

Sunday, May 9

**15:00 Conference opening**

**15:15 Plenary presentation**

Susumo Noda	Kyoto University, Japan	Photonic Crystal Surface-Emitting Lasers for Paradigm Shift in LiDAR Sensing and Laser Processing
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**SuD1 16:30-18:00 Photonic Crystal Lasers**

16:30	Shinji Matsuo Invited	NTT Device Technology Labs, Japan	Directly modulated membrane lasers and photonic crystal lasers on Si
17:00	Weidong Zhou Invited	University of Texas at Arlington, USA	Scaling of Photonic Crystal Lasers for Energy Efficient 3D Integrated Photonics on Silicon
17:30	Tu, Si-Yu	National Chiao Tung University, Taiwan	Short-pulse Characteristics Of Photonic-crystal Surface-emitting Lasers With Indium-tin-oxide Deposition
17:45	Jeon, Heonsu	Seoul National University, Korea	Random Lasers Based On Compositionally Disordered Photonic Crystals

**SuD2 16:30-18:30 High-frequency devices**

16:30	Colombo Bolognesi Invited	ETH, Switzerland	THz InP/GaAsSb DHBTs
17:00	Hideaki Matsuzaki Invited	NTT, Japan	Scaling-down and integration technologies of InP- based transistors and their THz-band applications
17:30	Encomendero, Jimmy	Cornell University, USA	GaN/AlN Resonant Tunneling Field Effect Transistors
17:45	Isomae, Yuuto	Tokyo University of Science; Japan	Device Performances And Delay Time Analysis Of GaInSb-Channel HEMTs Scaled To Epitaxial Structures
18:00	Vanjari, Sai Charan	Indian Institute of Science, Bangalore	18.4 GHz- $\mu\text{m}$ FT-LG In InAlN/GaN HEMT On Silicon
18:15	Li, Junjie	Chalmers University of Technology, Sweden	Reduction Of Noise Temperature In Cryogenic InP HEMT Low Noise Amplifiers With Increased Spacer Thickness In InAlAs-InGaAs-InP Heterostructures

Monday, May 10

<b>MoA1 8:00-10:00</b>		<b>Photonic materials and related technologies I</b>	
08:00	Patrick Runge <i>Invited</i>	Fraunhofer HHI, Germany	High-Speed InP-based photodetectors
08:30	Xie, Zongheng	Shanghai Tech University, China	InP Based E-SWIR Phototransistors With Type-II Absorber
08:45	Strömberg, Axel	KTH, Sweden	Hydride Vapor Phase Epitaxy Grown GaP For Photocathodic Applications
09:00	Pause		Withdrawn
09:15	Niu, Tianye	Institute of Industrial Science, University of Tokyo, Japan	GaAs-based MEMS Terahertz Bolometers Fabricated On High-resistivity Si Substrates Using Wafer Bonding Technique
09:30	Liu, Xin	University of Science and Technology of China	Fast-response Speed And High Responsivity Self-powered Solar-blind Photodetector Based On Highly Uniform, Self-assembled AlGaIn Nanowires
09:45	Akahane, Kouichi	National Institute of Information and Communication, Japan	Growth Of InPBi On InP(311)B Substrate By Molecular Beam Epitaxy
<b>MoA2 8:00-10:00</b>		<b>Processing and characterization</b>	
08:00	Esther Alarcon Llado <i>Invited</i>	AMOLF, Netherlands	Electrochemical methods for functional nanostructure growth
08:30	Goedecke, Nils	Heidelberg Instruments Nano, Germany	NanoFrazor -- A Nanolithography Tool For 2D & 3D Devices
08:45	Tempez, Agnès	HORIBA France SAS, France	Plasma Profiling TOFMS: A Close-to-process Chemical Depth Profiling Tool To Accelerate Process Development
09:00	Fiuczek, Natalia	Institute of High Pressure Physics PAS "Unipress", Poland	Nanometer Scale Inhomogeneity Of Si And Ge Dopants Incorporation Into GaN Revealed By Electrochemical Etching
09:15	Wohlfahrt, Markus	University of Bristol, UK	Doping Measurement By UV-Induced Increase In Channel Conductivity In AlGaIn/GaN High Electron Mobility Transistors
09:30			Withdrawn
09:45	Namiki, Shunya	University of Illinois, Urbana-Champaign, USA	Metal-Assisted Chemical Etching Of InGaAsP For Distributed Feedback Laser Gratings

