November 30 Monday

9:15 -9:30	Opening Ceremony	Room 1

9:30 - 10:30	Plenary Talk	Room A: Main Hall

Chair: Tatsuru Shirafuji (Osaka Metropolitan University)

PL-1 **Gas-Liquid Plasma Reactors for Chemical and Environmental Applications**
Bruce Locke (Florida State University, United States of America)

Coffee Break

30A-O1-1	Deposition	Room 1

Chair: Kunihiro Kamataki (Kyushu University, Japan)

11:00-11:25 1 (Invited) **Ionization of Sputtered Species and Hysteresis Behavior in Reactive HiPIMS**
Petr Vasina (Masaryk University, Czechia)

11:25-11:40 2 **Nanostructure design of ternary SiSnNi thin films for Li-ion-battery anode**
Giichiro Uchida (Nagoya University, Japan)

11:40-11:55 3 **Gas-Phase Chemistry of Cumene Plasma CVD for High-Deposition-Rate a-C:H Films**
Shinjiro Ono (Kyushu University, Japan)

11:55-12:10 4 **Decoding the origins of intrinsic stress in plasma-enhanced chemical vapor deposited hydrogenated amorphous carbon films**
Yusuke Ando (Nagoya University, Japan)

12:10-12:25 5 **Probe diagnostics and optical emission spectroscopy of multi pulse high-power impulse magnetron sputtering plasma for diamond-like carbon film synthesis**
Takashi Kimura (Nagoya Institute of Technology, Japan)

12:25-12:40 6 **Fabrication of SnS_2 Nanowall Films by RF Magnetron Sputtering for Application of Lithium-ion Battery Anodes**
Koki Sakaguchi (Meijo University, Japan)

30A-O2-1	Atmospheric/ Thermal and Nanotechnology	Room 2

Chair: Naoto Kodama (Nagoya University, Japan)

11:00-11:15 1 **Effect of Middle-Flange Ar Injection Phase on Si Nanoparticle Synthesis in Tandem Pulse-Modulated Induction Thermal Plasma**
Noritaka Kobayashi (Kanazawa University, Japan)

11:15-11:30 2 **Effect of Modulation Period on Reactive Species Radiation and Diamond Growth in Modulated Induction Thermal Plasma with Intermittent CH_4 Injection**
Kosei Matsuda (Kanazawa University, Japan)

11:30-11:45 3 **Experimental and Numerical Investigation of Optimal Conditions for Selective NO_3 Radical Synthesis Using Atmospheric-Pressure Plasmas**
Yuuki Morishita (Graduate School of Engineering, Tohoku University, Japan)

11:45-12:00 4 **Development and Characterization of a Hybrid CH_4 + H_2 Plasma-Assisted Burner for Industrial Electrification and Decarbonization**
Hamid Reza Yousefi (PlasmaAir AG, Germany)

12:00-12:15 | 5 | **Effect of Carbon Source on FeNi@C Core Shell Nanoparticles Synthesized by Induction Thermal Plasma**
Zichang Shi (Kyushu University, Japan)

12:15-12:30 | 6 | **Synthesis of N-doped carbon dots by plasma in pyridine–water solutions with various volume ratios**
Rintaro Takahata (The University of Tokyo, Japan)

Lunch

30P-O1-1 Etching Room 1

Chair: Nobuyuki Kuboi (Sony Semiconductor Solutions Corporation)

14:00-14:25 | 1 (Invited) | **Cryogenic Atomic Layer Etching: principles and applications**
Thomas Tillocher (GREMI - University of Orleans, France)

14:25-14:50 | 2 (Invited) | **Cryogenic plasma etching of dielectric with HF chemistry**
Makoto Sekine (Low-temperature plasma sciences, Nagoya University, Japan)

14:50-15:05 | 3 | **Sub-nanometer-thick surface modification of silicon in argon plasma processing**
Shota Nunomura (National Institute of Advanced Industrial Science and Technology, Japan)

15:05-15:20 | 4 | **Enhancing the Etching Selectivity of TiN over Gate Insulating Materials Using HCl/N_2 Capacitively Coupled Plasmas**
Che-Ya Wu (Center for Low-Temperature Plasma Sciences, Nagoya University, Japan)

15:20-15:35 | 5 | **Atomic-Scale Understanding of Carbon Etching Reactions and Profile Control in O–C–S Plasmas toward High-Aspect-Ratio Diamond Fabrication**
Kenji Ishikawa (Center for Low-Temperature Plasma Sciences, Nagoya University, Japan)

30P-O2-1 Environment & Energy Room 2

Chair: Masako Shindo (Osaka Institute of Technology, Japan)

14:00-14:25 | 1 (Invited) | **Exhaust Gas Treatment for Glass Melting Furnaces Using Atmospheric-Pressure Nonthermal Plasma**
Tomoyuki Kuroki (Osaka Metropolitan University, Japan)

14:25-14:50 | 2 (Invited) | **Plasma nitrogen fixation for sustainable green fertilizer formation**
Hyun-Ha Kim (AIST, Japan)

14:50-15:05 | 3 | **Nitrogen Fixation to NO in a Packed Bed Dielectric Barrier Discharge Reactor**
Boj Villanueva (Institute of Science Tokyo, Japan)

15:05-15:20 | 4 | **Plasma-Assisted Catalysis for Electrified Reverse Water-Gas Shift Reaction**
Siwan Kim (Institute of Science Tokyo, Republic of Korea)

15:20-15:35 | 5 | **Highly Efficient Hydrogen Peroxide Synthesis in Cavitation-Assisted Underwater Plasmas**
Anouphab Xonelatha (Institute of Science Tokyo, Japan)

Coffee Break

30P-O1-2 Surface Modification Room 1

Chair: Takashi Kimura (Nagoya Institute of Technology, Japan)

16:00-16:25 | 1 (Invited) | **Added Value of Plasma Modification for Nano/Microfibrous Textiles Aimed at Biomedical Applications**
Lenka Zajickova (CEITEC & Masaryk University, Czechia)

16:25-16:40 **2** **Film Formation and Electrical Conduction Properties of Carbon Nanotube-Containing Conductive Adhesives via Atmospheric Pressure Plasma**
Yutaro Hanami (Nagaoka University of Technology, Japan)

16:40-16:55 **3** **Analysis of Plasma-induced Reactions in Hydroquinone Aqueous Solutions Based on Absorbance Measurements**
Rui Hasegawa (The University of Tokyo, Japan)

16:55-17:10 **4** **VUV PRS Based Surface Kinetic Modeling of O- and OH-Radical Oxidation of Polyethylene Validated by XPS**
Weichen Zeng (The University of Tokyo, Japan)

17:10-17:25 **5** **Effect of Substrate Scanning Speed on Oxide-film Formation and Thermal Damage in Si and SiC Substrate Surface Oxidation using Racetrack Ar/O_2 Warm-plasma**
Tatsuki Sakai (Kanazawa University, Japan)

17:25-17:40 **6** **Molecular Dynamics Simulation of Adatom Migration near Vacancy-Pit Edges on Tungsten Surfaces for Plasma-Facing Material**
Wei Quan (The Graduate University for Advanced Studies, SOKENDAI, Japan)

30P-O2-2 Diagnostics Room 2

Chair: Uwe Czarnetzki (Ruhr University Bochum, Germany)

16:00-16:25 **1 (Invited)** **Advanced Non-equilibrium Plasma Diagnostics Supported by Numerical Modelling**
Tomas Hoder (Masaryk University, Czechia)

