

3/5 (SUN)

13:00-14:00

<05pA01TU>

Tutorial

Bio Applications

Chair: Yuzuru Ikehara (Chiba University)

Eun Ha Choi

Kwangwoon University

"Nonthermal Atmospheric Pressure Plasma Characteristics and International Standards for Plasma Bioscience, Medicine, Agriculture, and Environmental Sciences"

14:00-14:15 Break

14:15-15:15

<05pA02TU>

Tutorial

Nitride Semiconductors

Chair: Koh Matsumoto (Nagoya University)

Hao-Chung Kuo

National Yang Ming Chiao Tung University

"Micro-LEDs and Quantum Based-Full Color Devices for Display and Visible Light Communications"

15:15-15:30 Break

15:30-16:30

<05pA03TU>

Tutorial

Nanomaterials

Chair: Tetsuhide Shimizu (Tokyo Metropolitan University)

Jon Tomas Gudmundsson

University of Iceland

"On Ion Recycling and Electron Heating in High Power Impulse Magnetron Sputtering Discharges"

16:30-16:45 Break

16:45-17:45

<05pA04TU>

Tutorial

Plasma Science and Technologies

Chair: Daisuke Ogawa (Chubu University)

Miles Turner

Dublin City University

"Hybrid Models"

3/6 (MON)

10:00-10:10 Opening & Plasma prize ceremony
Chair and Presenter: Takashi Itoh (Gifu University)

10:10-11:10

Plasma prize

Chair: Takashi Itoh (Gifu University)

Alexander Fridman

Drexel University

11:10-12:00

<06aA02PL>

Plenary Lecture

Chair: Takashi Itoh (Gifu University)

Shinji Kambara

Gifu University

"Plasma Membrane Reactor for Pure Hydrogen Production from Ammonia"

12:00-12:40

<06aA03K>

Keynote Lecture 1

Chair: Seiichi Miyazaki (Nagoya University)

Seiichiro Higashi

Hiroshima University

"Atmospheric Pressure Thermal Plasma Jet Technology for Semiconductor Device Manufacturing"

12:40-14:00 Break

14:00-14:40

<06pA04K>

Keynote Lecture 2

Chair: Koh Matsumoto (Nagoya University)

Motoaki Iwaya

Meijo University

"Crystal Growth of High Quality AlGaN Thick Films and UV-B Laser Diodes Fabricated on it"

Plasma Science and Technologies 1

Chair: Moo Been Chang
(National Central University)

Room B

Nanomaterials 1

Chair: Junpei Sakurai
(Nagoya University)
Takayuki Tokoroyama
(Nagoya University)

Room C

Nitride Semiconductors 1

Chair: Motoaki Iwaya
(Meijo University)
Koh Matsumoto
(Nagoya University)

Room D

<p>15:00-15:30 <06pB05I> Invited Lecture Remi Dussart GREMI "Passivation Mechanisms Involved in Cryo-Etching Processes"</p>	<p>15:00-15:30 <06pC05I> Invited Lecture Motoyuki Murashima Tohoku University "New Challenge for Reduction in Friction of Diamond-Like Carbon Coatings Using in situ Irradiation of Dielectric Barrier Discharge onto DLC Surface"</p>	<p>15:00-15:30 <06pD05I> Invited Lecture Daisuke Iida King Abdullah University of Science and Technology (KAUST) "Efficient InGaN-Based Red LEDs and their Micro-LEDs"</p>
<p>15:30-15:45 1008 <06pB06O> Shih-Nan Hsiao Nagoya University "In Situ Monitoring Surface Structure during Hydrofluorocarbon Assisted Atomic Layer Etching of Silicon Nitride Using CF₄/H₂ and H₂ Plasmas" Shih-Nan Hsiao, Makoto Sekine and Masaru Hori Nagoya University</p>	<p>15:30-15:45 1168 <06pC06O> Minh Ngo Quang Nagoya University "Synthesis and Characteristics of Carbon Nanowalls by Combining Different Plasma Methods" Minh Ngo Quang, Nong Ngo Van, Osamu Oda and Masaru Hori Nagoya University</p>	<p>15:30-15:45 1186 <06pD06O> Yi-Xuan Wang National Chung Hsing University "Characteristic of Micro-Scale UVC Light-Emitting Diodes with Porous-AlGaN Structures" Yi-Xuan Wang, Yu-Cheng Kao and Chia-Feng Lin National Chung Hsing University</p>
<p>15:45-16:00 1180 <06pB07O> Yusuke Izumi Nagoya University "Self-Limited Fluorination of Electron-Beam-Irradiated GaN Surface" ¹Yusuke Izumi, ²Takayoshi Tsutsumi, ²Kenji Ishikawa, ²Hiroki Kondo, ²Makoto Sekine and ²Masaru Hori ¹Nagoya University ²Center for Low-temperature Plasma Sciences</p>	<p>15:45-16:15 <06pC07I> Invited Lecture Takayuki Tokoroyama Nagoya University "The Effect of Graphite Domain Direction on the Friction Coefficient of Diamond-Like Carbon Measured via Polarized Raman Analysis"</p>	<p>15:45-16:00 1134 <06pD07O> Chia-Yun Lee National Chung Hsing University "Membrane-Type InGaN Resonant-Cavity Light-Emitting Diodes" Chia-Yun Lee and Chia-Feng Lin National Chung Hsing University</p>

<p>16:00-16:15 1077 <06pB08O> Minoru Sasaki Toyota Technological Institute "Deep Micro-Textured Die Realized by Multiple-Patterning and Etching for Press-Transferring Water-Repellent Function to the Fin of the Heat Exchanger" ¹Seiya Fujita, ¹Gang Han, ²Shigenori Saito and ¹Minoru Sasaki ¹Toyota Technological Institute ²Aicello Corporation</p>		<p>16:00-16:15 1196 <06pD08O> Kenta Kobayashi Meijo University "MOVPE-Grown N-Type Conducting AlInN/GaN DBRs with AlGaN Graded Layers" Kenta Kobayashi, Kana Shibata, Tsuyoshi Nagasawa, Ruka Watanabe, Kodai Usui, Tetsuya Takeuchi, Satoshi Kamiyama and Motoaki Iwaya Meijo University</p>
<p>16:15-16:30 1085 <06pB09O> Michikazu Morimoto Hitachi High-Tech Corporation "Effects of Pulsed Microwave ECR Plasma on Si₃N₄ Etching" ¹Michikazu Morimoto, ²Miyako Matsui, ³Kazunori Koga and ³Masaharu Shiratani ¹Hitachi High-Tech Corporation ²Hitachi, Ltd. ³Kyushu University</p>	<p>16:15-16:30 1182 <06pC08O> Kenichi Inoue The University of Tokyo "Functionalization of Carbon Layer on Hexagonal Boron Nitride Formed by Plasma Processing in Solution" ^{1,2}Kenichi Inoue, ¹Tsuyohito Ito, ²Yoshiki Shimizu and ^{1,2}Kazuo Terashima ¹The University of Tokyo ²National Institute of Advanced Industrial Science and Technology (AIST)</p>	<p>16:15-16:30 1212 <06pD09O> Ruka Watanabe Meijo University "A Blue LED with Current Confinement Formed by Mist Particle Supply Oxidation" Ruka Watanabe, Tsuyoshi Nagasawa, Kenta Kobayashi, Mitsuki Yanagawa, Tetsuya Takeuchi, Satoshi Kamiyama and Motoaki Iwaya Meijo University</p>

