

3/18 (MON)

Opening
RoomA

10:20-10:30 Opening Address

Seiichi Miyazaki [ISPlasma2019/IC-PLANTS2019 Organizing Committee Chairperson]

10:30-11:10 Keynote Lecture

<18aA01K>

Chair: Tomohiro Nozaki (Tokyo Institute of Technology)

Davide Mariotti

Ulster University

"Atmospheric Pressure Plasmas for Next Generation Energy Materials"

11:10-11:50 Keynote Lecture

<18aA02K>

Chair: Osamu Nakatsuka (Nagoya University)

Hans-Robert Metelmann

University Medicine Greifswald

"Plasma and Cancer - On the Way to Evidence Based Medicine"

11:50-12:30 Keynote Lecture

<18aA03K>

Chair: Masaru Hori (Nagoya University)

Gyeong S. Hwang

University of Texas

"Accelerating Materials Discovery and Process Optimization via High-Performance Computing"

Lunch Break 12:30-14:00

Nanomaterials 1

Chair: Hideki Sato (Mie University)

Room C

Bio Applications 1**Plasma Biology & Medicine**

Chair: Hajime Sakakita (AIST)

Room D

Nitride Semiconductors 1**Growth & Characterization**

Chair: Tomohiko Shibata (DOWA Electronics Materials Co., Ltd.),
Koh Matsumoto (Taiyo Nippon Sanso Corp.)

Room F

14:00-14:30

<18pC04I>

Invited Lecture

Taiichi Otsuji

Tohoku University

"Terahertz Light Emission and Lasing in Current-driven Graphenebased 2D Nano-structures"

14:00-14:30

<18pD04I>

Invited Lecture

Michael Keider

The George Washington University

"Adaptive Plasmas for Plasma Medicine"

14:00-14:30

<18pF04I>

Invited Lecture

Shigefusa F. Chichibu

Tohoku University

"Recent Progress of Acidic Ammonothermal Growth of GaN"