<b>MoB1 10:15-12:00</b>		<b>Power and High Frequency Devices</b>	
10:15	Pause		Withdrawn
10:45	Stefan Mönch <i>Invited</i>	Fraunhofer IAF, Germany	Integration of GaN-on-Si Power Converter Topologies, Circuits, and Sensors
11:15	Samizadeh Nikoo, Mohammad	EPFL, Switzerland	Output Capacitance Losses In Wide-Band-Gap Transistors: From Packaged Devices To The Epitaxy
11:30	Chaudhuri, Reet	Cornell University, USA	AlN/GaN/AlN HEMTs With In-situ Crystalline AlN Passivation For Reduced RF Dispersion
11:45	Yang, Chen	Arizona State University, USA	Gate-Recess-Free GaN-based P-channel HFETs With Ultra-low Off-State Leakage And Subthreshold Swing Towards GaN CMOS Technology
<b>MoB2 10:15-12:15</b>		<b>Nanowire growth and characterization</b>	
10:15	Patrick Parkinson <i>Invited</i>	University of Manchester, UK	A needle in a needlestack – exploiting functional inhomogeneity as a tool for optimized nano-optoelectronics
10:45	Jash, Asmita	Lund University, Sweden	Time-resolved Photoluminescence Studies Of Single Interface Wurtzite/zincblende Heterostructured InP Nanowires
11:00	Fust, Sergej	Technical University of Munich, Germany	Quantum-confinement-enhanced Thermoelectric Properties In Modulation-doped GaAs-AlGaAs Core-shell Nanowires
11:15	Oliva, Miriam	Paul-Drude-Institut für Festkörperelektronik, Germany	Carrier Recombination In GaAs/(Al,Ga)As Core/Shell Nanowires With A Low Degree Of Polyttypism
11:30	Kumar, Sumit	GEMaC, Université Paris Saclay, UVSQ- CNRS, France	Au-catalyzed Growth Of ZnS Nanowires For Optoelectronics
11:45	Khayrudinov, Vladislav	Aalto University, Finland	MOVPE Growth Of InSb Nanowires Directly On Flexible Plastic Substrates
12:00	Gopakumar Saraswathy vilasam, Aswani	The Australian National University, Canberra	Epitaxial Growth Of Vertically Aligned GaAs Nanowires On Synthetic Mica

<b>MoC1 13:00-14:45</b>		<b>Wide bandgap materials and devices</b>	
13:00	Lars Samuelson <i>Invited</i>	Lund University, Sweden	Relaxed and dislocation-free InGaN platelets as ideal templates for red-emitting LEDs for the realization of all-nitride microLED displays
13:30	Pause		Withdrawn
14:00	Hajdel, Mateusz	Institute of High Pressure Physics PAS, Poland	Distributed Feedback InGaN Laser Diodes With Tunnel Junction Grown By Molecular Beam Epitaxy
14:15	van Deurzen, Len	Cornell University, USA	Optically Pumped AlGaIn UV-C Lasers By MBE
14:30	Persson, Lars	Chalmers University of Technology	Thermal Wavelength Stability Of Ultraviolet-B Vertical-Cavity Surface-Emitting Lasers Enabled By Short Cavity Length And Dielectric Mirrors

<b>MoC2 13:00-14:45</b>		<b>Women in STEM</b>	
13:00	Charlotte Karlsson <i>Invited</i>	RISE, Sweden	Welcome Speech
13:10	Deepa Venkitesh <i>Invited</i>	ITT Madras, India	EEE Photonic Society Women in Photonic Initiative
13:30	Andrew Nirmala Grace <i>Invited</i>	Vellore Institute of Technology, India	Vanadium nitride nanostructures as efficient Pt-free counter electrodes for dye sensitized solar cells
13:55	Linda Höglund <i>Invited</i>	IRnova AB, Sweden	T2SL and QWIP infrared detectors for gas sensing applications
14:20	Irina Bouianova <i>Invited</i>	Linköping University, Sweden	III-V nanowires from highly-mismatched alloys

<b>15:00 Plenary presentation</b>			
	Ursula Keller	ETH, Switzerland	Semiconductor disk lasers and SESAMs: material and design optimization

<b>16:00 ISCS &amp; IPRM Award ceremony</b>			
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<b>MoD1 16:45-18:15</b>		<b>Silicon photonics and III-V/Si integration I</b>	
16:45	Bei Shi <i>Invited</i>	UCSB, USA	1550 nm lasers epitaxially grown on silicon
17:15	Jos van der Tol <i>Invited</i>	TU Eindhoven, Netherlands	IMOS: A maturing platform for photonic integration on an indium phosphide membrane
17:45	Mukherjee, Kunal	Stanford University, USA	Filtering Thermal Mismatch Induced Dislocations In III-V/Si Lasers
18:00	Ruhstorfer, Daniel	TU Munich, Germany	Growth Dynamics And Compositional Structure In Periodic InAsSb Nanowire Arrays On Si(111) Grown By Selective Area Molecular Beam Epitaxy

<b>MoD2 16:45-18:15</b>		<b>2D materials and devices I</b>	
16:45	Daniel Neumaier <i>Invited</i>	University of Wuppertal, Germany	Graphene based Electronic Devices and Integrated Circuits-Applications and Manufacturing
17:15	Zallo, Eugenio	Walter Schottky Institute - TUM, Germany	The Two Phases Of Layered GaTe
17:30	Vyas, Agin	Chalmers University of Technology, Sweden	CMOS Compatible Functionalized RGO Based Spin-coated Microsupercapacitors For Integrated On-chip Low Power Electronics
17:45	R.K., Azega	Chalmers University of Technology, Sweden	Durable Activated Carbon Electrodes With A Green Binder
18:00	Sakanashi, Kohei	Chiba University, Japan	Realization Of Quantum Point Contact In Few-Layer P-type WSe3
<b>MoE1 18:30-20:00</b>		<b>Silicon photonics and III-V/Si integration II</b>	
18:30	Vladimir Tassev <i>Invited</i>	Air Force Research Lab, Dayton, USA	New Prospects in Development of Laser Sources for the MLWIR Region: Heteroepitaxy of GaAsP on GaAs and Si
19:00	Menon, Heera	Lund Univeristy, Sweden	Integration Of InSb-on-Insulator Microstructures On Si By Flash Annealing Into Melt
19:15	Cegielski, Piotr	AMO GmbH, Germany	Integration Of Lasers For Photonic Circuits On Silicon Substrates Using Metal-Halide Perovskites As The Gain Medium
19:30	Monge Bartolome, Laura	Institut d'Electronique et des Systèmes, France	Mid-infrared Laser Diodes Grown On Various On-axis III-V-on-Si Templates
19:45	Sergio Fernández Garrido	Universidad Autónoma de Madrid, Spain	Chemical Beam Epitaxy Of GaP <sub>1-x</sub> N <sub>x</sub> On GaP/Si(001)
<b>MoE2 18:30-20:00</b>		<b>Women in STEM</b>	
18:30	Linda Mondin <i>Invited</i>	European Space Agency	Laser Interferometer Space antenna
18:50	Qin Wang <i>Invited</i>	RISE/KTH, Sweden	GaN based HEMTs for power and RF applications
19:10	Ani Khachatryan <i>Invited</i>	USA Naval research Laboratory	Single Event Effects in wide bandgap semiconductors
19:35	Shouleh Nikzad <i>Invited</i>	NASA Jet Propulsion Laboratory	Nanoscale Engineered Silicon Imagers Reaching Theoretical Limit Performance and their Application in Space Exploration and Synergistic Fields

