

ICMAP 2018

The 7th International Conference on Microelectronics and Plasma Technology
Joint International Conference on ICMAP 2018, APCPST 2018, and ISPB 2018
July 24-28, 2018 / Songdo ConvensiA, Incheon, Korea

Poster Session II

Date / Time	July 26 (Thu.), 2018 / 17:30-19:00
Place	Room F (#117~118)

TP-001

Non-Thermal DBD Plasma Treatment Improves Chicken Sperm Motility via the Regulation of Demethylation Levels

Jiao Jiao Zhang¹, Nisansala Chandimali¹, Tae Yoon Kang¹, Hyebin Koh¹, Do Luong Huynh¹, Seong Bong Kim², Taeho Kwon¹, and Dong Kee Jeong¹

¹Jeju Nat'l Univ., Korea, ²NFRI, Korea

TP-002

Development of Freshness Preservation Technology for Cultured Yellowtail Using Pulsed Power Technology

Kosuke Kawaoka, Masaaki Yano, Mikiya Matsuda, Douyan Wang, and Takao Namihira
Kumamoto Univ., Japan

TP-003

The conversion of Ginsenoside in Ginseng Extract by Plasma Treated Water (PTW)

Sunkyoung Jung, Jin-Hwan Kim, and Sunkyoung Jung
NFRI, Korea

TP-004

Study on the Disinfection of Rice Seeds Using Surface DBD Plasma

Min Ho Kang¹, Sangheum Eom², Hyung Won Jeon², Jung Woo Yoon², Seong Bong Kim², Suk Jae Yoo², Eun Ha Choi¹, Seungmin Ryu², and Gyungsoon Park¹

¹Kwangwoon Univ., Korea, ²NFRI, Korea

TP-005

Non-Thermal Dielectric Barrier Discharge Plasma Technology for Agriculture Food

Jiao Jiao Zhang, Hyebin Koh, Nameun Kim, Mrinmoy Ghosh, Meeta Gera, Taeho Kwon, and Dong Kee Jeong
Jeju Nat'l Univ., Korea

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TP-006

Fungicidal Effects of Atmospheric Pressure Plasma on Plant Pathogens in Panax Ginseng

Jong-Seok Song, Sang Hye Ji, Sangheum Eom, Jin-Hwan Kim, Sunkyung Jung, Jaesung Oh, Seungmin Ryu, Yong-Seong Byeon, Min-Ho Kang, and Seong Bong Kim

NFRI, Korea

TP-007

Development of Customized Power Supply Device for the Array Typed DBD Plasma Generating at Atmospheric Pressure

Sangheum Eom, Changho Yi, Sang Hye Ji, Seong Bong Kim, and Seungmin Ryu

NFRI, Korea

TP-008

The Study of Micro DBD Plasma with the Seedling Growth and Antioxidant Activity in Panax Ginseng C. A. Meyer

Ji Sang Hye, Yoo Seungryul, Kim Seong Bong, Yoo Suk Jae, and Jaesung Oh

NFRI, Korea

TP-009

Removal of Stench in Livestock Production Facility Using a Pulsed Corona Discharge Plasma

InSun Park¹, DongChan Seok², InJe Kang¹, Min-Keun Bae¹, Yong-Sup Choi², Taihyeop Lho², Sang-Eun Oh³, JaeE Yang³, and Kyu-Sun Chung¹

¹Hanyang Univ., Korea, ²NFRI, Korea, ³Kangwon Nat'l Univ., Korea

TP-010

Control of Nitric Oxide Production in a Surface Dielectric Barrier Discharge Plasma at Atmospheric Pressure

S. PARK, C. YI, J.H. KIM, S.Y. YOON, S. RYU, and S.B. KIM

NFRI, Korea

TP-011

The Physical and Chemical Characteristics of Non-Thermal Plasma Treated Solution-Mist Spray: A First Step toward Optimization in Disinfection Process

