Poster session 4 March 19 (TUE) 16:15-18:00

19P4-01 **Surface-Diffuse Atmospheric-Pressure Dielectric Barrier Discharge Plasma Treatment on PEDOT:PSS for Inverted Structure Perovskite Solar Cells**

[1,2]Te-en Li, [1,2]Jui-Hsuan Tsai, [1]I-Chun Cheng, [1]Cheng-Che Hsu and [1,2]Jian-Zhang Chen
[1]National Taiwan University
[2]Advanced Research Center for Green Materials Science and Technology

19P4-02 **Plasma-enabled Growth of Nanocarbons from Biomass**

[1]Zhipeng Wang Zhipeng Wang, [2]Hironori Ogata and [1]Xiangshu Chen
[1]Nanchang Normal University
[2]Hosei University

19P4-03 **Nitrogen DC-Pulse Atmospheric-Pressure-Plasma-Jet (APPJ)-Reduced Pt-NiO_x Nanocomposite Catalysts**

[1], [2]Tzu-Ming Huang, [1]I-Chun Cheng, [1]Cheng-Che Hsu and [1,2]Jian-Zhang Chen
[1]National Taiwan University
[2]Advanced Research Center for Green Materials Science and Technology

19P4-04 **Application of Multi-layer WSe_2 with Oxygen Plasma Treatment**

Yu-Hsuan Shih, Jeng-Yu Ke, Tsung-Yu Huang and Kuei-Yi Lee
National Taiwan University of Science and Technology

19P4-05 **Silver Nanoparticles by the Pulsed Plasma in Liquid and their Antibacterial Properties**

[1]Emil Omurzak, [1]Asel Bekpolot Kyzy, [1]Ruslan Adil Akai Tegin, [2]Cai Rongsheng, [2]Yubiao Niu and [2]Richard E. Palmer
[1]Kyrgyz-Turkish Manas University
[2]Swansea University

19P4-06 **Preparation and Structural Analysis of Hydrogenated Amorphous Carbon Nitride Films with High Nitrogen Contents**

Haruhiko Ito, Yoshiki Iizawa, Yoshinori Karoh, Teppei Tsuda and Hidetoshi Saitoh
Nagaoka University of Technology

19P4-07 **Growth of Nitrogen-doped Diamond-like Carbon Thin Films using Low Energy Ion Beams**

[1,2]Allen Vincent Catapang, [1]Andrea Gracia Cuevas, [1]McGuillis Kim Ramos and [1]Magdaleno Jr. Vasquez
[1]University of the Philippines-Diliman
[2]Doshisha University

19P4-08 **Surface Grafting of Reactive Compatible Solute Hydroxyectoine onto Bioelastomer by using Plasma at Different Conditions**

Shinn-Gwo Hong and Jia-Shium Yu
Yuan Ze University

19P4-09 **Syntheses of Poly(Acrylic Acid)-Iron (III) Self-Healing Hydrogels by Argon-Microplasma**

Hardy Shuwanto and Meng-Jiy Wang
National Taiwan University of Science and Technology

19P4-10 **Modulation the Biocompatibility of Electrospun PEO Nanofibers Toward RT4-D6P2T Cells**

[1]Hsueh-Fang Huang, [1]Meng-Jiy Wang, [2]Yuki Shirosaki and [1]Alfin Kurniawan
[1]National Taiwan University of Science and Technology
[2]Kyushu Institute of Technology

19P4-11 **Study of Temperature Dependent Growth of Boron Nitride by Surface Wave Assisted Microwave Plasma Chemical Vapor Deposition Method**

[1]Rupesh Singh, [2]Golap Kalita, [3]Masayoshi Umeno and [1]Toshio Kawahara
[1]Chubu University
[2]Nagoya Institute of Technology
[3]C's Techno Inc.

