



ISPlasma2018/IC-PLANTS2018

10th International Symposium on Advanced Plasma Science and its Applications for Nitrides and Nanomaterials
11th International Conference on Plasma-Nano Technology & Science

March 4-8, 2018

Meijo University, Nagoya, Japan

Organizing Committee

Chairperson

Mineo Hiramatsu, Meijo University

Vice-Chairperson

Kenji Ishikawa, Nagoya University
Seiichi Miyazaki, Nagoya University
Tetsuya Takeuchi, Meijo University

Sponsored by : The Japan Society of Applied Physics

Co-Sponsored by : Nagoya University Nagoya Institute of Technology
Meijo University Chubu University

<http://www.isplasma.jp/>

※The photograph is an image.



ISPlasma/IC-PLANTS is a specialized international symposium that brings together about 1,000 world-leading scientists and engineers in Nagoya, Japan to discuss latest researches in the fields of advanced plasma science, its applications for processing and manufacturing of nitrides and nanomaterials, as well as new systems for technology transfers. This symposium will address issues such as global warming, resources and energy problems to which advanced plasma science and its application technologies can greatly contribute. In this symposium biosensing technologies will be also highlighted, because of their increasing importance in healthcare, agri-food and environmental areas. We hope that this symposium will provide an ideal venue for the exchange of new ideas and information, and also support the initiation or further development of international collaborations among those who work in these multidisciplinary fields.

Related Fields

Plasma Science & Technologies

- Plasma Source
- Modeling & Simulation
- Thin Film Deposition Process
- Flexible Electronics
- Plasma Agriculture
- Plasma for Nano & Green Technologies
- Advanced Plasma Diagnostics
- Plasma in Liquid
- Etching Process
- Plasma Biology & Medicine

Nitride Semiconductors

- Crystal Growth of GaN & Related Materials
- MBE Growth & Nitrogen Source
- Characterization
- Optical & Optoelectronic Devices
- Device Processing
- Electron & Power Devices

Nanomaterials

- Nanodots & Nanoparticles
- 2D Nanomaterials
- Composites & Functionally Graded Materials
- Surface Modification & Functionalization
- Applications for Energy
- Nanotubes, Nanowires & Nanorods
- Porous Materials & Membranes
- Nanomedicine & Sensing

Bio Applications

- Detection Technologies
- Electrochemical Devices
- Biomarkers & Biosensor Surfaces
- Biomaterials
- Optical Devices, Bioimaging
- Biosensors
- Fabrication Technologies
- Biodevices, uTAS, Lab on a Chip

Special Issue

Selected papers will be published in a special issue of a scientific journal.

Tutorial

Tutorial for Plasma Science, Nitride Semiconductors, Nanomaterials and Biosensing will be held on Sun, March 4, 13:00

Registration

Advanced Online Registration is required.

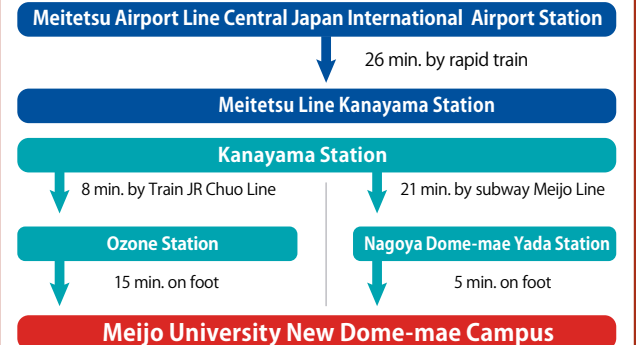
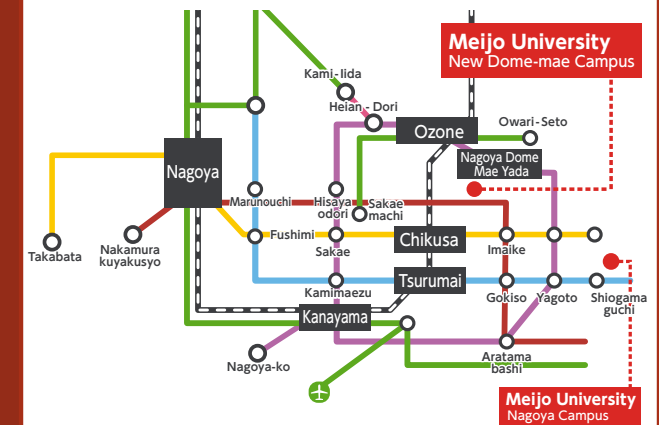
Registration Fee :	General	Student
Early Registration (Until Jan 31, 2018)	JPY 45,000	JPY 15,000
On-site Registration	JPY 50,000	JPY 20,000
Tutorial Fee :		
Participant in Main Symposium	JPY 1,000	JPY 1,000
Tutorial Registration Only	JPY 10,000	JPY 5,000
Banquet Fee (on March 6, 2018)	JPY 6,000	JPY 3,000

* Refunds cannot be made at any reason.