Yong-Seong Byeon, Eun Jeong Hong, Seong Bong Kim, and Junghyun Lim

NFRI, Korea

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TP-012

Proposed a Method of Plasma Treated Water(PTW) Generation; PTW Characteristic with Hybrid of Pin-to-Water and Underwater Capillary Discharge

Yong-Seong Byeon, Eun Jeong Hong, Junghyun Lim, Seong Bong Kim, and Yong-Seong Byeon

NFRI, Korea

TP-013

Effects of Rotational Speed on Inactivation of E.Coli in Red Pepper Powder by DBD Plasma

Eunjeong Hong, Junghyun Lim, Yong-Seong Byeon, Seong Bong Kim, and Seungmin Ryu

NFRI, Korea

TP-014

The Study of Residual Pesticides Removal in Fresh Food Using the Plasma Reactive Species

Hyeongwon Jeon, Sangheum Eom, Junghyun Lim, Jungwoo Yoon, Changho Yi, Jongseok Song, and Seungmin Ryu

NFRI, Korea

TP-015

Chemical Probe Calibration for Reactive Oxygen Radicals with Hydrogen Peroxide and Low Energy X-Ray

Hiroto Matsuura, Yoshiki Matsui, Jin Sakamoto, Tran Trung Nguyen, Kheim Do Duy, and Masafumi Akiyoshi

Osaka Prefecture Univ., Japan

TP-016

Plasma Assisted Preparation of ZnS and ZnO Nanomaterials and Plasma-Nano Treatment of Pollutant Dyes

Ananth Antony, Won Chang Lee, Hyeon Jin Seo, Jin-Hyo Boo, and Byung You Hong

Sungkyunkwan Univ., Korea

TP-017

Chemical Agent Destruction Using Flexible Surface DBD Plasma with Metaloxide Nanoparticles

Heesoo Jung

Agency for Defense Development, Korea

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TP-018

Effects of Argon Micro-Bubble Assistance on the Performance of 3D Integrated Micro Solution Plasma

Reiya Nakagawa, Hiroto Masunaga, Jun-Seok Oh, and Tatsuru Shirafuji
Osaka City Univ., Japan

TP-019

Effects of Pulse Voltage Polarity on GNP-Embedded Polymer Formation on Aqueous Solution Irradiated with Ar DBD Plasma

Shunta Hirano¹, Shiori Azuma¹, Yusuke Nakamura¹, Jun-Seok Oh¹, Toshiyuki Isshiki², and Tatsuru Shirafuji¹

¹*Osaka City Univ., Japan*, ²*Kyoto Inst. Tech., Japan*

TP-020

Synthesis of Carbon Coated TiO₂ by Underwater Discharge with Capillary Carbon Electrode.

HyunJae Park, Seungryul Yoo, and Kangil Kim
NFRI, Korea

TP-021

Effect of Pulse Current on Formation Behavior of Plasma Electrolytic Oxidation Films on Al Alloy

Juseok Kim¹, Sungmo Moon¹, and Heon-cheol Shin²
¹*KIMS, Korea*, ²*Pusan Nat'l Univ., Korea*

TP-022

Solution Plasma Synthesis of Nitrogen and Cobalt-Containing Carbon Materials

Shuhei Kato, Amane Kaneko, Camelia Miron, and Takahiro Ishizaki
Shibaura Inst. of Tech., Japan

TP-023

Synthesis of SiC Nanoparticles by Solution Plasma

Ryo Iwano, Camelia Miron, and Takahiro Ishizaki
Shibaura Inst. of Tech., Japan

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TP-024

Anodic Oxidation Behavior of AZ31 Mg Alloy in Na_2SnO_3 Solutions Containing Various Anions

Yeajin Kim and Sungmo Moon
KIMS, Korea

TP-025

Characteristic Comparison between Positive and Negative Nanosecond Pulsed Discharges

Hitoshi Yamaguchi, Terumasa Ryu, Takao Namihira, and Douyan Wang
Kumamoto Univ., Japan

TP-026

Two-Bit-Per-Cell Resistive Switching Memory Device with ITO/ Zn_2TiO_4 /Pt Structure