16:25-16:50 **2 (Invited)** **Machine-Learning Assisted Electric Field Reconstruction for the E-FISH Diagnostic**
Chng Tat Loon (National University of Singapore, Singapore)

16:50-17:05 **3** **Quantitative Electric-Field Measurements in Transient and Reactive Plasmas Using Inverse E-FISH Assisted by Machine Learning**
Mhedine Alicherif (King Abdullah University of Science and Technology, Saudi Arabia)

17:05-17:20 **4** **Measurement of Gas Dynamics in a Single-Filament Pulsed Positive Streamer Discharge in Atmospheric-Pressure Air**
Seungwon Mok (The University of Tokyo, Japan)

17:20-17:35 **5** **Signal Calculation for an Electron Spin Resonance Front End Toward TEMPOL-Based Plasma-Liquid Monitoring**
Paerhati Alafate (Kanazawa University, Japan)

17:50-19:20 Poster Session Core Time 1 Room 2

30P-P1-1 **Generation of DC Discharge Plasma Using a High-Current-Density Photocathode**
Akimitsu Hatta (Kochi University of Technology, Japan)

30P-P1-2 **Cavity Design Optimization for Efficient Microwave Coupling in a Compact Permanent-Magnet ECR Hydrogen Plasma Source**
Cheng Chung Lo (Dept. of Engineering and System Science, NTHU, Taiwan)

30P-P1-3 **DC and RF Bias Control of Plasma Expansion Near Sensitive Semiconductor Surfaces**
Andrey Ushakov (TNO, Netherlands)

30P-P1-4 **Regeneration of activated carbon saturated with acetic acid using low-pressure RF plasma.**
Sho Kawamitsu (University of Ryukyu, Japan)

30P-P1-5 **Feasibility Study on a Hydrogen Reduction System of Molten Iron Oxide Using an ICP Anode**
Masahiro Agata (Shizuoka University, Japan)

30P-P1-L6 **Effects of Plasma irradiation for Arabidopsis thaliana**
Yuga Harada (Undergraduate School of Life Science, Hokkaido University, Japan)

30P-P4-1 **Further Investigation of E-CARSv using Water as a Probe Molecule under Different Infrared Absorption Conditions**
Lisa Kobodo (The University of Tokyo, Japan)

30P-P4-2 **Initial Results on the Asymmetric Optical Vortex Laser-Induced Fluorescence Method in the IME Device at the University of Iowa**
Shinji Yoshimura (National Institute for Fusion Science, Japan)

30P-P4-3 **Wavelength-Selective Three-Dimensional Imaging of Ar Plasma Emission Using Multi-View Tomography**
Hayato Yoshikawa (Nagoya University, Japan)

30P-P4-4 **Posterior uncertainty and credibility analysis of data- versus prior-dominated structure in 2D CCP emission tomography**
Yuchen Ye (Institute of Science Tokyo, Japan)

30P-P4-5 **Spatiotemporal Diagnostics of Reduced Electric Field in Positive Streamer Corona in Dry Air by Single-Photon Counting Optical Emission Spectroscopy**
Ryunosuke Nawata (Tokyo Metropolitan University, Japan)

30P-P4-6 **Measurement of Density Distribution of Atomic Oxygen Generated by a Single Streamer Discharge in Atmospheric Dry Air**
Tomoya Mizutani (Graduate School of Systems Design, Tokyo Metropolitan University, Japan)

30P-P4-7 **Effects of Oxygen Addition on Gas-Phase Negative Ion Chemistry and Its Possible Contribution to Liquid-Phase Peroxynitrite Formation in an Atmospheric-Pressure Plasma Jet**
Kokone Michikura (Toyohashi University of Technology, Japan)

30P-P4-8 **Electrical and optical diagnostics of surface modification processes in low-temperature plasmas generated in water vapor/rare gas mixtures**
Koya Kyotani (Kyoto University, Japan)

30P-P4-9 **Measurement of the Loss Probabilities of Oxygen Atom on SiO_2 Surfaces under Plasma Irradiation**
Hayato Sato (Meijo University, Japan)

30P-P4-10 **Diagnostics framework for quantifying surface-relevant plasma loads in EUV-induced hydrogen plasmas**
Edgar Alberto Osorio Oliveros (ASML, Netherlands)

30P-P4-11 **Balmer alpha Absorption in an ECR-LICP Hydrogen Radical Source**
Yuya Inokuchi (Doshisha University, Japan)

30P-P4-12 **High Frequency Components in Extraction Current of J-PARC RF Negative Hydrogen Ion Source**
Motoi Wada (Doshisha University, Japan)

30P-P4-13 **Non-Invasive Electron Density Monitoring Using an External Planar Surface Wave Probe**
Hee-Jung Yeom (Korea Institute of Fusion Energy, Republic of Korea)

30P-P4-14 **Real-Time Monitoring of Plasma Processing Chamber Conditions Based on Broadband Microwave S11 Spectral Analysis**
Youngjun Yoon (Jeonbuk National University, Republic of Korea)

30P-P4-15 **End-point detection in SiO_2 plasma etching using a non-invasive viewport plasma resonance sensor**
Dae-Woong Kim (Korea Institute of Machinery & Materials, Republic of Korea)

30P-P4-16 **Real-Time Monitoring and Parameter Optimization in Laser-Assisted Atmospheric Pressure Plasma Jet Coating via Mixed Reality**
Ming-Tsang Lee (National Tsing Hua University, Taiwan)

30P-P4-L17 **A collisional-radiative model for atmospheric-pressure helium plasmas with minor admixtures of air and humidity**
Keren Lin (Seikei University, Japan)

30P-P4-L18 **A collisional-radiative model of atomic chlorine for optical emission spectroscopy of chlorine plasmas**
Koji Kikuchi (Institute of Science Tokyo, Japan)

30P-P4-L19 **Time-resolved measurement of OH density during and after pulsed streamer discharge in air**
Hayato Yasuda (The University of Tokyo, Japan)

30P-P4-L20 **Experimental Measurement of Electron Energy Distribution Function of Low-Pressure Argon-Helium Capacitively Coupled Plasma**
Da Deng (Institute of Science Tokyo, Japan)

30P-P4-L21 **Gas temperature characteristics in atmospheric-pressure microplasma-assisted particle synthesis using inkjet droplets**
Riku Tamura (The University of Tokyo, Japan)

30P-P4-L22 **Application of Potassium Laser Absorption Spectroscopy to High-Speed, Low-Pressure Expansion-Tube Flow**
Takumi Futohashi (Shizuoka University, Japan)

30P-P4-L23 **Mass Spectrum Analysis of Precursors for a-C:H Plasma CVD**
Koki Shirouzu (Kyushu University Okumura laboratory, Japan)

30P-P6-1 **Source–Downstream Decoupling by Grid-Aperture Aspect Ratio Control in a Capacitively Coupled Plasma: A 2D PIC-MCC Simulation**
Hanshin Cheong (Pusan National University, Republic of Korea)

30P-P6-2 **Application of Physics-Informed Neural Networks to Numerical Analysis of Glow Discharge Plasma**
Takeru Handa (Tokyo Metropolitan University, Japan)

30P-P6-3 **Influence of Electron Supply Process on Numerical Simulation of Parallel-Plate Dielectric Barrier Discharges**
Takuto Nozawa (Tokyo Metropolitan University, Japan)

