

## Program for EMN Optoelectronics Meeting 2017

**Monday April 17**

14:00-18:00PM

**Onsite registration & Sign up**

**Tuesday April 18, 2017**

**Room A**

8:20-8:30AM

**Opening Ceremony**

**Session: Lasers**

**Chair: Maxime Darnon**

8:30-8:55AM

A01: Laser efficiency improvement by high intensity pumping

**Sakae Kawato**  
University of Fukui, Japan

8:55-9:20AM

A02: Synchronization of two-color fiber lasers for pulse synthesis

**Dai Yoshitomi**  
AIST, Japan

9:20-9:45AM

A03: Ti:sapphire crystal fibers- from laser and broadband device to applications

**Sheng-Lung Huang**  
National Taiwan University, Taiwan

9:45-10:10AM

A04: Performances and robustness of IR seed Laser diodes under large overcurrent and short-pulse conditions for fiber Laser applications

**Laurent Bechou**  
University of Bordeaux, France

10:10-10:30AM

Session Break

**Session: Nanomaterials I**

**Chair: Jan J. Dubowski**

10:30-10:55AM

A05: Micro/Nanotechnologies for high efficiency solar cells fabrication

**Maxime Darnon**  
Université de Sherbrooke, Canada

10:55-11:20AM

A06: High-Responsivity Graphene Photodiode-Oxide-Semiconductor Field Effect Transistor for Wide-Dynamic Range Optical Detection

**Klaus Y. J. Hsu**  
National Tsing Hua University, Taiwan

11:20-11:45AM

A07: Engineered Nanomaterials with Implications for Triggered Drug Release by Light Activated Pathways

**Byron Gates**  
Simon Fraser University, Canada

11:45-12:10PM	A08: Dynamic Generation of Photothermal Patterns on Conjugated Polymer Films	<b>Eunyoung Kim</b> Yonsei University, Korea
12:10-13:30PM	Lunch Break	

<b>Tuesday April 18, 2017</b>		
<b>Room A</b>		
<b>Session: Nanomaterials II</b>		<b>Chair: Maxime Darnon</b>
13:30-13:55PM	A09: Toward a graphene photonic integrated circuit	<b>Choon-Gi Choi</b> Electronics and Telecommunications Research Institute (ETRI), Korea
13:55-14:20PM	A10: Fabrication of InGaN/GaN ultrafine nanostructures by hydrogen environment thermal etching	<b>Akihiko Kikuchi</b> Sophia University, Japan
14:20-14:45PM	A11: Controlling the chemistry of optical breakdown-induced microplasmas for metal nanoparticle synthesis	<b>Katharine M. Tibbetts</b> Virginia Commonwealth University, USA
14:45-15:10PM	A12: Controllable Nano-Structured Material Fabrication for Beyond Si Device	<b>Hui-Lin Chang</b> National Chiao Tung University, Taiwan/ National Chiao Tung University, Taiwan & Globalfoundries, Malta NY, USA
15:10-15:30PM	Session Break	
<b>Session: Micro and Nano Photonics I</b>		<b>Chair: Sergey Ponomarenko</b>
15:30-15:55PM	A13: Addressable Direct-Write Formation of Nanoplasmonic Architectures by Nanoparticle-Mediated Bipolar Electrochemistry	<b>Paul Bohn</b> University of Notre Dame, USA

15:55-16:20PM	A14: Multimode interference devices comprising dielectric-stripe-based integrated plasmonic circuits	<b>Masashi Ota</b> Toyohashi University of Technology, Japan
16:20-16:45PM	A15: Towards a chip-scale nanophotonics metrology platform for temperature, pressure, vacuum and humidity	<b>Nikolai. N. Klimov</b> National Institute of Standards and Technology, USA/ Joint Quantum Institute, University of Maryland, USA
16:45-17:10PM	A16: Nanoparticles in Magnetic Resonance Imaging	<b>Renhua Wu</b> Shantou University Medical College, China
17:30PM	Dinner Social	

