

A-1 Plasma Engineering

Representative Organizer

Toshiro KANEKO (Tohoku University)

Co-organizers

Koichi SASAKI (Hokkaido University)

Giichiro UCHIDA (Osaka University)

Poster Session March 27 (Fri.) 16:45 ~ 18:00

- 16:45 A1-P-01 **Enhancement of Conductivity on AZO Thin Film by Inserting Meticulous Nano-Silver Quasi-Mesh Structures**
Chen-Hui Weng, Yen-Sheng Lin
DEPARTMENT OF ELECTRONIC ENGINEERING, I-SHOU UNIVERSITY
- 16:45 A1-P-02 **Study of the Blocking Capacity Influence on the DF-CCP Discharge**
^{1,2}*Rafik Benallal*, ²*Arslane Boudghene Stambouli*, ^{1,2}*Mohamed Habchi*, ^{1,2}*Sidi Mohammed Mesli*
1 ÉCOLE PRÉPARATOIRE DES SCIENCES ET TECHNIQUES
2 ISP NMSE DIVISION URMER, ABOUBEKR UNIVERSITY
- 16:45 A1-P-03 **Uniform Formation of Thermal Plasmas Using a Loop-Type of Ar Inductively Thermal Plasma on a Substrate**
¹*Hiromitsu Irie*, ¹*Yuji Maruyama*, ^{1,2}*Yasunori Tanaka*, ^{1,2}*Yoshihiko Uesugi*, ³*Tetsuya Yukimoto*, ²*Tatsuo Ishijima*,
³*Tetsuya Yukimoto*, ³*Hiroshi Kawaura*
1 FACULTY OF ELECTRICAL AND COMPUTER ENGINEERING, KANAZAWA UNIVERSITY
2 RESEARCH CENTER FOR SUSTAINABLE ENERGY AND TECHNOLOGY, KANAZAWA UNIVERSITY
3 CV RESEARCH CORPORATION
- 16:45 A1-P-04 **Conversion of Hydrocarbons to Hydrogen by Plasma Polymerization and Catalytic Reaction**
¹*Min Geun LEE*, ¹*Eun Kyung Cho*, ^{1,2}*Dong Lyun Cho*
1 DEPARTMENT OF ADVANCED CHEMICALS & ENGINEERING, CHONNAM NATIONAL UNIVERSITY
2 DEPARTMENT OF APPLIED CHEMICAL ENGINEERING, CHONNAM NATIONAL UNIVERSITY
- 16:45 A1-P-05 **Dynamic Behavior of the Floating Potential of Tungsten Sample in Steady State Plasma in Response to Plasmoid Irradiation**
¹*Daisuke Sato*, ¹*Noriyasu Ohno*, ²*Shin Kajita*, ¹*Futoshi Domon*, ³*Yusuke Kikuchi*, ³*Ikko Sakuma*
1 GRADUATE SCHOOL OF ENGINEERING, NAGOYA UNIVERSITY
2 ECOTOPIA SCIENCE INSTITUTE, NAGOYA UNIVERSITY
3 GRADUATE SCHOOL OF ENGINEERING, UNIVERSITY OF HYOGO
- 16:45 A1-P-06 **Dynamics of Sheet Plasmas Observed by a High-Speed Camera**
¹*Takauya Onda*, ²*Shin Kajita*, ³*Takaaki Iijima*, ³*Akira Tonegawa*, ¹*Noriyasu Ohno*
1 GRADUATE SCHOOL OF ENGINEERING, NAGOYA UNIVERSITY
2 ECO TOPIA SCIENCE INSTITUTE, NAGOYA UNIVERSITY
3 DEPARTMENT OF PHYSICS, SCHOOL OF SCIENCE, TOKAI UNIVERSITY
- 16:45 A1-P-07 **The Geometric Effect in the Floating Harmonic Method for RF Inductive Coupled Plasma Diagnostics**
Jaewon Lee, Kyung-Hyun Kim, Sangbum Jeon, Chin-Wook Chung
DEPARTMENT OF ELECTRICAL ENGINEERING, HANYANG UNIVERSITY
- 16:45 A1-P-08 **Arc Reactor for Synthesis of Ferromagnetic Carbon Nanotubes in Low Pressure**
Grzegorz Raniszewski, Zbigniew Kolacinski, Lukasz Szymanski
INSTITUTE OF MECHATRONICS AND INFORMATION SYSTEMS, LODZ UNIVERSITY OF TECHNOLOGY

