

# ICNN2017

International **C**onference on  
**N**ano-photonics and **N**ano-optoelectronics

## Program

**19th-21st April 2017**  
**Pacifico Yokohama, Japan**

# ICNN2017

## Program at a glance

ICNN2017

	19-Apr	20-Apr	21-Apr		
9:00	OPIC plenary session	ICNN3-1 S. Hoefling	ICNN6-1 V. Dubrovskii		
9:15					
9:30		ICNN3-2 W. Lin	ICNN6-2 J. Tatebayshi		
9:45		ICNN3-3 K. Gao	ICNN6-3 R. Tao		
10:00		ICNN3-4 A. Tamada	ICNN6-4 H. Abe		
10:15		ICNN3-5 M. Ogawa	ICNN6-5 T. Inoue		
10:30		coffee	coffee		
10:45		coffee	coffee		
11:00		ICNN4-1 J. M. Gerard	ICNN7-1 A. Nikitin		
11:15					
11:30		ICNN4-2 A. Hayat	ICNN7-2 M. Merano		
11:45	ICNN4-3 T. Hiraki	ICNN7-3 E. M. Sala			
12:00	lunch break	lunch break	lunch break		
12:15					
12:30					
12:45					
13:00					
13:15					
13:30	WELCOME ADDRESS	POSTER SESSION	ICNN8-1 Y. Terada		
13:45	ICNN1-1 M. S. Skolnick		ICNN8-2 M. Nakadai		
14:00			ICNN8-3 M. A. Binti Daud		
14:15	ICNN1-2 R. Katsumi		ICNN8-4 X. Zhao		
14:30	ICNN1-3 K. Kondo		ICNN8-5 F. Qiu		
14:45	ICNN1-4 S. Iwamoto		ICNN8-6 M. Pakhuruddin		
15:00	coffee		ICNN5-1 Z. Dong	CLOSING	
15:15	coffee				
15:30	ICNN2-1 Y. Huang		ICNN5-2 H. Nishi		
15:45			ICNN5-3 I. Sychugov		
16:00	ICNN2-2 J. Fujikata	ICNN5-4 D.J. Lin			
16:15	ICNN2-3 K. Takeda	ICNN5-5 Y. Wang			
16:30	ICNN2-4 Y. Sobu	ICNN5-6 Y. Luo			
16:45	ICNN2-5 T. Tetsumoto	ICNN5-7 T. Mogami			

**WEDNESDAY PM**

**[Opening] 13:30-13:45 Opening Remarks** Y. Arakawa The University of Tokyo

**ICNN1:** Chair: **Y. Huang** Tsinghua University, China.

**ICNN1-1 13:45 Invited On-chip Quantum Optics based on III-V Quantum Dots in Circuit Geometries** Maurice Skolnick<sup>1,2</sup> <sup>1</sup>Department of Physics and Astronomy, University of Sheffield, UK, <sup>2</sup>University of Sheffield, UK

**ICNN1-2 14:15 Quantum dot-nanocavity-waveguide coupled systems fabricated by transfer printing** Ryota Katsumi<sup>1</sup>, Yasutomo Ota<sup>2</sup>, Kazuhiro Kuruma<sup>1</sup>, Akihito Tamada<sup>1</sup>, Masahiro Kakuda<sup>2</sup>, Toshiyuki Miyazawa<sup>3</sup>, Kazuya Takemoto<sup>3</sup>, Satoshi Iwamoto<sup>1</sup>, Yasuhiko Arakawa<sup>1</sup> <sup>1</sup>Institute of Industrial Science, The Univ. of Tokyo, Japan, <sup>2</sup>Institute for Nano Quantum Information Electronics, The Univ. of Tokyo, Japan, <sup>3</sup>Fujitsu Laboratories Ltd, Japan

**ICNN1-3 14:30 Adiabatic Wavelength Conversion Through Free-Carrier Depletion Using pn-Junction- Loaded Photonic Crystal Waveguides** Keisuke Kondo, Toshihiko Baba Yokohama Nat'l Univ., Japan

**ICNN1-4 14:45 A Scheme for Generating Optical Vortex from a Quantum Dot using Degenerate Photonic Crystal Nanocavity Modes** Satoshi Iwamoto, Yasutomo Ota, Yasuhiko Arakawa The University of Tokyo, Japan

---- 15:00-15:30 Break ----

**ICNN2:** Chair: **M. S. Skolnick** University of Sheffield, UK

**ICNN2-1 15:30 Invited Manipulating the Generalized Energy-bands by Nanostructure** Yidong Huang, Kaiyu Cui, Zhilei Huang Dept. of Electronic Engineering, Tsinghua Univ., China