<p>14:30-14:45 1268 <18pC05O> Shun Imai "Electrochemical Impedance Analysis of Pt Nanoparticles-Supported Carbon Nanowalls for Fuel Cell Application" ¹Shun Imai, ¹Hiroki Kondo, ¹Hyungjun Cho, ¹Takayoshi Tsutsumi, ¹Kenji Ishikawa, ¹Makoto Sekine, ²Mineo Hiramatsu and ¹Masaru Hori ¹Nagoya University ²Meijo University</p>	<p>14:30-15:00 <18pD05I> Invited Lecture Gianluca De Masi Consorzio RFX "The Effect of an Atmospheric Plasma Source on Blood Coagulation"</p>	<p>14:30-15:00 <18pF05I> Invited Lecture Agata Kaminska Institute of Physics, Polish Academy of Science "High Pressure Studies of Recombination Mechanisms in Nitride Semiconductor Structures"</p>
<p>14:45-15:00 1142 <18pC06O> Atsushi Ando "Morphological and Electrical Studies on Molybdenum Disulfide Sheets by N₂ Plasma Treatment within a High Vacuum Inward Plasma System" Atsushi Ando, Jun Miyawaki, Tetsuo Shimizu, Toshitaka Kubo and Toshifumi Irisawa National Institute of Advanced Industrial Science and Technology (AIST)</p>		
<p>15:00-15:15 1214 <18pC07O> Bo Feng Chen "Elasticity Enhancement of Graphene through a Distinctive Pattern of Kirigami" Bo Feng Chen and Chi Hsien Huang Ming Chi University of Technology</p>	<p>15:00-15:15 1277 <18pD06O> Ryugo Tero "Plasma-induced Pore Formation in a Lipid Bilayer: Effects of Long-lived Active Species and Peptide Incorporation" Ryugo Tero, Fumiya Oike, Toru Harigai, Tsuyoshi Tanimoto, Hirofumi Takikawa and Yoshiyuki Suda Toyoashi University of Technology</p>	<p>15:00-15:15 1062 <18pF06O> Akira Yamaguchi "Growth of High Crystalline quality GaN with High Growth Rate by THVPE" ¹Akira Yamaguchi, ²Daisuke Oozeki, ²Nao Takekawa, ²Naoya Kawamoto, ²Hisashi Murakami, ²Yoshinao Kumagai, ¹Kou Matsumoto and ²Akinori Koukitu ¹Taiyo Nippon Sanso Corporation ²Tokyo University of Agriculture and Technology</p>
<p>15:15-15:30 1165 <18pC08O> Ma. Rosario Omega "Plasma-Functionalized Porous Exfoliated Graphene for Water Desalination" Ma. Rosario Omega, Ma. Shanlene Dela Vega, Aubrey Faith Mella and Jomar Tercero University of the Philippines-Diliman</p>	<p>15:15-15:30 1145 <18pD07O> Sotaro Yamaoka "High-Speed Atomic Force Microscopy of Dynamical Changes of Supported Lipid Bilayers Containing Cholesterol in Plasma-Activated Lactec" Sotaro Yamaoka, Hiroki Kondo, Hiroshi Hashizume, Takayoshi Tsutsumi, Kenji Ishikawa, Makoto Sekine, Hiromasa Tanaka and Masaru Hori Nagoya University</p>	<p>15:15-15:30 1184 <18pF07O> Kentaro Takeda "Electrochemical Characterization of Etching Damage Induced to n-GaN Surface" Kentaro Takeda, Masachika Toguchi and Taketomo Sato Hokkaido University</p>
<p>Nanomaterials 2 Chair: Takashi Itoh (Gifu University) Room C</p>	<p>Bio Applications 2 Plasma Biology & Medicine Chair: Alexander Fridman (Drexel University) Room D</p>	<p>Nitride Semiconductors 2 UVLED Chair: Shigefusa F. Chichibu (Tohoku University) Room F</p>
<p>15:45-16:00 1161 <18pC09O> Shigeru Yamada "Changes in Wettability of Carbon Nanowalls by Oxygen Plasma Treatment" Shigeru Yamada, Kousei Tanabe, Yusuke Ieda, Tomoyasu Suzuki, Hiroshi Sobue, Takashi Itoh and Shuichi Nonomura Gifu University</p>	<p>15:45-16:15 <18pD08I> Invited Lecture Jun-ichiro Ikeda Chiba University "Therapeutic Strategy using Non-thermal Plasma for Cancers Targeting Cancer-initiating Cells"</p>	<p>15:45-16:15 <18pF08I> Invited Lecture Tomohiko Shibata DOWA Electronics Materials Co., Ltd. "Progress of Deep UV Leds and their Technical Roadmap"</p>
<p>16:00-16:15 1318 <18pC10O> Daisuke Ogawa "Investigation of Plasma Functionalization of Carbon Nanotubes with Wear-resistance of Polyurethane Composite Film" Daisuke Ogawa, Kazuki Michiya, Hideo Uchida and Keiji Nakamura Chubu University</p>		

<p>16:15-16:45 <18pC11I> Invited Lecture Magdaleno Jr. Rigodon Vasquez University of the Philippines "Development of Low-energy Ion Sources for Thin Film Deposition Applications"</p>	<p>16:15-16:45 <18pD09I> Invited Lecture Jong-Shinn Wu National Chiao Tung University "Human Blood Coagulation using Atmospheric-pressure Argon Plasma Jet"</p>	<p>16:15-16:45 <18pF09I> Invited Lecture Masafumi Jo RIKEN "Structural and Optical Investigation of (11-22) AlGaIn on m-plane Sapphire"</p>
	<p>16:45-17:00 1129 <18pD10O> Yugo Hosoi "Mechanism of Selective Killing of Glioblastoma to Astrocytes in Plasma-Activated Lactate" Yugo Hosoi, Kenji Ishikawa, Hiromasa Tanaka, Hiroshi Hashizume, Masaaki Mizuno, Fumitaka Kikkawa and Masaru Hori Nagoya University</p>	<p>16:45-17:00 1082 <18aF10O> Muhammad Ajmal Khan "Improved Current Injection in AlGaIn-Based 310 nm-UVB LED for Real World Applications" ¹M. Ajmal Khan, ¹Noritoshi Maeda, ¹Masafumi Jo, ²Yoichi Yamada and ¹Hideki Hirayama ¹RIKEN ²Yamaguchi University</p>
<p>Nanomaterials 3 Chair: Seiichi Miyazaki (Nagoya University) Room C</p>	<p>Bio Applications 3 Plasma Biology & Medicine / Plasma Agriculture Chair: Emilio Martines (Consorzio RFX) Room D</p>	<p>Nitride Semiconductors 3 GaN-HEM Chair: Tamotsu Hashizume (Hokkaido University) Room F</p>
<p>17:00-17:30 <18pC12I> Invited Lecture Yanli Pei San Yat-sen University "In₂O₃ TFT Based pH Sensor with Sensitivity over than Nernst Limit"</p>		
<p>17:30-17:45 1205 <18pC13O> Hidetaka Sofue "Formation of Strain-relaxed Ge_{1-x}Si_xSn_y Epitaxial Layer using Ion-implanted Ge Substrate" Hidetaka Sofue, Masahiro Fukuda, Shigehisa Shibayama, Osamu Nakatsuka and Shigeaki Zaima Nagoya University</p>	<p>17:15-17:45 <18pD11I> Invited Lecture Alexander Fridman Drexel University "DBD and GlidArcs in Plasma Agriculture and Food Safety" Alexander Fridman, Gregory Fridman, Charles Bailey, Alexander Rabinovich, Christopher Sales and Jasreen Sekhon"</p>	<p>17:15-17:45 <18pF11I> Invited Lecture Jan Kuzmik Slovak Academy of Sciences "GaN-based Normally-off HEMTs for Switching and Logic Applications"</p>

