

## 3/1 (WED)

Registration 12:30-

Tutorial Plasma Science <Chair> M. Sekine (Nagoya University)	13:00-14:00 <01pE01TU> Hiroataka Toyoda (Nagoya University) "Introduction to Plasma Production - from Breakdown to Plasma Sustainment - "
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Break 14:00-14:10

Tutorial Nitride Semiconductors <Chair> T. Kachi (Nagoya University)	14:10-15:10 <01pE02TU> Daisuke Ueda (Kyoto Institute of Technology) "Basics of Wide Bandgap Semiconductor Devices"
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Break 15:10-15:20

Tutorial Nanomaterials <Chair> T. Kaneko (Tohoku University)	15:20-16:20 <01pE03TU> Yongfeng Li (China University of Petroleum) "Plasma Synthesis of Functionalized Nanocarbon Materials and their Applications"
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Break 16:20-16:30

Tutorial Bioapplications <Chair> K. Ishikawa (Nagoya University)	16:30-17:30 <01pE04TU> Alexander Fridman (Drexel University) "Plasma Agriculture: Fundamentals and Applications"
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Welcome Party  
18:00-19:30

Registration 9:00-								
Opening <Chair> (University) <Chair> M. Ito (Meijo University)								
10:00-10:05 Opening Address Keiji Nakamura [ISPlasma2017/IC-PLANTS2017 Organizing Committee Chairperson]								
10:05-10:10 Introduction of the Plenary Lecture								
Plenary Lecture <Chair> K. Nakamura (Chubu University)								
10:10-11:00 Plenary Lecture <02aA01PL> Osamu Ishihara (Chubu University) "Role of Complex Plasma in Emerging Sciences"								
Break 11:00-11:10								
Keynote Lecture <Chair> Y. Ikehara (AIST)								
11:10-11:50 Keynote Lecture <02aA02K> Hayao Nakanishi (Aichi Cancer Center Aichi Hospital) "A New Therapeutic Modality with Plasma-Activated Medium Targeting Peritoneal Micrometastasis in Human Gastric Cancer Cell Lines in Nude Mice"								
Keynote Lecture <Chair> Y. Fujiwara (Osaka University)								
11:50-12:30 Keynote Lecture <02aA03K> Tom Gregorkiewicz (University of Amsterdam) "PECVD-Grown and Chemically Synthesized Semiconductor Nanocrystals for Photon Management in Future Photovoltaics"								
Lunch 12:30-14:00								
Plasma Science 1 Atmospheric-pressure Plasma <Chair> W. H. Choe (KAIST)	14:00-14:30 In invited Lecture <02pB04I> Laxminarayan L. Raja (The University of Texas) "Modeling and High-Fidelity Simulations of Atmospheric-Pressure Non-Equilibrium Discharges for the Processing of Liquids"	Nitride Semiconductors 1 <Chair> K. Naniwa (EL-Seed Corp.)	14:00-14:30 In invited Lecture <02pC04I> Qian Sun (Chinese Academy of Science) "GaN-on-Si LED, Laser Diode and HEMT"	Nanomaterials 1 Carbon/2D Materials <Chair> H. Kousaka (Gifu University) J. Shiomi (The University of Tokyo)	14:00-14:30 In invited Lecture <02pD04I> Junichiro Shiomi (The University of Tokyo) "Development of Nanocrystalline Thermoelectric Materials by Interfacial Phonon Engineering"	Bioapplications 1 Plasma Medicine <Chair> R. D. Short (University of South Australia)	14:00-14:30 In invited Lecture <02pE04I> Klaus-Dieter Weltmann (INP Greifswald e.V.) "Plasma Medicine Status of Basic Research and Transfer into the Hospital"	
	14:30-14:45 <02pB05O> 1013 Jun-Seok Oh "Ambient Mass Spectrometric Diagnosis of an Atmospheric Pressure He Plasma Jet"		14:30-15:00 1254 In invited Lecture <02pC05I> Natsumi Hayashi "Gan-based VCSEs with Lateral Optical Confinement Structures"		14:30-15:00 In invited Lecture <02pD05I> Hongwei Zhu (Tsinghua University) "Solid State Solar Cells and Photodetectors Based on Graphene"		14:30-14:45 1207 <02pE05O> Kuang-Yao Cheng "Effects of Applying Atmospheric-Pressure Plasma Jet on Wound Healing in Diabetic Rats"	