16:45-18:15 Presentation 1

3/7 (TUE)			
Plasma Science and Technologies 2 Chair: Atsushi Ito (National Institute for Fusion Science (NIFS)) Room B	Nanomaterials 2 Chair: Tetsuya Yamamoto (Kochi University of Technology) Jon Tomas Gudmundsson (University of Iceland) Room C	Nitride Semiconductors 2 Chair: Makoto Miyoshi (Nagoya Institute of Technology) Manato Deki (Nagoya University) Room D	Bio Applications 1 Chair: Hiromasa Tanaka (Nagoya University) Room E
<p>09:30-10:00 <07aB01l> Invited Lecture Tomoyuki Murakami Seikei University "Graph-Based Approach to Chemistry Modelling for Low-Temperature Plasma Science"</p>	<p>09:30-10:00 <07aC01l> Invited Lecture Tetsuya Yamamoto Kochi University of Technology "Surface Modification of 10-nm Thick ZnO Films as Interface Layers to Tailor the Properties of Al-Doped ZnO Films and Control of Surface and Interface Roughness to Achieve High Carrier Transport Ultra-Thin W-Doped In₂O₃ Films"</p>	<p>09:30-10:00 <07aD01l> Invited Lecture Naoteru Shigekawa Osaka Metropolitan University "Direct Wafer Bonding of Nitride and its Application for Advanced Devices"</p>	<p>09:30-10:00 <07aE01l> Invited Lecture Hazime Sakakita National Institute of Advanced Industrial Science and Technology (AIST) "Practical Realization of Plasma Medical Equipment Based on International Standardization"</p>
<p>10:00-10:30 <07aB02l> Invited Lecture Cheng-Che Hsu National Taiwan University "Machine Learning on Plasma Spectroscopy for Analytical Applications."</p>	<p>10:00-10:15 1119 <07aC02O> Pin-Hsuan Chiang National Taiwan University of Science and Technology "Microplasma Engineering of Surface-Functionalized Silver-Based Nanoclusters as Multifunctional Probes of Biomarkers Alzheimer's Disease and Heavy Metals" Pin-Hsuan Chiang and Wei-Hung Chiang National Taiwan University of Science and Technology</p>	<p>10:00-10:30 <07aD02l> Invited Lecture Atsushi Tanaka Nagoya University "Laser Slicing of GaN Substrates and GaN Devices"</p>	<p>10:00-10:15 1027 <07aE02O> Emiri Yamamoto Chiba University "Plasma Treatment Effectively Diminished the Accumulation of Bone Marrow Derived Cells on Bleeding Control" ¹Emiri Yamamoto, ¹Shinsuke Akita, ^{1,2}Sanae Ikehara, ¹Ikumi Nomata, ¹Shigehito Sakai, ^{1,2}Takashi Yamaguchi, ¹Kazuo Yamamoto, ¹Nobuyuki Mitsukawa and ^{1,2}Yuzuru Ikehara ¹Chiba University ²National Institute of Advanced Industrial Science and Technology (AIST)</p>
	<p>10:15-10:30 1045 <07aC03O> Takeshi Ito Kansai University "Analysis of Fe_xO_y Nanoparticles Deposited by Arc Plasma Deposition" ¹Koyo Kawabata, ¹Masahiro Takebayashi, ¹Ryosuke Moriyama, ²Satoru Kaneko, ¹Hitoshi Ishida, ¹Tomohiro Shimizu, ¹Shoso Shingubara and ¹Takeshi Ito ¹Kansai University ²Kanagawa Institute of Industrial Science and Technology (KISTEC)</p>		<p>10:15-10:30 1036 <07aE03O> Liyin Du Nagoya University "Investigation of Anti-Tumor Effect Mechanism by Plasma Irradiated L-Arginine Solution" ¹Liyin Du, ²Carmelia Miron, ¹Saitoshi Kashiwagura, ²Takashi Kondo, ²Hiromasa Tanaka, ²Kenji Ishikawa, ¹Masaaki Mizuno, ¹Shinya Toyokuni, ¹Hiroaki Kajiyama and ²Masaru Hori ¹Nagoya University ²Center for Low-temperature Plasma Sciences</p>

<p>10:30-10:45 1127 <07aB03O> Yusuke Ando Nagoya University "Contribution Analysis of Process Parameters in Plasma-Enhanced Chemical Vapor Deposition of Amorphous Carbon" Yusuke Ando, Jumpei Kurokawa, Hiroki Kondo, Takayoshi Tsutsumi, Kenji Ishikawa, Makoto Sekine and Masaru Hori Nagoya University</p>	<p>10:30-11:00 <07aC04I> Invited Lecture R. Mohan Sankaran University of Illinois "On Boron-Doped Diamond and the Observation of Intervalence Plasmons"</p>	<p>10:30-10:45 1053 <07aD03O> Kazuki Sawai Osaka Metropolitan University "Characterization of GaN/GaN Interfaces Fabricated by Surface-Activated Bonding" ¹Kazuki Sawai, ^{1,2}Jianbo Liang, ³Yasuo Shimizu, ³Yutaka Ohno, ³Yasuyoshi Nagai and ^{1,2}Naoteru Shigekawa ¹Osaka City University ²Osaka Metropolitan University ³Tohoku University</p>	<p>10:30-10:45 1140 <07aE04O> Yuki Kojima Nagoya University "Morphological Control of Human Mesenchymal Stem Cells with Electrical Stimulation on Carbon Nanowalls." Yuki Kojima, Hiroki Kondo, Masahiro Tanaka, Kenji Ishikawa, Hiroshi Hashizume and Masaru Hori Nagoya University</p>
<p>10:45-11:00 1148 <07aB04O> Seiki Saito Yamagata University "Hydrogen Recycling Model on Carbon Materials by Machine Learning Based on Molecular Dynamics Simulation" ¹Seiki Saito, ¹Masato Iida, ^{2,3}Hiroaki Nakamura, ³Kazuki Takasan, ⁴Keiji Sawada, ⁵Kazuo Hoshino, ²Masahiro Kobayashi and ⁶Masahiro Hasuo ¹Yamagata University ²National Institute for Fusion Science ³Nagoya University ⁴Shinsyu University ⁵Keio University ⁶Kyoto University</p>		<p>10:45-11:00 1059 <07aD04O> Keitaro Toda Nagoya Institute of Technology "Estimation of Electrical Characteristics of Gate-Recessed AlGaIn/GaN MIS-HEMTs with Surface Treatment" Keitaro Toda, Toshiharu Kubo and Takashi Egawa Nagoya Institute of Technology</p>	<p>10:45-11:00 1082 <07aE05O> Guan-Ying Tasi National Taiwan University of Science and Technology "Preparation of Functional Collagen Fibril Microislands for Control of Cell Phenotype and Induction of Stem Cell Differentiation" ¹Guan-Ying Tasi, ²Szu-Yuan Chen and ¹Meng-Jiy Wang ¹National Taiwan University of Science and Technology ²Institute of Atomic and Molecular Sciences Academia Sinica</p>
<p>11:00-11:15 1070 <07aB05O> Hiroaki Nakamura National Institute for Fusion Science "DNA Double Strand Breaks by Tritium Disintegration Using Molecular Dynamics Simulation with Reactive Force Field" ^{1,2}Hiroaki Nakamura, ²Kento Ishiguro, ²Masayuki Murai, ³Ayako Nakata, ¹Shunsuke Usami, ⁴Seiki Saito and ⁵Susumu Fujiwara ¹National Institute for Fusion Science ²Nagoya University ³National Institute for Materials Science ⁴Yamagata University ⁵Kyoto Institute of Technology</p>	<p>11:00-11:15 1131 <07aC05O> Tomonori Kato Tokyo Metropolitan University "Synthesis of Cauliflower-Like Carbon Nanoparticles Using High-Power Pulsed Hollow Cathode Sputtering in Ne/Ar Gas Mixture" ¹Tomonori Kato, ¹Ryoichi Mizue, ¹Kei-ichi Takizawa, ¹Kanta Mori, ²Robert Boyd, ²Sebastian Ekeroth, ¹Ming Yang, ²Ulf Helmersson and ¹Tetsuhide Shimizu ¹Tokyo Metropolitan University ²Linkoping University</p>	<p>11:00-11:30 <07aD03I> Invited Lecture Takeyoshi Onuma Kogakuin University "Sub-200 nm Far-UV Emission Characteristics in Rocksalt-Structured MgZnO Epitaxial Films"</p>	<p>11:00-11:15 1141 <07aE06O> Thipwadee Klom-In National Taiwan University of Science and Technology "Synergetic Control of Stem Cell Differentiation by Extrinsic Photobiomodulation and Collagen Functionalized Micropatterns" ¹Thipwadee Klom-In, ²Szu-Yuan Chen and ¹Meng-Jiy Wang ¹National Taiwan University of Science and Technology ²Institute of Atomic and Molecular Sciences Academia Sinica</p>