<b>Wednesday April 19, 2017</b>		
<b>Room B</b>		
<b>Session: Terahertz Technology</b>		<b>Chair: Sylvain Girard</b>
8:30-8:55AM	B01: 0.7 Terahertz Silicon-Germanium Heterojunction Bipolar Technology: the European DOTSEVEN Project	<b>Michael Schroter</b> Technical University Dresden, Germany
8:55-9:20AM	B02: Plasmonic Anti-reflection Coating for Photoconductive Terahertz Generation	<b>Faezeh Fesharaki</b> University of Victoria, Canada
9:20-9:45AM	B03: Antenna-coupled microcavities for terahertz emission	<b>Julien Madéo</b> Okinawa Institute of Science and Technology, Japan
9:45-10:10AM	B04: Terahertz wave modulation in organic/inorganic hybrid structures	<b>Joong Wook Lee</b> Chonnam National University, Korea
10:10-10:30AM	Session Break	

<b>Session: Fiber-optic Sensors and Devices</b>		<b>Chair: Michael Schroter</b>
10:30-10:55AM	B05: Recent Progress in Fiber-based Sensors for Nuclear Environments	<b>Sylvain Girard</b> Université de Saint-Etienne, France
10:55-11:20AM	B06: Low loss jammed-array wideband sawtooth filter for fast interrogation of fiber grating sensors	<b>Zhongwei Tan</b> Beijing Jiaotong University, China
11:20-11:45AM	B07: Single mode confinement in a photonic crystal fiber using air hole geometry	<b>Waqas Mahmood</b> Beijing Institute of Technology, China
12:00-13:30PM	Lunch Break	

<b>Wednesday April 19, 2017</b>		
<b>Room B</b>		
<b>Session: Luminescence Materials</b>		<b>Chair: Ivan Djordjevic</b>
13:30-13:55PM	B08: Highly efficient deep ultraviolet light-emitting diodes using glass electrodes	<b>Tae Geun Kim</b> Korea University, Korea
13:55-14:20PM	B09: Material development for organic light-emitting field-effect transistors	<b>Shih-Chun Lo</b> The University of Queensland, Australia
14:20-14:45PM	B10: Small Molecule Two-Photon Probes for Biomedical Applications	<b>Bong Rae Cho</b> Daejin University, Korea
14:45-15:10PM	B11: Application of Emission Ellipsometry Technique for Characterization of Luminescent Materials	<b>Paulo Alliprandini Filho</b> University of São Paulo, Brazil
15:10-16:00PM	<b>Poster Session&amp;Break</b>	

<b>Session: Fiber-optic Communications I</b>		<b>Chair: Shuto Yamamoto</b>
16:00-16:25PM	B12: Recent progress on demultiplexer for variable symbol rate optical OFDM communication	<b>Koichi Takiguchi</b> Ritsumeikan University, Japan
16:25-16:50PM	B13: Optically encrypted multidimensional coded modulation enabling ultra-high speed optical transmission	<b>Ivan Djordjevic</b> University of Arizona, USA
16:50-17:15PM	B14: Optical Transmission Systems for Data Center Interconnects	<b>Werner Rosenkranz</b> University of Kiel, Germany
17:30PM	Dinner Social	

<b>Wednesday April 19, 2017</b>		
<b>Room C</b>		
<b>Session: Nanomaterials III</b>		<b>Chair: Byron Gates</b>
8:30-8:55AM	C01: Photonic monitoring of bacterial growth and reaction to antibiotics with a photocorrosion-based biosensor	<b>Jan J. Dubowski</b> Université de Sherbrooke, Canada
8:55-9:20AM	C02: Design and density functional theory explorations on the luminescent mechanism of AuCu nanoclusters	<b>Haizhu Yu</b> Anhui University, China
9:20-9:45AM	C03: Silicides formation on Pt/SiO <sub>x</sub> interface induced by synchrotron radiation excitation	<b>Hidehiro Yasuda</b> Osaka University, Japan
9:45-10:10AM	C04: Enhanced Optoelectronic Performance based on Metal-Semiconductor Hybrid Materials	<b>Lin Jiang</b> Soochow University, China
10:10-10:30AM	Session Break	