Tuesday, May 11

<b>TuA1 8:00-10:15</b>		<b>Wide bandgap materials - Epitaxy I</b>	
08:00	K. Radhakrishnan <i>Invited</i>	Nanyang Technological University, Singapore	Unintentional or modulation doping—what is the choice for AlGaN/GaN based multichannel high-electron-mobility transistor heterostructures?
08:30	Hideto Miyake <i>Invited</i>	Mie University, Japan	MOVPE Growth of Al(Ga)N on Face-to-Face Annealed Sputtered AlN with Low Threading Dislocation Density
09:00	Diez, Sandra	University of Michigan, Ann Arbor, USA	Growth Of High Quality 350nm-Thick InGaN Films On N-polar GaN Substrates By Plasma-Assisted Molecular Beam Epitaxy
09:15	Khan, Kamruzzaman	University of Michigan, Ann Arbor, USA	Demonstration Of Self-assembled InGaN/GaN Superlattice On GaN Template Grown By Plasma-assisted Molecular Beam Epitaxy
09:30	Papamichail, Alexis	Linköping University, Sweden	Low Resistivity P-GaN Grown By Hot-wall MOCVD
09:45	Sawicka, Marta	Institute of High Pressure Physics PAS, Poland	Semipolar And Nonpolar InAlN Grown By Plasma-assisted Molecular Beam Epitaxy
10:00	Hengfang Zhang	Linköping University, Sweden	Polarity determination and inversion in nitrogen-polar group III-nitride films
<b>TuA2 8:00-10:15</b>		<b>Silicon photonics and III-V/Si integration III</b>	
08:00	Bernardette Kunert <i>Invited</i>	IMEC, Belgium	III/V Nano-Ridge Engineering for Device Integration on 300 mm Silicon
08:30	Yoan Léger <i>Invited</i>	INSA Rennes, France	High quality-factor Zinc-Blende III-V microdisks on Silicon for nonlinear photonics
09:00	Fang, Weicheng	Tokyo Institute of Technology, Japan	Thermal Resistance Reduction Of GaInAsP/Si Membrane Laser Bonded By Room Temperature Si-nano-film Assisted Surface Activated Bonding
09:15	Hiraki, Taturou	NTT Device Technology Labs, Japan	High-temperature Operation Of Integrated Membrane DFB Laser With InGaAsP Mach-Zehnder Modulator On Si Platform
09:30	Aihara, Takuma	NTT Device Technology Labs, Japan	Widely Tunable Laser With Lattice Filter On Si Photonics Platform
09:45	Nandy, Manali	TU Ilmenau, Germany	Reduction Of Crystal Defects In GaP Layers Grown On Si(100) By MOCVD
10:00	Ghyselen, Bruno	SOITEC, France	Large Diameter III-V On Si Substrates By The Smart Cut(TM) Process: 200mm InP On Si Substrate (InPOSi) Examples

<b>10:30 Plenary presentation</b>			
	Masataka Higashiwaki	National Institute of Information and Communications Technology, Japan	Gallium Oxide: The Star of Hope for Compound Semiconductors?
<b>11:30 Exhibition pitches</b>			
<b>TuC1 13:15-15:15</b>		<b>Oxide semiconductors, devices and applications I</b>	
13:15	Grace Xing <i>Invited</i>	Cornell University, USA	How to achieve 1 GW/cm <sup>2</sup> Ga <sub>2</sub> O <sub>3</sub> transistors?
13:45	James Speck <i>Invited</i>	UCSB, USA	Materials progress for the development of $\beta$ -Ga <sub>2</sub> O <sub>3</sub> for power electronics
14:15	Carmine Borelli	University of Parma, Italy	High Quality e-Ga <sub>2</sub> O <sub>3</sub> Thin Films for UV Solar-Blind Detection
14:30	Tsymbalov, Alexander	Tomsk State University, Russia	Solar-blind UV Photodetectors Based On Gallium Oxide
14:45	Kaneko, Kentaro	Kyoto University, Japan	Fabrication Of Corundum-structured P-Type Alpha-(Ir,Ga) <sub>2</sub> O <sub>3</sub> With Bandgaps Of Up To 4.3 eV and Pn Junctions With N-Type Alpha-Ga <sub>2</sub> O <sub>3</sub>
15:00	Wang, Boyan	Virginia Tech, USA	Ga <sub>2</sub> O <sub>3</sub> Schottky Diodes With 60 A Surge Current Capability Enabled By Double-side-cooling Packaging
<b>TuC2 13:15-15:15</b>		<b>Semiconductor lasers I</b>	
13:15	Kouji Nakahara <i>Invited</i>	Lumentum, Japan	High-speed directly modulated AlGaInAs/InP MQW lasers
13:45	Hoe Tan <i>Invited</i>	Australian National University, Canberra	Selective area growth of InP micro-ring lasers
14:15	Schmiedeke, Paul	Technical University of Munich, Germany	Low-threshold Strain-compensated InGaAs/(In,Al)GaAs Multi-quantum Well Nanowire Lasers Emitting Near 1.3 $\mu$ m
14:30	Yamaoka, Suguru	NTT Device Technology Labs, Japan	Effects Of Intermediate SiO <sub>2</sub> Bonding Layer Thickness On Thermal Properties Of Membrane Distributed Reflector Lasers On SiC Substrates
14:45	Paranthoen, Cyril	Institut FOTON, France	1550 nm InAs QD On InP For VECSEL And MECSEL Applications
15:00	Kaneko, Runa	Waseda university, Japan	1550nm-band InAs/InGaAlAs Quantum Dot DFB Lasers Grown On (311)B InP Substrate With Side Gratings Simultaneously Fabricated With A Ridge Waveguide