30P-P6-4 **Ehrenfest Molecular Dynamics of Plasma-Derived Reactive Species Interacting with Cellulose and Lignin Model Compounds**
Atsushi Ito (The Graduate University for Advanced Studies, SOKENDAI, Japan)

30P-P6-5 **Design and power coupling analysis of a multi hollow cathode discharge (MHCD) plasma source**
Salini Datta (Indian Institute of Technology, India)

30P-P6-L6 **Coarse-grained Molecular Dynamics Simulations on Deformation Behavior of Plasma-Surface-Modified hBN/Polyrotaxane Composites**
Yusuke Yasuda (Graduate School of Frontier Sciences, the University of Tokyo, Japan)

30P-P6-L7 **Analysis of CCP discharge characteristics using finite element method software and comparison with optical emission spectroscopy**
Kazuto Yamashita (Institute of Science Tokyo, Japan)

30P-P9-1 **Computational Study of the Effects of Alloying Elements on Low-Temperature Plasma Nitriding of Stainless Steel**
Shinichiro Adachi (Osaka Research Institute of Industrial Science and Technology, Japan)

30P-P9-2 **Nitriding for Cylindrical Surface of Round Steel using Atmospheric-Pressure Plasma Jet**
Amane Kanzaki (Oita University, Japan)

30P-P9-3 **Control of Nitrided Region in Atmospheric-Pressure Dielectric Barrier Discharge: Effects of Applied Voltage and Argon Gas Mixing**
Sho Matsumoto (Oita University, Japan)

30P-P9-4 **Investigation of Reduction Behavior of Metal Oxide by Pulsed-Arc Atmospheric-Pressure Hydrogen Plasma Jet**
Takuma Ogata (Oita University, Japan)

30P-P9-5 **Control of MoS_2 Growth on Substrates Surface Modified by Ar/SF_6 Plasma**
Akihisa Ogino (Shizuoka University, Japan)

30P-P9-6 **Role of Ions and Radicals in p-Type Doping and Defect Formation of MoS_2 by Nitrogen Plasma Treatment**
Taichi Sakamoto (Shizuoka University, Japan)

30P-P9-7 **Effects of Oxygen Radicals on p-type Doping of MoS_2 by Ar/O_2 Plasma**
Rikiya Matsushima (Shizuoka University, Japan)

30P-P9-8 **Immobilization of MnO_2 on Alumina Substrates Using Silica Sol Binder for Catalytic Hydrogen Peroxide Decomposition**
Min-Ze Hong (National Taiwan University of Science and Technology, Taiwan)

30P-P9-9 **Hydrogen-Assisted Surface Modification of Titanium by Atmospheric-Pressure Plasma for Oxidation Control**
Kosuke Takenaka (The University of Osaka, Japan)

30P-P9-10 **Influence of Solute Elements on the Oxide Film Thickness of Aluminum Alloys Treated by Atmospheric Pressure Plasma**
Ryo Kanno (Shibaura Institute of Technology, Japan)

30P-P9-11 **Micron-Scale Cauliflower-Like Structures Formed on Laser-Preirradiated Tungsten Surfaces by Helium Arc Exposures**
Ryotaro Hata (University of Hyogo, Japan)

30P-P9-12 **Optimizing Structure–Property Correlations and Morphological Characteristics of Ag doped β-Tricalcium Phosphate (Ag- βTCP) Nanoparticles via RF Magnetron Sputtering**
Sanjeet Kumar Paswan (Indian Institute of Technology, India)

December 1 Tuesday

9:30 - 10:30	Reactive Plasma Award Lecture	Room A: Main Hall

Chair: Tatsuru Shirafuji (Osaka Metropolitan University)

PT-1 **Plasmas - Experiment, Model, and Simulation**
Uwe Czarnetzki (Ruhr University Bochum, Germany)

Coffee Break

1A-O1-1	Low-pressure plasma	Room 1

Chair: Tsuyohito Ito (The University of Tokyo, Japan)

11:00-11:25 **1 (Invited)** **Microwave Magnetic Excitation of Reactive Plasmas: Design and Investigation**
Horia-Eugen Porteanu (Ferdinand-Braun-Institute 12489 Berlin, Germany)

11:25-11:40 **2** **Dependence of Working Pressure on Plasma Generation Delay Time in Microwave Excited Water Vapor Plasma**
Thiha Kyaw Swar (Kanazawa University, Japan)

11:40-11:55 **3** **Effect of Time Interval Between High-Voltage Application and Microwave Irradiation on Plasma Generation Probability for High-Pressure Microwave-Excited Water Vapor Plasma**
Hnin Thazin Hlaing (Kanazawa University, Japan)

11:55-12:10 **4** **Comparison of Plasma Generation Probability on Time Interval Between High-Voltage Application and Microwave Irradiation in High-Pressure Microwave Excited Nitrogen and Oxygen Plasmas**
Khin Si Si Kyaw (Kanazawa University, Japan)

12:10-12:25 **5** **Raman scattering spectrum from iron surface exposed to inductively coupled nitrogen/water vapor plasma for ammonia synthesis**
Kyohei Kita (Hokkaido univ., Japan)

12:25-12:40 **6** **Pulse-modulated RF-driven He:O2 plasma jet for contactless cleaning of cultural heritage artefacts**
Yijia Song (Ghent University, Belgium)

1A-O2-1	Modeling and Simulation	Room 2

Chair: Toru Sasaki (Nagaoka University of Technology, Japan)

11:00-11:25 **1 (Invited)** **Plasma-Informed Atomistic Mechanisms of Carbon Ashing in Torr-Range Ar/O_2 Capacitively Coupled Plasmas**
Ho Jun Kim (Hanyang University, Republic of Korea)

11:25-11:40 **2** **Effect of Oxygen Admixture on Ion Flux and Ion Energy Distribution in Dual-Frequency Capacitive RF Ar/O_2 Plasmas under HF/LF Voltage Variation**
Cheol Woong Kim (Pusan National University, Republic of Korea)

11:40-11:55 **3** **Plasma and Material Informatics for Machine-Learning Prediction of Thin-Film Properties in Plasma Processing**
Kunihiro Kamataki (Kyushu University, Japan)

11:55-12:10 **4** **The Unified Concept of Chyhin Complex Pulsations of Negative Corona: From the Trichel Limit to Reactive Plasma Kinetics**
Vasyl Chyhin (Lviv Polytechnic National University, Ukraine)

12:10-12:25 | 5 | **Thermal Wall Model for Gas–Solid Interfaces Based on Collision Processes toward Plasma-Seed Treatment**
Hiroya Yamamoto (National Institute for Fusion Science, Japan)

12:25-12:40 | 6 | **Numerical investigation of Arc Plasma Elongation and Reconnection Processes in Gliding Arc Discharge using 2D Electromagnetic-Thermofluid Simulation**
Takumi Yamagishi (Tohoku University, Japan)

Lunch

Special Session 1 | **Computational** | **Room 2**

Chair: Satoru Kawaguchi (Muroran Institute of Technology), Shinichi Imai (Hitachi High-Tech Corporation)

13:00-15:00 | 1 | **Operator Learning Accelerated Particle-in-Cell Simulations**
Linlin Zhong (Southeast University, China)

2 | **Data-driven estimation of kinetic parameters for O surface recombination in plasmas**
Pedro Viegas (IPFN, IST, University of Lisbon, Portugal)

