

**3/18 (MON)**

**Opening  
Keynote Lecture**  
Chair:  
RoomA

**10:20-10:30 Opening Address**

**10:30-11:10 Keynote Lecture**

<18aA01K>  
Davide Mariotti  
Ulster University  
"Atmospheric Pressure Plasmas for Next Generation Energy Materials"

**11:10-11:50 Keynote Lecture**

<18aA02K>  
Hans-Robert Metelmann  
University Medicine Greifswald  
"Plasma and Cancer - On the Way to Evidence Based Medicine"

**11:50-12:30 Keynote Lecture**

<18aA03K>  
Gyeong S. Hwang  
University of Texas  
"T.B.A."

**Lunch Break 12:30-14:00**

**Nanomaterials 1**

Chair:  
Room C

**14:00-14:30**

<18pC04I>  
**Invited Lecture**  
Taiichi Otsuji  
Tohoku University  
"Terahertz Light Emission and Lasing in  
Current-driven Graphenebased 2D  
Nano-structures"

**Bio Applications 1**

Chair:  
Room D

**14:00-14:30**

<18pD04I>  
**Invited Lecture**  
Robert Short  
Lancaster University  
"On the Role of Plasma in Biofilm  
Formation"

**Nitride Semiconductors 1  
Growth & Characterization**

Chair:  
Room F

**14:00-14:30**

<18pF04I>  
**Invited Lecture**  
Shigefusa F. Chichibu  
Tohoku University  
"Recent Progress of Acidic  
Ammonothermal Growth of GaN"

<p><b>14:30-14:45 1268</b> &lt;18pC05O&gt; Shun Imai "Electrochemical Impedance Analysis of Pt Nanoparticles-Supported Carbon Nanowalls for Fuel Cell Application" <sup>1</sup>Shun Imai, <sup>1</sup>Hiroki Kondo, <sup>1</sup>Hyungjun Cho, <sup>1</sup>Takayoshi Tsutsumi, <sup>1</sup>Kenji Ishikawa, <sup>1</sup>Makoto Sekine, <sup>2</sup>Mineo Hiramatsu and <sup>1</sup>Masaru Hori <sup>1</sup>Nagoya University <sup>2</sup>Meijo University</p>	<p><b>14:30-15:00</b> &lt;18pD05I&gt; <b>Invited Lecture</b> Gianluca De Masi Consorzio RFX "The Effect of an Atmospheric Plasma Source on Blood Coagulation"</p>	<p><b>14:30-15:00</b> &lt;18pF05I&gt; <b>Invited Lecture</b> Agata Kaminska Institute of Physics, Polish Academy of Science "High Pressure Studies of Recombination Mechanisms in Nitride Semiconductor Structures"</p>
<p><b>14:45-15:00 1142</b> &lt;18pC06O&gt; Atsushi Ando "Morphological and Electrical Studies on Molybdenum Disulfide Sheets by N<sub>2</sub> 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><b>15:00-15:15 1214</b> &lt;18pC07O&gt; 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><b>15:00-15:15 1277</b> &lt;18pD06O&gt; 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><b>15:00-15:15 1062</b> &lt;18pF06O&gt; Akira Yamaguchi "Growth of High Crystalline quality GaN with High Growth Rate by THVPE" <sup>1</sup>Akira Yamaguchi, <sup>2</sup>Daisuke Oozeki, <sup>2</sup>Nao Takekawa, <sup>2</sup>Naoya Kawamoto, <sup>2</sup>Hisashi Murakami, <sup>2</sup>Yoshinao Kumagai, <sup>1</sup>Kou Matsumoto and <sup>2</sup>Akinori Koukitu <sup>1</sup>Taiyo Nippon Sanso Corporation <sup>2</sup>Tokyo University of Agriculture and Technology</p>
<p><b>15:15-15:30 1165</b> &lt;18pC08O&gt; 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><b>15:15-15:30 1145</b> &lt;18pD07O&gt; 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><b>15:15-15:30 1184</b> &lt;18pF07O&gt; Kentaro Takeda "Electrochemical Characterization of Etching Damage Induced to n-GaN Surface" Kentaro Takeda, Masachika Toguchi and Taketomo Sato Hokkaido University</p>
<p><b>Nanomaterials 2</b> Chair: Room C</p>	<p><b>Bio Applications 2</b> Chair: Room D</p>	<p><b>Nitride Semiconductors 2</b> <b>UVLED</b> Chair: Room F</p>
<p><b>15:45-16:00 1161</b> &lt;18pC09O&gt; 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><b>15:45-16:15</b> &lt;18pD08I&gt; <b>Invited Lecture</b> Jun-ichiro Ikeda Chiba University "Therapeutic Strategy using Non-thermal Plasma for Cancers Targeting Cancer-initiating Cells"</p>	<p><b>15:45-16:15</b> &lt;18pF08I&gt; <b>Invited Lecture</b> Tomohiko Shibata DOWA Electronics Materials Co., Ltd. "Progress of Deep UV Leds and their Technical Roadmap"</p>
<p><b>16:00-16:15 1318</b> &lt;18pC10O&gt; 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><b>16:15-16:45</b> &lt;18pC11I&gt; <b>Invited Lecture</b> Magdaleno Jr. Rigodon Vasquez University of the Philippines "Development of Low-energy Ion Sources for Thin Film Deposition Applications"</p>	<p><b>16:15-16:45</b> &lt;18pD09I&gt; <b>Invited Lecture</b> Jong-Shinn Wu National Chiao Tung University "Human Blood Coagulation using Atmospheric-pressure Argon Plasma Jet"</p>	<p><b>16:15-16:45</b> &lt;18pF09I&gt; <b>Invited Lecture</b> Masafumi Jo RIKEN "Structural and Optical Investigation of (11-22) AlGaIn on m-plane Sapphire"</p>
	<p><b>16:45-17:00 1129</b> &lt;18pD10O&gt; 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><b>16:45-17:00 1082</b> &lt;18aF10O&gt; Muhammad Ajmal Khan "Improved Current Injection in AlGaIn-Based 310 nm-UVB LED for Real World Applications" <sup>1</sup>M. Ajmal Khan, <sup>1</sup>Noritoshi Maeda, <sup>1</sup>Masafumi Jo, <sup>2</sup>Yoichi Yamada and <sup>1</sup>Hideki Hirayama <sup>1</sup>RIKEN <sup>2</sup>Yamaguchi University</p>
<p><b>Nanomaterials 3</b> Chair: Room C</p>	<p><b>Bio Applications 3</b> Chair: Room D</p>	<p><b>Nitride Semiconductors 3 GaN-HEM</b> Chair: Room F</p>
<p><b>17:00-17:30</b> &lt;18pC12I&gt; <b>Invited Lecture</b> Yanli Pei San Yat-sen University "In<sub>2</sub>O<sub>3</sub> TFT Based pH Sensor with Sensitivity Over Than Nernst Limit"</p>		
	<p><b>17:15-17:45</b> &lt;18pD11I&gt; <b>Invited Lecture</b> Gregory Fridman Drexel University "T.B.A."</p>	<p><b>17:15-17:45</b> &lt;18pF11I&gt; <b>Invited Lecture</b> Jan Kuzmik Slovak Academy of Sciences "Gan-based Normally-off Hemts for Switching and Logic Applications"</p>
<p><b>17:30-17:45 1205</b> &lt;18pC13O&gt; Hidetaka Sofue "Formation of Strain-relaxed Ge<sub>1-x</sub>-<sub>y</sub>Si<sub>x</sub>Sn<sub>y</sub> Epitaxial Layer using Ion-implanted Ge Substrate" Hidetaka Sofue, Masahiro Fukuda, Shigehisa Shibayama, Osamu Nakatsuka and Shigeaki Zaima Nagoya University</p>		