Venue

Meijo University | 4-102-9, Yada Minami, Higashi-ku, Nagoya, Japan
Phone : +81-52-832-1151

Access



Schedule at a glance

Time	3/4 (Sun)	3/5 (Mon)	3/6 (Tue)	3/7 (Wed)	3/8 (Thu)	Time				
9:00	<p>Registration 09 : 00-</p> <p>Opening Address Mineo Hiramatsu, Meijo University</p> <p>Introduction of the Plenary Lecture</p> <p>Plenary Lecture Sumio Iijima Meijo University</p> <p>Break 11:00-11:10</p> <p>Keynote Lecture Jeon Geon Han Sungkyunkwan University</p> <p>Keynote Lecture Uwe Czarnetzki Ruhr-Universität Bochum</p> <p>Registration 12:30-</p> <p>Tutorial <i>Plasma Science & Technologies</i> Pascal Chabert LPP, CNRS, Ecole Polytechnique</p> <p>Break 14:00-14:10</p> <p>Tutorial <i>Nitride Semiconductors</i> Yasushi Nanishi Ritsumeikan University</p> <p>Break 15:10-15:20</p> <p>Tutorial <i>Nanomaterials</i> Yahachi Saito Nagoya University</p> <p>Break 16:20-16:30</p> <p>Tutorial <i>Bio Applications</i> Pietro Favia University of Bari</p> <p>Hajime Sakakita National Institute of Advanced Industrial Science and Technology</p> <p>Welcome Party 18:00-19:30</p>	<p>Registration 09 : 00-</p> <p>Plasma Science 3 <i><Surface and Thin Films></i></p> <p>Nitride Semiconductors 3 <i><Etching & Surface treatments></i></p> <p>Nanomaterials 3 <i><Nanomechanical and electronic devices></i> Invited Lecture Kenji Fukuzawa Nagoya University Heeyeop Chae Sungkyunkwan University</p> <p>Invited Lecture Matteo Gherardi Alma Mater Studiorum – Università di Bologna</p> <p>Plasma Science 4 <i><Atmospheric Pressure></i></p> <p>Nitride Semiconductors 4 <i><Optical Devices 1></i> Invited Lecture Daniel Feezell The University of New Mexico</p> <p>Nanomaterials 4 <i><Surface modifications and tribology></i></p> <p>Bio Applications 4 <i><Plasma Medicine 1></i> Invited Lecture Ta-Chin Wei Chung Yuan Cristian University</p> <p>Nanomaterials 5 <i><Functional nanomaterials></i></p> <p>Plasma Science 2 <i><Thermal Plasma></i> Invited Lecture Juan Pablo Trelles University of Massachusetts Lowell</p> <p>Nitride Semiconductors 2 <i><Novel Materials></i> Invited Lecture Nelson Tansu Lehigh University</p> <p>Nanomaterials 2 <i><Optical properties / Carbon nanomaterials></i> Invited Lecture Kazunari Matsuda Kyoto University</p> <p>Bio Applications 2 <i><Biosensing></i> Hideaki Kano University of Tsukuba Kazuo Nakazato Nagoya University</p> <p>Topical Session 1 <i><The States of the Art Plasma-bio Applications></i> Invited Lecture Alexander Fridman Drexel University</p> <p>Klaus-Dieter Weltmann Leibniz Institute for Plasma Science and Technology (INP Greifswald)</p> <p>Break 16:45-17:00</p> <p>Topical Session 1 <i><Bio-Applications based on Plasma Technology></i> Invited Lecture Kiichi Niitsu Nagoya University Zdenko Machala Comenius University Stephan Reuter Princeton University, INP Greifswald e.V.</p> <p>Banquet 18:30-20:30</p>	<p>Registration 09 : 00-</p> <p>Plasma Science 5 <i><Multiple media></i> Invited Lecture James W Bradley University Liverpool Fumiyoshi Tochikubo Tokyo metropolitan University</p> <p>Nitride Semiconductors 5 <i><Electronic Devices></i> Invited Lecture Kazuya Yamamura Osaka University</p> <p>Nanomaterials 6 <i><Functional nanomaterials / Plasma synthesis and plasma treatment></i></p> <p>Bio Applications 5 <i><Plasma Agriculture></i> Juergen F. Kolb University Rostock</p> <p>Plasma Science 6 <i><Etching></i> Invited Lecture Remi Dussart University of Orleans-CNRS</p> <p>Nitride Semiconductors 6 <i><Optical Devices 2></i> Invited Lecture Xuelun Wang National Institute of Advanced Industrial Science and Technology</p> <p>Plasma Science 1 <i><Plasma Sources></i> Invited Lecture Dmytro Rafalsky Ecole Polytechnique</p> <p>Nitride Semiconductors 1 <i><Growth & Characterizations></i> Invited Lecture Stanislaw Krukowski Polish Academy of Sciences</p> <p>Nanomaterials 1 <i><Carbon/2D Materials></i> Invited Lecture Gheorghe Dinescu University of Bucharest Kosuke Nagashio The University of Tokyo</p> <p>Bio Applications 1 <i><Bio Material></i> Invited Lecture Masaaki Nagatsu Shizuoka University. Yoshimichi Nakatsu Kyushu University</p> <p>Topical Session 2 <i><Advanced Electronic Nitride Materials and Devices></i> Invited Lecture Kazuo Nojiri Lam researchCorp. Heiji Watanabe Osaka University Romualdo Alejandro Ferreyra Kyoto Institute of Technology</p>	<p>Registration 09 : 00-</p> <p>Plasma Science 5 <i><Multiple media></i> Invited Lecture James W Bradley University Liverpool Fumiyoshi Tochikubo Tokyo metropolitan University</p> <p>Nitride Semiconductors 5 <i><Electronic Devices></i> Invited Lecture Kazuya Yamamura Osaka University</p> <p>Nanomaterials 6 <i><Functional nanomaterials / Plasma synthesis and plasma treatment></i></p> <p>Bio Applications 5 <i><Plasma Agriculture></i> Juergen F. 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PLENARY SPEAKER