Shi-Xiang Chen, Shoou-Jinn Chang, Sheng-Po Chang, Cheng-Han Lin, and Kuan-Jen Chen
Nat'l Cheng Kung Univ., Taiwan

TP-027

Ion Energy Distribution in High Power Impulse Magnetron Sputtering Discharge Using Carbon Target

Kazunori Iga¹, Akinori Oda², Hiroyuki Kousaka³, and Takayuki Ohta¹
¹*Meijo Univ., Japan*, ²*Chiba Inst. of Tech., Japan*, ³*Gifu Univ., Japan*

TP-028

Co Liner for Enhancement of Cu Damascene Interconnections

Byeonghwa Jeong¹, Yongseok Jang¹, Eungjoon Lee¹, Masamichi Harada², Yutaka Kokaze², and Geunyoung Yeom³
¹*ULVAC KOREA, Ltd, Korea*, ²*ULVAC, Inc., Japan*, ³*Sungkyunkwan Univ., Korea*

TP-029

Properties of Very Thin Tungsten Film Deposited Using Inductively Coupled Plasma Assisted Sputtering

Soo Jung Lee, Tae Hyung Kim, Byeong Hwa Jeong, Chang Hoon Song, Won Oh Lee, You Jin Ji, and Geun Young Yeom
Sungkyunkwan Univ., Korea

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TP-030

Growth of Titanium Suboxide Thin Films by Reactive DC Magnetron Sputtering

Jin-Soo Kim, Hyeok Jee, and Hye-Won Seo
Jeju Nat'l Univ., Korea

TP-031

Substrate Temperature and Sputtering Power Effect on the Growth of MgO Thin Films

Jitendra Pal Singh and Keun Hwa Chae
KIST, Korea

TP-032

Characteristics of Films Prepared by Various Inner Magnet Arrangements in Facing Targets Sputtering

Lee Sang Min¹, Yu Jin Kim¹, Dae San Lee¹, Sangmo Kim¹, Min Jong Keum², and Kyung Hwan Kim¹
¹*Gachon Univ., Korea*, ²*Junsung Engineering, Korea*

TP-033

TiO₂ Thin Film by Reactive Sputtering

Pyeong Seob Song, Sang Ho Hwang, Yeong Jo Baek, In Hye Kang, Min Su Kang, Seok Jun Kang, Ye Lin Han, and Byung Seong Bae
Hoseo Univ., Korea

TP-034

Effects of High-Intensity Pulsed Ion Beam Irradiation on the Structural Thermal Stability of Fe-Based and Ni-Based Metallic Glasses

Xianxiu Mei¹, Qi Zhang¹, Xiaonan Zhang¹, Younian Wang¹, Gennady E. Remnev², and Sergey K. Pavlov²
¹*Dalian Univ. of Tech., China*, ²*Nat'l Research Tomsk Polytechnic Univ., Russia*

TP-035

Preparation and Characterization of the Sputtered TiAlN Coatings Using a Ti-Al Alloy Metal Target

Jiseon Kwon¹, Hwa-Min Kim¹, Chang-Hyun Lee¹, Changhwan Park¹, Jaewoong Choi¹, Taewoo Kim¹, Sunyoung Sohn², and Seongcheol Choi¹
¹*Daegu Catholic Univ., Korea*, ²*POSTECH, Korea*

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TP-036

Characteristics of TiC/a-C Nanocomposite Films Prepared by Closed-Field Unbalanced Magnetron Sputtering for Bio-Medical Application

Yong Seob Park¹ and Jaehyeong Lee²

¹*Chosun College of Science and Tech., Korea*, ²*Sungkyunkwan Univ., Korea*

TP-037

Roll-to-Roll sputtered ZnSnO/AgPdCu/ZnSnO Multilayer Electrodes for Flexible Thin-Film Heaters and Heat-Shielding Films

Haejun Seok¹, Hyeonwoo Jang², Dongyeop Lee², Beomgwon Son², And Hanki Kim¹

¹*Sungkyunkwan Univ., Korea*, ²*LG Chem Co., Ltd., Korea*

TP-038

Spectroscopic Ellipsometry Study of Transition Metal Chalcogenide Thin Films Grown by RF Magnetron Sputtering