<b>TuD1 15:30-17:30</b>		<b>Wide bandgap materials - Processing</b>	
15:30	Martin Kuball <i>Invited</i>	University of Bristol, UK	Thermal Management of Electronics-GaN and Gallium Oxide
16:00	Jung Han <i>Invited</i>	Yale University, USA	Porous GaN and its applications
16:30	Kikuchi, Akihiko	Sophia University, Japan	Fabrication Of Shape-controlled GaN High-aspect Fine-nano-hole Arrays By Hydrogen Environment Anisotropic Thermal Etching (HEATE)
16:45	Chan, Clarence	University of Illinois, Urbana-Champaign, USA	Photoinduced Open-circuit Metal-assisted Chemical Etching Of Homoepitaxial GaN
17:00	Garbe, Valentin	TU Bergakademie Freiberg, Germany	Formation Of Au-Free Ohmic Contacts And Their Influence On The 2DEG In AlGaIn/GaN-Heterostructures
17:15	Pause		Withdrawn
<b>TuD2 15:30-17:30</b>		<b>Semiconductor lasers II</b>	
15:30	Oldenbeuving, R.M. <i>Invited</i>	LioniX International, Netherlands	Sub kHz linewidth tunable lasers by hybrid integration of InP gain chips with SiN-PICs
16:00	Matsumoto, Atsushi	National Institute of Inf. & Comm. Technology, Japan	Optimization Of Thickness Of InGaAlAs Embedded Layers In 1.5-um-Band QD LD
16:15	Kwoen, Jinkwan	The University of Tokyo, Japan	MBE Growth Of InAs/InGaAs Quantum Dot Lasers On Multi-Functional Metamorphic Buffer Layer
16:30	Joshi, Vinayakrishna	Institute of Nanostructure Technologies and Analytics, Germany	1.3 Micrometer InP Based Quantum Dot Laser
16:45	Zhan, Wenbo	The University of Tokyo, Japan	InAs/GaAs Tri-layer Quantum Dot Lasers
17:00	Amnon Yarif <i>Invited</i>	Caltech, USA	Linewidth of semiconductor lasers
<b>17:45-19:15</b>		<b>Exhibition / Poster session (see end of program for details)</b>	



Wednesday, May 12

<b>WeA1 8:00-10:15</b>		<b>Oxide semiconductors, devices and applications II</b>	
08:00	Martin Albrecht <i>Invited</i>	Leibniz Insitute für Kristallzüchtung, Germany	The Impact of Order and Disorder in the Phase Formation of (In,Ga)2O3
08:30	Jawad ul Hassan <i>Invited</i>	Linköping University, Sweden	CVD Growth and Properties of b-Ga2O3 Epitaxial Layers
09:00	Sriram Krishnamoorthy	The University of Utah, USA	MOVPE-grown $\beta$ -Ga2O3 Lateral Field Effect Transistors
09:15	Sridharan, Moorthy Babu	Anna University, Chennai, India	Single crystal growth of $\beta$ -Ga2O3 by OFZ technique and their characterization
09:30	Ghezellou, Misagh	Linköping University, Sweden	Hot-Wall MOCVD Epitaxial Growth Of Beta-Gallium Oxide On Sapphire
09:45	Kochkova, Anastasiia	National University of Science and Technology MISiS, Russia	Properties Of HVPE Ga2O3 Films Grown On HPHT P- type Diamond Substrates
10:00	Richard Knapp	CS Clean Solutions AG, Germany	Simulation of Emergency Leakage from Gas Cabinets using Controlled Flows of Arsine
<b>WeA2 8:00-10:15</b>		<b>Long and mid-IR wavelength devices</b>	
08:00	Jérôme Faist <i>Invited</i>	ETH Zürich, Switzerland	Integrated Quantum cascade laser combs for spectroscopy
08:30	Benedikt Schwarz <i>Invited</i>	TU Vienna, Austria	Frequency combs in QCLs and ICLs
09:00	Hinkov, Borislav	TU Vienna, Austria	Continuous-wave Surface-emitting Ring Interband Cascade Lasers
09:15	Hinkov, Borislav	TU Vienna, Austria	THz And Mid-infrared Optoelectronic Devices Based On Non-polar ZnO
09:30	Yoshioka, Yuri	Tokyo University of Agriculture and Technology, Japan	Temperature Coefficient Of InGaAs MEMS Beam Resonators
09:45	David, Mauro	TU Vienna, Austria	Germanium-based Dielectric Loaded Plasmonic Waveguides For The Long-wave Infrared Spectral Range
10:00	Díaz-Thomas, Daniel Andres	Université de Montpellier, France	Sb-based Interband Cascade Mid-IR Devices With Top GaAs Metamorphic Layers
<b>10:30-12:00</b>		<b>Exhibition / Poster session (see end of program for details)</b>	