	14:45-15:00 1216 <02pB06O> Mohammad Pervez "Effect of N <sub>2</sub> Admixture Ratio on Atmospheric Pressure He-N <sub>2</sub> DBD"		15:00-15:15 1242 <02pC06O> Ryo Yoshizawa "Effect of Thermal Annealing on AlN Films Grown on Sputtered AlN Templates"		15:00-15:15 1316 <02pD06O> Atsushi Ando "Morphology and Electrical Studies on Defect-induced Transition Metal Dichalcogenide Nanosheet by O <sub>2</sub> Plasma Treatment"		14:45-15:00 1021 <02pE06O> Endre SzilOxidation, Oxygenation and Decoagulation of Tissue and Tissue Fluid with Plasma Jets"	
	15:00-15:15 1001 <02pB07O> How-Ming Lee "Abatement of Perfluorocompounds with New Thermal Plasmas"						15:00-15:15 1202 <02pC07O> Yukihiko Kurokawa "Killing Effects of HeLa Cells in Laser-generated Plasma Activated Medium (LPAM) "	15:00-15:15 1097 <02pE07O> Chih-Tung Liu "Development of Nitrogen-based Cold Atmospheric Pressure Plasma Jet and its Application in Bacteria Sterilization"
	15:15-15:30 1020 <02pB08O> Adam Obrusnik "Atmospheric-pressure Plasma Deposition of Carboxyl-containing Co-polymers: Understanding Complex Chemistry through Simple Models"						15:15-15:30 1223 <02pC07O> Guan-Wei Fu "Quality Improvement of AlN-on-sapphire Epilayers by Inserting Superlattice Structures at a Low Growth Temperature (1100C)"	15:15-15:30 1120 <02pD07O> Xin Jiang "Fast Multi-Varieties Liquid Recognition and Quality Inspection with Graphene Test Papers"
	Break 15:30-15:45							
Plasma Science 2 Plasma <Chair> N. Ohno (Nagoya University)	15:45-16:15 In invited Lecture <02pB09I> Wonho Choe (KAIST) "Considerations for High Efficiency Non-Source Thermal Atmospheric Pressure Plasma Sources for Food Applications"	Thin Film Deposition Process <Chair> T. Ohta (Meijo University)		15:45-16:00 1078 <02pC08O> Ching-Chun Kao "Preparation of Conductive Antifouling Thin Films by Plasma Polymerization for Biomaterial Applications"		Nanomaterials 2 Nanowire <Chair> T. Yanagida (Kyushu University) H. Sato (Mie University)	15:45-16:15 In invited Lecture <02pD08I> Takeshi Yanagida (Kyushu University) "Single Crystalline Metal Oxide Nanowires and their Promises"	Bioapplications 2 Biosensing <Chair> M. Ito (Meijo University)
	16:15-16:30 1267 <02pB10O> Haruka Suzuki "Long-scale N <sub>2</sub> Line Plasma Production under Atmospheric Pressure"		16:00-16:15 1127 <02pC09O> Yueh-Hang Huang "Synthesis of Zwitterionic Polymers for Antifouling by Plasma Polymerization"	16:00-16:15 1050 <02pE10O> Meng-Jiy Wang "Microwave Plasma Assisted Deposition of Graphene for Development of Enzymatic Calcium Biosensor based on H <sub>2</sub> O <sub>2</sub> Detection"				
	16:30-16:45 1288 <02pB11O> Md. Amzad Hossain "RF Magnetized Ring-Shaped Plasma for Uniform Cu Target Utilization by Circular Magnets Monopole Arrangement"		16:15-16:30 1052 <02pC10O> Chang-Li Luep "Enhancement of Optoelectronic Property on Ga-doped ZnO Thin Film by Various Thermal Annealing Treatments"	16:15-16:30 1134 <02pD09O> Chi-Lin Tsai "Conversion of ZnS into Cu <sub>2</sub> -xS Superlattice Nanobelts Through Cation Exchange Reactions"	16:15-16:30 1304 <02pE11O> Keisuke Itakura "A CMOS Electrochemical Impedance Spectroscopy Biosensor in 55nm DDC Technology for High-Sensitivity Cell-State Monitoring"			
	16:45-17:00 1183 <02pB12O> Yuichi Hasegawa "Control of Resonant Cavity Fields for Microwave Plasma Production"		16:30-16:45 1246 <02pC11O> Takuma Doi "Formation of SiC and SiCN Films by Chemical Vapor Deposition using Vinylsilane"	16:30-16:45 1069 <02pD10O> Gung-Hao Jhou "Thermoelectric Properties of Homologous In <sub>2</sub> O <sub>3</sub> (ZnO) <sub>m</sub> Porous Nanowires"	16:30-16:45 1352 <02pE12O> Masahito Yamanaka "Deep-tissue Imaging by High-resolution Optical Coherence Microscopy in 1700-nm Spectral Band"			
	Break 16:45-17:15							
Break 17:00-17:15			Break 17:00-17:15					
Poster Session @ 17:15-18:45								