Younghun Hwang¹, Manil Kang², and Hyoyeol Park¹

¹*Ulsan College, Korea*, ²*Univ. of Ulsan, Korea*

TP-039

Electrical, Optical, and Magnetic Properties of Magnetron-Sputtered and RTAed NiO:Nd Thin Films

Seongha Oh¹, Yong Seob Park², and Nam-Hoon Kim¹

¹*Chosun Univ., Korea*, ²*Chosun College of Science and Tech., Korea*

TP-040

Dependence of the Characteristics of Aluminum-Doped Zinc Oxide Films on the Reversed Pulse Times and Oxygen Gas Ratio in the Pulsed-DC Sputtering

Hyungseok Ryu, Zhenqian Zhao, Sang Jik Kwon, and Eou-Sik Cho

Gachon Univ., Korea

TP-041

Optical Properties of Reversible Phase-Change Silver Selenide Thin Films by Co-Sputtering for Smart Window Applications

Sakal Pech, Myoung Han Yoo, Pil Ju Ko, and Nam-Hoon Kim

Chosun Univ., Korea

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TP-042

Effect of Silicon Content in Diamond-Like Carbon Film Deposited by Magnetron Sputtering

Yuki Miwa¹, Akinori Oda², Hiroyuki Kousaka³, and Takayuki Ohta¹

¹Meijo Univ., Japan, ²Chiba Inst. of Tech., Japan, ³Gifu Univ., Japan

TP-043

Effect of Annealing on Surface Morphology and Wettability of NC-FeSi₂ Films Produced via Facing-Target Direct-Current Sputtering

Peerasil Charoenyuenyao¹, Nathaporn Promros¹, Rawiwan Chaleawpong¹, Bunpot Saekow², Supanit Porntheeraphat², and Tsuyoshi Yoshitake³

¹King Mongkut's Inst. of Tech. Ladkrabang, Thailand, ²Nat'l Electronics and Computer Tech. Center, Thailand, ³Kyushu Univ., Japan

TP-044

Physical Properties of Diamond-Like Carbon Films Fabricated by Utilization of Magnetron Sputtering Source with Changing Outer Permanent Magnets

Peerasil Charoenyuenyao¹, Rawiwan Chaleawpong¹, Sakmongkon Teekchaicum¹, Nathaporn Promros¹, Phongsaphak Sittimart¹, and Boonchoat Paosawatyanong²

¹King Mongkut's Inst. of Tech. Ladkrabang, Thailand, ²Chulalongkorn Univ., Thailand

TP-045

A Parametric Model for Temperature Dependence of Dielectric Function of AISb Film

Van Long Le, Tae Jung Kim, Han Gyeol Park, Hoang Tung Nguyen, Jeoung Min Ji, Xuan Au Nguyen, and Young Dong Kim

Kyung Hee Univ., Korea

TP-046

Study on the Surface Contact Angle of YBCO Thin Film Superconducting Wire by Sputter Surface Treatment

Hyeon-Gi Jeong, Ho-Ik Du, and Sung-Chae Yang

Chonbuk Nat'l Univ., Korea

TP-047

Local Electronic Structure of Radio Frequency Sputtered MgO Thin Film under Swift Heavy Ion Irradiation

Jitendra Pal Singh¹, Weon Cheol Lim¹, Manish Kumar², Richa Bhardwaj³, Sanjeev Gautam³, H. H. Lee², K. Asokan⁴, Navdeep Goyal³, and Keun Hwa Chae¹

¹KIST, Korea, ²PAL, Korea, ³Panjab Univ., India, ⁴IUAC, India

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TP-048

Investigation of Deuterium and Helium Plasma Irradiation Effect on Tungsten Erosion

Myeong-Geon Lee¹, Jaemin Song², Ki-Baek Roh¹, Nam-Kyun Kim¹, and Gon-Ho Kim¹

¹Seoul Nat'l Univ., Korea, ²NFRI, Korea

TP-049

Enhancement of Crack through the Depth of Grain Growth on Tungsten under Transient High Heat Flux