3 | **Machine Learning-Based Optimization of Etching Processes: Effects of Design of Experiments for Initial Data Acquisition and Application of Transfer Learning**
Takeshi Ohmori (Hitachi, Ltd., Research & Development Group, Tokyo, Japan)

4 | **Probabilistic Framework for Physics Modeling of Plasma Discharges**
Laxminarayan Raja (University of Texas at Austin, United States of America)

1P-O1-1 | **Life Science** | **Room 1**

Chair: Shinya Kumagai (Meijo University, Japan)

13:45-14:10 | 1 (Invited) | **Strategies for Modulating Cellular Responses via Low-Dose Cold Atmospheric Plasma Treatment**
Hirofumi Kurita (Toyohashi University of Technology, Japan)

14:10-14:35 | 2 (Invited) | **Effect of Atmospheric-Pressure Plasma irradiation on Sorghum Seeds**
Yuki Yanagawa (Chiba University, Japan)

14:35-14:50 | 3 | **Analysis of Reaction Intermediates in Oxygen Radical–Induced Tryptophan in Aqueous Solution by ESR and Mass Spectrometry**
Daiji Kitagawa (Nagoya University, Japan)

14:50-15:05 | 4 | **Structural alterations of proteins induced by cold plasma in seeds and mammalian cells**
Pankaj Attri (Kyushu University, Japan)

15:05-15:20 | 5 | **Effects of Air Plasma-Synthesized Dinitrogen Pentoxide on Secondary Metabolism in Strawberry**
Zimeng Wu (Tohoku University, Japan)

15:20-15:35 | 6 | **Correlation between Dynamic Membrane Properties and Temperature-Dependent Hydrogen Peroxide Permeability of Phospholipid Bilayers: A Molecular Dynamics Study**
Yuki Iijima (Tokyo Metropolitan University, Japan)

Coffee Break

1P-O1-2 Deposition Room 1

Chair: Giichiro Uchida (Nagoya University, Japan)

16:00-16:25 **1 (Invited)** **Multi-Scale, Mechanism-Driven Simulation of TEOS-Based Chemical Vapor Deposition**
Hu Li (Tokyo Electron America Inc., United States of America)

16:25-16:50 **2 (Invited)** **Plasma-surface Interactions on Deposition Processes for Si Dielectric Films**
Nobuyuki Kuboi (Sony Semiconductor Solutions Corporation, Japan)

16:50-17:05 **4** **Plasma Chemical Diversity as a Grey-Box AI Descriptor for Low-Temperature ICP-PECVD SiO_2 Films**
Masaharu Shiratani (Kyushu University, Japan)

17:05-17:20 **5** **Distinct Features of Organosilicon Film Forming Behaviors in Helium and Argon-based Atmospheric Pressure Very-High Frequency Plasma**
Farrel Dzaudan Naufal (The University of Osaka, Japan)

1P-O2-1 Liquid-Phase and Gas-Liquid •Diagnostics Room 2

Chair: Toru Sasaki (Nagaoka University of Technology, Japan)

16:00-16:25 **1 (Invited)** **Evaluation of plasma-induced reactive oxygen species using a gas-liquid interface reaction**
Jun-Seok Oh (Osaka Metropolitan University , Japan)

16:25-16:50 **2 (Invited)** **Plasma-Liquid Interactions: Mechanistic Studies to Enable Reaction Control**
Peter Bruggeman (University of Minnesota, United States of America)

16:50-17:05 **3** **Reactive Transport of Plasma-Generated Species in Water Jet: An SPH Simulation with Electrophoresis**
Makoto Sugimoto (Tohoku University, Japan)

17:05-17:20 **4** **Experimental Estimation of Net Hydroxyl Radicals Flux Utilizing Reaction-Diffusion Model**
Xiao Yuan (Tohoku University, Japan)

17:20-17:35 **5** **Comprehensive Multi-Modal Monitoring of Diamond Growth in Plasma CVD Processes**
Kaishu Nitta (National Institute of Advanced Industrial Science and Technology, Japan)

17:35-17:50 **6** **In-situ monitoring of reactive hydrocarbon microwave microplasma for synthesis of size controlled luminescent nanodiamonds**
Joel Jeevan (LSPM-CNRS, Université Sorbonne Paris Nord, Villetaneuse, France)

17:50-19:20 Poster Session Core Time 2 Room 2

1P-P2-1 **Influence of Electrode Geometry on the Emission Distribution of Surface-Launched Plasma Bullets in Helium**
Masaya Yamamoto (Osaka Metropolitan University, Japan)

1P-P2-2 **Effects of Input Pulsed-Voltage Waveforms on Bullet Propagation Characteristics of Atmospheric-Pressure Surface-Launched Plasma Bullets in Argon Gas**
Mizuki Yoshimoto (Osaka Metropolitan University, Japan)

1P-P2-3 **Surface-Launched Plasma Bullet Control through Dynamic dV/dt Modulation**
Tatsuru Shirafuji (Osaka Metropolitan University, Japan)

1P-P2-4 **Polarity-Dependent Emission Propagation of an Atmospheric-Pressure Plasma Jet under an External Electric Field**
Hiromasa Yamada (National Institute of Technology, Nagano College, Japan)

1P-P2-5 **Electron Layer Thickness on Metal Object Formed by Nonthermal Equilibrium Plasma**
Kiyoyuki Yambe (Niigata University, Japan)

1P-P2-6 **Streamer diagnostics using a flexible fast pulse source**
Sander Nijdam (Eindhoven University of Technology, Netherlands)

1P-P2-7 **Repetition Frequency Characteristics of Nitrogen Pulsed Glow Discharge Plasma Driven by a High *dv/dt* SiC Pulser**
Yugo Tanaka (University of Hyogo, Japan)

1P-P2-8 **Velocity of Plasma Filaments Generated by Nitrogen Micro-gap Dielectric Barrier Discharge in Flow Field**
Seiji Mukgaigawa (Iwate University, Japan)

1P-P2-9 **Changes in the Geometry of Microwave Discharge Filaments at Subatmospheric Pressure**
Shiori Nibu (Iwate University, Japan)

1P-P2-10 **Effects of Quartz-Nozzle Diameter and Inner-Conductor Length on Microwave Plasma Expansion toward Large-Area Y_2O_3 Film Deposition**
Hiroki Nagamori (Kanazawa University, Japan)

1P-P2-11 **Experiments and modeling of carbon monoxide production by an atmospheric pressure plasma jet**
Ippei Saito (Seikei University, Japan)

1P-P2-12 **Enhancement of SiO_2-SiO_2 Interfacial Bonding via Atmospheric-Pressure Low-Temperature Plasma Surface Treatment**
Jaeuk Park (Jeonbuk National University, Republic of Korea)

1P-P2-13 **Numerical Thermofluid Modelling of Arc Plasma and Hafnium Evaporation in a Plasma Cutting Torch**
Nobuhiro Takata (Kanazawa University, Japan)

1P-P2-14 **Molecular Dynamics Simulation of Si Atom Condensation under Different Temperature Decay Rates for Tandem Modulated Induction Thermal Plasma**
Rio Okano (Kanazawa university, Japan)

1P-P2-L15 **Temporal Control of Carbon-, Hydrocarbon-, and Hydrogen-Related Species Generation Using a Two-Slope Sawtooth-Modulated Coil-Current Waveform for Single-Crystal Diamond Growth**
Kou Sato (Kanazawa University, Japan)