19P4-12 **Crystalline TCO Film Synthesis by Cluster Deposition with 3D Magnetron Sputtering at Low Temperature**

Jeon G. Han, Bibhuti B. Sahu and Long Wen
Sungkyunkwan University

19P4-14 **Mechanical and Frictional Properties of Nanocrystalline and Amorphous Alloys by In-situ TEM Compression and Nanoindentation**

Shih-Wei Liang and Te-Hua Fang
National Kaohsiung University

19P4-15 **High-temperature Corrosion of AlCrSiN Films**

Dongbok Lee, Xiao Xiao and Minjung Kim
Sungkyunkwan University

19P4-16 **Smaller Particle Synthesis by Combination of Microwave and Ultrasound Irradiations**

Atsuya Shibatani, Hruka Kan and Yusuke Asakuma
University of Hyogo

19P4-17 **Surface Modification of Carbon Acid Catalysts by Gas-liquid Interface Plasma Process for Biomass Transformation**

Oi Lun Helen Li and Lusha Qin
Pusan National University

19P4-18 **Fabrication of Paper-based Highly Sensitive Electrochemical Device using Oxygen Plasma Treatment**

Wonseok Jung, Sangki Lee and Joonhyub Kim
Korea University

19P4-20 **Super-amphiphobic Teflon-like Fluorocarbon Nanoflakes Deposited by Microwave Plasmas**

Ching-Fu Tseng and Ta-Chin Wei
Chung Yuan Christian University

19P4-21 **Extended-Gate Field Effect Transistor pH Sensor Based on Few-Layer MoS_2**

[1]Yu-Jui Fang, [1]Sheng-Po Chang, [1]Shoou-Jinn Chang and [2]Chih-Chien Lin
[1]National Cheng Kung University
[2]Center for Micro/Nano Science and Technology, Advanced Optoelectronic Technology Center, NCKU

19P4-22 **High-voltage Electrical Double-layer Capacitors using Vertical Graphene Nanowalls with and Without Nitrogen Doping**

[1]Chi-Chang Hu, [1,2]Yu-Wen Chi, [1]Hsiao-Hsuan Shen and [2]Kun-Ping Huang
[1]National Tsing Hua University
[2]Industrial Technology Research Institute

19P4-23 **Photo Response Measurement for Transfer-free Multilayer Graphene Films Prepared Utilizing Catalyst Metal Agglomeration Technique**

Bilguun Dorjdagva, Motoki Kobayashi, Toshiharu Kubo, Makoto Miyoshi and Takashi Egawa
Nagoya Institute of Technology

19P4-24 **Fabrication of Transfer-free Graphene FETs with ALD-Al_2O_3 Layers as the Gate Insulator**

Motoki Kobayashi, Bilguum Dorjdagva, Toshiharu Kubo, Mokoto Miyoshi and Takashi Egawa
Nagoya Institute of Technology

19P4-25 **Characterization of Carbon Metal Diffusion Barrier Prepared by PECVD System using Mixed Precursor of Graphite Flake with 4-methylcyclohexanone**

Min Wook Jung, Jong Wook Kim, Kwang Ki Kim, Da Un Jung, Yong Yi Yin and Jae Young Yang
TES Co.,Ltd

19P4-26 **High Efficiency Formation of Carbon Nanotube Filaments Induced by Gas Discharge Breakdown using Metal Needle Electrode**

Masatoshi Hiromura, Seiji Funaki and Hideki Sato
Mie University

19P4-27 **Direct Synthesis of Graphene on Glass by Low Temperature Microwave Plasma Enhanced Chemical Vapor Deposition**

[1]Riteshkumar Vishwakarma, [1]Zhu Rucheng, [1]Y Mabuchi, [1]Amr Abuelwafa, [2]Susumu Ichimura, [1]Sudip Adhikari and [1]Masayashi Umeno
[1]C's Techno. Inc. Nagoya, Japan
[2]Nagoya Industries Promotion Corporation

19P4-28 **Charge Transport Characteristics of Nanographene-Perovskite Heterojunction Films Produced by Microwave Plasma CVD Method**

[1]Hironori Ogata, [1]Takamasa Takeuchi, [1]Hiroya Kiuchi, [1]Kazunori Ito, [1]Masato Gocho, [1]Toshiya Kobayashi, [1]Yuki Fukazawa and [2]Zhipeng Wang
[1]Hosei University
[2]Jiangxi Normal University

