A-6 Solution Plasma

Representative Organizer
Oi Lun Helena LI (Nagoya University)
Co-organizers
Akira MIZUNO (Toyohashi University of Technoloogy)
Kazunori TAKASHIMA (Toyohashi University of Technoloogy)
Tatsuru SHIRAFUJI (Osaka City University)
Koichi YASUOKA (Tokyo Institute of Technology)
Jun NAKAMURA (The University of Electro-Communications)
Hiroharu YUI (Tokyo University of Science)
Takahiro ISHIZAKI (Shibaura Institute of Technology)
SangYul LEE (Korea Aerospace University, Korea)
ZhengHao HE (Huazhong University of Science and technology, China)
Jie LI (Dalian University of Technology, China)
Xiulan HU (Nanjing Tech University, China)
Isarawat PRASERTSUNG (Naresuan University, Kingdom of Thailand)
Rujiravanit RATANA (Chulalongkorn University, Kingdom of Thailand)
Pavel BAROCH (University of West Bohemia, Czech Republic)
MyeongHoon LEE (Korea Maritime University, Korea)
Marek KOCIK (The Szewalski Institute of Fluid Flow Machinery Polish Academy of Sciences, Poland)

Poster Session March 30 (Mon.) 11:15 ～ 12:30

11:15 A6-P-01 **Experimental and Modeling Investigation of Atmospheric DC Argon Plasma Having a Liquid Electrode**

Kei Ikeda, Nozomi Takeuchi, Koichi Yasuoka

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING, TOKYO INSTITUTE OF TECHNOLOGY

11:15 A6-P-02 **Electrochemical Property of Metal Carbide Nanoparticles Synthesized by Solution Plasma**

Takuya Inishi, Takayuki Ban, Yutaka Ohya

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY, GIFU UNIVERSITY

11:15 A6-P-03 **Plasma-Ozone Combination System for Mineralization of Persistent Organic Compounds in Water**

Yu Kamiya, Ryo Saeki, Kosuke Tachibana, Koichi Yasuoka

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11:15 A6-P-04 **Formation Mechanism of Nanoparticles Prepared by Electrode during Solution Plasma Using Pulsed High Voltage**

[1]Tsuyoshi Mizutani, [1]Satoshi Ogawa, [2]Takaaki Murai, [2]Hirofumi Nameki, [3]Tomoko Yoshida, [3]Shinya Yagi,

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2 AICHI CENTER FOR INDUSTRY AND SCIENCE TECHNOLOGY
3 ECOTOPIA SCIENCE INSTITUTE OF NAGOYA UNIVERSITY

11:15 A6-P-05 **Electrocatalytic Activity for Oxygen Reduction Reaction of Halogen-Doped Carbons Synthesized by Solution Plasma Process**

[1]Yota Kaneko, [1]Gasidit Panomsuwan, [1,2]Takahiro Ishizaki

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2 JST CREST

11:15 A6-P-06 **Synthesis of Composite Nanoparticles by Laser Ablation in Liquid CO_2**

[1]Mardiansyah Mardis, [2]Noriharu Takada, [3]Koichi Sasaki, [1]Hideki Kanda, [1]Motonobu Goto

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2 TECHNICAL CENTER, NAGOYA UNIVERSITY
3 DIVISION OF QUANTUM SCIENCE AND ENGINEERING, HOKKAIDO UNIVERSITY

11:15 A6-P-07 **Synthesis of ZnO into Bacterial Cellulose Template via Solution Plasma Process for Wound Care Application**

[1,2]Nattakammala Janpetch, [3]Nagahiro Saito, [1,2]Ratana Rujiravanit

1 PETROLEUM AND PETROCHEMICAL COLLEGE, CHULALONGKORN UNIVERSITY
2 CENTER OF EXCELLENCE ON PETROCHEMICAL AND MATERIALS TECHNOLOGY, CHULALONGKORN UNIVERSITY
3 DEPARTMENT OF MATERIALS, PHYSICS AND ENERGY ENGINEERING, GRADUATE SCHOOL OF ENGINEERING, NAGOYA UNIVERSITY

11:15 A6-P-08 **Evaluation of ZnO Nanoparticles Synthesized by Solution Plasma Processing**

[1,2]Shohei Morishita, [1]Shinpei Nemoto, [2]Sang-Yul Lee, [1,3,4,5]Nagahiro Saito