1P-P2-L16 **High-Speed Spectroscopic Imaging of Hydrocarbon Pyrolysis Processes in a Multiphase AC Arc**
Manabu Tanaka (Kyushu University, Japan)

1P-P2-L17 **Effects of Mn Feedstock Powder Injection on the Temperature Field for HEA Nanoparticle Synthesis Using Tandem-Type Induction Thermal Plasma**
Takahiro Akashi (Kanazawa University, Japan)

1P-P2-L18 **Numerical Investigation of Temporal Control of Nitrogen-Containing Species Fluxes by Feed-Gas Timing in Modulated Induction Thermal Plasma**
Htet Wonna Oo (Kanazawa University, Japan)

1P-P5-1 **Impact of Tsallis q-Entropy on Atomic Photoionization in Non-Extensive Plasmas**
Myoung-Jae Lee (Hanyang University, Republic of Korea)

1P-P5-L2 **Effects of electron impact transitions between excited states on argon emission**
Shion Kobayashi (Institute of Science Tokyo, Japan)

1P-P7-1 **Fluorocarbon-assisted Cryogenic HF Plasma Etching of Si-based Dielectric Films with Ultra-high Selectivity over Amorphous Carbon**
Shih-Nan Hsiao (Nagoya University, Japan)

1P-P7-2 **13.56 MHz and 2 MHz Bias effect on the High-Aspect-Ratio Etching in $Ar/O_2/C_4F_6/C_4F_8$ Dual-Frequency Capacitively Coupled Plasma**
Sijun Kim (Chungnam National University, Republic of Korea)

1P-P7-3 **Low Temperature Etching of Silicon Oxide Assisted by H_2O in Ar/CF_4 Plasma**
Hakseung Lee (SKKU, Republic of Korea)

1P-P7-4 **SiO_2/Si stack damage structure in Ar, O_2, and H_2 plasma processing**
Shota Nunomura (National Institute of Advanced Industrial Science and Technology, Japan)

1P-P7-5 **Sputter Cleaning of the ITER Divertor Impurity Monitor First Mirror Using Low-Pressure 40.68 MHz RF Discharge**
Andrey Ushakov (TNO, Netherlands)

1P-P7-6 **Effect of Change in Water Vapor Supply and Pressure Associated with Temperature Increase on Water Plasma Ashing Characteristics**
Yamato Hiraoka (Kanazawa University, Japan)

1P-P7-7 **Effects of Hydrogen Radicals Generated from Remote Plasma Source on Atomic Scale Etching of TiO_2 Layer**
Heesu Lee (Jeonbuk National University, Republic of Korea)

1P-P8-1 **Enhancement of N–V Center Formation in Nitrogen-Doped Diamond Films by Radical Injection Plasma Enhanced Chemical Vapor Deposition**
Yuto Yonehara (Meijo University, Japan)

1P-P8-2 **Structural Control of Si–Sn Nanowires Fabricated by Sputtering for Li-ion Battery Anodes**
Reo Yokoyama (Meijo University, Japan)

1P-P8-3 **Development of Sn-Zn Composite Thin Film Anodes by Co-Sputtering for Lithium-Ion Batteries**
Kotaro Toda (Meijo University, Japan)

1P-P8-4 **Sputter-Deposition of Al_2O_3 Layer for Interfacial Control on LTO anode in Li ion Batteries**
Takashi Asai (Meijo University, Japan)

1P-P8-5 **Effect of process pressure on nitrogen incorporation in titanium dioxide thin films deposited by reactive sputtering**
Ryusuke Goto (Meijo University, Japan)

1P-P8-6 **Effect of nitrogen gas flow rate ratio on deposition of AlN film by high-power impulse magnetron sputtering**
Shunichi Oshima (Meijo University, Japan)

1P-P8-7 **Deposition of tellurium oxide using high-power impulse magnetron sputtering**
Tatsuro Yamamoto (Meijo University, Japan)

1P-P8-8 **Fracture Characteristics of Hydrogenated Amorphous Carbon Films with Inserted Carbon Nanoparticles**
Ryosuke Kinnami (Kyushu university, Japan)

1P-P8-9 **Ion Energy Dependence of a-C:H Film Structure from the Low-H/C Precursor Cumene**
Shumpei Ohara (Kyushu University, Japan)

1P-P8-10 **Effects of Nitrogen Incorporation into ZnON Seed Layers Fabricated by a Low-Temperature Process on the Grain Size of ZnON Seed Layers and Quality of ZnO:Al Films**
Yoshiharu Wada (Kyushu University, Japan)

1P-P8-11 **Preparation of Hydrogenated Amorphous Carbon (a-C:H) Films to Promote Corrosion Resistance and Thermal Aging Stability on Stainless-Steel**
Kun-Lin Li (National Taiwan University of Science and Technology, Taiwan)

1P-P8-12 **Influence of Nozzle-to-Substrate Distance on Wide High-Rate DLC Deposition in Gas-Injected Pulsed Plasma CVD**
Toru Harigai (Gifu University, Japan)

1P-P8-13 **Deposition and Characterization of Silicon Oxide Like Films Using Capacitively-Coupled Ar/HMDSO/O_2 plasmas**
Junho Seo (Jeonbuk National University, Republic of Korea)

1P-P8-14 **Fabrication of High-Adhesion Gradient Functional Thin Films for Hydrogen Embrittlement Prevention**
Hiroharu Kawasaki (National Institute of Technology, Sasebo College, Japan)

1P-P8-15 **Evaluation of Mechanical Properties of sp^3-bonded BN films under Progressive Delamination using Si Microstructured Substrates**
Haruki Toge (Kyoto university, Japan)

1P-P8-16 **Effects of Nitrogen Incorporation into sp^2-phase BN films on Time-dependent Dielectric Breakdown Features**
Ayato Chiwata (Kyoto University, Japan)

1P-P8-17 **Application of a High-*dv/dt* SiC-MOSFET Pulser as a Plasma Power Supply for Diamond-Like Carbon Film Preparation**
Ren Kitaguchi (University of Hyogo, Japan)

1P-P8-18 **Aerosol-Assisted Multi-Gas Atmospheric Plasma Deposition of Enhanced Antimicrobial Biopolymer Coatings**
Hua-Ting Hsieh (FIRST, Institute of Science Tokyo, Japan)

1P-P8-L19 **Growth behavior of crystalline Si film on nanostructured Si substrate using high-density hydrogen plasma induced chemical transport**
Jun Onoe (The University of Osaka, Japan)

1P-P10-1 **Pressure-Induced Morphological Transition from Planar Graphene to Carbon Nanowalls in Microwave Plasma CVD**
Naoki Morita (Meijo University, Japan)

1P-P10-2 **Deposition of p-type high-carrier-mobility SnO film by high-power impulse magnetron sputtering**
Takumi Inoue (Meijo University, Japan)

1P-P10-3 **Effect of Oxygen Flow Rate Ratio on Film Characteristics of IGZO Thin Films Deposited by HiPIMS**
Sota Matsuoka (Meijo University, Japan)

1P-P10-L4 **XAFS analysis of Ge nanostructures implanted in SiO_2 materials**
Tomoko Yoshida (Nagoya University, Japan)

1P-P10-L5 **Silicon Sludge Recycling using Thermal Plasma Process and Suspension Feeding**
Daiki Kubota (Shimane Institute for Industrial Technology, Japan)

1P-P10-L6 **Diameter-Selective Reaction Confined to the Topmost Surface of Single-Walled Carbon Nanotube Sheets under Hydrogen Radical Irradiation**
Haruna Sakata (Kyushu University, Japan)