Sumio. Iijima
(Meijo University, Japan)

Nano-structured Materials: Characterization, Growth and Use

Keynote Speakers



PLASMA SCIENCE & TECHNOLOGIES

U. Czarnetzki (Ruhr-Universität Bochum, Germany)
Ten Years of Plasma Diagnostics as ISPlasma: Progress, Challenges and Perspectives



J. G. Han (Sungkyunkwan University, Korea)
A New Therapeutic New Horizon of Novel Plasma and Films for Next Generation Flexible Devices

Tutorial Speakers



PLASMA SCIENCE & TECHNOLOGIES

P. Chabert (LPP,CNRS,Ecole Polytechnique, France)
Fundamentals of Low-Temperature Plasma Physics



NITRIDE SEMICONDUCTORS

Y. Nanishi (Ritsumeikan University, Japan)
Growth of InN and In-rich InGaN by RF-MBE -Present Status and Challenges-



NANOMATERIALS

Y. Saito (Nagoya University, Japan)
Carbon Nanomaterials as an Electron Emitter: Fundamentals and Applications



BIO APPLICATIONS

P. Favia (University of Bari, Italy)
Tutorial Introduction to Plasma Processing of Biomedical Materials



H. Sakakita (National Institute of Advanced Industrial Science and Technology, Japan)
Study on International Standardization of a Low Energy Ionized Gas Haemostasis Equipment

INVITED SPEAKERS

PLASMA SCIENCE&TECHNOLOGIES

J.W. Bradley (University Liverpool, U.K)
Plasma Discharges for the Ambient Processing of Materials
W. H. Chiang (National Taiwan University of Science & Technology, Taiwan)
Nanostructure Engineering using Microplasmas: Synthesis and Applications
R. Dussart (University of Orléans, France)
Cryogenic Processes for Silicon Deep Etching, Low-K Materials and Atomic Layer Etching
S. Gortchakow (INP Greifswald, Germany)
Advanced Optical Diagnostics for Characterisation of Switching and Welding Arcs
J. L. He (Feng Chia University, Taiwan)
T.B.A.
D. Rafalsky (Ecole Polytechnique, France)
Plasma Sources of Bipolar Flows: Principles of Operation and Diagnostic
F. Tochikubo (Tokyo Metropolitan University, Japan)
Numerical Simulation of Atmospheric-pressure Dc Glow Discharge using Liquid Electrode with Noble Gas Flow
J. P. Trelles (University of Massachusetts Lowell, U.S.A)
Nonequilibrium Plasma Flows Simulation: Kinetics, Patterns and Turbulence