**ICNN2-2 16:00 High Speed and Highly Efficient Si Optical Modulator with In-Situ B Doped Strained SiGe Layer** Junichi Fujikata<sup>1</sup>, Jaehoon Han<sup>2</sup>, Masataka Noguchi<sup>1</sup>, Shigeki Takahashi<sup>1</sup>, Mitsuru Takenaka<sup>2</sup>, Takahiro Nakamura<sup>1</sup> <sup>1</sup>PETRA, Japan, <sup>2</sup>Univ. of Tokyo, Japan

**ICNN2-3 16:15 Continuous-Wave Operation of Photonic- Crystal Lasers Coupled to Si Waveguides** Koji Takeda<sup>1</sup>, Takuro Fujii<sup>1</sup>, Akihiko Shinya<sup>2</sup>, Tai Tsuchizawa<sup>1</sup>, Hidetaka Nishi<sup>1</sup>, Eiichi Kuramochi<sup>2</sup>, Masaya Notomi<sup>2</sup>, Koichi Hasebe<sup>1</sup>, Takaaki Kakitsuka<sup>1</sup>, Shinji Matsuo<sup>1</sup> <sup>1</sup>NTT Device Technology Labs., Japan, <sup>2</sup>NTT Basic Research Labs., Japan

**ICNN2-4 16:30 Polarization Splitting Grating Coupler for a Silicon Photonics Receiver** Yohei Sobu, Seok-Hwan Jeong, Yu Tanaka PETRA, Japan

**ICNN2-5 16:45 A CMOS compatible in-plane compact wavelength demultiplexer based on photonic crystal nanocavities** Tomohiro Tetsumoto, Yuta Ooka, Nurul Ashikin Binti Daud, Naotaka Kamioka, Taku Okamura, Takasumi Tanabe Keio University, Japan

**THURSDAY AM**

**ICNN3:** Chair: **S. Matsuo** NTT Corporation, Japan.

**ICNN3-1 9:00 Invited Nanophotonic quantum light emitting devices based on semiconductor quantum dots and 2D materials** Sven Hoefling, Yu-Ming He, Stefan Gerhardt, Sebastian Unsleber, Oliver Iff, Nils Lundt, Christian Schneider, Wuerzburg University, Germany

**ICNN3-2 9:30 Spin-dependent Directional Emission from a Quantum Dot Ensemble Embedded in an Asymmetric Optical Waveguide** Wenbo Lin<sup>1</sup>, Yasutomo Ota<sup>2</sup>, Satoshi Iwamoto<sup>1</sup>, Yasuhiko Arakawa<sup>1</sup> <sup>1</sup>Institute of Industrial Science, The University of Tokyo, Japan, <sup>2</sup>Institute for Nano Quantum Information Electronics (NanoQuine) , The University of Tokyo, Japan

**ICNN3-3 9:45 Lifetime measurement of a single GaN fluctuation quantum dot based on its power dependent single photon emission dynamics** Kang Gao<sup>1,2</sup>, Mark Holmes<sup>3</sup>, Munetaka Arita<sup>1</sup>, Yasuhiko Arakawa<sup>1</sup> <sup>1</sup>Institute of Industrial Science, University of Tokyo, Japan, <sup>2</sup>Institute of Industrial Science, University of Tokyo, Japan, <sup>3</sup>Institute of Industrial Science, University of Tokyo, Japan, UK

**ICNN3-4 10:00 Observation of the Purcell effect in a plasmonic microring resonator embedding self-assembled quantum dots** Akihito Tamada<sup>1</sup>, Yasutomo Ota<sup>2</sup>, Kazuhiro Kuruma<sup>1</sup>, Jinfa Ho<sup>2</sup>, Katsuyuki Watanabe<sup>2</sup>, Satoshi Iwamoto<sup>2</sup>, Yasuhiko Arakawa<sup>2</sup> <sup>1</sup>Institute of Industrial Science, The University of Tokyo, Japan, <sup>2</sup>Institute for Nano Quantum Information Electronics, The University of Tokyo, Japan

**ICNN3-5 10:15 High-Q photonic crystal double-hetero structure nanocavity with Er,O-codoped GaAs** Masayuki Ogawa, Natsuki Fujioka, Kanji Sakuragi, Taiki Kishina, Takanori Kojima, Yasufumi Fujiwara Division of Materials and Manufacturing Science, Graduate School of Engineering, Osaka University, Japan

----- 10:30-11:00 Break -----

**ICNN4:** Chair: **S. Hoefling** University of Wuerzburg, Germany

**ICNN4-1 11:00 Invited Dynamic Control of CQED Effects in Switched Optical Microcavities** Jean-Michel GERARD<sup>1,2</sup>, Emanuel PEINKE<sup>2</sup>, Tobias SATTTLER<sup>2</sup>, Joël BLEUSE<sup>2</sup>, Julien CLAUDON<sup>2</sup>, Gaston HORNECKER<sup>2</sup>, Emre YUCE<sup>3</sup>, Henri Thyrrestrup<sup>3</sup>, Willem L VOS<sup>3</sup> <sup>1</sup>CEA/INAC Grenoble, FRANCE, <sup>2</sup>CEA/INAC, FRANCE, <sup>3</sup>Twente Univ., The Netherlands