Ki-Baek Roh¹, Nam-Kyun Kim¹, Jaemin Song¹, Kyungmin Kim², Myung-gun Lee¹, and Gon-Ho Kim¹

¹Seoul Nat'l Univ., Korea, ²NFRI, Korea

TP-050

Experimental Study on Preparation of Spherical Alumina Powder by Laminar Plasma Jet

Hui Jiang, Deping Yu, and Jin Yao

Sichuan Univ., China

TP-051

Low Temperature Growth of Single-Walled Carbon Nanotubes Using Plasma-Assisted Chemical Vapor Deposition System

Sung-Il Jo and Goo-Hwan Jeong

Kangwon Nat'l Univ., Korea

TP-052

Surface Structuration and Control of the CuS Particle Size by the Discharge Mode of Inductively Coupled Plasma and Vapor-Phase Sulfurization

Daehan Choi¹, Tae-Wan Kim¹, Rauf Shahzad¹, Hyeji Park¹, H.J. Yeom¹, J.H. Kim¹, D.J. Seong¹, Sang-Woo Kang¹, Euijoon Yoon², and Hyo-Chang Lee¹

¹KRISS, Korea, ²Seoul Nat'l Univ., Korea

TP-053

C-V-f, G-V-f and Z''-Z' Characteristics of n-Type Si/B-doped p-Type Ultrananocrystalline Diamond Heterojunctions Formed via Pulsed Laser Deposition

Rawiwan Chaleawpong¹, Nathaporn Promros¹, Peerasil Charoenyuenyao¹, Weerasaruth Kaenrai¹, Adison Nopparuchikun¹, Takanori Hanada², Shinya Ohmagari³, and Tsuyoshi Yoshitake²

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TP-054

Surface Morphology and Wettability of Ultrananocrystalline Diamond Films

Rawiwan Chaleawpong¹, Nathaporn Promros¹, Peerasil Charoenyuenyao¹, Eslam Abubakr², Satoshi Takeichi², Abdelrahman Zkria², Kenji Hanada², and Tsuyoshi Yoshitake²

¹King Mongkut's Inst. of Tech. Ladkrabang, Thailand, ²Kyushu Univ., Japan

TP-055

Grain Boundary Observation of CVD Graphene Based on Oxygen Plasma

Gwan-Hyoung Lee, Jong-Young Lee, and Min Jung Kim

Yonsei Univ., Korea

TP-056

Defect-Free Doping on Graphene Using Horizontal Inductively Coupled Plasma System

Sung-Il Jo¹, Byeong-Joo Lee², and Goo-Hwan Jeong¹

¹Kangwon Nat'l Univ., Korea, ²Nat'l NanoFab Center, Korea

TP-057

The Effect of Fluorine Plasma Treatment on β -Ga₂O₃ Transistors

Janghyuk Kim and Jihyun Kim

Korea Univ., Korea

TP-058

Non-Equilibrium Condensation Process for Synthesis of Cosmic Dust Analogues by Triple Thermal Plasma Jet

Tae-Hee Kim¹, Jeong-Hwan Oh¹, Minseok Kim¹, Yong Hee Lee¹, Akira Tsuchiyama², Junya Matsuno², Aki Takigawa², and Sooseok Choi¹

¹Jeju Nat'l Univ., Korea, ²Kyoto Univ., Korea

TP-059

Atmospheric Plasma Deposited Titanium Dioxide Thin Films: Surface and Plasma Chemistry

Rodolphe Mauchauffé, Seongchan Kang, and Se Youn Moon

Chonbuk Nat'l Univ., Korea

TP-060

Synthesis of Tungsten Carbide Nanoparticles in Triple Thermal Plasma Jet System

Jeong-Hwan Oh, Minseok Kim, Young Hee Lee, Seung-Hyun Hong, Tae-Hee Kim, and Sooseok Choi

