. Coli

¹T. Towatari, ¹H. Hashizume, ¹T. Ohta, ²M. Hori, ¹M. Ito

¹Meijo University

²Nagoya University

04pP18

Fluorescent Analysis of Inactivation Mechanism of *P. Digitatum* Spores Treated with Oxygen Radicals

¹H. Hashizume, ¹T. Towatari, ¹T. Ohta, ²K. Takeda, ²K. Ishikawa, ²M. Hori, ¹M. Ito

¹Meijo University, Japan

²Nagoya University, Japan

04pP19

Nanostructural Observation of *P. Digitatum* Spores on The Inactivation Process with Oxygen Radical Treatment

¹H. Hashizume, ¹T. Ohta, ²K. Takeda, ²K. Ishikawa, ²M. Hori, ¹M. Ito

¹Meijo University, Japan

²Nagoya University, Japan

04pP20

Promotion and Repression Effects of Oxygen Radical Treatment on Budding Yeast Cells

¹H. Hashizume, ¹T. Ohta, ²M. Hori, ¹M. Ito

¹Meijo University, Japan

²Nagoya University, Japan

04pP21

Investigation of Main Sterilization Factor of Bacterial Spores by Atmospheric Pressure Air Plasma

¹K. Nakamura, ²D. Yoshino, ²T. Nakajima, ²T. Sato

¹Tohoku University, Japan

²Tohoku University, Japan

04pP22

Surface Characteristics of EB-PVD Si-HA Coating on The Plasma Electrolytic Oxidized Ti-Xhf Alloys

H. C. Choe

Chosun University, Korea

04pP23

Integrative Analysis of Cellular Response Induced by Non-Thermal Plasma

H. Kurita, K. Sano, M. Shimizu, T. Nakajima, H. Yasuda, K. Takashima, A. Mizuno
Toyohashi University of Technology, Japan

04pP24

Manganese-Hydroxyapatite Coated Ti-Nb Alloy by Plasma Sputtering Methods

C. I. Jo, H. C. Choe
Chosun University, Korea

04pP25

Molecular Structural Change of Soft Materials Via Irradiation with Atmospheric-Pressure Plasma Jet for Plasma Medicine

K. Takenaka, A. Miyazaki, K. Kawabata, G. Uchida, Y. Setsuhara
Osaka University, Japan

04pP26

Fungicidal Effect of Atmospheric Pressure Dielectric Barrier Discharge (APDBD) on *Penicillium Digitatum* Spore on Citrus

¹Y. Yagyu, ¹N. Matsumoto, ²N. Hayashi, ¹T. Yamasaki, ¹H. Kawasaki, ¹T. Ohshima, ¹T. Ihara,
¹Y. Suda

¹Sasebo National College of Technology, Japan

²Kyushu University, Japan

04pP27

Spatial Profiles of Emission Spectra From Atmospheric-Pressure Plasma Jet For Plasma Medicine

¹G. Uchida, ¹K. Takenaka, ¹A. Miyazaki, ¹K. Kawabata, ¹Y. Setsuhara, ²M. Hori

¹Osaka University, Japan

²Nagoya University, Japan

04pP28

Effects of Gas-Mixing Structure on Discharge Properties of Atmospheric-Pressure Plasma Jet for Plasma Medicine

G. Uchida, K. Takenaka, A. Miyazaki, K. Kawabata, Y. Setsuhara

Osaka University, Japan

04pP29

Effect of Bimodal Diamond Particle Size Distribution on Thermal Properties of Al/Diamond Composite Fabricated By SPS

¹K. Mizuuchi, ²K. Inoue, ¹Y. Agari, ¹M. Sugioka, ¹M. Tanaka, ¹T. Takeuchi, ¹J. Tani, ³M. Kawahara,