1P-P10-L7 **Effects of Hydrogen Plasma Active Species on Structural and Electrical Properties of Single-Walled Carbon Nanotube Sheets**
Mika Yamasaki (Kyushu University, Japan)

December 2 Wednesday

9:30 - 10:30	Plenary Talk 2	Room A: Main Hall

Chair: Tatsuru Shirafuji (Osaka Metropolitan University)

PL-2 **Development of Plasma Sources: From Low Pressure to Atmospheric Pressure, and from Solid to Liquid Surfaces**
Hirotaka Toyoda (Nagoya University, Japan)

Coffee Break

2A-O1-1	Life Sciences	Room 1

Chair: Shinya Kumagai (Meijo University, Japan)

11:00-11:25 **1 (Invited)** **Plasma-activated water generated by Transient Spark discharge and its use for biomedical applications**
Mário Janda (Comenius University, Slovakia)

11:25-11:40 **2** **Contribution of Endogenous Reactive Oxygen Species to Plasma-Induced Molecular Introduction: Focusing on Taro (*Colocasia esculenta*) Callus Cells**
Masafumi Jinno (Ehime University, Japan)

11:40-11:55 **3** **Growth of an Indica Rice Cultivar Treated with Foliar Application of Plasma-activated Lactate Solution**
Hiroshi Ehara (Nagoya University, Japan)

11:55-12:10 **4** **Regulation of Plant Morphogenesis under Simulated Micro- and Partial-Gravity Conditions Using Plasma-Synthesized Dinitrogen Pentoxide**
Kazuki Wada (Tohoku University, Japan)

12:10-12:25 **5** **Delayed Pro-Survival Bystander Effects of Cold Atmospheric Plasma: A Soluble-Factor-Mediated Response in B16F10 Melanoma Cells**
Jinuo Chen (The University of Tokyo, Japan)

12:25-12:40 **6** **Effects of Plasma Irradiation on Growth in a Photosynthetic Organism**
Shota Terashima (Tohoku University, Japan)

2A-O2-1	Diagnostics	Room 2

Chair: Koichi Sasaki (Hokkaido University, Japan)

11:00-11:25 **1 (Invited)** **Optical diagnostics to investigate the nitrogen triplet system**
Jan Kuhfeld (Plasma Matters BV, Eindhoven, The Netherlands)

11:25-11:50 **2 (Invited)** **Thermal Stratification Governs O_3-to-NO_x Chemistry in Closed Air Plasma Reactors**
Sanghoo Park (Korea Advanced Institute of Science and Technology, Republic of Korea)

11:50-12:05 **3** **Approximate Collisional-Radiative Model of Fluorine Atoms without Molecular Processes under Ionizing Plasma Condition**
Hiroshi Akatsuka (Institute of Science Tokyo, Japan)

12:05-12:20 **4** **Plasma Elongation Dynamics of Nanosecond-Pulsed High-Frequency Discharges in High-Speed Flows**
Si Shen (Institute of Science Tokyo, Japan)

12:20-12:35 **5** **Generation and Investigation of Generation Conditions of Laser-Sustained Plasma (LSP) using Nitrogen Gas and a Near-Infrared Laser**
Eito Kato (Shizuoka University, Japan)

Lunch

Special Session 2 | Plasama Seed | Room 2

Chair: Kazunori Koga (Kyushu University, Japan), Kenji Ishikawa (Nagoya University, Japan)

13:00-15:00

1 **Characterization of cambium stem cells using single nucleus RNA-seq analysis**
Dongbo Shi (RIKEN CSRS, Japan)

2 **Visualization of Carbon-Radical Distribution on Plasma-Irradiated Seeds Using Electron Spin Resonance**
Kenichi Inoue (Nagoya University, Japan)

3 **Essential Roles of Reactive Oxygen Species in Plant Growth and Their Modulation by Cold Atmospheric Plasma**
Kazuyuki Kuchitsu (Tokyo University of Science, Japan)

4 **Development of High-Sensitive Multi-Element Analysis System in Single Cell using Inductively Coupled Thermal Plasma, "Metal Cytometer"**
Akitoshi Okino (Institute of Science Tokyo, Japan)

2P-O1-1 | Elementary Processes | Room 1

Chair: Takayoshi Tsutsumi (Nagoya University, Japan)

14:00-14:25 **1 (Invited)** **Data-driven determination of electron swarm parameters using Bayesian inference and physics-informed neural networks**
Satoru Kawaguchi (Muroran Institute of Technology, Japan)

14:25-14:40 **2** **Long-Lifetime Hydrogen TALIF Observed After the Termination of an Atmospheric-Pressure H_2/Ar Dielectric Barrier Discharge**
Raio Torihama (Hokkaido University, Japan)

14:40-14:55 **3** **Discrete and modal ion focusing effects manifestation at microscale**
Chris Phong Van Nguyen (Tokyo University of Sciencem Japan)

14:55-15:10 **4** **First-Principles Prediction of Critical Fields and Mixture Synergy in Insulating Gases from R-matrix Electron-Collision Cross Sections**
Rei Tsukada (The University of Tokyo, Japan)

Coffee Break

Sepcial Session 3 | Diamond | Room 1

Chair: Norio Tokuda (Kanazawa University, Japan)

15:30-17:30

1 **Diamond Homo- and Heteroepitaxy by Plasma-Enhanced Chemical Vapor Deposition**
Kimiyoshi Ichikawa (Kanazawa University, Japan)

2 **Single-atom-level observation of diamond surfaces using an ultra-high vacuum atomic force microscope**
Yoshiaki Sugimoto (The University of Tokyo, Japan)

3 **Analysis of Atomic Arrangements on Diamond Surfaces and Interfaces Using Photoelectron Holography**
Mami Fujii (Ritsumeikan University, Japan)

4 **From c-BN to h-BN/diamond heterostructures: Growth and Interfaces**
Robert Nemanich (Arizona State University, United States of America)

16:00-17:30	Poster Session Core Time 3	Room 2

2P-P3-1 **Optical And Electrical Measurements On The 1st Discharge Between Needle Electrode And Ionic Liquid**
Ching-Hung Huang (National Sun Yat-sen University, Taiwan)

2P-P3-2 **Problems in long-term operation of microplasma contactors and analysis of power consumption**
Shusuke Oka (Osaka Metropolitan University, Japan)

2P-P3-3 **Toward Estimation of OH Radical Flux and Its dV/dt Dependence in Liquid Treatment Using a Microplasma Contactor**
Takeomi Sawa (Osaka Metropolitan University, Japan)

2P-P3-4 **Correlation between Plasma-Generated Halogen Concentrations and Ion Concentration Distributions at Gas-Liquid Interface**
Kosuke Tachibana (Oita University, Japan)

2P-P3-5 **Gasification pathways of biomass-related model compounds in solution plasma**
Takaki Miyamoto (Kyoto University, Japan)

2P-P3-6 **Nitrogen Fixation from Water and Air Using a Combination of Plasma-Driven Electrolysis and Photocatalysis**
Kosuke Yagi (Hokkaido Univ. , Japan)

2P-P3-7 **Effect of Ethanol Addition on the Structure Formation of Au Nanoparticles in Plasma-Driven Electrolysis**
Yuki Araki (Hokkaido University, Japan)