<p>11:15-11:30 1203 <07aB06O> Yuto Toda Graduate University for Advanced Studies "Simulation of Negative Hydrogen Ion Bombardment onto Amorphous Carbon" ¹Yuto Toda, ^{1,2}Arimichi Takayama and ^{1,2}Atsushi M. Ito ¹The Graduate University for Advanced Studies ²National Institute for Fusion Science</p>	<p>11:15-11:45 <07aC06I> Invited Lecture Tetsuhide Shimizu Tokyo Metropolitan University "Film Growth-Based Process Design of HiPIMS Pulse Parameters"</p>		<p>11:15-11:30 1133 <07aE07O> Qi-Fu Gao National Taiwan University of Science and Technology "Preparation of Sodium Alginate Tissue Engineering Scaffolds by 3D Bioprinting Technology" ¹Qi-Fu Gao, ²Yi-Cheng Liu, ²Szu-Yuan Chen and ¹Meng-Jiy Wang ¹National Taiwan University of Science and Technology ²Institute of Atomic and Molecular Sciences Academia Sinica</p>
<p>11:30-11:45 1139 <07aB07O> Joshua Martin Bumanlag Ateneo de Manila University "Molecular Dynamics Study of TiO₂ Thin Films Synthesized by Plasma Deposition" Joshua Martin Bumanlag, Christian Lorenz Mahinay and Catherine Joy Dela Cruz Ateneo de Manila University</p>		<p>11:30-11:45 1071 <07aD06O> Itsuki Umemura Aichi Institute of Technology "Degradation of Photoluminescence Intensity Induced by Mechanical Polish in a GaN Epitaxial Layer" Itsuki Umemura, Kengo Sumita, Masahiko Demachi, Kentaro Osakabe, Hiroyuki Iwata and Nobuhiko Sawaki Aichi Institute of Technology</p>	

12:00-12:40
<07aA08K>
Keynote Lecture 3
Chair: Jun-Seok Oh (Osaka Metropolitan University)
Meng-Jiy Wang
National Taiwan University of Science and Technology
"Biocompatible and Anti-Corrosion Thin Films Prepared by Plasma Polymerization"

12:40-14:00 Break

14:00-14:10 Plasma Materials Science Hall of Fame Prize Award ceremony
Chair: Masafumi Ito (Meijo Univesity) Presenter: Masaru Hori (Nagoya Univesity)

14:10-14:40
Plasma Materials Science Hall of Fame Prize
Chair: Masafumi Ito (Meijo Univesity)
Gottlieb S. Oehrlein

14:40-15:10
Plasma Materials Science Hall of Fame Prize
Chair: Masafumi Ito (Meijo Univesity)
Masaharu Shiratani

15:30-17:00 Presentation 2

Move to Banquet Venue

Banquet

3/8 (WED)			
Plasma Science and Technologies 3 Chair: Nozomi Takeuchi (Tokyo Institute of Technology) Room B	Nanomaterials 3 Chair: Wipakorn Jevasuwan (NIMS) Shigeya Naritsuka (Meijo University) Room C	Nitride Semiconductors 3 Chair: Tsutomu Araki (Ritsumeikan University) Daichi Imai (Meijo University) Room D	
<p>9:30-10:00 <08aB01I> Invited Lecture Moo Been Chang National Central University "Application of Alumina-Based Catalyst for C₄F₈ Conversion via Plasma Catalysis"</p>	<p>9:30-10:00 <08aC01I> Invited Lecture Masashi Kurosawa Nagoya University "Potential of Silicon-Germanium-Tin Thin Films for Future Thermoelectric Device Applications"</p>	<p>9:30-10:00 <08aD01I> Invited Lecture Kentaro Nagamatsu Tokushima University "High-Temperature Growth in AIN by MOVPE"</p>	
<p>10:00-10:15 1033 <08aB02O> Md Hadi Iskandar Abd Razak Gifu University "Hydrogen Permeation Characteristic of Flat Plate Plasma Membrane Reactor" Md Hadi Iskandar Abd Razak, Motoki Tsuda, Yukio Hayakawa and Shinji Kambara Gifu University</p>	<p>10:00-10:15 1163 <08aC02O> Daisuke Ogawa Chubu University "Effect of Plasma-Treated Multi-Walled Carbon Nanotubes on Polyurethane Composites" Daisuke Ogawa, Seira Morimune-Moriya, Hikaru Fukuda and Keiji Nakamura Chubu University</p>	<p>10:00-10:30 <08aD02I> Invited Lecture Masatomo Sumiya National Institute of Materials Science (NIMS) "Characterization of Wide Gap Semiconductors by Photothermal Deflection Spectroscopy"</p>	
<p>10:15-10:30 1207 <08aB03O> Naohiro Shimizu Nagoya University "Nano-Pulsed Plasma Study of the Wet Electrode Methods on Hydrogen Generation from High-Resistive Water" ¹Naohiro Shimizu, ¹Britun Nikolay, ¹Reiko Tanaka, ¹Osamu Oda, ¹Ranjit Borude, ²Hiroki Hosoe, ²Satoshi Ino, ²Yosuke Inoue and ¹Masaru Hori ¹Nagoya University ²Innovative Research Excellence, Power unit & Energy, Honda R&D Co. Ltd.</p>	<p>10:15-10:30 1118 <08aC03O> Shintaro Iba Nagoya University "In-Plane Aligned Growth of Carbon Nanowalls by Ion Irradiation Control" ¹Shintaro Iba, ¹Hiroki Kondo, ¹Kenji Ishikawa, ¹Makoto Sekine, ²Mineo Hiramatsu and ¹Masaru Hori ¹Nagoya University ²Meijo University</p>		