NITRIDE SEMICONDUCTORS

S. Chowdhury (UC Davis, U.S.A)
Vertical GaN Transistors for Power Switching Application
D. Feezell (The University of New Mexico, U.S.A.)
High-speed Nonpolar and Semipolar Light-emitting Diodes for Visible Light Communication
R. A. Ferreyra (Kyoto Institute of Technology, Japan)
Non-alloy Ohmic Contacts Based on Ge-doped GaN Regrown by PicoSecond Pulsed Laser Deposition
S. Keller (University of California, Santa Barbara, U.S.A)
Growth of N-Polar (Al,Ga,In)N Heterostructures for Electronic Device Applications
S. Krukowski (Unipress, Poland)
Energy Dissipation During Adsorption at Solid Surfaces - The Role of Electron Transfer.
K. Nojiri (Lam Research Corp., Japan)
Atomic Layer Etching of GaN And AlGaIn using Directional Plasma-enhanced Approach
N. Tansu (Lehigh University, U.S.A)
Beyond Conventional III-Nitride Semiconductor Technologies
X.L. Wang (National Institute of Advanced Industrial Science and Technology, Japan)
Directional Micro LED based on Evanescent Wave Coupling
H. Watanabe (Osaka University, Japan)
Gate Stack Technology for Advanced GaN-based MOS Devices
K. Yamamura (Osaka University, Japan)
Highly Efficient Damage-free Chemical Mechanical Dry Finishing of Wide Gap Semiconductor Substrate by Plasma Assisted Polishing

NANOMATERIALS

H. Chae (Sungkyunkwan University, Korea)
Plasma-enhanced Atomic Layer Deposition and Chemical Vapor Deposition for Flexible Moisture Barrier Layers
Y. C. Chou (National Taichung University of Education, Taiwan)
Silicide and Germanide Formation in Semiconductor Nanowires
G. Dinescu (University of Bucharest, Romania)
Cold Plasma Jet Sources: From Design to Multidisciplinary Applications
K. Fukuzawa (Nagoya University, Japan)
Real-time Visualization of Nm-thick Liquid Films by Ellipsometric Microscopy
K. Matsuda (Kyoto University, Japan)
Optical Phenomena and Application of Two-dimensional Materials; Control and Dynamics of Optical Properties in Atomically Thin Materials
K. Nagashio (The University of Tokyo, Japan)
Understanding of Layered Heterointerfaces in 2D Semiconductors
T. Nozaki (Tokyo Institute of Technology, Japan)
Nonthermal Plasma-assisted Catalysis of Greenhouse Gas
M. Shiratani (Kyushu University, Japan)
Iot-oriented Solar Cells Fabricated using Plasma-based Nanotechnology
T. Sugaya (National Institute of Advanced Industrial Science and Technology, Japan)
Smart Stacked Heterogeneous Multijunction Solar Cells Fabricated by Advanced Bonding using Metal Nanoparticle Arrays
C. H. Wang (National Taiwan University of Science & Technology, Taiwan)
Synthesis of Non-Precious Metal Catalysts by Different Kinds of Cobalt Precursors for Oxygen Reduction Reaction in Alkaline Media
T. C. Wei (Chung Yuan Cristian University, Taiwan)
T.B.A.
L. Yu (Nanjing University, China)
Programming Silicon Nanowires for high Performance Large Area Electronics and Energy Applications

BIOAPPLICATIONS

A. Fridman (Drexel University, USA)
Nanosecond Pulsed DBD plasma: Fundamentals and Applications in Medicine
M. Gherardi (Università di Bologna, Italy)
Current Research Activities on Plasma-assisted Biomedical Applications and Nanoparticle Synthesis at UniBO
H. Kano (University of Tsukuba, Japan)
Label-free Live Cell Imaging using a White-light Laser Source
Juergen F. Kolb (University Rostock, Germany)
Post-harvest Processing of Crops by Plasma and Pulsed Electric Fields
Z. Machala (Comenius University, Slovenia)
T.B.A.
E. Martines (Consorzio RFX, Italy)
Interacting with Cellular Processes using a Helium Plasma
M. Nagatsu (Shizuoka University, Japan)
Tailoring Surface-functionalized Graphite-encapsulated Metal Nanoparticles by Plasma Processing for Biomedical and Environmental Applications
Y. Nakatsu (Kyushu University, Japan)
T.B.A.
K. Nakazato (Nagoya University, Japan)
Integration of Biochemistry on a Large-scale Integrated Circuit
S. Reuter (Princeton University, USA, INP Greifswald e.V., Germany)
T.B.A.
K. D. Weltmann (Leibniz Institute for Plasma Science and Technology (INP Greifswald), Germany)
Development of Plasma Sources for Medical Applications