³Y. Makino, ³M. Ito

¹ Osaka Municipal Technical Research Institute, Japan

² University of Washington, USA

³ Fuji Electronic Industrial Co., Ltd., Japan

⁴ Kyoto University, Japan

⁵ Osaka University, Japan

ISPlasma2014/IC-PLANTS2014 March 2- 6, 2014 Nagoya, Japan

- 04pP30 **Perpendicular Magnetization Reversal Mechanism of Functional Fept Films for Magnetic Storage Medium**
D. H. Wei, C. H. Chao, P.W. Chi
National Taipei University of Technology, Taiwan
- 04pP31 **The Characteristics of Glass Fiber Reinforced Plastics Embedded with Shape Memory Alloy and Silicone Plates Embedded with Superelastic Alloy Wires**
M. Tanaka, K. Mizuuchi, M. Sugioka, S. Yamada
Osaka Municipal Technical Research Institute, Japan
- 04pP32 **Perpendicular Magnetization Behavior of Functional Cu/Fept Nanobilayers for Magnetic Recording Media**
D. H. Wei, P. W. Chi, C. H. Chao
National Taipei University of Technology, Taiwan
- 04pP33 **Joining of Stainless Steels by Spark Plasma Sintering Process**
T. Furuhashi, T. Matsumoto, Y. Watanabe, H. Sato
Nagoya Institute of Technology, Japan
- 04pP34 **Development of Al-Based TiO₂ Photocatalytic Functionally Graded Materials Fabricated by Centrifugal Mixed-Powder Method**
J. Maeda, H. Sato, Y. Watanabe
Nagoya Institute of Technology, Japan

04pP35 **Annealing temperature dependent structural evolution and electric response of ZnO–TiO₂ core-shell nanostructures**

Y. C. Liang, W. K. Liao

National Taiwan Ocean University, Taiwan

04pP36 **Change of Phase Transformation Temperature of Fe-Ni Alloy by Shot Peening**

M. Okada, H. Sato, Y. Watanabe

Nagoya Institute of Technology, Japan

04pP37 **Effect of Thermo-Mechanical Training with Bending Mode on Damping Capacity in Fe-20mass%Mn Alloy**

N. Iwata, Y. Watanabe, H. Sato, Y. Nishino

Nagoya Institute of Technology, Japan

04pP38 **Development of Strain Sensitive Multilayered Films for High-Temperature Pressure Sensors**

Y. Kakehi, Y. Yamada, T. Matsunaga T. Oguri, Y. Hasegawa, K. Satoh

Technology Research Institute of Osaka Prefecture, Japan

04pP39 **Hot Roll Bonding of Pure Al and Interstitial Free Steel Plates**

¹T. Harada, ¹H. Tsukamoto, ^{1,2}Y. Komiya, ¹H. Sato, ¹Y. Watanabe

¹Nagoya Institute Of Technology, Japan

²Nihon University, Japan

04pP40

Functionally Gradient Material of Carbonated Hydroxyapatite Prepared by Spark Plasma Sintering

D. Kawagoe, N. Satou, T. Kosuta, R. Masuda, T. Kaneko, A. Shinohara

Oyama National College of Technology, Japan

04pP41

Multiferroic and Structural Transition Properties of $\text{Bi}_{1-X}\text{Pr}_X\text{Fe}_{0.95}\text{Mn}_{0.05}\text{O}_3$ Thin Films

¹M. C. Kao, ¹H. Z. Chen, ¹S. L. Young, ²C. Y. Kung

¹Hsiuping University of Science And Technology, Taiwan

²National Chung Hsing University, Taiwan

04pP42

Studying the Surface Quality of ZnO Nanorods by Second Harmonic Generation

¹C. W. Liu, ¹S. J. Chang, ¹C. H. Hsiao, ²C. C. Liu, ^{2,3}K. Y. Lo

¹National Cheng Kung University, Taiwan

²National Cheng Kung University, Taiwan

³National Cheng Kung University, Taiwan

04pP43

Effects of Hydrolysis on The Luminescence of $\text{ZnAl}_{204}:\text{Mn}_2^+$ Nanophosphors Prepared With The Urea-Assisted Sol-Gel Process

¹M. T. Tsai, ²H. L. Chen, ³Y. S. Chang, ¹Y. Y. Chen

¹National Formosa University, Taiwan

²Kao Yuan University, Taiwan

³National Formosa University, Taiwan

04pP44

Effects of Pr₃₊ Ion-Doped Ba₂ZnO₅ Phosphor Prepared Using Sol Gel Method

¹B. Y. Chen, ¹H. L. Chen, ²M. T. Tsai, ³Y. S. Chang

¹Kao Yuan University, Taiwan

²National Formosa University, Taiwan

³National Formosa University, Taiwan

04pP46

Annealing Effect of Thremal Reducde Molybdenum Sulfide as A Pt-Free and Highly Electrocatalytic Counter Electrode for Dye-Sensitized Solar Cells