<p>10:30-10:45 1067 <08aB04O> Yukio Hayakawa Gifu University "Verification of H₂ Purification Enhancement Effect of Zeolite Filled the PMR" Yukio Hayakawa, Motoki Tsuda and Shinji Kambara Gifu University</p>	<p>10:30-11:00 <08aC04I> Invited Lecture Wipakorn Jevasuwan National Institute for Materials Science (NIMS) "Silicon-Based Nanostructure Formation and Device Applications for Photovoltaic Cells and Field-Effect Transistors"</p>	<p>10:30-10:45 1179 <08aD03O> Kouki Noda Meijo University "Analysis of the Sub-Bandgap Optical Absorption Processes in 300 nm-thick Al_{1-x}In_xN Alloys Grown on a c-Plane GaN/sapphire Template by Photothermal Deflection Spectroscopy" ¹Kouki Noda, ¹Yuto Murakami, ¹Hayata Toyoda, ¹Kazutoshi Kubo, ¹Kyosuke Masaki, ¹Daichi Imai, ¹Makoto Miyoshi, ²Makoto Miyoshi, ¹Tetsuya Takeuchi and ¹Takao Miyajima ¹Meijo University ²Nagoya Institute of Technology</p>
<p>10:45-11:00 1096 <08aB05O> Ahmed Khalil Kyushu University "Molecular Structure Change in Phenol by Gas-Liquid Discharge Plasma" ^{1,2}Ahmed Khalil, ²Takamasa Okumura, ²Pankaj Attri, ²Kunihiro Kamataki, ^{2,3}Kazunori Koga and ²Masaharu Shiratani ¹Aswan University ²Kyushu University ³National Institute of Natural Sciences</p>		<p>10:45-11:00 1227 <08aD04O> Junya Yoshinaga Taiyo Nippon Sanso Corporation "Epitaxial Growth for AlGaN-Based Deep-Ultraviolet Light-Emitting Diodes on 6-inch Sputter-Annealed AlN Template by Using a Mass Production MOCVD System" ¹Junya Yoshinaga, ¹Keitaro Ikejiri, ¹Hiroki Tokunaga, ¹Shuichi Koseki, ²Kenjiro Uesugi and ²Hideto Miyake ¹Taiyo Nippon Sanso Corporation ²Mie University</p>
<p>11:00-11:15 1195 <08aB06O> Kaishu Nitta The University of Tokyo "Droplet Evaporation Behavior in Atmospheric-Pressure Nonequilibrium Plasma" ¹Kaishu Nitta, ¹Hitoshi Muneoka, ²Yoshiki Shimizu, ³Hikomichi Kobayashi, ^{1,2}Kazuo Terashima and ^{1,2}Tsuyohito Ito ¹The University of Tokyo ²National Institute of Advanced Industrial Science and Technology (AIST) ³Keio University</p>	<p>11:00-11:15 1081 <08aC05O> Jia-Ming Kuo National Taiwan University of Science and Technology "Preparation of Iron Carbide-Doped Carbon Composite Nanoparticles by Argon Microwave Plasma for Advanced Oxygen Reduction Reaction" Jia-Ming Kuo and Meng-Jiy Wang National Taiwan University of Science and Technology</p>	<p>11:00-11:15 1218 <08aD05O> Arun Kumar Dhasiyan Nagoya University "Study of the Behavior of Trimethyl Gallium and Triethyl Gallium by OES and QMS for the Growth of GaN by REMOCVD (Radical-Enhanced Metalorganic Chemical Vapor Deposition)" Arun Kumar Dhasiyan, Swathy Jayaprasad, Frank Wilson Amalraj, Naohiro Shimizu, Osamu Oda, Kenji Ishikawa and Masaru Hori Nagoya University</p>
<p>11:15-11:30 1099 <08aB07O> Katsuyuki Takahashi Iwate University "Decomposition of Dibutyl Phosphate in Alkaline Solutions by Pulsed Discharge over Water Surface for Nuclear Recycling Process" ¹Katsuyuki Takahashi, ¹Tetsu Sakakibara, ¹Koichi Takaki, ²Tatsuya Horimai and ²Norio Kanehira ¹Iwate University ²Japan Nuclear Fuel Ltd.</p>	<p>11:15-11:30 1095 <08aC06O> Shigeru Yamada Gifu University "Defect Reduction in Si/SiO₂ Multilayer Films by Hydrogen Radical Treatment" Shigeru Yamada, Naoki Matsuo, Tomohiro Deto, Tomoki Fujisawa and Takashi Itoh Gifu University</p>	<p>11:15-11:30 1123 <08aD06O> Tsutomu Araki Ritsumeikan University "Growth of GaN on ScAlMgO₄ Substrate by RF-MBE" ¹Tsutomu Araki, ¹Naoki Goto, ²Momoko Deura, ¹Yuuya Kuroda, ¹Takashi Fujii, ¹Shinichiro Mouri, ³Yuuji Shiraishi and ³Tsuguo Fukuda ¹Ritsumeikan University ²Ritsumeikan Global Innovation Research Organization (R-GIRO) ³Fukuda Crystal Laboratory</p>

11:30-11:40 Break			
Plasma Science and Technologies 4 Chair: Masanaga Fukasawa (Sony Semiconductor Solutions Corporation) Room B	Nanomaterials 4 Chair: Masashi Kurosawa (Nagoya University) Room C	Nitride Semiconductors 4 Chair: Takuya Maeda (The University of Tokyo) Room D	Bio Applications 2 Chair: Minoru Sasaki (Toyota Technological Institute) Room E
11:40-12:10 <08aB08I> Invited Lecture Atsushi M. Ito National Institute for Fusion Science (NIFS) "Simulation Study of Tungsten Surface Diffusion Process on Fuzzy Nanostructures under Helium Plasma Irradiation."	11:40-12:10 <08aC07I> Invited Lecture Haruki Kiyama Kyushu University "High-Fidelity Readout of Semiconductor Spin Qubits for Large-Scale Quantum Computers"	11:40-12:10 <08aD07I> Invited Lecture Maciej F. Matys Nagoya University "Design and Fabrication of Vertical GaN Junction Barrier Schottky Diodes Using Selective Ion Implantation Technology"	11:40-12:10 <08aE01I> Invited Lecture Yoshihiro Tanaka Nagoya Institute of Technology "Augmentation and Sharing of Tactile Sensations"
12:10-12:25 1003 <08aB09O> Huang-Chi Su Ming Chi University of Technology "The Fabrication of Orthorhombic MoO _x Cap on Hf _x Zr _{1-x} O ₂ Dielectrics by Plasma-Enhanced Atomic Layer Deposition" ¹ Pi-Chun Juan, ¹ Huang-Chi Su, ² Chuan-Hsi Liu and ¹ Chun-Yao Tou ¹ Ming Chi University of Technology ² National Taiwan Normal University	12:10-12:25 1010 <08aC08O> Ting Jui Chang National University of Tainan "Comparison of Electric Conductive Additives in Electrode Compositions for Electric Double-Layer Capacitors with Organic Electrolyte" Ting Jui Chang and Jarrn-Horng Lin National University of Tainan	12:10-12:25 1187 <08aD08O> Minagi Miyamoto Yamaguchi University "Improvement of Electrical Properties by Improving Surface Flatness of N-Polar AlGaIn/AlN Hetero Structures Field Effect Transistor" ¹ Minagi Miyamoto, ¹ Wataru Matsumura, ¹ Ryo Okuno, ¹ Shunsuke Matsuda, ¹ Koki Hanasaku, ¹ Takeko Kowaki, ¹ Daiki Inahara, ² Yongzhao Yao, ² Yukari Ishikawa, ¹ Satoru Kurai, ¹ Narihito Okada and ¹ Yoichi Yamada ¹ Yamaguchi University ² Japan Fine Ceramics Center	12:10-12:25 1034 <08aE02O> Wei-Ting Ting National Taiwan University of Science and Technology "Highly Sensitive Molecularly Imprinted Sensors Based on Protein Recognition Polyaniline via Electrosynthesis Imprinting Method" ¹ Wei-Ting Ting, ¹ Meng-Jiy Wang and ² Matiar M.R. Howlader ¹ National Taiwan University of Science and Technology ² McMaster University
12:25-12:40 1004 <08aB10O> Jun-Yu Su Ming Chi University of Technology "The Effect of Morphological Change on Thermochromic Transition by Nitrogen Gas Added in Reactive High-Density Plasma for VO ₂ Devices" ¹ Pi-Chun Juan, ¹ Jun-Yu Su, ² Ding-Yeong Wang and ¹ Chih-Yi Lin ¹ Ming Chi University of Technology ² Feng Chia University	12:25-12:40 1128 <08aC09O> Bo Liang Peng National Cheng Kung University "Prospective Research of Lithium Phosphorus Oxynitride (LiPON) as an Artificial SEI, Pseudo/All-Solid-State Electrolyte on Silicon Thin-Film Battery" Bo Liang Peng and Chuan Pu Liu National Cheng Kung University	12:25-12:40 1052 <08aD09O> Tomoyuki Kawaide Nagoya Institute of Technology "Device Characteristics of Strain-Engineered AlGaInN/GaN HEMTs on Single-Crystal AlN Substrate" Tomoyuki Kawaide, Sakura Tanaka, Akiyoshi Inoue, Takashi Egawa and Makoto Miyoshi Nagoya Institute of Technology	12:25-12:40 1202 <08aE03O> Yan-Yi Chen National Taiwan University of Science and Technology "Bioresource-Derived Nitrogen-Doped Graphene Quantum Dots as Ultrasensitive and Stable Nanosensors for Cancer and Neurotransmitter Biomarkers" Yan-Yi Chen, Darwin Kurniawan and Wei-Hung Chiang National Taiwan University of Science and Technology