<b>WeC1 13:00-14:45</b>		<b>Oxide semiconductors, devices and applications III</b>	
13:00	Roberto Fornari <i>Invited</i>	University of Parma, Italy	Crystallographic phase of Ga <sub>2</sub> O <sub>3</sub> epilayers as a function of growth method and parameters
13:30	Lasse Vines <i>Invited</i>	Oslo University, Norway	Electrically active defects in b-Ga <sub>2</sub> O <sub>3</sub>
14:00	Ren Zhongjie	University of Illinois at Urbana- Champaign, USA	Metal-Assisted Chemical Etching Of (001) Beta-Ga <sub>2</sub> O <sub>3</sub>
14:15	Uno, Kazuyuki	Wakayama University, Japan	Composition Control Of Alpha-AlGaO Alloy Thin Films In Mist CVD
14:30	Papadogianni, Alexandra	Paul-Drude-Institut für Festkörperelektronik, Germany	Single-crystalline (In <sub>1-x</sub> Ga <sub>x</sub> ) <sub>2</sub> O <sub>3</sub> Thin Films In The In-rich Bixbyite Phase
<b>WeC2 13:00-14:45</b>		<b>Photonic materials and related device technologies II</b>	
13:00	Kristijonas Vizbaras <i>Invited</i>	Brolis Semiconductors, Lithuania	Paving the Way Towards Optical Sensing Revolution: Integrated Hybrid GaSb/SOI Ultra-Widely Swept Laser-based Sensors for Health and Wellness Applications
13:30	Kaizu, Toshiyuki	Kobe University, Japan	Lateral Photoconductivity Of Multiple-stacked InAs/GaAs Quantum Dot Structure For Photoconductive Antenna Device
13:45	Harikumar, Anjali	CEA, France	Assessment Of Al <sub>x</sub> Ga <sub>1-x</sub> N   AlN (0 ≤ X ≤ 0.1) Quantum Dot Superlattices Embedded In Planar Layers As Active Region For E-Beam Pumped UV Sources
14:00	Qiu, Boqi	Institute of Industrial Science, University of Tokyo, Japan	Enhancement In Thermal Responsivities Of Doubly Clamped InGaAs MEMS Beam Resonators By Introducing A Critical Buckling Strain
14:15	Wang, Danhao	University of Science and Technology of China	Toward High Responsivity, Self Powered Solar-blind Ultraviolet-Sensitive Photodetection-A Novel AlGaIn Nanowires Based Photodetector
14:30	Hino, Maui	The University of Tokyo, Japan	Enhanced Radiative Efficiency Of InGaAs/GaAsP Multiple Quantum Wells By The Optimum Thickness Of GaAs Interlayers
<b>15:00 Plenary presentation</b>			
	Federico Capasso	Harvard University, USA	Metasurfaces as heterogeneous nanostructured materials for multifunctional flat optics: from components to cameras
<b>16:00 Exhibition pitches</b>			

<b>WeD1 16:45-18:45</b>		<b>High-power devices</b>	
16:45	Florin Udrea <i>Invited</i>	Univ. of Cambridge, UK	Emerging superjunction wide bandgap power devices
17:15	Tomas Palacios <i>Invited</i>	MIT, USA	Vertical Power Devices... Where is the Limit?
17:45	Zhu, Renqiang	Hong Kong University of Science and Technology	Improved Design Space Between ON-resistance, ON-current And $V_{th}$ In GaN Vertical Trench MOSFETs With Two-step Doped Channel
18:00	Pause		Withdrawn
18:15	Xiao, Ming	Virginia Polytechnic Institute and State University, USA	8.7 KV Multi-Channel P-GaN/AlGaN/GaN Power Schottky Barrier Diodes
18:30	Fu, Kai	Arizona State University, USA	GaN Vertical P-n Diodes With Avalanche Capability Through Hydrogen Plasma Based Edge Termination
<b>WeD2 16:45-18:45</b>		<b>Novel Device Concepts, Physics, Spintronics, Ferroelectrics, etc</b>	
16:45	David C. Look <i>Invited</i>	Wright State University, Dayton, Ohio, USA	Quantum-based magnetoconductivity in degenerate thin films: application to Si-doped b-Ga <sub>2</sub> O <sub>3</sub>
17:15	Pause		Withdrawn
17:45	Lee, Hyunjea	Cornell University, USA	Design Considerations For ScAlN/AlGaN/GaN Ferroelectric HEMT
18:00	Samizadeh Nikoo, Mohammad	EPFL, Switzerland	Nanoplasma-Enabled Picosecond Switches For Terahertz Electronics: A New Concept To Break The Limitations Of III-V Devices
18:15	Bescond, Marc	LIMMS-CNRS University of Tokyo, Japan	Highly Efficient Thermionic Cooling Nano-device: The Quantum Cascade Cooler
18:30	Kavokin, Alexey	Westlake University, China	Qubits Based On Split-Ring Bosonic Condensates Of Exciton-Polaritons
<b>WeE1 19:00-20:00</b>		<b>2D materials and devices II</b>	
19:00	Zhenxing Wang <i>Invited</i>	AMO GmbH, Aachen, Germany	Metal-Insulator-Graphene RF Diodes: From Device to Integrated Circuits
19:30	Wallart, Xavier	IEMN, France	Towards III-V Semiconductor-based Artificial Graphene
19:45	Ludwiczak, Katarzyna	University of Warsaw, Poland	Optical Studies Of Wafer-scale Heteroepitaxial Monolayer MoSe <sub>4</sub>