19P4-29 **Indium Phosphide/Zinc Selenium Sulfur/Zinc Sulfide Quantum Dots Anchored on Carbon Nanotubes as Cathode Materials for Solar-assisted Li-O_2 Batteries**

[1]Rong-Zhong Chang, [2]Chih-Jung Chen, [1]Da-Hua Wei and [2]Ru-Shi Liu
[1]National Taipei University of Technology
[2]National Taiwan University

19P4-30 **Metal Chloride Doped of Graphene Grown by Microwave Surface Wave Plasma CVD**

Amr Attia Abuelwafa, Riteshkumar Vishwakarma, Zhu Rucheng, Yota Mabuchi, Sudip Adhikari and Masayoshi Umeno
C's Techno,Inc

19P4-31 **High Specificity of MiRNA-21 Detection Based on Flexible Graphene Oxide/Graphene Layered Structure**

Tzu-Ting Huang and Chi-Hsien Huang
Ming Chi University of Technology

19P4-32 **Drawable Carbon Nanotube Arrays: Required Density and Height**

Hirotaka Inoue, Tomohiro Nakagawa, Masaki Hada, Takeshi Nishikawa, Yoshifumi Yamashita and Yasuhiko Hayashi
Okayama University

19P4-33 **Gas Desorption and Structural Change of Various Diamond-Like Carbon Films by Heat Treatment under Vacuum**

[1]Tsuyoshi Tanimoto, [1]Yuya Sugie, [1]Satoshi Degai, [1]Koki Tamekuni, [1]Toru Harigai, [1]Yoshiyuki Suda, [1]Hirofumi Takikawa, [2]Masao Kamiya, [3]Hidenobu Gonda and [4]Makoto Taki
[1]Toyohashi University of Technology
[2]Itoh Optical Industrial Co., Ltd.
[3]OSG Coating Service Co., Ltd.
[4]Onward Ceramic Coating Co., Ltd.

19P4-34 **Synthesis of Pt/Carbon-Sphere Catalyst and Evaluation of Its Oxygen Reduction-Reaction Activity in Acidic Environmental**

Kan Sakakibara, Ryohei Igami and Takahiro Saida
Meijo University

19P4-35 **Growth of Graphene on Nickel Substrate using Different Cycles of Refined Cooking Palm Oil**

[1,2]Robaiah Mamat, [1,2]Asnida Asli, [1,2]Saifollah Abdullah, [1,2]Zuraida Khusaimi, [3]Salman A.H.Alrokayan, [3]Haseeb A.Khan, [4]Tetsuo Soga and [2,5]Mohamad Rusop Mahmood
[1]UniversitiTeknologi MARA, Malaysia
[2]King Saud University Riyadh
[3]Nagoya Institute of Technology

19P4-36 **Synthesis of Graphene from Green Carbon Source and Its Application**

[1]Salifairus Mohammad Jafar, [2]Tetsuo Soga, [3]Salman A.H. Alrokayan, [3]Haseeb A. Khan and [1]Mohamad Rusop Mahmood
[1]Universiti Teknologi MARA
[2]Nagoya Institute of Technology
[3]King Saud University

19P4-37 **Removal of Various Diamond-Like Carbon Films by Oxygen Plasma Treatment**

[1]Tsuyoshi Tanimoto, [1]Yuki Kondo, [1]Koki Tamekuni, [1]Toru Harigai, [1]Yoshiyuki Suda, [1]Hirofumi Takikawa, [2]Hidenobu Gonda, [3]Yasuhiro Hadano and [4]Masao Kamiya
[1]Toyohashi University of Technology
[2]OSG Coating Service Co., Ltd.
[3]Kojima Industries Corporation
[4]Itoh Optical Industrial Co., Ltd.