<p>12:40-12:55 1097 <08aB11O> Katsunori Nagahashi Meijo University "Deposition of Crystalline Zinc Oxide Film Using High-Power Pulsed Magnetron Sputtering" Katsunori Nagahashi and Takayuki Ohta Meijo University</p>	<p>12:40-12:55 1200 <08aC10O> Yi-Jui Yeh National Taiwan University "Microplasma Engineering of Photothermal Water Nanogenerators with Porous Graphene Quantum Dot-MXene Nanocomposites" ¹Yi-Jui Yeh, ^{1,2}Wei-Hung Chiang and ¹Kuo-Lun Tung ¹National Taiwan University ²National Taiwan University of Science and Technology</p>		<p>12:40-12:55 1021 <08aE04O> Ping-Yen Hsieh Feng Chia University "Silver Containing Porous Bioceramic Coating for Antimicrobial Titanium Implant" ¹Ping-Yen Hsieh, ¹Cih-Wun Ke, ¹Ying-Hung Chen, ²Hsi-Kai Tsou, ³Hsien-Te Chen and ¹Ju-Liang He ¹Feng Chia University ²Taichung Veterans General Hospital ³China Medical University Hospital</p>
			<p>12:40-12:55 1205 <08aE05O> Ju-Liang He Feng Chia University "HiPIMS Silver Deposition for Antibacterial Bone Implant" ¹Shu-Ting Li, ^{1,2}Ning-Chien Chin, ¹Ping-Yen Hsieh, ¹Ying-Hung Chen, ³Hsi-Kai Tsou and ¹Ju-Liang He ¹Feng Chia University ²Antai Tian-Sheng Memorial Hospital ³Taichung Veterans General Hospital</p>
12:55-14:30 Break		13:10-14:30 Break	
<p>14:30-15:10 <08pA12K> Keynote Lecture 4 Chair: Tetsuya Suemitsu (Tohoku University) Tomas Palacios Massachusetts Institute of Technology "GaN CMOS, MoS₂ Chipllets and other Hardware Accelerators for the Future of Electronics"</p>			
<p>15:10-15:40 <08pA13L> Topical Session 1 Chair: Naotaka Iwata (Toyota Technological Institute) Takuma Nanjo Mitsubishi Electric Corporation "Demonstration of E-Mode Operation in EID AlGaIn/GaN MOS-HEMT"</p>			
<p>15:40-16:10 <08pA14L> Topical Session 2 Chair: Naotaka Iwata (Toyota Technological Institute) Takuya Maeda The University of Tokyo "ScAlN as a Material to Boost Next-Generation High-Frequency GaN-Based FETs"</p>			
16:30-18:00 Presentation 3			

3/9 (THU)			
Plasma Science and Technologies 5 Chair: Remi Dussart (GREMI) Room B	Nanomaterials 5 Chair: Katsuaki Sugawara (Tohoku University) Achim von Keudell (Rhur University) Room C		Bio Applications 3 Chair: Hirofumi Kurita (Toyohashi University of Technology) Room E
	<p>9:30-10:00 <09aC01> Invited Lecture Achim von Keudell Ruhr University Bochum "Transport from Target to Substrate in High Power Impulse Magnetron Sputtering Plasmas"</p>		
	<p>10:00-10:15 1023 <09aC02O> Fan Xiao Gifu University "Homogeneous Wettability Modification of Ultra-Fine Polyethylene Powders in a Plasma-Enhanced Spouted Bed Enriched by Adding Coarser Particles and Vibration" Fan Xiao, Kobayashi Nobusuke, Itaya Yoshinori and Suami Akira Gifu University</p>		
	<p>10:15-10:30 1024 <09aC03O> Ichiro Kato Nagoya Institute of Technology "Transfer-Free Graphene Synthesis on Sapphire Substrates Utilizing the Agglomeration Phenomenon of the Ni Pattern with Fine Structure" Ichiro Kato, Toshiharu Kubo, Makoto Miyoshi and Takashi Egawa Nagoya Institute of Technology</p>		

<p>10:30-10:45 1193 <09aB01O> Atsumu Matsumoto Osaka Metropolitan University "Influence of Applied Voltage Polarity on Surface-Launched Plasma Bullets" Atsumu Matsumoto, Genki Kawanishi, Koki Sasaki, Jun-Seok Oh and Tatsuru Shirafuji Osaka Metropolitan University</p>	<p>10:30-11:00 <09aC04I> Invited Lecture Katsuaki Sugawara Tohoku University "High-Resolution ARPES Studies of Atomic-Layer Transition-Metal Dichalcogenides"</p>	<p>10:30-11:00 <09aE01I> Invited Lecture Takamasa Okumura Kyushu University "Impact of Plasma Irradiation on Plant Seeds Metabolism"</p>
<p>10:45-11:00 1025 <09aB02O> Nikolay Britun Center for Low-Temperature Plasma Sciences, Nagoya University "Multi-Diagnostic Study of Nanosecond Atmospheric Jet Discharge" Nikolay Britun, Peterraj Dennis Christy, Shih-Nan Hsiao and Masaru Hori Center for Low-temperature Plasma Sciences, Nagoya University</p>		
<p>11:00-11:15 1219 <09aB03O> Noriyasu Ohno Nagoya University "Dynamic Response of Detached Recombining Plasmas by Applying Electron Beam" ¹Noriyasu Ohno, ¹Hideki Kaizawa, ¹Kenji Nakabayashi, ¹Hiroki Natsume, ¹Hirohiko Tanaka and ²Shin Kajita ¹Nagoya University ²The University of Tokyo</p>	<p>11:00-11:15 1080 <09aC05O> Vikaskumar Gupta Nagoya Institute of Technology "Fabrication of Ni-Nanoparticles Dispersed Carbon Nanocomposite at Room Temperature for High Performance Gold Based Supercapacitor" ¹Vikaskumar Gupta, ^{1,2}Akiyama Tatsuya, ¹Suresh Giri, ¹Sota Honsho, ¹Ryosuke Miyachi, ¹Kitao Masaya, ¹Shota Tomida, ¹Yosuke Ishii, ¹Shinji Kawasaki and ¹Masaki Tanemura ¹Nagoya Institute of Technology ²F.C.C. Co. Ltd.</p>	<p>11:00-11:15 1065 <09aE02O> Shin-Hung Chen Feng Chia University "DBD Plasma Water Irrigation on Soil Farmed A-Choy: From Seed to Table" Shin-Hung Chen, Ying-Hung Chen, Ping-Yen Hsieh and Ju-Liang He Feng Chia University</p>
<p>11:15-11:30 1161 <09aB04O> Keigo Takeda Meijo University "Surface Loss Probability of H Atom on SUS Surface Continuously-Irradiated by Inductively Coupled Remote H₂ Plasma" Keigo Takeda, Kazushi Masuda and Mineo Hiramatsu Meijo University</p>	<p>11:15-11:30 1194 <09aC06O> Kazushi Sekiya Gifu University "Synthesis of WS₂ Films on Sapphire Substrates by Using Thermal CVD under Ar Atmosphere" Kazushi Sekiya, Fumitaka Ohashi, Kazuma Shirai, Shunsuke Sugai, Shunta Kitazawa, Himanshu Jha and Tetsuji Kume Gifu University</p>	<p>11:15-11:30 1184 <09aE03O> Sayma Khanom Kyushu University "Growth Response of Arabidopsis by Irrigated with Oxygen Plasma Treated Water" Sayma Khanom and Nobuya Hayashi Kyushu University</p>