**ICNN4-2 11:30 Hybrid Semiconductor-Superconductor Optoelectronic Devices** Alex Hayat, Dmitry Panna, Shlomi Bouscher, Leonid Rybak Department of Electrical Engineering, Technion, Haifa 32000, Israel

**ICNN4-3 11:45 Si-waveguide-integrated Superconducting Nanowire Single-photon Detector with Low-loss Spot-size Converter** Tatsuro Hiraki<sup>1</sup>, Tai Tsuchizawa<sup>1</sup>, Hiroyuki Shibata<sup>2</sup>, Shinji Matsuo<sup>1</sup> <sup>1</sup>NTT Device Technology Laboratories, Japan, <sup>2</sup>Kitami Institute of Technology, Japan

----- 12:00-13:00 Lunch -----

**THURSDAY PM**

**POSTER SESSION 13:00-15:00 <Exhibition Hall A>**

**ICNN5:** Chair: **J. M. Gerard** CEA, University of Grenoble, France

**ICNN5-1 15:00 *Invited* Plasmon Enhanced Single-Molecule Electroluminescence and Beyond** Zhenchao Dong University of Science and Technology of China, P. R. China

**ICNN5-2 15:30 Carrier-lifetime measurements of deep- subwavelength Si core plasmonic waveguide** Hidetaka Nishi, Tai Tsuchizawa, Masaaki Ono, Masaya Notomi, Shinji Matsuo NTT, Japan

**ICNN5-3 15:45 Luminescent Silicon Nanocrystals: Physics and Applications** Ilya Sychugov<sup>1</sup>, Federico Pevere<sup>1</sup>, Jun-Wei Luo<sup>2</sup>, Jonathan Veinot<sup>3</sup>, Alex Zunger<sup>4</sup>, Jan Linnros<sup>1</sup> <sup>1</sup>KTH - Royal Institute of Technology, Sweden, <sup>2</sup>State Key Laboratory for Superlattices and Microstructures, Chinese Academy of Science, China, <sup>3</sup>University of Alberta, Edmonton, Canada, <sup>4</sup>Renewable and Sustainable Energy Institute, University of Colorado, USA

**ICNN5-4 16:00 Surface plasmon-enhanced ultraviolet electroluminescence from an individual n-ZnO microrod/p-GaN heterostructured light- emitting diodes via controlling the size of Ag nanoparticles** Hsu-Cheng Hsu, Dai-Jie Lin, Ching-Yen Wang, Bo-Lun Jiang Department of Photonics, National Cheng Kung University, Tainan, Taiwan

**ICNN5-5 16:15 Complex cavity photonic crystal surface emitting laser** Yufei Wang, Xiaojie Guo, Wanhua Zheng Laboratory of Solid State Optoelectronics Information Technology, Institute of Semiconductors, CAS, China

**ICNN5-6 16:30 A Single GaAs Nanowire Schottky Junction Photodetector** Yanbin Luo, Bang Li, Xin Yan, Qichao Lu, Jiamin Wang, Xia Zhang State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Posts and Telecommunications, China

**ICNN5-7 16:45 Silicon photonics platform and PDK of 300mm SOI for advanced optical integrated circuits** Tohru Mogami<sup>1</sup>, Tsuyoshi Horikawa<sup>1,2</sup>, Keizo Kinoshita<sup>1</sup> <sup>1</sup>Photonics Electronics Technology Research Association (PETRA), Japan, <sup>2</sup>National Institute of Advanced Industrial Science and Technology (AIST), Japan

**FRIDAY AM**

**ICNN6:** Chair: A. Nikitin CIC nanoGUNE, Spain

**ICNN6-1 9:00 Invited Heterostructured III-V nanowires: opportunities and challenges** Vladimir Dubrovskii St. Petersburg Academic University, Russia

**ICNN6-2 9:30 Nanowire-quantum dot lasers on flexible substrates** Jun Tatebayashi<sup>1</sup>, Yasutomo Ota<sup>1</sup>, Satomi Ishida<sup>2</sup>, Masao Nishioka<sup>2</sup>, Satoshi Iwamoto<sup>3</sup>, Yasuhiko Arakawa<sup>3</sup> <sup>1</sup>NanoQuine, the Univ. of Tokyo, Japan, <sup>2</sup>IIS, the Univ. of Tokyo, Japan, <sup>3</sup>NanoQuine and IIS, the Univ. of Tokyo, Japan