Thursday, May 13

<b>ThA1 8:00-10:00</b>		<b>Oxide semiconductors, devices and applications IV</b>	
08:00	Siddharth Rajan <i>Invited</i>	Ohio State University, USA	High-Performance Gallium Oxide Lateral Field Effect Transistors
08:30	Juris Purans <i>Invited</i>	ISSP, Riga, Latvia	Iridium Doped p-type Zinc Oxide Thin Films
09:00	Herath Mudiyansele, Dinusha	Iowa State University, USA	Wide Bandgap Beta-Ga <sub>2</sub> O <sub>3</sub> /GaN Heterojunction Based Vertical P-N Diode With Mesa Edge Termination
09:15	Almaev, Aleksei	National research Tomsk state University, Russia	Pseudo-hexagonal Gallium Oxide -- New Gas Sensing Materials
09:30	Sallet, Vincent	CNRS, France	Evidence Of O-polar (000-1) ZnO Surfaces Induced By In Situ Ga Doping
09:45	Fernandez, Sergio	Universidad Autónoma de Madrid, Spain	Chemical Vapour Transport Of ZnO Nanowires On Si(001): Coalescence, Crystallographic Orientation And Luminescence Properties
<b>ThA2 8:00-09.30</b>		<b>Other widebandgap materials</b>	
08:00	Johan Ekman <i>Invited</i>	KISAB AB, Sweden	4H-SiC Substrate Manufacturing Using the Fast Sublimation Growth Process
08:30	John, Philipp	CNRS-CRHEA, France	Crystalline Magnesium Nitride: From Epitaxial Growth To Fundamental Physical Properties
08:45	Dabrowska, Aleksandra	University of Warsaw, Poland	Large Scale, High Quality Boron Nitride Grown By A Two-stage Epitaxy Method
09:00	Jinno, Riena	University of Tsukuba, Japan	Substrate-orientation Dependence Of Alpha-Al <sub>2</sub> O <sub>3</sub> Homoepitaxy By Plasma-assisted Molecular Beam Epitaxy
09:15	Shashank Patwal	Nanyang Technological University, Singapore	Stress engineering in two-step AlN buffer growth on SiC substrate using PA-MBE

<b>ThB1 10:15-12:00</b>		<b>III-V -based materials and devices</b>	
10:15	Lars-Erik Wernersson <i>Invited</i>	Lund University, Sweden	III-V Nanowire MOSFETs on Si Substrates
10:45	Zhu, Zhongyunshen	Lund University, Sweden	Improvement Of GaSb Vertical Nanowire P-type MOSFETs On Si Using Annealing
11:00	Desplanque, Ludovic	University of Lille, IEMN, France	InGaAs/Ga(As)Sb Nanoscale Tunnel Junctions Grown By Selective Area Molecular Beam Epitaxy
11:15	Gocalinska, Agnieszka	Tyndall National Institute, Ireland	High Mobility N- And P-type III-V MOVPE Polycrystalline Thin Films On Amorphous Substrates.
11:30	SpringThorpe, Anthony	National Research Council of Canada	Comparative Study Of 'in-situ' Etching Of InP-based Quaternary Alloys in An MOCVD Reactor
11:45	Gocalinska, Agnieszka	Tyndall National Institute, Ireland	An Unusual Dopant Profile Of InP During Metal Organic Vapor Phase Epitaxy
<b>ThB2 10:15-12:00</b>		<b>Wide bandgap materials - Characterization &amp; applications</b>	
10:15	Mochizuki, Kazuhiro	Hosei University, Japan	Estimation Of Shockley-Read-Hall Lifetime In Homoepitaxial N-GaN On Low-Dislocation-Density GaN Substrates Prepared By HVPE And M-3D
10:30	Weatherley, Thomas	EPFL, Switzerland	Imaging Point Defects Buried In InGaN/GaN Quantum Wells On The Nanoscale Using Cathodoluminescence
10:45	Montes, Jossue	Arizona State University, USA	Deep Level Transient Spectroscopy Investigation Of (-201) And (001) Ultrawide Bandgap $\alpha$ -Ga <sub>2</sub> O <sub>3</sub>
11:00	Lingaparthi, Ravikiran	Nanyang Technological University, Singapore	Effects Of High Si Doping In GaN Epilayers Grown By Plasma-assisted MBE
11:15	Tran, Dat	Linköping University, Sweden	Thermal Conductivity Of Wide-bandgap Semiconductors Beyond The Debye Approximation
11:30	Ranjan, Akhil	Nanyang Technological University, Singapore	Gas Sensors Using High 2DEG Density GaN HEMT Heterostructures
11:45	Manavaimaran, Balaji	University of Madras, India	Indium Gallium Nitride based nanocomposites for ammonia gas sensors