<p>11:30-11:45 1086 <09aB05O> Shinji Yoshimura National Institute for Fusion Science "Laser-Induced Fluorescence Method Using Asymmetric Optical Vortex Beams" ^{1,2}Shinji Yoshimura, ³Kenichiro Terasaka, ⁴Hiroki Minagawa and ⁴Mitsutoshi Aramaki ¹National Institute for Fusion Science ²Nagoya University ³Kyushu University ⁴Nihon University</p>	<p>11:30-11:45 1122 <09aC07O> Galang Dhaifullah Abdul Aziz National Taiwan University of Science and Technology "Highly Sensitive Electrochemical Biosensors Prepared by Atmospheric Pressure Plasma Treatment on Electrospun Sn/SnO₂ Nanofibers Modified Gold Electrode" Galang Dhaifullah Abdul Aziz and Meng-Jiy Wang National Taiwan University of Science and Technology</p>	<p>11:30-11:45 1051 <09aE04O> Hiromi Alwi Yamamoto Meijo University "Lifetime of Bactericidal Species Generated in Water Irradiated with Oxygen Radicals" ¹Hiromi Alwi Yamamoto, ²Naoyuki Iwata, ²Masaru Hori and ¹Masafumi Ito ¹Meijo University ²Nagoya University</p>
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12:00-12:40
<09aA08K>
Keynote Lecture 5
Chair: Daisuke Ogawa (Chubu University)
Kenji Ishikawa
Nagoya University
"Plasma-Driven Science for Emerging Plasma-Processing Technologies"

12:40-13:20 Award / Closing
Chair: Makoto Sekine (Nagoya University) Presenter: Takashi Ito (Gifu University)

- 06P-P1-02 **Study on Oxygen Gas Addition Effect on Radical Production of Argon Atmospheric Pressure Plasma**
¹Hiroto Matsuura, ¹Takumi Nakano, ²Yota Okamoto, ²Hu Min, ¹Trung Nguyen Tran, ¹Ryoko Asada, ³Yuki Iwata, ³Haruka Suzuki and ³Hiroataka Toyoda
¹Osaka Metropolitan University
²Osaka Prefecture University
³Nagoya University
- 06P-P1-03 **Measurement of Two-Dimensional Profiles of Electron Density and Temperature of 450 MHz Ultra-High Frequency Plasma by Laser Thomson Scattering**
¹Bohao Li, ²Yiming Pan and ¹Kentaro Tomita
¹Hokkaido University
²Kyushu University
- 06P-P1-04 **Microwave Plasma Production under Air-Flow-Induced Reduced Pressure**
¹Taina Ogawa, ¹Yuki Iwata, ¹Haruka Suzuki and ^{1,2}Hiroataka Toyoda
¹Nagoya University
²National Institute for Fusion Science
- 06P-P1-05 **Pulsed Plasma Accelerator Source and Optical Diagnostics for the Study of Pulsed Plasma**
 Azmirah Ahmed, Sumit Singha, Nirod Kumar Neog and Tridip Kumar Borthakur
 Centre of Plasma Physics-Institute for Plasma Research
- 06P-P1-06 **Plasma Treatment on PET Film Using Low-Temperature Atmospheric Pressure Helium Plasma Jet**
¹Tetsuji Shimizu, ^{1,2}Junya Nonaka, ^{1,2}Yuukei Ishihara and ^{1,2}Hajime Sakakita
¹National Institute of Advanced Industrial Science and Technology (AIST)
²University of Tsukuba
- 06P-P1-07 **Suppression of Induced Voltage Emitted from Corona Discharge Type Ionizer Using Grounded Grid Electrodes**
¹Eriko Nakata, ¹Kakeru Uchimido, ¹Katsuyuki Takahashi, ¹Koichi Takaki, ²Nozomi Takeuchi, ³Shinichi Yamaguchi and ⁴Hidemi Nagata
¹Iwate University
²Tokyo Institute of Technology
³Shishido Electrostatic, Ltd.
- 06P-P1-08 **Development of a Portable Plasma Generation Device Driven by a Bluetooth-Modulated Power Source for VOC Detection.**
 Hao-An Yu, Yu-Hong Chu and Cheng-Che Hsu
 National Taiwan University
- 06P-P1-09 **Wettability Characteristics of Copper Surfaces Treated with Air Plasma Using Home-Made Atmospheric Pressure Plasma Jet (APPJ)**
 La Raine Salazar and Christian Lorenz Mahinay
 Ateneo de Manila University

- 06P-P1-10 **Atomic Composition of Droplet Ejected from Liquidized Sn-Bi-Li-Er Alloy Under Hydrogen Plasma Exposure**
¹Kota Tamura, ²Junichi Miyazawa, ²Suguru Masuzaki, ²Masayuki Tokitani, ²Yukinori Hamaji and ^{1,2,3}Hiroataka Toyoda
¹Nagoya University
²National Institute for Fusion Science
³Center for Low-temperature Plasma Sciences
- 06P-P1-11 **Using Microplasma Spectroscopy for Volatile Organic Compounds Detection in Air**
Kuan-Ting Chen, Po-Chien Chang, Wei-Cheng Yen and Cheng-Che Hsu
National Taiwan University
- 06P-P1-12 **Power Absorption of High Negative Pulse Power to an Electron Cyclotron Plasma**
¹Ikumi Hamaguchi, ²Kensuke Sasai, ^{1,2}Haruka Suzuki and ^{1,2,3}Hiroataka Toyoda
¹Nagoya University
²Center for Low-temperature Plasma Sciences
³National Institute for Fusion Science
- 06P-P1-13 **Measurement of Feedstock Particle Motion in Modulated Thermal Plasmas During Nanoparticle Synthesis**
¹Yasunori Tanaka, ¹Ryudai Furukawa, ¹Yurina Nagase, ¹Yusuke Nakano, ¹Tatsuo Ishijima, ²Shiori Sueyasu, ²Shu Watanabe and ²Keitaro Nakamura
¹Kanazawa University
²Nisshin Seifun Group Inc.
- 06P-P1-14 **Optical Measurements of Plume Velocity on Pulsed Plasma Thruster**
Hiroto Yamada, Masataka Yoshikawa, Takeshi Miyasaka, Masaharu Hori and Makoto Asahara
Gifu University
- 06P-P1-15 **Electron Beam Energy Control Using Multi-DC Grid in Ar/CF₄ Inductively Coupled Plasma**
Minseok Kim, Junyoung Park, Beomjun Seo, Changmin Lim and Chinwook Chung
Hanyang University
- 06P-P1-16 **Deuterium Atom Measurement by TALIF in the Spiral Plasma Generator NAGDIS-T**
¹Kota Hiraiwa, ²Shin Kajita, ¹Ryosuke Nishio, ¹Hirohiko Tanaka, ¹Keigo Tojo, ³Mitsutoshi Aramaki, ⁴Ryo Yasuhara and ¹Noriyasu Ohno
¹Nagoya University
²The University of Tokyo
³Nihon University
⁴National Institute for Fusion Science
- 06P-P1-17 **Electron Energy Distribution Function in HIPIMS Plasma**
^{1,2}Kam-Hong Chau, ^{1,3}Yoshinobu Kawai, ²Chi-Wai Kan, ¹Jia-Lin Syu, ¹Yen-Chun Liu, ¹Ying-Hung Chen, ¹Chen-Jui Liang and ¹Ju-Liang He
¹Feng Chia University
²The Hong Kong Polytechnic University
³Kyuhsu University
- 06P-P1-18 **Time Variation of Ion Composition in Dual-Frequency Capacitively-Coupled Ar/C₄F₈O₂ Pulsed Plasma**
¹Haruhito Kato, ¹Yuto Seki, ¹Shuichi Kuboi, ^{1,2}Haruka Suzuki and ^{1,2,3}Hiroataka Toyoda
¹Nagoya University
²Center for Low-temperature Plasma Sciences
³National Institute for Fusion Science