Jeju Nat'l Univ., Korea

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TP-061

Electrical Discharge in Liquid Nitrogen for Particle Preparation

Yoon Sik Park¹, Dong-Wook Kim², Satoshi Kodama¹, and Hidetoshi Sekiguchi¹

¹*Tokyo Inst. of Tech., Japan*, ²*Inha Univ, Korea*

TP-062

Withdrawn

TP-063

Purification and Doping of Nano-Thin Exfoliated(NTE) Graphite for EMI Shielding by RF Thermal Plasma System

Kyu-Hang Lee¹, Myung-Sun Shin¹, Byung-Koo Son¹, Soon-Jik Lee², Jeong-Mi Yeon², and Sun-Yong Choi²

¹*Kwangwoon Univ., Korea*, ²*Cheorwon Plasma Research Inst., Korea*

TP-064

Molecular Dynamics Simulation of Nanometer-Scale Hole Etching

Charisse Marie Donato Cagomoc, Michiro Isobe, and Satoshi Hamaguchi

Osaka Univ., Japan

TP-065

ALE of SiO₂ by Alternating CF₄ Plasma with Energetic Ar⁺ Plasma Beams

Wan Dong, Zhongling Dai, Yuanhong Song, and Younian Wang

Dalian Univ. of Tech., China

TP-066

Investigation of Plasma-Surface Reactions in a Large Scale Very-High-Frequency(162MHz) CCP for Atomic Layer Processing of SiO₂

Cleo Harvey, Nishant Sirse, Cezar Gaman, and Bert Ellingboe

Dublin City Univ., Ireland

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TP-067

Modeling of Dry Cleaning Processes of Semiconductor Surfaces Using Fluorine-Based Etchant Gases

Tanzia Chowdhury, Romel Hidayat, Tirta Rona Mayangsari, Jiyeon Gu, Hye-Lee Kim, Jongwan Jung, and Won-Jun Lee

Sejong Univ., Korea

TP-068

Etch Characteristics of Nanoscalepatterned Magnetic Tunnel Junction Stacks Using Pulse-Modulated RF Sourceplasma

Jae Yong Lee, Eun Taek Lim, Jin Su Ryu, Jae Sang Choi, and Chee Won Chung

Inha Univ., Korea

TP-069

Effect of Non-Corrosive Gas Mixture on Etching of Cu Thin Film Using Inductively Coupled Plasma Reactive Ion Etching

Eun Taek Lim, Jin Su Ryu, Jae Sang Choi, and Chee Won Chung

Inha Univ., Korea

TP-070

Dry Etching of Copper Thin Films in High Density Plasma of Organic Acids

Jin Su Ryu, Eun Taek Lim, Jae Sang Choi, and chee Won Chung

Inha Univ., Korea

TP-071

Plasma Chemistry Study of Hydrogen/Oxygen Mixture (H_2/O_2), Hydrogen Peroxide (H_2O_2), Water Vapor (H_2O), and Isopropyl Alcohol (IPA) in Inductively Coupled Plasma (ICP)

Shuang Meng and Shawming Ma

Mattson Tech., Inc., USA

TP-072

Profile Characteristics of Sintered SiC Line Etching by Atmospheric Pressure Plasma

Yong Ho Jung, Dong Chan Seok, Gangil Lee, and Seungryul Yoo

NFRI, Korea

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TP-073

Measurements of Plasma Density and Downstream Etching of Silicon and Silicon Oxide in Ar/NF₃ Mixture Remote Plasma Source

HeeJung Yeom¹, YeongSeok Lee², SiJun Kim², DaeHan choi¹, DaeJin Seong¹, JungHyung Kim¹, ShinJae You², and Hyo Chang Lee¹

¹KRISS, Korea, ²Chungnam Nat'l Univ., Korea

TP-074

ClF₃/H₂-Plasma Assisted Thermal Etching of Si₃N₄

Won Oh Lee¹, Jin Woo Park¹, Doo San Kim¹, Soo Jung Lee¹, Han Dock Song², and Geun Young Yeom¹