<b>Session: Fiber-optic Communications II</b>		<b>Chair: Werner Rosenkranz</b>
10:30-10:55AM	C05: Long-haul optical transmission systems enabled by LDPC coded non-uniform signaling	<b>Ivan Djordjevic</b> University of Arizona, USA
10:55-11:20AM	C06: Performance Improvement Using Coded-PAM Technique for Short-Reach Transmission	<b>Shuto Yamamoto</b> NTT Corporation, Japan
11:20-11:45AM	C07: Flat frequency comb and short pulse generation from a bismuth-based actively mode-locked fiber laser	<b>Yutaka Fukuchi</b> Tokyo University of Science, Japan
11:45-12:00AM	C08: Heavy Metal-free, Near-infrared Colloidal Quantum Dots for Efficient Photoelectrochemical Hydrogen Generation	<b>Xin Tong</b> Institute of Fundamental and Frontier Sciences, University of Electronic Science and Technology of China, China
12:00-13:30PM	Lunch Break	

<b>Wednesday April 19, 2017</b>		
<b>Room C</b>		
<b>Session: Optical Control and Measurement of Properties of Materials I</b>		<b>Chair: Donald Snyder</b>
13:30-13:55PM	C09: Photonic function based on longitudinal optical phonon modes of semiconductors: infrared absorption control of composite materials and destructive quantum interferences	<b>Yoshihiro Ishitani</b> Chiba University, Japan
13:55-14:20PM	C10: Ultrafast Carrier Dynamics in Photo-Excited Optoelectronic Semiconductors	<b>Junichi Kanasaki</b> Osaka University, Japan
14:20-14:45PM	C11: Optical Properties of Ultrathin Metal Oxide Films	<b>Tupeï Chen</b> Nanyang Technological University, Singapore

14:45-15:10PM	C12: AFM INTERMODULATION TECHNIQUE FOR CHARACTERIZATION OF SOFT BIOMATERIALS AT THE NANOSCALE	<b>Nisha Rani Agarwal</b> Chalmers university of technology, Sweden
15:10-16:00PM	<b>Poster Session&amp;Break</b>	
<b>Session: Optical Control and Measurement of Properties of Materials II      Chair: Junichi Kanasaki</b>		
16:00-16:25PM	C13: Quantifying Shifts in Refractive Index of Transparent Materials by Wavefront Distortion Analysis - Applications of Single Beam Interferometry in Optical Sensors and Chemical Analysis	<b>Donald Snyder</b> Eastern Michigan University, USA
16:25-16:50PM	C14: 3D metamaterials: fabrication, optical control and application	<b>Changzhi Gu</b> Institute of Physics, Chinese Academy of Sciences, China
16:50-17:15PM	C15: Ultra-fast spintronics with optical magnetization switching	<b>Kuntal Roy</b> Purdue University, USA
17:30PM	Dinner Social	

<b>Thursday April 20, 2017</b>		
<b>Room B</b>		
<b>Session: Micro and Nano Photonics II      Chair: Masashi Ota</b>		
8:30-8:55AM	B15: Nonlinear plasmonics paves the way to accurate sensing	<b>Sergey Ponomarenko</b> Dalhousie University, Canada
8:55-9:20AM	B16: Nanofluidics and Plasmonics for In-Line DNA Optical Mapping	<b>Parisa Bayat</b> University of Hamburg, Germany