19P4-38 **Power Generation Characteristics of Polymer Electrolyte Fuel Cell using Carbon Nanowalls**

[1]Takayuki Ohta, [1]Hiroaki Iwata, [1]Mineo Hiramatsu, [2]Hiroki Kondo and [2]Masaru Hori
[1]Meijo University
[2]Nagoya University

19P4-39 **Regulation of Cell Proliferation Changing Duty Ratio of an Electrical Stimulation on Carbon Nanowalls Scaffold**
Tomonori Ichikawa, Hiroki Kondo, Hiroshi Hashizume, Hiromasa Tanaka, Takayoshi Tsutsumi, Kenji Ishikawa, Makoto Sekine and Masaru Hori
Nagoya University

19P4-40 **Magnetic Properties of Reduced Multilayer Graphene Oxide Sheets**
[1]Ren Sonoda, [1]Kyosuke Kimura, [1]Yuji Fujiwara, [2]Mutsuko Jimbo and [1]Tadashi Kobayashi
[1]Mie University
[2]Daido University

19P4-41 **Co Catalyzed Single-walled Carbon Nanotubes Growth on Mesoporous Carbon by Chemical Vapor Deposition**
Aliza Khaniya Sharma, Takahiro Saida, Shigeya Naritsuka and Takahiro Maruyama
Meijo University

19P4-42 **The Syhthesis of NiS Thin Films as the High Efficiency Counter Electrode in Dye-Sensitized Solar Cells**
Jian-Hong Ye and Chien-Kuo Hsieh
Ming Chi University of Technology

19P4-43 **Interfacial Modulation of TiO_2 Nanorod for Solar Fuel Production**
Yu-Lin Chen and Ying-Chih Pu
National University of Tainan

19P4-44 **$BiVO_4/FeMO_x$ (M: Zn, Ni and Cu) Nanoheterostructures for Photoelectrochemical Solar Fuel Production**
Chien-Chih Lai, Jie-Wen Chen and Ying-Chih Pu
National University of Tainan

19P4-45 **Photocatalytic Property of Titanium Dioxide Mixed Bismuth Lanthanum Titanate (BLT) for Photovoltaic Devices**
Sangmo Kim and Chung Wung Bark
Gachon University

19P4-46 **Synthesis of Cobalt Doped TiO_2 Based on Metal Organic Frameworks as an Effective Electron Transport Material in Perovskite Solar Cells**
Chung Wung Bark, Thi My Huyen Nguyen, Sangmo Kim and Hai Truyen Dang
Gachon University

19P4-47 **Low Temperature Encapsulating Perovskite Solar Cells by RF Sputtering**
Maro Kim
Gachon University

19P4-48 **Synthesis, Characterization and Magnetic Properties of $NiFe_2O_4$ Nanoparticles for Use as MRI Agent**
[1]Sudarat Sitthichai, [1]Titipun Thongtem, [1]Chalermchai Pilapong, [2]Anukorn Phuruangrat and [1]Somchai Thongtem
[1]Chiang Mai University
[2]Prince of Songkla University

19P4-49 **Fabrication and Photoconductive Characteristics of $Mo_{1-x}W_xS_2$**
Jeng-Yu Ke, Tsung-Yu Huang, Yu-Hsuan Shih and ,Kuei-Yi Lee
National Taiwan University of Science and Technology

19P4-50 **Improved Thermal Conductivity of Epoxy Composite Containing Exfoliated Hexagonal Boron Nitride Via Jet Cavitation Method**
Wei-Cheng Cheng and Wei-Ren Liu
Chung Yuan Christian University

19P4-51 **Effect of Seed Layer Deposited by Facing Targets Sputtering System on ZnO Photo-Electrode for Dye-Sensitized Solar Cells**
Jeongsoo Hong, Sangmo Kim and Kyunghwan Kim
Gachon University

19P4-52 **Arsenic Adsorption of Surface Modified Philippine Natural Zeolite (SM-PNZ) in an Aqueous Solution**
[1]Eleanor Olegario, [2]Shawnn Audric Nadurata, [2]Stephanie Dela Merced, [2]Emmanuel Judd Jabla, [2]Luc Raphael Ruiz, [2]Lyka Valmores and [2]Erwine Dela Paz
[1]University of the Philippines-Diliman
[2]Ateneo de Manila University