<p>17:45-18:00 1257 <18pC14O> Yuto Futamura "Electron Field Emission from Multiply-Stacked Structures consisting of Ge-Core Si Quantum Dots and Si Quantum Dots" Yuto Futamura, Katsunori Makihara, Akio Ohta, Mitsuhisa Ikeda and Seiichi Miyazaki Nagoya University</p>	<p>17:45-18:00 1028 <18pD12O> Naoyuki Iwata "Simultaneous Achievement of Bactericidal Efficacy and Plant-growth in Neutral pH Range using Radical-Activated Benzoic Compounds" ¹Naoyuki Iwata, ¹Vladislav Gamaleev, ²Jun-Seok Oh, ³Hiroshi Hashizume, ¹Takayuki Ohta, ³Kenji Ishikawa, ³Masaru Hori and ¹Masafumi Ito ¹Meijo University ²Osaka City University ³Nagoya University</p>	<p>17:45-18:00 1288 <18pF12O> Keisuke Uemura "Low-damage Wet Etching for AlGaIn/GaN Recessed-gate HEMTs using Photo-Electrochemical Reactions" Keisuke Uemura, Yuto Komatsu and Taketomo Sato Hokkaido University</p>
<p>18:00-18:15 1264 <18pC15O> Jone F Chen "Investigation of Hot-carrier-Induced Degradation in N-type LDMOS Transistors" Jone F. Chen and Y. S. Feng National Cheng Kung University</p>	<p>18:00-18:15 1088 <18pD13O> Ryoya Katsuya "Surface Reaction Analysis of Plasma-treated Bio-molecules using Sum Frequency Generation Spectroscopy" ¹Ryoya Katsuya, ¹Takayuki Ohta, ²Kenji Ishikawa and ²Masaru Hori ¹Meijo University ²Nagoya University</p>	<p>18:00-18:15 1088 <18pF13O> Keita Furuoka "Effects of Forming Gas Annealing Conditions on Electrical Properties of ALD-Al₂O₃/AlGaIn/GaN MIS-HEMTs" Keita Furuoka, Toshiharu Kubo, Makoto Miyoshi and Takashi Egawa Nagoya Institute of Technology</p>
<p>18:15-18:30 1283 <18pC16O> Shih-Chen Yen "Optimized Al-doped ZnO Layer with CuO nano-wires Deposited on Flexible Substrate to Apply on Touch Display Sensor" Shih-Chen Yen and Yen-Sheng Lin I-Shou University</p>	<p>18:15-18:30 1394 <18pD14O> Pietro Favia "Plasma- Bio Interactions Mediated by Liquid Phase Chemistry: an Indirect Cancer Immunotherapy" ¹Eloisa Sardella, ¹Valeria Veronico, ¹Francesco Fracassi, ²Amalia Azzariti, ²Rosa Maria Iacobazzi, ²Nicola Silvestris, ²Roberta Di Fonte, ²Letizia Porcelli, ¹Ilaria Trizio, ²Stefania Tommasi, ¹Pietro Favia, ¹Roberto Gristina ¹University of Bari ²IRCCS Istituto Tumori Giovanni Paolo II</p>	