2P-P4-L24 **Simultaneous Measurement of Electron Density and Deposited Film Thickness Using Same-Diameter Probes in the Double Curling Probe Method**
Daisuke Ogawa (Chubu University, Japan)

2P-P11-1 **Plasma-Driven Catalytic Dry Reforming of Methane over Ni/CeO_2: Reaction Characteristics and Promotion Mechanisms**
Dae-Yeong Kim (Institute of Science Tokyo, Japan)

2P-P11-2 **Kinetic Analysis of N_2/H_2 and N_2/NH_3 Plasma Reaction Fields**
Sena Suzuki (Tohoku University, Japan)

2P-P11-3 **Enhancing plasma NO_x production through controlling the dynamic equilibrium**
Ayman Abdelaziz (Institute of Science Tokyo, Japan)

2P-P11-4 **Plasma-Induced Growth Enhancement of *Botryococcus braunii***
Taro Takeno (Osaka Institute of Technology, Japan)

2P-P11-5 **Evaluation of bactericidal factors in atmospheric-pressure-air-glow plasma-activated rice straw solution**
Kenta Shimizu (Meijo University, Japan)

2P-P11-6 **Effect of Applied Voltage on Collection Efficiency of Inorganic Aerosols in a Rotary Electrode Dielectric Barrier Discharge Reactor**
Yin Nwe Nyein (Kanazawa University, Japan)

2P-P11-7 **Development of Mist-Assisted DBD Plasma Device for Plasma Activated Water Generation**
Yuya Ikebe (Osaka Institute of Technology, Japan)

2P-P11-8 **Effect of DC-Biased Pulsed Discharge on Droplet Electrostatic Precipitation**
Tasuku Hatakeyama (Iwate University, Japan)

2P-P11-9 **Structural Characterization of Sulfur-Incorporated Three-Dimensional Graphene toward Lithium-Sulfur Batteries**
Ryota Ichiyanagi (Meijo University, Japan)

2P-P11-10 **Effect of plasma treatment on iron azaphthalocyanine-supported carbon black**
Tsukasa Irie (Meijo University, Japan)

2P-P11-L11 **Pulsed Surface Discharge on a Self-Concentrating Polyethylene Plate: In-Place PFAS Decomposition and Fluorine Mass Balance**
Si Shen (Institute of Science Tokyo, Japan)

2P-P11-L12 **Effect of Feed H/C Ratio on Carbonaceous Product Formation in Hydrocarbon Decomposition Using a Multiphase AC Arc**
Tomoyasu Kawashita (Kyushu University, Japan)

2P-P11-L13 **Microkinetic Modeling of Eley-Rideal Surface Dynamics during Inductively Coupled Plasma-Assisted Methanation**
Susumu Toko (The University of Osaka, Japan)

2P-P12-1 **Spatiotemporal Evaluation of ROS-Induced Coloration Dynamics in KI-Starch Gel**
Ren Katsuki (Kyushu University, Japan)

2P-P12-2 **Transport Characteristics of Reactive Nitrogen Species in Atmospheric-Pressure Air Plasma Nitrogen Fixation**
So Shimizu (Kyushu University, Japan)

2P-P12-3 **Effects of Plasma-Treated Water Applied to Plant Leaf Surfaces on Water Physiology and Nitrogen Content in Plants**
Tomonori Kawano (The University of Kitakyushu, Japan)

2P-P12-4 **High Density ·OH Radicals Induced by Atmospheric Plasma for Rapid Biomedical Device Sterilization at Room Temperature**
Ben Li Cheng (National Sun Yat-sen University, Taiwan)

2P-P12-5 **Influence of operating pressure on CO formation in non-thermal plasma**
Kazunori Koga (Kyushu Univ, Japan)

2P-P12-6 **Plasma exposure effects on substance introduction into cells**
Shinya Kumagai (Meijo University, Japan)

2P-P12-7 **Selective Inactivation Effects of Lactate Ringer's Solution Activated by Atmospheric-Pressure-Air-Glow Plasma on Breast Cancer Cells**
Naohiro Noro (Meijo University, Japan)

2P-P12-8 **Cell Proliferation-Promoting Activity and Intercellular Uptake of Oxygen Radical-Treated Tryptophan Derivative Solutions**
Takashi Eto (Meijo University, Japan)

2P-P12-9 **Structural analysis of bactericidal factors derived from oxygen-radical activated surfactant solutions**
Soya Goto (Meijo university, Japan)

2P-P12-10 **Role of Soaking Duration in Plasma-Activated Water Treatment relative to Red Clover Seed Imbibition Phases**
Genki Ono (Kyushu University, Japan)

2P-P12-11 **Importance of Plasma Treatment Optimization for Field Application of Plasma Seed Priming in Rice**
Yoshihisa Ikeda (Ehime University, Japan)

2P-P12-12 **Enhanced Germination and Growth Promotion in Iron-Coated Rice Seeds after Plasma Treatment**
Hirotoshi Sakai (The University of Kitakyushu, Japan)

2P-P12-13 **Implementation of Cell-Collagen Scaffolds and Heart Parts by Extrusion Based 3D Bioprinting**
Bo-Han Chen (National Taiwan University of Science and Technology, Taiwan)

2P-P12-14 **Optimization the Fabrication and Geometric Design of MeHA Microwell Platform to Regulate the Germ Layer Differentiation of Mouse Embryonic Stem Cells (ES-D3)**
Hui-Fang Lin (National Taiwan University of Science and Technology, Taiwan)

2P-P12-15 **IES-driven Plasma Jet Effectively Reduces Lentiviral Infection to Mammalian Cells**
Nana Saito (Iwate University, Japan)

2P-P12-L16 **Roadmap of plasma agriculture in Japan**
Kazunori Koga (Kyushu University, Japan)

2P-P12-L17 **Non-Thermal Plasma for Juice Treatment**
Joanna Pawlat (Lublin University of Technology, Poland)

2P-P12-L18 **Effects of Atmospheric-Pressure Plasma Irradiation on Early Growth of Arabidopsis Seedlings**
Tadashi Kunieda (Kyoto Prefectural University, Japan)

2P-P12-L19 **Numerical Analysis of the Effects of Plasma Stimuli on Membrane Transport**
Satoshi Uchida (Tokyo Metropolitan University, Japan)

2P-P12-L20 **Recent Insights into the Relationship Between Plasma Irradiation, Translational Repression, and Acclimation in *Arabidopsis thaliana***
Takahiro Hamada (Okayama University of Science, Japan)

2P-P12-L21 **Characterization of *nDart*-Induced Rice Mutants and the Importance of Bioresource Backup through IBBP**
Kazuo Tsugane (National Institute for Basic Biology, Japan)

2P-P12-L22 **Roles of Reactive Species in Cold Plasma-Induced Promotion of Rice Seed Germination**
Kazuya Ishikawa (Nagoya University, Japan)

2P-P12-L23 **Time-Dependent Nitrosylation of Cysteine by Nitrogen Oxide Radical Irradiation**
Hokuto Mori (Meijo University, Japan)

2P-P12-L24 **Bactericidal and Fungicidal Effects of Plasma-Activated Sodium Lactate Solutions Containing Surfactant Fractionated by Liquid Chromatography**
Rio Oura (Meijo University, Japan)

2P-P12-L25 **Effect of Post-Irradiation Time of Atmospheric-Pressure Air-Glow Plasma-Activated Lactate Ringer's Solution on Selective Inactivation of Breast Cancer Cells**
Kazuhito Suzuoki (Meijo University, Japan)