19P4-53 **Plasma Functionalized Few-Layered Graphene for Desalination Applications**
Daphne Angelina Mercado, Francis Rumen Parungao and Ma. Shanlene Dela Vega
University of the Philippines-Diliman

19P4-54 **Graphene-based Composites as Forward Osmosis Membranes for Desalination**
[1]Ma. Shanlene Dela Vega, [1]Aubrey Faith Mella, [1]Jomar Tercero, [2]Matthew Sherburne and [1]Magdaleno Vasquez Jr.
[1]University of the Philippines-Diliman
[2]University of California-Berkeley

19P4-55 **Molecular Dynamics Study of Low-Temperature Graphene Growth on Cu Surface**
[1]Jomar Tercero, [1]Aubrey Faith Mella, [1]Ma. Shanlene Dela Vega, [2]Matthew Sherburne and [1]Magdaleno Vasquez Jr.
[1]University of the Philippines-Diliman
[2]University of California-Berkeley

19P4-56 **Fabrication of Superhydrophilic and Underwater Superoleophobic Nanostructured CuO/Cu_2O Mesh for Oily Wastewater Treatment**
Abbie Gail Villanueva, Christian Agano, Anna Patricia Cristobal, Arantxa Danielle Montallana and Magdaleno Vasquez Jr.
University of the Philippines-Diliman

19P4-57 **Volatile Organic Compound (VOC) Removal from Natural Rubber using Surfactant-Modified Zeolites with Water Scrubbing**
Marc Justin Lauzon, Eleanor Olegario and Magdaleno Vasquez
University of the Philippines-Diliman

19P4-58 **Growth and Characterization of 2D MoS_2 Thin Films for Photodetector Applications**
Sin-Liang Ou, Jun-Yu Li, Chia-Pei Tsai and Chun-Yu Chang
Da-Yeh University

19P4-59 **Electric Arc Synthesis of Germanium Nanotubes**
Almaz Saifutdinov, Boris Timerkaev, Artem Sofronitsky and Allia Saifutdinova
Kazan National Research Technical University named after A.N.Tupolev

19P4-60 **Cyclic Amino-Functionalisation on Graphene Quatum Dots using Atomic Layer Amidation Technique**
Bikash Mallick
Yuan Ze University

19P4-61 **Surface Treatment Effects on Si/C Composite Anode for Lithium Ion Batteries**
Cheng-Che Hsieh and Wei-Ren Liu
Chung Yuan Christian University

19P4-62 **Synthesis and Characterizations of $Li_{1+x}Al_xTi_{2-x}(PO_4)_3$ Solid Electrolyte for Li-Ion Batteries**
Pei-Yi Yen and Wei-Ren Liu
Chung Yuan Christian University

19P4-63 **Porous Metal-Organic Framework Nano/Micromaterials with Selective Adsorption Properties**
Wei-Yin Sun
Nanjing University

19P4-64 **Functionalization of Organosilicate Thin Films by Catalytic Reaction using Microwave-Exited Plasma and their Application.**
Suhan Kim, Ju Young Park and Jun Choi
KITECH

19P4-65 **Enzymatic Hydrolysis of Soybean Oil for Fatty Acid Production using Magnetically Immobilized Lipase**
[1]Hoang Chinh Nguyen and [2]Chia-Hung Su
[1]Ton Duc Thang University
[2]Ming-Chi University of Technology

19P4-66 **Effect of Particle Shape on Fragmentation Behavior of Al_3Ti Particles in Al-Al_3Ti Composite Deformed by Multi-Directional Forging**
Hisashi Sato, Kohei Takayama, Sarath Babu Duraisamy, Tadachika Chiba and Yoshimi Watanabe
Nagoya Institute of Technology

19P4-67 **Growth Mechanism, Microstructural and Optical Properties of Ga_2O_3 Nanowires for Photodetector Applications**
Jun-Yu Li, Sin-Liang Ou, Chun-Yu Chang and Chia-Pei Tsai
Da-Yeh University