<b>ThC1 13:00-14:45</b>		<b>Novel materials and device structures</b>	
13:00	Emmanouil Dimakis <i>Invited</i>	Helmholtz-Zentrum Dresden-Rossendorf, Germany	Bandgap tuning and electron mobility enhancement in strained III-V nanowires
13:30	Panyakeow, Somsak	Chulalongkorn University, Thailand	Direct Growth Of InSb Nanowires On CdTe (001) Substrates By Molecular Beam Epitaxy
13:45	Yamamoto, Ryoko	Tokyo University of Agriculture and Technology, Japan	Improvement Of The Thermal Sensitivity Of MEMS Resonators With Mesh Phononic Nanostructures
14:00	Persson, Anton E. O.	Lund University, Sweden	Evaluating Traps In Ferroelectric Films On III-Vs
14:15	Atle, Robin	Lund University, Sweden	Ferroelectricity In Hf1-xZrxO2 Affected By TiN Process Conditions
14:30	Asami, Meita	The University of Tokyo, Japan	Smooth Surface Morphology And Long Carrier Lifetime Of InGaP Realized By Low-temperature-grown Cover Layer

<b>ThC2 13:00-14:45</b>		<b>Wide bandgap materials - Epitaxy II</b>	
13:00	Maki Kushimoto <i>Invited</i>	Nagoya University, Japan	Development of polarization doped UVC LDs on AlN substrates
13:30	Zak, Mikolaj	Institute of High Pressure Physics Polish Academy of Sciences	Heavily Doped InGaN Tunnel Junctions For Stacking Of III-Nitride Devices
13:45	Ravi, Loganathan	National Central University, Taiwan	Van Der Waals Epitaxial Growth Of GaN On 150 mm Si (111) Substrates Using A Sp2-BN Interface Layer
14:00	Chlipala, Mikolaj	Institute of High Pressure Physics of the Polish Academy of Sciences	Influence Of The Built-in Polarization On The Performance Of Nitride LEDs At Cryogenic Temperatures
14:15	Chen, Yao	EPFL, Switzerland	GaN Buffer Growth Temperature And Efficiency Of InGaN/GaN Quantum Wells: The Critical Role Of Nitrogen Vacancies At The GaN Surface
14:30	Delgado-Carrascon, Rosalia	Linköping University, Sweden	Homoepitaxial Growth Of GaN By Hot-wall MOCVD: Thermal Stability And Effect Of H2

<b>15:00 Plenary session</b>			
	John Bowers	UCSB, USA	Epitaxial Growth of Quantum Dot Lasers on Silicon for Photonic Integrated Circuits

<b>16:00 Closing ceremony</b>			
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## Poster session

### Tuesday 17:45-19:15 and Wednesday 10:30-12:00 (CET)

P1	Taguchi, Akito	Kogakuin University, Japan	"Mist CVD Growth Of Alpha-In <sub>2</sub> O <sub>3</sub> Films Using Indium Oxide Powder As Source Precursor
P2			Withdrawn
P3	del Giudice, Fabio	Technical University of Munich, Germany	Ultrathin Catalyst-free InAs Nanowires On Silicon With Distinct 1D Sub-band Transport Properties
P4			Withdrawn
P5			Withdrawn
P6	Hashimoto, Mari	Kogakuin University, Japan	"Growth Of AlGa <sub>N</sub> On AlN Template By RF-MBE And Deep UV Sensor Characteristics
P7	Mase, Akira	Nagoya Institute of Technology, Japan	Simulation Study On A Novel GaN-based Npn HBT With A Quaternary AlGaInN Emitter Layer And A Two-Dimensionally Conductive Base Layer
P8			Withdrawn
P9	Miyamoto, Yasuyuki	Tokyo Institute of Technology, Japan	Proposal Of Breakdown Voltage Control Of GaN HEMT By Interface Charge
P10	Wang, Dawei	Iowa State University, USA	Modulation-doped Beta-(Al <sub>x</sub> Ga <sub>1-x</sub> ) <sub>2</sub> O <sub>3</sub> /Ga <sub>2</sub> O <sub>3</sub> HEMTs: Design Principles And Performance Optimization Via TCAD
P11	Samanta, Swagata	University of Glasgow, UK	Two-Step Lithography RTD Fabrication Process Using Air-Bridge Technology
P12	Lee, Kiwon	Wonkwang University, Republic of Korea	Dynamic-capacitance Characteristics Of RTD-pair Configuration For Improved Frequency And Output-power Potential
P13	Mishima, Tomoyoshi	Hosei University, Koganei, Tokyo, Japan	Impact Of Reducing Dislocation Density In GaN Substrate On Forward And Reverse Characteristics Of Vertical P-n Junction Diodes
P14	Lin, Qi	Hong Kong University of Science and Technology	Low-RON P-GaN Gate HEMTs On Si With High ON-state Current
P15	Nishimura, Tomoaki	Hosei University, Koganei, Tokyo, Japan	Deep Implantation Of Mg Ions Into GaN Substrate On A Channeling Condition
P16	Cuesta-Arcos, Sergi	Univ. Grenoble-Alpes, CEA, Grenoble, France	AlGa <sub>N</sub> /Ga <sub>N</sub> Heterostructures With Asymmetric GRINSCH For E-Beam Pumped UV Lasers
P17	Khartsev, Sergiy	KTH Royal Institute of Technology, Sweden	Reverse Bias Electroluminescence In Er-doped Beta-Ga <sub>2</sub> O <sub>3</sub> Schottky Barrier Diodes Manufactured By Pulsed Laser Deposition
P18	Morais, Natalia	The University of Tokyo, Japan	Integration Of E-band InAs/InGaAs Quantum Dot Lasers On Silicon Substrate By Device Bonding