- 16:45 A1-P-09 **Tailoring Surface Properties of Polyethylene Separator by Low Pressure 13.56 MHz RF Oxygen Plasma Glow Discharge**
Chun Li, Chun Huang
 DEPARTMENT OF CHEMICAL ENGINEERING & MATERIALS SCIENCE, YUAN ZE UNIVERSITY
- 16:45 A1-P-10 **Low Temperature Screen Plasma Technology for Low Chromium-Molybdenum Mold Steel**
¹Kuk-Hyun Yeo, ¹Sang-Gweon Kim, ¹Jae-Hoon Lee, ²Jung-Hyun Kong, ²Masahiro Okumiya
 1 HEAT TREATMENT TECHNOLOGY R&BD GROUP, KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY
 2 TOYOTA TECHNOLOGICAL INSTITUTE
- 16:45 A1-P-11 **Investigation of Temperature Parameter on Si Substrate Temperature Measurement Using Spectral-Domain Optical Low-Coherence Interferometry**
¹Katsuhiko Hattori, ¹Takayuki Ohta, ¹Masafumi Ito, ²Takayoshi Tsutsumi, ²Keigo Takeda, ²Masaru Hori
 1 DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING, MEIJO UNIVERSITY
 2 DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE, NAGOYA UNIVERSITY
- 16:45 A1-P-12 **Axial Distribution of a VHF H₂ Plasma Produced by a Narrow Gap Discharge**
¹Kuan-Chen Chen, ²Chia-Fu Chen, ¹Yoshinobu Kawai, ¹Cheng-Yang Lien, ¹Kuo-Feng Chiu, ²Jen-Bin Shi, ³Yu-Jer Tsai, ⁴Ting-Kuei Lien
 1 DEPARTMENT OF MATERIALS SCIENCE & ENGINEERING, FENG CHIA UNIVERSITY
 2 DEPARTMENT OF ELECTRONIC ENGINEERING, FENG CHIA UNIVERSITY
 3 ULVAC AUTOMATION TAIWAN INC.
 4 HELIUS POWER CORP.
- 16:45 A1-P-13 **Kinetic Model of NO Molecular States (X²Π_r, A²Σ⁺, B²Π_r and C²Π_r) in a Low- Pressure N₂-O₂ Discharge**
Hao Tan, Atsushi Nezu, Haruaki Matsuura, Hiroshi Akatsuka
 TOKYO INSTITUTE OF TECHNOLOGY
- 16:45 A1-P-14 **B-Field Strength Effect on Closed Drift Type Circular Ion Source**
Yong Jin Kang, Seung Hun Lee, Gi Taek Kim, Jong Kuk Kim
 DEPARTMENT OF MATERIAL PROCESSING, KOREA INSTITUTE OF MATERIALS SCIENCE, PLASMA COATING
- 16:45 A1-P-15 **Effect to Control Substrate Temperature on GaN Film Damaged by Plasma**
Daisuke Ogawa, Yoshitaka Nakano, Keiji Nakamura
 COLLEGE OF ENGINEERING, CHUBU UNIVERSITY
- 16:45 A1-P-16 **Investigation of Antenna Configuration Effects on EM Field Uniformity in Large Area Inductively-Coupled Plasma Systems**
Seon-Geun Oh, Young Jun Lee, Hee Hwan Choe
 DEPARTMENT OF ELECTRONICS ENGINEERING, KOREA AEROSPACE UNIVERSITY
- 16:45 A1-P-17 **Discharge Property of High Power Pulsed Magnetron Sputtering with Positive High-Voltage Pre-Pulse for Substrate**
¹Kingo Azuma, ²Takashi Kimura, ²Hikaru Kamata, ³Setsuo Nakao, ³Tsutomu Sonoda, ³Takeshi Kusumori, ³Kimihiko Ozaki
 1 DEPARTMENT OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, UNIVERSITY OF HYOGO
 2 NAGOYA INSTITUTE OF TECHNOLOGY
 3 ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY
- 16:45 A1-P-18 **A Study on Plasma Parameters in Various Mixed Ar/SF₆ Inductively Coupled Plasmas**
Seung-Ju Oh, Hyo-Chang Lee, Chin-Wook Chung
 DEPARTMENT OF ELECTRICAL ENGINEERING, HANYANG UNIVERSITY
- 16:45 A1-P-19 **Etching Characteristics of SiC in Inductively Coupled CH₂F₂ / CF₄ / O₂ / Ar Plasma**
¹Jongchan Lee, ²Alexander Efremov, ³Hyun Woo Lee, ⁴Kwangsoo Kim, ¹Kwang-Ho Kwon
 1 DEPARTMENT OF CONTROL AND INSTRUMENTATION ENGINEERING, KOREA UNIVERSITY
 2 DEPARTMENT OF ELECTRONIC DEVICES AND MATERIALS TECHNOLOGY, STATE UNIVERSITY OF CHEMISTRY AND TECHNOLOGY
 3 DEPARTMENT OF ELECTRONICS, HANSEO UNIVERSITY
 4 DEPARTMENT OF ELECTRONIC ENGINEERING, SOGANG UNIVERSITY