¹SungKyunkwan Univ., Korea, ²Wonik Materials, Korea

TP-075

Improvement of Productivity through Time Reduction by Using Cleaning Process Optimization Using OES Wavelength of Semiconductor Plasma Equipment

In Young Back

Samsung Electronics Co., Ltd., Korea

TP-076

The Enhancement of the Flash Memory Boosting Efficiency by Adding Deep N-Phosphorous Implantation

Youngho Kwon¹, Hyongsun Park², Ikhyung Joo², Sungjin Jang¹, and Byoungdeog Choi¹

¹Sungkyunkwan Univ., Korea, ²Samsung Electronics Co., Ltd., Korea

TP-077

Electrical Characterization, Heat Flux and the Reactive Oxygen Radical Production of Argon Atmospheric Pressure Plasma Jet with Alcohol

Trung Nguyen Tran¹, Hiroto Matsuura¹, Yoshiki Matsui¹, Jian Chen¹, and Yuichiro Takemura²

¹Osaka Prefecture Univ., Japan, ²Kindai Univ., Japan

TP-078

Observation of the Standing Wave Effect in Large-Area, Very-High-Frequency Capacitively Coupled Plasmas by Using a Fiber Bragg Grating Sensor and Hairpin Resonance Probe

Dao-Man Han, Yong-Xin Liu, Fei Gao, and You-Nian Wang

Dalian Univ. of Tech., China

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TP-079

Electron Impact Excitation Diagnostics in Pulse-Modulated Ar/O₂ Inductively Coupled Plasma

Chan Xue, Fei Gao, De-Qi Wen, and You-Nian Wang
Dalian Univ. of Tech., China

TP-080

100 kW Dc Arc Generator with a Divergent Channel of Inter-Electric Inserter and Anode

Wenxia Pan, Xian Meng, and Yong Zhang
Chinese Academy of Sciences, China

TP-081

Dynamics of Energetic Electrons at the Igniting Phase in a Pulsed Capacitively Coupled Plasma

Xiang-Yu Wang and Yong-Xin Liu
Dalian Univ. of Tech., China

TP-082

Numerical Simulation of Electromagnetic Effects in Very High Frequency Capacitively Coupled Plasma

Jian-Kai Liu, De-Qi Wen, Yu-Ru Zhang, and You-Nian Wang
Dalian Univ. of Tech., China

TP-083

Characteristic Study of Radio-Frequency Inductively Coupled Hydrogen and Deuterium Plasma Operated at High Power and Low Pressure

Peng-Cheng Du, Fei Gao, Hong Li, and You-Nian Wang
Dalian Univ. of Tech., China

TP-084

PIC/MC Simulation of Breakdown Dynamic Near High Power Microwave Out-Put Window Inside

Chun-Yan Zuo, Fei Gao, Zhong-Ling Dai, and You-Nian Wang
Dalian Univ. of Tech., China

TP-085

Integrated Initiation Carrier Injection for Low Voltage Plasma Generation

Hyunho Park, Changhun Hong, and Youngmin Kim
Hongik Univ., Korea

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TP-086

PIC Simulation on the Effects of Secondary Electron Emission in Capacitive Oxygen Discharges

Li Wang, Yuan-Hong Song, and You-Nian Wang
Dalian Univ. of Tech., China

TP-087

Pressure Effect on Polycrystalline Diamond Film Deposition Using Modulated to Non-Modulated Induction Thermal Plasmas

Takashi Arai, Betsuin Toshiki, Yasunori Tanaka, Yoshihiko Uesugi, and Tatsuo Ishijima
Kanazawa Univ., Japan

TP-088

Characteristics of Inkjet-Printed Dielectric Barrier Discharge Source

Jinwoo Kim, SangHoo Park, JooYoung Park, and Wonho Choe
KAIST, Korea

TP-089

Miniaturization of Nanosecond Pulsed Discharge System for Industrial Application

Takehiro Yamaguchi , Ryuki Matsukawa, Mikiya Matsuda, Douyan Wang, and Takao Namihira
Kumamoto Univ., Japan