9:20-9:45AM	B17: Dynamic measurements of pressure using photonic devices	<b>Kevin Douglass</b> National Institute of Standards and Technology, USA
9:45-10:10AM	B18: Core-level XPS spectra and elemental analysis on sputter deposited CuO and In:CuO thin films	<b>Jayaram Peediyekkal</b> MES Ponnani college, India
10:10-10:30AM	Session Break	
<b>Session: Optical Control and Measurement of Properties of Materials III</b>		<b>Chair: Peng Jiang</b>
10:30-10:55AM	B19: Oxygen partial pressure inside a running fuel cell measured with optical-fiber probes	<b>Junji Inukai</b> University of Yamanashi, Japan
10:55-11:20AM	B20: Optical Evaluation of Unconventional Nanoscopic Shape Memory Efforts Exhibited by Multi-Stimuli-Responsive Shape Memory Polymers	<b>Peng Jiang</b> University of Florida, USA
11:20-11:45AM	B21: Optical characterization of liquid crystalline materials	<b>Usha Manchi Krishna Rao</b> Saint Philomena's college, India
11:45-12:00AM	B22: Controlled interfacial engineering in "Giant" core/shell colloidal quantum dots to boost the solar cell performance	<b>Gurpreet Singh Selopal</b> Institute of Fundamental and Frontier Sciences, University of Electronic Science and Technology of China, China
12:00-13:30PM	Lunch Break	



**Thursday April 20, 2017**

**Room B**

**Session: Nanomaterials IV**

**Chair: Benoît Lessard**

13:30-13:55PM	B23: IV-VI Semiconductors Grown on Silicon Substrates for Thermophotovoltaic (TPV) Power Generation	<b>Patrick J. McCann</b> University of Oklahoma, USA
13:55-14:20PM	B24: Au-Nanoparticle Embedded TiO <sub>2</sub> Nanotube Arrays for Sensing, Photocatalysis and Nonlinear Optics	<b>Karthik Shankar</b> University of Alberta, Canada
14:20-14:45PM	B25: Metal Oxide Nanowire Growth and Application for UV Sensing and Dye sensitized Solar Cells	<b>Simas Rackauskas</b> University of Torino, Italy
14:45-15:10PM	B26: Microstructural and biocompatibility properties of biogenic-hydroxyapatite doped with nano-sized Y-Zirconia	<b>Aliasghar Niakan</b> SEGi University, Malaysia
15:10-15:30PM	Session Break	
<b>Session: Nanomaterials V</b>		<b>Chair: Simas Rackauskas</b>
15:30-15:55PM	B27: Performance Improvement of organic electronic devices through Interface Engineering: from surface initiated polymerization off the electrodes to crosslinking silicon phthalocyanine additives	<b>Benoît Lessard</b> University of Ottawa, Canada
15:55-16:20PM	B28: Chemical and electronic structure of graphene oxide and reduced/doped graphene oxide monolayers	<b>D. S. Sutar</b> Indian Institute of Technology Bombay, India
16:20-16:45PM	B29: Organic nanophotovoltaics: from the physical carrier transport to commercial aspects	<b>Vaidotas Kažukauskas</b> Vilnius University, Lithuania
17:30PM	Dinner Social	
April 21	One day excursion	

Wednesday April 19, 2017

15:10-16:00PM

Poster Session

P01	Graphene Oxide Supported Carbonate Doped Iron-Cerium Oxide for Rapid Visible-Light Driven Decomposition of Organic Dyes	<b>Jin Suk Chung</b> University of Ulsan, Korea
P02	Characterization of a photo-induced current in poly-Si solar cell by employing photoconductive AFM(PC-AFM)	<b>Jinhee Heo</b> Korea Institute of Materials Science, Korea
P03	Enhanced Photoresponse of Conductive Polymer Nanowires Embedded with Au Nanoparticles	<b>Junchang Zhang</b> Soochow University, China
P04	A Switchable Diffractive Grating Based on Metallic Reversible Electrochemical Mirror	<b>Chihyun Park</b> Yonsei University, Korea
P05	One-dimensional Solution-Processed TiO <sub>2</sub> Nanostructures for Use in Photovoltaics, Gas Sensing, Photocatalysis, and Microwave Resonators	<b>Ryan Kisslinger</b> University of Alberta, Canada