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3 GREEN MOBILITY COLLABORATIVE RESEARCH CENTER NAGOYA UNIVERSITY
4 JST-CREST
5 JST COI STREAM

11:15 A6-P-09 **Transport of Active Species through the Gas-Liquid Interface by Liquid Phase Stirring**

Hideaki Mizoguchi, Nozomi Takeuchi

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING, TOKYO INSTITUTE OF TECHNOLOGY

11:15 A6-P-10 **Symple Synthesis of Nitrogen Doped Carbon by Solution Plasma Process**

[1]Satoshi Chiba, [1]Gasidit Panomswan, [1,2]Takahiro Ishizaki

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11:15 A6-P-11 **Solution Plasma Process for the Conversion of Guar Gum to Bioethanol**

[1]Shimpei Nemoto, [1,2]Anyarat Watthanaphanit, [1,2,3,4]Nagahiro Saito

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11:15 A6-P-12 **One-Step Facile Fabrication of SnO_2 Nanoclusters Using a Solution Plasma**

[1]Jianbo Zhang, [1]Xiulan Hu, [1]Junjun Shi, [2]Nagahiro Saito

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2 PHYSICS AND ENERGY ENGINEERING, GRADUATE SCHOOL OF ENGINEERING, NAGOYA UNIVERSITY

11:15 A6-P-13 **Electrocatalytic Activity for Oxygen Reduction on Nitrogen-Doped Graphene**

Akihide Ichikawa, Akira Akaishi, Jun Nakamura

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11:15 A6-P-14 **Universal Feature of Seebeck Coefficients in Graphene/h-BN Nano-Composites**

Yosuke Ayako, Akira Akaishi, Jun Nakamura

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11:15 A6-P-15 **Structural Stability of B-, N-Doped Graphene Nanoribbons**

Yuuki Uchida, Akira Akaishi, Jun Nakamura

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11:15 A6-P-16 **CN_x Nanosheets as Metal-Free Catalysts for the Oxygen Reduction Reaction by Solution Plasma Process**

[1]Seunghyo Lee, [1,2]Tomonaga Ueno, [1,2,3]Nagahiro Saito

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11:15 A6-P-17 **On the Differences in Temporal Behavior of OH(A) in 3D Integrated Micro-Solution Plasma Using Ar and He**

Naoya Sotoda, Yuhei Ogura, Kenji Tanaka, Tatsuru Shirafuji

DEPARTMENT OF PHYSICAL ELECTRONICS AND INFORMATICS, OSAKA CITY UNIVERSITY

11:15 A6-P-18 **Carbon Nano Spheres by Solution Plasma Process for CO_2 Adsorption**

[1]Nanthiya Thongvijit, [2]Oi Lun Li, [2]Nagahiro Saito, [1]Uthaiporn Suriyapraphadilok

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2 THE PETROLEUM AND PETROCHEMICAL COLLEGE, CHULALONGKORN UNIVERSITY

11:15 A6-P-19 **Single-Bubble Plasma Generated in a Capillary Tube, and Its Mobile Characteristics**

Kazuhiko Obana, Ryutaro Tashiro, Kenji Tanaka, Tatsuru Shirafuj

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11:15 A6-P-20 **Direct and Controllable Synthesis of Nitrogen-Doped Carbon for Oxygen Reduction Reaction by Solution Plasma Process**

[1]Koangyong Hyun, [2]Tomonaga Ueno, [1,2,3]Nagahiro Saito

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3 JST-CREST

11:15 A6-P-21 **Analysis of Degradation Products after Treatment of Methylene Blue Aqueous Solution with 3D Integrated Micro-Solution Plasma**

[1]Ayano Nomura, [2]Yui Hayashi, [1]Kenji Tanaka, [2]Motonobu Goto, [1]Tatsuru Shirafuji

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2 ENGINEERING, NAGOYA UNIVERSITY

11:15 A6-P-22 **Influence of Solution Temperature on Processing Performance by In-Line Plasma Treatment Device**

[1,3]Michiko Ito, [3]Seigo Takashima, [4]Norio Nomura, [4]Tominori Kitagawa, [1,2]Hirotaka Toyoda

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3 PLASMA CENTER FOR INDUSTRIAL APPLICATIONS (PLACIA), NAGOYA INDUSTRIES PROMOTION CORPORATION
4 SANSHIN MFG.Co., Ltd.