2P-P12-L26 **Exploring the Factors Underlying Growth Responses of Synechocystis Plasma-Treated Medium**
Shota Terashima (Tohoku University, Japan)

2P-P12-L27 **Qualitative Evaluation of Membrane-Filter Thickness Effect on the Permeability of Nitrogen Oxide Radical-Derived Reactive Species by Absorption Spectroscopy**
Kosuke Muto (Meijo University, Japan)

2P-P12-L28 **Plasma-Based On-Site Nitrogen Fixation and Closed-Loop Gas Recycling for Future Lunar Agriculture**
Toshiro Kaneko (Tohoku University, Japan)

2P-P12-L29 **Inactivation of Extremophilic Microorganisms and Effects of Water Plasma on Protein Components**
Kirara Yamanaka (Kyush University, Japan)

2P-P12-L30 **Changes in Seed Coat Lipids Induced by Cold Plasma Jet Irradiation**
Shoko Matsushita (Nihon University, Japan)

2P-P12-L31 **Changes in cell activity in a co-culture system of macrophages and cytokines induced by oxygen plasma irradiation of a porous medium**
Hinako Nakamura (Kyushu Univ., Japan)

2P-P12-L32 **Development of a Novel Porous Membrane Plasma Source and Its Inactivation Effects on Human Cancer Spheroids**
Yoshihito Yagyu (Kyushu University, Japan)

2P-P12-L33 **Utilization of Low-Temperature Plasma Technology for Improving Early Growth of Sago Palm**
Hiroshi Ehara (Nagoya University, Japan)

2P-P13-1 **High power frequency-tunable rf plasma source for space propulsion**
Yuki Otani (Tohoku University, Japan)

2P-P13-2 **Analysis of ion plume structures in electric propulsion systems based on plasma-induced Si substrate damage dynamics**
Taiga Sasakura (Kyoto University, Japan)

2P-P14-1 **Anisotropic Hydrophilization of Resin Surface Using Atomic Oxygen Produced by Laser Photolysis of O_3**
Yusei Takano (Tokyo Metropolitan University, Japan)

2P-P14-2 **Investigation of plasma gas chemistry on the growth mechanism of PEALD-SiO_2 using Bis(diethylamino)silane**
Pankaj Attri (Kyushu University, Japan)

2P-P14-3 **New hybrid technology for deposition of transparent conductive oxide films for solar cell applications**
Ana Lacoste (Grenoble Alpes University, France)

2P-P14-4 **Proof-of-Principle Experiment on Heat-Load Dispersion Using a Detached Plasma Facing a Rotating Liquid-Metal Target**
Takumi Seto (Tohoku University, Japan)

December 3 Thursday

3A-O1-1 Liquid-Phase and Gas-Liquid — Room 1

Chair: Kunihiro Kamataki (Kyushu University, Japan)

9:00-9:25 **1 (Invited)** **Plasma–Liquid Interactions as a Platform for Controlled Reactive Species and Nanomaterial Design**
Van-Phuoc Thai (HCMC University of Technology and Engineering, Vietnam)

9:25-9:40 **2** **Influence of an Atmospheric-Pressure Dielectric-Barrier Discharge on the Breakup Dynamics of a Coaxial Water Microjet**
Kalyani Barman (Tohoku University, Japan)

9:40-9:55 **3** **Characteristics of Pulsed-Power-Driven Dielectric Barrier Discharge (DBD) for the Treatment of Highly Conductive Solutions**
Masahiro Yamada (Iwate University, Japan)

9:55-10:10 **4** **Characteristics of the Liquid-Flow-Controlled Gliding Arc Reactor**
Sota Kamiyashiki (Iwate University, Japan)

10:10-10:25 **5** **Formation of Self-Organized Luminescence Patterns Observed on the Metal Anode in Atmospheric-Pressure DC Glow Discharges**
Naoki Shirai (Hokkaido University, Japan)

3A-O2-1 Propulsion and Aerodynamics — Room 2

Chair: Takumi Seto (Tohoku University, Japan)

9:00-9:25 **1 (Invited)** **Radiofrequency magnetic nozzle plasma for space propulsion**
Kazunori Takahashi (Tohoku University, Japan)

9:25-9:40 **2** **Numerical Analysis of the Effect of Channel Width on Performance Improvement in CO_2 Hall Thrusters**
Haku Suzuki (Shizuoka University, Japan)

9:40-9:55 **3** **Flight Verification of Passive Compression Intake for Air Breathing Ion Engine (ABIE)**
Tomohisa Oyanagi (Graduate School of Engineering, Kobe University, Japan)

9:55-10:10 **4** **Analysis of the Interaction Between Incident Millimeter Waves and Dielectric Reed Valves for Microwave Rockets**
Yuto Masuda (Tohoku University, Japan)

Coffee Break

3A-O1-2 Atmospheric / Thermal — Room 1

Chair: Yusuke Nakagawa (Tokyo Metropolitan University, Japan)

11:00-11:25 **1 (Invited)** **Modelling for Production and Control of Atmospheric Pressure and Thermal Plasmas**
Pierre Freton (LAPLACE Laboratory, Université de Toulouse, France)

11:25-11:50 **2 (Invited)** **From Streamer Simulations to DBD Field Measurements: Electric-Field Control of Atmospheric-Pressure Plasma Chemistry**
Atsushi Komuro (National Institute of Advanced Industrial Science and Technology, Japan)

11:50-12:05 **3** **Update on “Bottled Lightning” project**
Sander Nijdam (Eindhoven University of Technology, Netherlands)

12:05-12:20 | 4 | **Dielectric Breakdown Characteristics of CO_2/O_2 Gas Mixture after Arc Quenching Under Various O_2 Concentration Conditions**
Go Matsuda (Aoyamagakuin University, Japan)

12:20-12:35 | 5 | **Influence of Electric Field on Electrical Conductivity for High-Temperature SiO_2/Cu Vapor Mixture Formed in Electric Fuses after Arc Quenching**
Naoto Kodama (Nagoya University, Japan)

3A-O2-2	New Trends, Enviroment & Energy	Room 2

Chair: Tatsuo Ishijima (Kanazawa University, Japan)

11:00-11:25 | 1 (Invited) | **Plasma Catalysis Enabling Sustainable C1 Chemistry**
Tomohiro Nozaki (Institute of Science Tokyo, Japan)

11:25-11:40 | 2 | **Relationship between Gas-Flow Parameters and Production Rate of Performic Acid in Atmospheric-Pressure CO_2/H_2O Dielectric Barrier Discharge**
Yuri Kiniwa (Engineering Hokkaido University , Japan)

11:40-11:55 | 3 | **High-Purity Synthesis of Dinitrogen Pentoxide Using DC Rotating Arc Plasma**
Shota Sasaki (Tohoku University, Japan)

11:55-12:10 | 4 | **Plasma-Assisted CO_2 desorption and methanation over Dual-Function Materials**
Pranav Arun (Eindhoven University of Technology, Netherlands)

12:10-12:25 | 5 | **Toward Carbon-Neutral Fertilizer Production: Plasma-Assisted Nitrogen Fixation from Water and Air**
Robert Masumbuko (Gifu University, Japan)

12:25-12:40 | 6 | **Influence of Solution Conductivity on Plasma Characteristics and PFBS Degradation in a Pin-to-Liquid Plasma Reactor**
Siqi Deng (Tohoku University, Japan)

12:45 - 13:00	Closing Ceremony	Room 1