P19	Reniers, Sander	Eindhoven University of Technology, The Netherlands	A Waveguide-coupled Uni-traveling-carrier Photodiode With A High Bandwidth-efficiency Product On An Indium Phosphide Membrane
P20	Zhou, Jingan	Arizona State University, USA	Characterizations Of Two-photon Absorption And Kerr Nonlinear Optical Properties For Aluminum Nitride Using Z-scan Method
P21	Ye, Hanqiao	Osaka University, Japan	High Speed Characteristics Analysis Of Circular Defect In Photonic Crystal (CirD) Laser
P22	Aulika, Ilze	Institute of Solid State Physics, Riga, Latvia	Spectral Darkness Of Multilayer Semiconductor Structures For Biomedical Sensor Applications
P23	Shiojima, Kenji	Nagoya Institute of Technology, Japan	Mapping Of Schottky Contacts On P-4H-SiC Wafers Using Scanning Internal Photoemission Microscopy
P24			Withdrawn
P25	Roca, Ronel Christian	Toyota Technological Institute, Nagoya, Japan	Control Of The 2D To 3D Transition Of Stacked Submonolayer (SML) InAs Nanostructures By As <sub>2</sub> Flux
P26	Alcer, David	Lund University, Sweden	Comparison Of Triethylgallium And Trimethylgallium Precursors For GaInP Nanowire Growth
P27	Okujima, Masahiro	Ehime University, Matsuyama, Japan	GaNAs Nanowires Grown By Molecular Beam Epitaxy Showing Room Temperature Photoluminescence
P28	Yoshikawa, Kohei	Ehime University, Matsuyama, Japan	Molecular Beam Epitaxial Growth Of GaNAsBi Nanowires
P29	John, Philipp	CRHEA, CNRS, UCA, Valbonne, France	"Exploring The Microstructure Of A New Nitride Material: Correlation Between X-ray Diffraction Peak Profiles And TEM Of Crystalline Magnesium Nitride Thin Films
P30			Withdrawn
P31			Withdrawn
P32	Kushnarev, Bogdan	Tomsk State University, Russia	Structural Properties Of Cr <sub>2</sub> O <sub>3</sub> Thin Films
P33	du Rietz, Anna	Linköping University, Sweden	Poly(acrylic Acid) Coated Cerium Oxide Nanoparticles With Gadolinium Integration For Biomedical Applications
P34			Withdrawn
P35	Sridharan, Moorthy Babu	Anna University, Chennai, India	Influence Of Morphology Controlled Cu <sub>2</sub> ZnSnSe <sub>4</sub> Nanoparticles For Environmental Remediation Process Under Visible Light
P36	Yamaguchi, Hiroshi	NTT Corporation, Atsugi, Japan	Double-gate Nanowire Electromechanical Resonator Devices



P37	Frey, Samuel	Veeco Corp., USA	Characterization Of Al <sub>x</sub> Ga <sub>1-x</sub> As/GaN High Electron Mobility Transistor (HEMT) Structures With Mercury Probe Capacitance-voltage And Current-voltage
P38	Mohanty, Subhajit	University of Michigan, USA	A Systematic Study Of Interfacial Property Of HfO <sub>2</sub> Dielectric On N-polar GaN
P39	Kühne, Philipp	Terahertz Materials Analysis Center, Linköping, Sweden	Two-dimensional Electron Gas In AlN/Al <sub>0.78</sub> Ga <sub>0.22</sub> N High Electron Mobility Transistor Structure Detected By THz Optical Hall Effect
P40	Shapenkov, Sevastian	Saint-Petersburg State University, Russia	Polymorphism And Faceting In Ga <sub>2</sub> O <sub>3</sub> Layers Grown By HVPE At Various Gallium-to-oxygen Ratios
P41	Varygin, Georgii	Saint-Petersburg State University, Russia	Cathodoluminescence Of Epsilon-Ga <sub>2</sub> O <sub>3</sub> Grown With HVPE At Various Oxygen/gallium Ratio Fluxes
P42	Delgado-Carrascon, Rosalia	Linköping University, Sweden	Hot-wall MOCVD Growth Of Low Al Content, High Electron Mobility N-type Al <sub>x</sub> Ga <sub>1-x</sub> N Layers
P43	Kosaka, Wataru	Kogakuin University, Tokyo, Japan	UV Emission Properties Of Rocksalt-structured MgZnO Microcrystals Prepared On Quartz Glass Substrates
P44	G, Kiran	Shiv Nadar University, India	An Analytical Modeling Of MgZnO/ZnO MOS-HEMT For Biosensor Applications
P45	Cha, Suhyeong	Gwangju Institute of Science and Technology, Republic of Korea	High-field Mobility Modeling For Gallium Oxide Based 2DEG Channel In Modulation Doped Heterostructure
P46	Yamase, Kairi	Tokyo City University, Japan	Electroluminescence From HBN-encapsulated Bilayer MoTe <sub>2</sub> By Dual Back-gate Voltage Modulation
P47			Withdrawn
P48	Liu, Yanfeng	Linköping University, Sweden	Electric Field Facilitating Hole Transfer In Non-Fullerene Organic Solar Cells With A Negative HOMO Offset