3/4 (SAT)

Registration 9:10

Plasma Science 6 Deposition I <Chair> Hiroyuki Kosaka (Gifu University)	9:30-10:00 Invited Lecture <04aB011> Eugen Stamate (Technical University of Denmark) "Conductive, Transparent and Low Emissivity Coatings of Aluminum Doped Zinc Oxide Produced by Magnetron Sputtering"	Nitride Semiconductors 4 Electron Devices 2 <Chair> E. Zanoni (Universita' di Padova)	9:30-10:00 Invited Lecture <04aC011> Hiroji Kawai (POWDEC K.K.) "New Platform for Low-Cost High-Voltage GaN Power Devices"	Nanomaterials 5 Plasma Synthesis and Plasma Treatment <Chair> X. Li (Peking University), Y. Suda (Toyoashi University of Technology)	9:30-10:00 Invited Lecture <04aD011> Xingguo Li (Peking University) "Synthesis and Properties of Nanostructured Materials for Hydrogen Storage and Lithium Battery by Hot and Cold Plasma"	Bioapplications 5 Biointerfaces <Chair> K. Ishikawa (Nagoya University), T. Ohta (Meijo University)	9:30-9:45 1291 <04aE010> Ryugo Tero "Mechanism of Plasma-induced Pore Formation in Artificial Cell Membranes"
	10:00-10:15 1245 <04aB020> Tomoya Washizu "Selective Growth of Ge1-xSnx Epitaxial Layer on Patterned Si Substrate using Metal-organic Chemical Vapor Deposition Method"		10:00-10:30 1228 Invited Lecture <04aC021> Atsushi Yamada "Electron Mobility Enhancement in MOVPE-grown InAlN-HEMTs by Control of Surface Morphology of Spacer Layer"		10:00-10:15 1045 <04aD020> Wan-Ting Yang "Graphene Lateral p-n Homojunction by Nitrogen Plasma Treatment"		9:45-10:00 1264 <04aE020> Makoto Sekine "Effects of Reactive Oxygen and Nitrogen Species in Plasma-Activated Medium on Supported Lipid Bilayers"
	10:15-10:30 1230 <04aB030> Tien-Hong Cheng "The Electric Properties of IAZO Thin-Film Transistors by RF Sputtering"		10:30-10:45 1164 <04aC030> Taofei Fu "Enhancement-Mode GaN-Based High Electron Mobility Transistors with a P-Type GaN Cap Layer"		10:15-10:30 1054 <04aD030> Kai-Cheng Chang "Growth of Graphene on CuO Fibers by Microwave Plasma Chemical Vapor Deposition for Enhanced Photocatalytic and Antibacterial Activities"		10:00-10:15 1175 <04aE030> Hirofumi Kurita "Rapid Analysis of DNA Damage Induced by Exposure to an Atmospheric Pressure Plasma Jet"
	10:30-10:45 1145 <04aB040> Ying Peng "Thermoelectric Property of Si1-xGeX Multilayered Quantum Dot Films Prepared by RF Magnetron Sputtering using B Buffer Layer"		10:45-11:00 1022 <04aC040> Kentarou Hayashi "Current Crowding Caused by Surface Roughness of Vertical GaN p-n Diodes"		10:30-10:45 1176 <04aD040> Akoya Yoshida "Investigation of Isocyanate Groups Functionalized on Multi-walled Carbon Nanotubes after Nitrogen/Carbon-dioxide Plasma Exposure"		10:15-10:30 1084 <04aE040> Chia-Heng Chang "A Electrical Biosensor Based on Graphene Oxide/Graphene Structure for Sensitive Detection of Circulating miRNA-21"
	10:45-11:00 1268 <04aB050> Hirotaka Toyoda "Measurement of Directional Heat Flux Component in VHF-Magnetron Sputtering"				10:45-11:00 1338 <04aD050> Xinghua Chang "The Application of Tandem Plasma Technology in Lithium-ion Batteries"		10:30-10:45 1180 <04aE050> Kenji Ishikawa "Plasma-Activated Medium Induced Intracellular Changes of HeLa Cells"