- 06P-P1-19 **Study on Plasma Surface Modification in Carbon Fiber Sheet**
Taiki Ito, Dinh Quynh, Masaharu Komiyama and Satoshi Nishida
Gifu University
- 06P-P1-20 **High-Speed Measurement for Pulsed Plasma Using the Floating Harmonic Method**
Beomjun Seo, Sehun Ahn, Minseok Kim, Jiwon Jung, Junyoung Park and Chinwook Chung
Hanyang University
- 06P-P1-21 **Comparison of Uniformity between Etching Rate and Calculated Plasma Parameter in Dual-Frequency Capacitively Coupled Plasma**
¹Shigeyuki Takagi, ¹Dong Hao, ²Shih-Nan Hsiao and ²Makoto Sekine
¹Tokyo University of Technology
²Nagoya University
- 06P-P1-22 **Positive and Negative Ion Behaviors in DC-Imposed Ar/SF₆ Pulsed Plasma**
Kazuki Toji, Takayoshi Tsutsumi, Kenji Ishikawa, Shih-Nan Hsiao, Makoto Sekine and Masaru Hori
Nagoya University
- 06P-P1-23 **Etching Silicon Oxide, Silicon Nitride, and Polysilicon Films in CH₂FCHF₂ Hydrofluorocarbon Plasma**
Trung Nguyen Tran, Thi-Thuy-Nga Nguyen, Kenji Ishikawa, Shih-Nan Hsiao, Toshio Hayashi, Makoto Sekine and Masaru Hori
Nagoya University
- 06P-P1-24 **Non-Halogen Plasma Etching of Metal Gate TiAlC**
¹Thi-Thuy-Nga Nguyen, ²Kazunori Shinoda, ¹Shih-Nan Hsiao, ²Hiroataka Hamamura, ³Kenji Maeda, ³Kenetsu Yokogawa, ³Masaru Izawa, ¹Kenji Ishikawa and ¹Masaru Hori
¹Nagoya University
²Hitachi, Ltd.
³Hitachi High-Tech Corp.
- 06P-P1-25 **Etching Behavior of Lamellar Poly(styrene-*b*-2-vinylpyridine) Block Copolymer under N₂/H₂ Plasma Process**
¹Ma. Shanlene Dela Vega, ¹Ayane Kitahara, ¹Thi-Thuy-Nga Nguyen, ¹Takayoshi Tsutsumi, ¹Atsushi Takano, ²Yushu Matsushita and ¹Masaru Hori
¹Nagoya University
²Toyota Physical and Chemical Research Institute
- 06P-P1-26 **Study on Plasma Process Using Adsorbed C₇F₁₄ as an Etchant**
Kohei Masuda, Makoto Sekine, Kenji Ishikawa, Shih-Nan Hsiao, Takayoshi Tsutsumi, Hiroki Kondo and Masaru Hori
Nagoya University
- 06P-P1-73 **3D Molecular Dynamics Simulation of Titanium Nitride (TiN) Thin Film Plasma Deposition with Ti Seed Layer**
Bianca Jasmin Manzano, Catherine Joy Dela Cruz and Christian Lorenz Mahinay
Ateneo de Manila University
- 06P-P2-27 **The Charge Carrier Dynamics of CsPbBr₃ Perovskite Nanocomposites for Photocatalytic CO₂ Reduction**
Ying-Chih Pu
National University of Tainan

- 06P-P2-28 **Toward Self-Powered Lithium-Ion Batteries by Developing Porous PVDF-TrFE Piezo-Separator as Piezoelectric Nanogenerators**
Yu-Liang Hsiao, Yen-Ting Chen and Chuan-Pu Liu
National Cheng Kung University
- 06P-P2-30 **Annealing Temperature Dependence of Magnetic Properties of Fe-Ga-Hf Thin Films**
¹Kazuho Suzuki, ¹Yuji Fujiwara, ²Daiki Oshima, ²Takeshi Kato and ³Mutsuko Jimbo
¹Mie University
²Nagoya University
³Daido University
- 06P-P2-32 **Investigation on Ion Migration of Electronic Synapse for Energy Efficient Neuromorphic Computing**
Te-Yu Liao, Chuan-Pu Liu and Chao-Hung Wang
National Cheng Kung University
- 06P-P2-33 **Improving Water Splitting Photoelectrochemical Performance by Synergistic Design of Cu-Doped ZnO Nanorods with CuO Nanoparticles Surface Decoration**
¹An-Mi Chang, ²Ying-Chih Pu and ¹Chuan-Pu Liu
¹National Cheng Kung University
²National University of Tainan
- 06P-P2-34 **Characterization of Perovskite Films Prepared by Vapor Phase Process with Different Deposition Rates of PbI₂**
Tamio Iida, Gota Okada, Kento Takase and Mayo Hashimoto
National Institute of Technology, Gifu College
- 06P-P2-35 **Improvement in Initial Coulombic Efficiency by Chemical Pre-Lithiation of SiO_x Anodes for Lithium-Ion Battery**
Yu Chen Chen and Chuan Pu Liu
National Cheng Kung University
- 06P-P2-37 **Aspect-Ratio Dependent Interfacial Charge Dynamics and Solar Hydrogen Evolution of CdSe/CdS Dot-In-Rod Nanostructures**
Yu-Chen Wei and Ying-Chih Pu
National University of Tainan
- 06P-P2-38 **CdS@UiO66-NH₂ Core@Shell Nanorods for the Photocatalytic CO₂ Reduction**
Yu-Chieh Li and Ying-Chih Pu
National University of Tainan
- 06P-P2-39 **Applied Carbon-Nanotube Coated Plasma Treatment on Fungal Bioaerosols Inactivating in Indoor Medical Environment**
¹Shinhao Yang, ²Chi-Yu Chuang and ¹Ying-Fang Hsu and Hsiao-Chien Huang
¹CTBC Business School
²Department of Occupational Safety and Health, Chang Jung Christian University
- 06P-P2-40 **Highly Effective Preparation of Graphene Nanoflakes Preparation by Microwave Plasma Enhanced Chemical Vapor Deposition for Application of High Voltage Electric Double Layer Capacitors**
^{1,2}Jui-Yu Tung, ²Kun-Ping Huang and ¹Meng-Jiy Wang
¹National Taiwan University of Science and Technology
²Industrial Technology Research Institute

- 06P-P3-43 **Microplasma-Enabled Silicon Quantum Dot-Based Nanogels (SiQDNG) for Sensitive and Selective Biomolecular Sensing**
Yu Hung Yeh
National Taiwan University of Science and Technology
- 06P-P3-44 **Improved Water Lubrication Characteristics by Using Silica Nanoparticles Supported on Si-DLC**
¹Masataka Uchiyama, ¹Hiroyuki Kousaka and ²Natsuo Horiba
¹Gifu University
²Sanyu Tokushu Seiko Company
- 06P-P3-45 **Electroluminescence from High Density Ge/Si Quantum Dots on Sub-Micron Patterned Si Wires**
Yuki Imai, Katsunori Makihara, Noriyuki Taoka, Akio Ohta and Seiichi Miyazaki
Nagoya University
- 06P-P3-46 **Characterization of Light Emission Properties of Superatom-Like Ge-core/Si-shell Quantum Dots**
^{1,2}Katsunori Makihara, ²Yuji Yamamoto, ¹Yuki Imai, ¹Noriyuki Taoka, ²Markus Andreas Schubert, ^{2,3}Bernd Tillack and ¹Seiichi Miyazaki
¹Nagoya University
²IHP - Leibniz-Institut für innovative Mikroelektronik
³Technische Universität Berlin
- 06P-P3-47 **The Catalytic and Electronic Properties of Dispersed CeO₂ Nanoparticles on a Substrate in H₂ and Low Oxygen Pressure**
¹Masakuni Ozawa, ¹Masatomo Hattori, ¹Takashi Hattori, ¹Ryo Kashima and ²Yutaka Majima
¹Nagoya University
²Tokyo Institute of Technology
- 06P-P3-48 **Controlling Orientation of Plasma-Surface Modified Hexagonal Boron Nitride by Electric Field**
¹Rui Hasegawa, ^{1,2}Kenichi Inoue, ¹Tsuyohito Ito, ²Yoshiki Shimizu, ¹Kohzo Ito and ^{1,2}Kazuo Terashima
¹The University of Tokyo
²National Institute of Advanced Industrial Science and Technology (AIST)
- 06P-P4-49 **HVPE Growth Method of Hexagonal Shape Si by Al-Related Nanostructures**
¹Suhyun Mun, ¹Seonwoo Park, ¹Nam Jun Ahn, ¹Kyoung Hwa Kim, ¹Hyung Soo Ahn, ¹Min Yang, ^{1,2}Jae Hak Lee, ¹Young Tea Chun, ¹Sam Nyung Yi, ³Won Jae Lee, ⁴Sang-Mo Koo and ⁵Suck-Whan Kim
¹Korea Maritime and Ocean University
²LNBS Co., Ltd.
³Dong-Eui University
⁴Kwangwoon University
⁵Andong National University