- 16:45 A1-P-20 **Magnetic Configuration Influence on the Structure of Impulse Magnetron Discharge with Profiled Electrodes**
Andrey Kaziye, Georgy Khodachenko
 DEPARTMENT OF PLASMA PHYSICS, NATIONAL RESEARCH NUCLEAR UNIVERSITY MEPHI
- 16:45 A1-P-21 **Effect of Cylindrical-Type Antenna Turns on the Plasma Parameters in Inductively Coupled Plasmas**
Junhyeon Moon, Jae-Won Lee, Ju Ho Kim, Chin-Wook Chung
 DEPARTMENT OF ELECTRICAL ENGINEERING, HANYANG UNIVERSITY
- 16:45 A1-P-22 **Curling Probe Measurement of Plasma Pulse-Modulated at High-Frequency**
¹Anil Pandey, ²Wataru Sakakibara, ²Hiroyuki Matsuoka, ¹Keiji Nakamura, ¹Hideo Sugai
 1 SCHOOL OF ENGINEERING, CHUBU UNIVERSITY
 2 DOWA THERMOTECH
- 16:45 A1-P-23 **Analysis of Temporal Changes on Substrate Temperature: Heat Fluxes During Plasma Processes and Influence of Chamber Parts**
¹Takayoshi Tsutsumi, ¹Yusuke Fukunaga, ¹Kenji Ishikawa, ¹Keigo Takeda, ²Takayuki Ohta, ²Masafumi Ito, ¹Hiroki Kondo, ¹Makoto Sekine, ²Masaru Hori
 1 NAGOYA UNIVERSITY
 2 MELJO UNIVERSITY
- 16:45 A1-P-24 **Intelligent Parametric Model Development for Plasma System Design**
^{1,2}Junghoon Joo
 1 DEPARTMENT OF PLASMA CONVERGENCE ENGINEERING, KUNSAN NATIONAL UNIVERSITY
 2 DEPARTMENT OF MATERIAL SCIENCE AND ENGINEERING, KUNSAN NATIONAL UNIVERSITY
- 16:45 A1-P-25 **Study on the Harmonic Currents by Plasma Sheath Using Floating Langmuir Probe with Series Connection of Capacitor**
¹Kyung-Hyun Kim, ²Dong-Hwan Kim, ¹Yu-Sin Kim, ¹Chin-Wook Chung
 1 DEPARTMENT OF ELECTRICAL ENGINEERING, HANYANG UNIVERSITY
 2 DEPARTMENT OF NANOSCALE SEMICONDUCTOR ENGINEERING, HANYANG UNIVERSITY
- 16:45 A1-P-26 **Plasma Graft Polymerization of Acrylic Acid onto Polystyrene by Cyclonic Plasma at Atmospheric Pressure**
Yi-Jan Chang, Chun Huang
 DEPARTMENT OF CHEMICAL ENGINEERING AND MATERIALS SCIENCE, YUAN ZE UNIVERSITY
- 16:45 A1-P-27 **Characterization of Plasma Nitrided Austenitic Stainless 316L Steels at Low Temperature**
Sung-Bo Heo, Byung-Chul Cha
 KOREA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KITECH)
- 16:45 A1-P-28 **Study of the Numerical Differentiation to Obtain the Electron Distribution Functions of the Plasmas**
¹Hyun-Ju Kang, ²Hyeok Choi, ²Jae-Hyun Kim, ²Se-Hun Lee, ²Tae-Ho Yoo, ¹Chin-Wook Chung
 1 DEPARTMENT OF ELECTRICAL ENGINEERING, HANYANG UNIVERSITY
 2 SEOUL SCIENCE HIGH SCHOOL
- 16:45 A1-P-29 **Reliability Analysis of a Plasma Vacuum System from Accident**
¹Jinyong Jeong, ¹Jinhyoung Lim, ¹Hyewon Mun, ^{1,2}Junghoon Joo, ³Yongsub Choi
 1 DEPARTMENT OF PLASMA CONVERGENCE ENGINEERING, KUNSAN NATIONAL UNIVERSITY
 2 DEPARTMENT OF MATERIAL SCIENCE AND ENGINEERING, KUNSAN NATIONAL UNIVERSITY
 3 PLASMA TECHNOLOGY RESEARCH CENTER, NATIONAL FUSION RESEARCH INSTITUTE
- 16:45 A1-P-30 **Simulation Study of Trapped Fast Ion Motion in Magnetic Confinement Devices**
 Seiya Nishimura
 DEPARTMENT OF ELECTRICAL ENGINEERING, KOBE CITY COLLEGE OF TECHNOLOGY