Break 11:00-11:15

Break 11:00-11:15

Break 11:00-11:15

Break 11:00-11:15

Plasma Science 7 Diagnostics <Chair> Shin Kajita (Nagoya University)	11:15-11:45 Invited Lecture <04aB061> Hennie van der Meiden (DIFFER) "Incoherent and Collective Thomson Scattering for the Determination of Electron and Ion Properties in High Density, Low-Temperature Plasma"	Nitride Semiconductors 5 Electron Devices 3 <Chair> T. Kachi (Nagoya University)	11:15-11:45 Invited Lecture <04aC051> Asamira Suzuki (Panasonic) "Low on-State Resistance Enhancement-Mode Algan/GaN Hfet with P-Type Nio Gate Formed by Atomic Layer Deposition"	Nanomaterials 6 Surface Modifications <Chair> T. Shirafuji (Osaka City University), Y. Suda (Toyoashi University of Technology)	11:15-11:30 1261 <04aD060> Akihisa Ogino "Surface Study of Electron Affinity on Semiconductor Produced by the Adsorption of Cs and Oxygen Atom"	Bioapplications 6 Bio Applications <Chair> R. Tero (Toyoashi University of Technology)	11:15-11:45 Invited Lecture <04aE071> Chi-Chang Hu (National Tsing Hua University) "Plasma-Enhanced Chemical Vapor Deposition of Heteroatom-Doped Graphenes for Biosensing"
	11:45-12:00 1211 <04aB070> Richard Engeln "Investigating the Role of Vibrationally Excited CO2 in Solar Fuel Production"		11:45-12:00 1308 <04aC060> Yoshitaka Nakano "Electrical Damage Introduced into n-GaN Films by CF4 Plasma Treatments"		11:30-11:45 1222 <04aD070> Dong-Sing Wu "Microstructure Transformation and Application of ZnO Nanorods Grown by Pulsed Laser Deposition via a Chemical-bath-deposited ZnS Seed Layer"		11:45-12:00 1072 <04aE080> Ekaterina Makhneva "Functional Plasma Polymer Surfaces in Quartz Crystal Microbalance and Surface Plasmon Resonance Immunosensing"
	12:00-12:15 1250 <04aB080> Timothy Brubaker "Active Control of Reactive Oxygen and Nitrogen Species (RONS) in Plasma-Activated Media (PAM)"		12:00-12:15 1116 <04aC070> Chun-Lung Su "Free-standing GaN/AlGaIn-based Transistor Separated from Si Substrate"		11:45-12:00 1210 <04aD080> Chia-Chun Wu "Improving the Lithium-ion Battery Properties through Surface Modification of Silicon Anodes"		12:00-12:15 1064 <04aE090> Yung-Hsin Liu "Protein onto Substrate for Biosensor Fabrication"
	12:00-12:15 1260 <04aB090> Masaya Hotta "Effects of Antenna Material on Miniaturized Curling Probe"		12:15-12:30 1345 <04aC080> Nguyen Xuan Truyen "PYS Study on Energy Distributions of Defect States in Remote O2 Plasma Enhanced CVD SiO2/GaN Structure"		12:15-12:30 1285 <04aD100> Mohamad Rusop Mahmood "Sensing Behavior of Nanostructured Zinc Oxide for Methane Detection"		12:15-12:30 1128 <04aE100> Shih-Chieh Yen "Electrospun Carbon Nanotube-Conducting Polymer Composite Nanofiber Membranes with Efficient Hemodialysis for Removing Protein-bound Uremic Toxins"

Lunch 12:30-14:00

Topical Session 2 Advanced Electronic Nitride Materials and Devices <Chair> A. Suzuki (Panasonic Corporation)	14:00-14:30 Invited Lecture <04pA111> Izabella Grzegory (Institute of High Pressure Physics of the Polish Academy of Sciences) "High Pressure Thermodynamics and Crystal Growth of GaN"
	14:30-15:00 Invited Lecture <04pA121> Tetsu Kachi (Nagoya University) "Developments of GaN on GaN Power Devices"
	Break 15:00-15:15
	15:15-15:45 Invited Lecture <04pA131> Colin Humphreys (University of Cambridge) "GaN-on-Si LEDs and Electronic Devices"
	15:45-16:15 Invited Lecture <04pA141> James S. Speck (University of California) "Pure and Disordered Group III Nitride Heterostructures: Growth and Physical Properties"