- 06P-P4-50 **Characteristics of Si Nanostructures and Crystals Grown on 4H-SiC Substrates**
¹Seonwoo Park, ¹Suhyun Mun, ¹Jang Beom An, ¹Kyoung Hwa Kim, ¹Hyung Soo Ahn, ¹Min Yang, ^{1,2}Jae Hak Lee, ¹Young Tea Chun, ¹Sam Nyung Yi, ³Won Jae Lee, ⁴Sang-Mo Koo and ⁵Suck-Whan Kim
¹Korea Maritime and Ocean University
²LNBS Co., Ltd.
³Dong-Eui University
⁴Kwangwoon University
⁵Andong National University
- 06P-P4-52 **Field-Induced Self-Assembly Filament Formation of Carbon Nanotube with Various Dimensions**
Kohei Tomita and Hideki Sato
Mie University
- 06P-P4-54 **Electrospinning of Polymer Nanofibers Containing Carbon Nanotubes Filled with Iron Nanowires**
Mutsuki Fujii, Takumitsu Tsunekawa, Yuji Fujiwara and Hideki Sato
Mie University
- 06P-P4-55 **High-Density Growth of Highly Crystalline Carbon Nanotubes Enabled by a Microplasma-Based Multi-Step CVD Reactor**
Takashi Tsuji, Guohai Chen, Yoshiki Shimizu, Hajime Sakakita, Kenji Hata, Don Futaba and Shunsuke Sakurai
National Institute of Advanced Industrial Science and Technology (AIST)
- 06P-P4-56 **Characteristics and Heterostructure of Graphene Oxide /CuBi₂O₄/TiO₂ Composites**
Meng-Hsi Huang, Kuo-Chin Hsu, Te-Hua Fang and Ming-Hong Lin
National Kaohsiung University of Science and Technology
- 06P-P4-58 **Observation of Planar Type Atmospheric Pressure Plasma Formed by Tri-Electrode Dielectric Barrier Discharge**
Hiroshi Akamatsu
Kobe City College of Technology
- 06P-P4-59 **Effect of Oxygen Plasma Treatment on Properties of CNW as Electrode Material of Electrical Double-Layer Capacitor**
Takashi Itoh, Junya Ohno, Satoru Goto, Kousei Tanabe and Shigeru Yamada
Gifu University
- 06P-P4-60 **Effect of Hydrogen Embrittlement on the Tribo-Mechanical Properties of TiN-Coated Aluminum Alloys**
Ho Seong Heo and Seong Jong Kim
Mokpo National Maritime University
- 06P-P4-61 **Effect of Hydrogen Embrittlement on Tribological Characteristics of CrN Coated Al Alloy**
Dong Ho Shin and Seong Jong Kim
Mokpo National Maritime University
- 06P-P4-62 **Electrochemical Characteristics of Austenitic Stainless Steel with Plasma Ion Nitriding and Electropolishing in Scrubber Washing Water**
Hyun-Kyu Hwang and Seong-Jong Kim
Mokpo National Maritime University

- 06P-P4-63 **Effect of Temperature History on Peeling Test Results for Evaluating PMMA Release Properties of DLC Films for Injection Molds**
Masanari Kurata, Hiroyuki Kousaka and Tatsuya Furuki
Gifu University
- 06P-P4-64 **Density Functional Theory (DFT) Study on the Organic Radical-Functionalized Graphene**
¹Shigeaki Abe, ¹Sirus Safae, ¹Mahdis Nesabi, ¹Alireza Valanezhad, ¹Ikuya Watanabe and ²Hiroto Tachikawa
¹Nagasaki University
²Hokkaido University
- 06P-P5-65 **Study on Tensile Properties of Sb₂Te₃ Nanofilm by MD Simulation**
Tang-yu Lai
Air Force Academy
- 06P-P5-66 **Effect of Dose on Lattice Pattern Using Hydrogen Silsesquioxane**
¹Manabu Yasui, ¹Masahito Kurauchi, ¹Satoru Kaneko, ¹Masahiko Mitsuhashi, ²Yoshiaki Nishijima and ³Fumikazu Harazono
¹Kanagawa Institute of Industrial Science and Technology (KISTEC)
²Yokohama National University
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¹University of Malaya
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^{1,3}Satoru Kaneko, ²Takashi Tokumasu, ¹Manabu Yasui, ¹Masahito Kurouchi, ³Masaki Azuma, ³Akifumi Matsuda, ³Mamoru Yoshimoto, ⁴Ruei Yu, ⁵Musa Can, ⁶Sumanta Sahoo, ⁶Kripasindhu Sardar, ⁶Jyn-Ming Ting and ⁶Masahiro Yoshimura
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²Tohoku University
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¹National Taiwan University of Science and Technology
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¹Meijo University
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¹Meijo University
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¹Da-Yeh University
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¹Nagoya Institute of Technology
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¹Katagiri Engineering Co., Ltd.
²Nagoya Industries Promotion Corporation
³Iwata Tool Co., Ltd.
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¹Yusuke Imai, ²Shih-Nan Hsiao, ²Takayoshi Tsutsumi, ²Kenji Ishikawa, ²Makoto Sekine and ²Masaru Hori
¹Nagoya University
²Center for Low-temperature Plasma Sciences
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¹Yuuki Tsuchiizu, ¹Takuhiro Hasegawa, ¹Kouki Ono, ²Sigeo Yasuhara and ¹Wakana Takeuchi
¹Aichi Institute of Technology
²Japan Advanced Chemicals
- 08P-P4-45 **Growth of SiC Thin Films on Various Metal Substrates by Thermal Chemical Vapor Deposition Method Using Vinylsilane**
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- 08P-P4-46 **Characteristics of Incident Particle Flux Determining Growth Rates and Electrical Properties of Indium Tin Oxide Films Deposited by Ion-Plating with Dc Arc Discharge**
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- 08P-P4-47 **Argon Assisted Crystallization of Silicon Film with Hydrogen Dilution**
Chiung-Wei Lin and Hong-Li Lin
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- 08P-P4-48 **Preparation of Al-Doped Zinc Oxide Thin Films Using Mixed Powder Targets with Different Bulk Densities**
^{1,2}Tamiko Ohshima, ¹Hiroharu Kawasaki, ¹Yusuke Hibino, ^{1,3}Takahiko Satake, ¹Yoshihito Yagyu, ¹Takeshi Ihara, ²Naho Itagaki, ²Kazunori Koga and ²Masaharu Shiratani
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- 08P-P4-49 **Development of the Ultra-High Transparent Conducting Oxide Multi-Layer Thin Film Using the Sputtering Method**
Yi-Tzu Tseng, Yu-Ting Tseng, Bo-Chun Chen and Chia-Ching Wu
National Taitung University
- 08P-P4-51 **Droplet-Vaporization Behavior Analysis in Plasma for Fabrication of 3D Nanostructured Zinc Oxide Thin Films by Plasma-Assisted Mist CVD**
Kosuke Takenaka, Susumu Toko and Yuichi Setsuhara
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08P-P4-52 **Effects of Chemical Compositions on the Semiconductor Characteristics of MgCo_2O_4 Thin Films**

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