<p><b>17:45-18:00 1257</b>  &lt;18pC14O&gt;  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><b>17:45-18:00 1028</b>  &lt;18pD12O&gt;  Naoyuki Iwata  "Simultaneous Achievement of Bactericidal Efficacy and Plant-growth in Neutral pH Range using Radical-Activated Benzoic Compounds"  <sup>1</sup>Naoyuki Iwata, <sup>1</sup>Vladislav Gamaleev, <sup>2</sup>Jun-Seok Oh, <sup>3</sup>Hiroshi Hashizume, <sup>1</sup>Takayuki Ohta, <sup>3</sup>Kenji Ishikawa, <sup>3</sup>Masaru Hori and <sup>1</sup>Masafumi Ito  <sup>1</sup>Meijo University  <sup>2</sup>Osaka City University  <sup>3</sup>Nagoya University</p>	<p><b>17:45-18:00 1288</b>  &lt;18pF12O&gt;  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><b>18:00-18:15 1264</b>  &lt;18pC15O&gt;  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><b>18:00-18:15 1235</b>  &lt;18pD13O&gt;  Yu-Pin Cheng  "Investigation on Acute and Diabetic Wound Healing of Model Rats using Argon Atmospheric-Pressure Plasma Jet"  <sup>1</sup>Kuang-Yao Cheng, <sup>1</sup>Zhi-Hua Lin, <sup>1,2</sup>Yu-Pin Cheng and <sup>1</sup>Jong-Shinn Wu  <sup>1</sup>National Chiao Tung University  <sup>2</sup>Cathay General Hospital</p>	<p><b>18:00-18:15 1088</b>  &lt;18pF13O&gt;  Keita Furuoka  "Effects of Forming Gas Annealing Conditions on Electrical Properties of ALD-Al<sub>2</sub>O<sub>3</sub>/AlGaIn/GaN MIS-HEMTs"  Keita Furuoka, Toshiharu Kubo, Makoto Miyoshi and Takashi Egawa  Nagoya Institute of Technology</p>
<p><b>18:15-18:30 1283</b>  &lt;18pC16O&gt;  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><b>18:15-18:30</b>  &lt;18pD14O&gt;  Pietro Favia</p>	<p><b>18:15-18:30 1228</b>  &lt;18pF14O&gt;  Koki Tsurimoto  "Impact of Gamma-Ray Irradiation on Device Characteristics of p-GaN/AlGaIn/GaN Normally-Off High-Electron-Mobility Transistors"  Koki Tsurimoto, Masahiro Horita and Jun Suda  Nagoya University</p>