Break 16:15-16:30

3/5 (SUN)

Registration 9:10-

Plasma Science 8	9:30-10:00 Invited Lecture <05aB011> Makoto Matsui (Shizuoka University) "Laser Sustained Plasma by High Power Laser Diode"	Nanomaterials 7 Carbon/2D Materials <Chair> T. Kaneko (Tohoku University) , M. Hiramatsu (Meijo University)	9:30-9:45 1185 <05aC010> Kai-Chen Huang "The Nanocomposite of Pt Nanoparticles on MoS <sub>2</sub> Nanosheets as High-performance and Economical Counter Electrode for Dye-Sensitized Solar Cells"	Nanomaterials 8 Optical Properties <Chair> Ray Hua Hong (National Chiao Tung University) , A. Wakahara (Toyohashi University of Technology)	9:30-9:45 1182 <05aD010> Ray-Hua Horng "Nanorods Effect on the Performance of p-Side-up Thin-Film AlGaInP LEDs"	Plasma Science 9	9:30-9:45 1365 <05aE010> Subong Jin "High conductivity TCO Thin Film Synthesis at Low Temperature by Cluster and Particle Flux Control in Remote Magnetron Sputtering"
Plasma Fundamentals <Chair> K. Nakamura (Chubu University)	10:00-10:15 1356 <05aB020> Taleb Gasmil Cherifi "TEA-CO <sub>2</sub> Laser Pulse Shaping Using a Pre-Ionized Plasma Technique to Achieve High Spatial Resolution Monitoring of Atmospheric Constituents"		9:45-10:00 1091 <05aC020> Hong-Cing Wu "Double-layer Graphene for Stretchable Transparent Electrode Application"		9:45-10:00 1131 <05aD020> Yi-Yun Chen "Optical Properties of Free-standing InGaN Light Emitting Diode with Porous-GaN Reflector through a Chemical Lift-off Process"	Deposition 2 <Chair> Eugen Stamate (Technical University of Denmark)	9:45-10:00 1012 <05aE020> Satoru Kaneko "Graphitic Spheric Ball and Thin Film Growth in Oxygen Atmosphere by Pulsed Laser Deposition"
	10:15-10:30 1033 <05aB030> Hiroaki Nakamura "Roughness Dependence of Noble Gas Sputtering Yield of Nano-structured Tungsten"		10:00-10:15 1208 <05aC030> Ji-Ting Lu "Low-cost Synthesis of Nitrogen Doped Carbon Quantum Dots with Strong Luminescence"		10:00-10:15 1149 <05aD030> Mohamad Rusop Mahmood "Controlled Growth of ZnO Nanostructures on TiO <sub>2</sub> Seed Layer-Coated Glass Substrate"		10:00-10:15 1077 <05aE030> Chen-An Tsai "The Effect of Cap Material on Ferroelectric HfO <sub>2</sub> Films in Non-volatile Memory Applications"
			10:15-10:30 1232 <05aC040> Takayuki Fujii "Effect of Buffer Layer on Single-walled Carbon Nanotubes Growth from Ru Catalysts by CVD"		10:15-10:30 1324 <05aD040> Hailiang Dong "The Photoluminescence and Structural Properties of InGaAs/GaAsP Quantum Dots"		10:15-10:30 1296 <05aE040> Hsiao-Ling Li "Plasma Surface Modification on Polyethylene Terephthalate by the Enhanced Magnetron Source for Cyclonic Plasma at Atmospheric Pressure"

Break 10:30-10:45

Topical Session 3	10:45-11:15 Invited Lecture <05aA051> Hiroki Ago (Kyushu University) "Synthesis and Applications of Graphene and 2D Heterostructures"					
Energy Innovation based on Plasma-nano Technology <Chair> K. Makihara (Nagoya University) , T. Shirafuji (Osaka City University)	11:15-11:45 Invited Lecture <05aA061> Yoshihiko Kanemitsu (Kyoto University) "Photophysics of Organometal Halide Perovskites: a High-Quality Solution-Processed Optoelectronic Material"					
	11:45-12:15 Invited Lecture <05aA071> Tomohiro Nozaki (Tokyo Institute of Technology) "Plasma Synthesis of Free-Standing Silicon Nanocrystals for Energy Applications"					
Award <Chair> M. Ito (Meijo University)	Award					

Closing