11:15 A6-P-23 **High Durable Silica Coated Pt/CNT for PEMFC Application**

[1]Wattanachai Yaowarat, [1,2]Oi lun Helena Li, [1,2,3]Nagahiro Saito

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11:15 A6-P-24 **Catalyst-Free Synthesis of Boron-Doped Carbon *via* a Simple Solution Plasma Process and Its Catalysis Toward Oxygen Reduction Reaction**

[1]Gasidit Panomsuwan, [1,2]Takahiro Ishizaki

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2 THE CORE RESEARCH FOR EVOLUTIONAL SCIENCE AND TECHNOLOGY (CREST), JAPAN SCIENCE AND TECHNOLOGY (JST)

11:15 A6-P-25 **The Synthesis of the Composition-Controlled Pt-Pd Alloy Nanoparticles Using Solution Plasma Process**

[1]Ah-Rong Cho, [1]Sung-Min Kim, [2]Jung-Wan Kim, [1]Sang-Yul Lee

1 DEPARTMENT OF MATERIALS ENGINEERING, KOREA AEROSPACE UNIVERSITY
2 DIVISION OF BIOENGINEERING, UNIVERSITY OF INCHEON

11:15 A6-P-26 **Research on the Method of Using High Voltage and Heavy Current Pulse Discharge to Dispose Waste Tires**

[1]Xinya Xu, [2]Zhenghao He, [2]Siqi Song, [2]Yuqing Wang, [2]Wenfang Fan

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11:15 A6-P-27 **The PWSCC Mitigating Effect of Zn Nanoparticles on Alloy 600 Surface**

[1]Seong-Cheol Kim, [1]Sung-Min Kim, [1]Chan-Su Kim, [2]Jung-Wan Kim, [1]Sang-Yul Lee

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11:15 A6-P-28 **Synthesis of $CuInSe_2$ Nanoparticles in Solution Plasma**

Mehdi Mardanian, Mikhail Nedelko, Nikolai Tarasenko

INSTITUTE OF PHYSICS, NATIONAL ACADEMY OF SCIENCES OF BELARUS

11:15 A6-P-29 **A Cost-Effective Production of Low-Dimensional Carbon Nanomaterials Using a Solution Plasma System and Its Use as Flexible Conductive Films**

Byeong-Joo Lee, Goo-Hwan Jeong

DEPARTMENT OF NANO APPLIED ENGINEERING, KANGWON NATIONAL UNIVERSITY

11:15 A6-P-30 **Size-Tunable Palladium Nanoparticles as Electrocatalysts Synthesized by Solution Plasma Process**

[1]Yu-Geun Jo, [1]Sung-Min Kim, [2]Jung-Wan Kim, [1]Sang-Yul Lee

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11:15 A6-P-31 **Time-Resolved Optical Diagnostics of Aqueous Solution Plasma**

Motohiro Banno, Kenta Kanno, Hotaka Takakuwa, Hiroharu Yui

DEPARTMENT OF CHEMISTRY, FACULTY OF SCIENCE, TOKYO UNIVERSITY OF SCIENCE

11:15 A6-P-32 **Conversion Ability of Sugars to HMF by Solution Plasma Process**

[1]Yukihiro Muta, [1,3]A.Watthanaphanit, [1,2,3]Nagahiro Saito

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11:15 A6-P-33 **Synthesis of Crystalline Manganese Dioxides by Solution Plasma Prosessing**

[2]Takuya Chiyoda, [1]Motohiro Banno, [1]Toshinori Morisaku, [1,2]Hiroharu Yui

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11:15 A6-P-34 **Influence of Temperature on Free Radical Generation in Water-Ethanol Mixture Based Solution Plasma due to Hydrogen-Bonding Network**

[1]Tomohito Sudare, [1,2,5]Tomonaga Ueno, [1,2,3,4,5]Nagahiro Saito

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5 JST-CREST, JAPAN

11:15 A6-P-35 **Boiling Water Sealing of Plasma Electrolytic Oxidation Treated AZ31B Mg Alloy**

[1]Y.W.Kim, [1]K.S.Son, [1]D.H.Sung, [2]W.S.Chung

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2 DEPARTMENT OF MATERIAL SCIENCE AND ENGINEERING, PUSAN NATIONAL UNIVERSITY

11:15 A6-P-36L **Novel Flow Plasma**

Hiroshi Horibe

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