¹C. H. Lin, ²C. C. M. Ma, ¹F. R. Chen, ¹C. H. Tsai, ³C. K. Hsieh

¹National Tsing Hua University, Taiwan

²National Tsing Hua University, Taiwan

³Ming Chi University of Technology, Taiwan

04pP47

Interface Reaction with Different Iodine Electrolyte Concentration at the Platinum Electrode in Dye-Sensitized Solar Cells

¹Y. H. Wei, ¹C. H. Lin, ¹C. C. M. Ma, ²C. H. Tsai, ³C. K. Hsieh

¹National Tsing Hua University, Taiwan

²National Tsing Hua University, Taiwan

³Ming Chi University of Technology, Taiwan

04pP48

Synthesis of Cu-Fe Nanoparticles as Bi-Functional Catalyst for Li-Air Battery

¹R. Takahashi, ^{1,2}H. O. L. Li, ^{1,2,3}N. Saito

¹Nagoya University, Japan

²Nagoya University, Japan

³JST CREST, Japan

04pP49

Control of Optical Bandgap in Doped Bismuth Titanates for Novel Optoelectric Device

J. Y. Han, C. W. Bark

Gachon University, Korea

04pP50

Investigation of Gate Oxide Integrity under Hot Carrier Stress in Advanced BCD HV PMOS

T. H. Chen, J. F. Chen

National Cheng Kung University, Taiwan

04pP51

Pt and PtRu Nanoparticles Electrodeposited Without Hydrogen Evolution Reaction on Mesoporous Carbon Electrode for Methanol Oxidation

¹H. Y. Chou, ²C. K. Hsieh, ¹T. K. Yeh, ¹C. H. Tsai

¹National Tsing Hua University, Taiwan

²Ming Chi University of Technology, Taiwan

04pP52

Fabrication of Qunatum-Dot Sensitized Solar Cells Using Ge Nanoparticle Films Deposited by High Pressure Rf Magnetron Sputtering Method

¹D. Ichida, ¹S. Hashimoto, ²G. Uchida, ¹H. Seo, ³K. Kamataki, ^{1,4}N. Itagaki, ¹K. Koga, ¹M. Shiratani

¹Kyushu University, Japan

²Osaka University, Japan

³Kyushu University, Japan

⁴Japan Science And Technology Agency, Japan

04pP53

Synthesis of Pt Nanoparticles Supported on Cnts by Solution Plasma Sputtering Processing

¹W. Yaowarat, ²O. L. H. Li, ³N. Saito

¹Nagoya University, Japan

²Nagoya University, Japan

³Nagoya University, Japan

04pP54

Catalytic Activity and Durability for Oxygen Reduction Reaction of Hetero-Atom Doped Mesoporous Carbons

¹D. W. Kim, ²O. L. Li, ³N. Saito

¹Nagoya University, Japan

²Nagoya University, Japan

³Nagoya University, Japan

04pP55

Reliability of Devices in Periphery Circuitry of NAND Flash Memory

T. H. Lu, D. R. Ai, J. F. Chen

National Cheng Kung University, Taiwan

04pP56

Effects of Device Dimension on Reliability of N-LDMOS Transistors

Y. S. Fing, Y. M. Liu, J. F. Chen

National Cheng Kung University, Taiwan

04pP57

An MD Study of Self-Induced Bubble Growth in W Under He Irradiation

R. Kobayashi, T. Hattori, T. Tamura, S. Ogata

Nagoya Institute Of Technology, Japan

04pP58

An Excellent Encapsulation Of Silicone On Crystalline-Si Photovoltaic Devices With Zno Nanowires

<Withdrawn> ¹S. Y. Lin, ¹S. J. Chang, ²T. J. Hsueh, ²S. M. Lin, ²J. Y. Tsai

¹National Cheng Kung University, Taiwan

²National Nano Device Laboratories, Taiwan

04pP59

The Effect of Dye-Sensitized Solar Cells Based on the Anodizing Tio2 Nanotube Array/Nanoparticle Double Layer Electrode