TP-090

Investigation of Capacitively Coupled Plasma with Electron Beam by Impedance Analysis

Inshik Bae, Hongyoung Chang, and Hohyun Song
KAIST, Korea

TP-091

Etch Characteristics of Superimposed Multi-Frequency Inductively Coupled Plasma Source

Kyung Chae Yang, Ye Ji Shin, Soo Gang Kim, Jun Ki Jang, Da In Sung, Hyun Woo Tak, and Geun Young Yeom
Sungkyunkwan Univ., Korea

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TP-092

Demonstration of an Atmospheric Pressure Capacitively-Coupled-Plasma Driven at VHF(162MHz) for Recycling of CO₂ into Renewable Fuels

Cleo Harvey, Saoirse Vandenberg, and Bert Ellingboe
Dublin City Univ., Ireland

TP-093

Discharge Characteristics of Water Thermal Plasmas

Hiroki Munekata, Manabu Tanaka, and Takayuki Watanabe
Kyushu Univ., Japan

TP-094

Sheath and Bulk Expansion in Atmospheric Pressure Microwave Plasma via RF Field Induction

Jimo Lee, Woo Jin Nam, Seung Taek Lee, Jae Koo Lee, and Gunsu Yun
POSTECH, Korea

TP-095

Experimental Investigation on Control of Plasma Density Distribution in Inductively Coupled Plasma

Juho Kim And Chinwook Chung
Hanyang Univ., Korea

TP-096

Improved Deinking Efficiency Using Atmospheric Helium Plasma: Effect of Inkjet Printed Paper

Seung Jun Lee, Isaac Han, Yong Sung You, and Se Youn Moon
Chonbuk Nat'l Univ., Korea

TP-097

Experimental Investigation of Discharge of Transitoin by RF Bias Power in Inductively Coupled Plasma

Howon Lee and Chin-wook Chung
Hanyang Univ., Korea

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TP-098

Control of Plasma Density Distribution by Adding LC Parallel Circuit to Antenna in an Inductively Coupled Plasma

Tae-Woo Kim and Chin-Wook Chung
Hanyang Univ., Korea

TP-099

An Atmospheric Low-Power Microwave Plasma Using Two-Parallel-Wires Transmission Line Resonator

Ju Young Park¹, Ho Jun Lee¹, and Jun Choi²
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TP-100

Development of the Cs-Seeded RF Negative Ion Beam Source

Min Park¹, Tae-seong Kim¹, Seung Ho Jeong¹, and ByungKeun Na²
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TP-101

High-Speed Visualization Of Electrode Phenomena in Nitrogen DC Arc

Masaki Yoshida¹, Naoki Sakura¹, Manabu Tanaka¹, Takayuki Watanabe¹, Seiichiro Shimizu², and Koji Fujii²
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TP-102

A Novel Linear Microwave Plasma Source Using Circular TE₁₁ Mode and Continuous Line Slot Antenna

Ju-Hong Cha, Jeehun Jeong, Goonho Kim, and Ho-Jun Lee
Pusan Nat'l Univ., Korea

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A Study on Optimization in Large Area Inductively and Magnetized Inductively Coupled Plasma

Eui-Jeong Son, Sung Hwan Cho, and Ho-Jun Lee
Pusan Nat'l Univ., Korea

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TP-104

Nitridation of SiO₂ Surface by VHF (162 MHz) Multi-Tile Push-Pull Plasma Source

You Jin Ji¹, Ki Seok Kim¹, Ki Hyun Kim¹, Ji Young Byun¹, Soo Jung Lee¹, Albert Rogers Ellingboe², and Geun Young Yeom¹

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TP-105

Fabrication and Characterization of HfC/TiC Multilayer Coating by Vacuum Plasma Spraying

Ho-Seok Kim, Bo-Ram Kang, Se-Youn Moon, and Seong-Man Choi

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TP-106

Zirconium Carbide Coatings Fabricated by Vacuum Plasma Spraying

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TP-107

Effective Ammonia Synthesis by Synchronizing of Pressure Swing and Discharge Switching

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