J. H. Yang, K. H. Kim, C. W. Bark, H. W. Choi

Gachon University, Korea

ISPlasma2014/IC-PLANTS2014 March 2- 6, 2014 Nagoya, Japan

04pP60

Y₂O₃:Er₃₊ Phosphors Doped Photoelectrode for Improving Efficiencies of Dye-Sensitized Solar Cell

Y. M. Kim, K. H. Kim, C. W. Bark, H. W. Choi

Gachon University, Korea

04pP61

Solution Plasma Synthesis Process of Tungsten Carbide on N-Doped Carbon Nanocomposite with Enhancing Catalytic ORR Activity and Durability

¹D. W. Kim, ^{1,2}H. O. L. L., ^{1,2,3}N. Saito

¹ Nagoya University, Japan

² Nagoya University, Japan

³ JST CREST, Japan

04pP62

Reversibly Thermoswitchable Two Dimensional Periodic Gratings Prepared From Tethered Poly (N-Isopropylacrylamide) on Silicon Surfaces

C. L. Li, J. K. Chen

National Taiwan University of Science and Technology, Taiwan

04pP63

Understanding Plasma Growth of Fullerene: Effect of Electric Field and Nitrate

Y. T. Wang

Kaohsiung Medical University, Taiwan

ISPlasma2014/IC-PLANTS2014 March 2- 6, 2014 Nagoya, Japan

04pP64

The Effects of Different Solvents to Dissolve Active Layer on Organic Solar Cells Based on Polyaniline as Hole Transporting Layer

Y. Y Huang, H. Y. Wen, M. Y. Chang
National Sun Yat-Sen University, Taiwan

04pP65

Highly Conductive of PEDOT : PSS Electrode by Film Soaking with Acidic for ITO-Free Organic Solar Cells

C.W. Chiu, Y.C. Hung, C.C. Lin, M.Y. Chang
National Sun Yat-Sen University, Taiwan

04pP66

The Effects of Anode Buffer Layer on The Performance of Organic Solar Cells

C.C. Lin, C.W. Chiu, M.Y. Chang
National Sun Yat-Sen University, Taiwan

04pP67

Impedance Spectroscopy of $1-x$ BaTiO₃- x Ba(Mg_{1/3}Nb_{2/3})O₃ Ceramics

¹H. H. Su, ²C. S. Hong, ³C. C. Tsai, ¹S. Y. Chu
¹National Cheng Kung University, Taiwan
²National Kaohsiung Normal University, Taiwan
³Tung Fang Design University, Taiwan

ISPlasma2014/IC-PLANTS2014 March 2- 6, 2014 Nagoya, Japan

04pP68LN **Application of AlGaInP Quaternary Compound Tunneling Layer for Highperformance Heterostructure-Emitter Bipolar Transistor**

J. H. Tsai, C. C. Chiang, Y. T. Chao, F. M. Wang
National Kaohsiung Normal University, Taiwan

04pP69LN **Synthesis and Characterization of Nanocrystalline CeO₂/ZnO by Sol-Gel Process**

¹Y. S. Yanga, ²L. Guo, ²L. G. Teoh
¹Kao Yuan University, Taiwan
²National Pingtung University of Science and Technology, Taiwan

04pP70LN **Effect of Extra Pb Excess on Dielectric and Structural Property of Pbtio₃ Thin Films Capacitor**

N. Zainal, M. Rusop
Universiti Teknologi Mara, Malaysia

04pP71LN **Unusual Electric Double-Layer Capacitance Increase with Charge-Discharge Cycles of Nitrogen Doped Single-Walled Carbon Nanotubes**

A. A. Zubaidi, Z. Jiang, S. Kawasaki
Nagoya Institute of Technology, Japan

04pP72LN

Synthesis of Nanographene/Pt Composite using Alcohol in-liquid Plasma

¹K. Yoshida, ¹M. Ito, ¹M. Hiramatsu, ²T. Saida, ³H. Kano, ⁴H. Kondo, ⁴M. Hori

¹Meijo University, Japan

²Meijo University, Japan

³NU ECO ENGINEERING CO.LTD, Japan

⁴Nagoya University, Japan

04pP73LN

Properties of p-type N Doped Cu₂O Thin Films Prepared by Reactive Sputtering

Y. S. Jung, H. W. Choi, K. H. Kim

Gachon University, Korea