**ICNN6-3 9:45 A theoretical comparison study on threshold currents of III-nitride lasers with quantum dots and quantum wells** Renchun Tao<sup>1</sup>, Yasuhiko Arakawa<sup>2</sup> <sup>1</sup>Institute for Nano Quantum Information Electronics, The University of Tokyo, Japan, <sup>2</sup>Institute of Industrial Science, The University of Tokyo, Japan

**ICNN6-4 10:00 Photonic Crystal Nanolaser Array with Ordered Lasing Wavelengths For High-Speed Cell Imaging** Hiroshi Abe, Satoshi Ota, Yasushi Takemura, Toshihiko Baba Yokohama National University, Japan

**ICNN6-5 10:15 Spectral control of near-field thermal radiation transfer using a Si photonic crystal thermal emitter** Takuya Inoue, Takashi Asano, Susumu Noda Kyoto University, Japan

----- 10:30-11:00 Break -----

**ICNN7:** Chair: V. Dubrovskii St. Petersburg Academic University, Russia

**ICNN7-1 11:00 Invited Nanophotonics in low dimensions** Alexey Nikitin CIC NANogune, Ikerbasque, Spain

**ICNN7-2 11:30 The optical response of a two-dimensional crystal** Michele Merano Università degli studi di Padova, Italy

**ICNN7-3 11:45 Growth and structure of In<sub>0.5</sub>Ga<sub>0.5</sub>Sb quantum dots on GaP(001) for nanomemories** Elisa M. Sala<sup>1</sup>, Gernot Stracke<sup>1</sup>, Sören Selve<sup>2</sup>, Tore Niermann<sup>3</sup>, Michael Lehmann<sup>3</sup>, Sarah Schlichting<sup>1</sup>, Felix Nippert<sup>1</sup>, Gordon Callsen<sup>1</sup>, André Strittmatter<sup>4</sup>, Dieter Bimberg<sup>1</sup> <sup>1</sup>Institute of Solid State Physics, Technical University of Berlin, Germany, <sup>2</sup>Center for Electron Microscopy (ZELMI), Technical University of Berlin, Germany, <sup>3</sup>Institute for Optics and Atomic Physics (IOAP), Technical University of Berlin, Germany, <sup>4</sup>Institute of Experimental Physics, Otto-von-Guericke University Magdeburg, Germany

----- 12:00-13:30 Lunch -----

**FRIDAY PM**

**ICNN8:** Chair: **M. Holmes** The University of Tokyo, Japan

**ICNN8-1 13:30 32 Gbps Operation in Si Photonic Crystal Slow Light Modulator** Yosuke Terada, Tomoki Tatebe, Yosuke Hinakura, Toshihiko Baba Yokohama National University, Japan

**ICNN8-2 13:45 Design of Double-slotted Photonic Crystal Nanocavity Robust to Structural Fluctuations** Masahiro Nakadai, Ryotaro Konoike, Yoshinori Tanaka, Takashi Asano, Susumu Noda Department of Electronic Science and Engineering, Kyoto University, Japan

**ICNN8-3 14:00 Photonic Crystal Nanocavity Photodetector Integrated with p-i-n Junction Fabricated by Photolithography Process.** Nurul Ashikin Binti Daud, Yuta Ooka, Tomohiro Tetsumoto, Takasumi Tanabe Keio University, Japan

**ICNN8-4 14:15 Two mode channel switchable hybrid grating assisted contra-directional coupler** Xiangjie Zhao, Yuxi Wang, Qingzhong Huang, Jinsong Xia Wuhan National Laboratory for Optoelectronics, China

**ICNN8-5 14:30 Novel Silicon-Organic Hybrid Micro-Ring Modulator** Feng Qiu, Shiyoshi Yokoyama Kyushu University, Japan

**ICNN8-6 14:45 Enhanced Light-Coupling in Laser- Crystallised Silicon Thin-Film Solar Cells on Glass by Moth-Eye Anti-Reflection Foil** Mohd Zamir Pakhuruddin<sup>1,2</sup>, Sven Kühnappel<sup>3</sup>, Jialiang Huang<sup>2</sup>, Jonathan Dore<sup>2</sup>, Stefan Gall<sup>3</sup>, Sergey Varlamov<sup>2</sup> <sup>1</sup>School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney 2052, Australia, Malaysia, <sup>2</sup>School of Photovoltaic and Renewable Energy Engineering, University of New South Wales, Sydney 2052, Australia, <sup>3</sup>Helmholtz- Zentrum Berlin, Institute for Silicon-Photovoltaics, Kekuléstr. 5, D-12489 Berlin, Germany

**[Closing] 15:00-15:15 Closing Remarks** **Y. Arakawa** The University of Tokyo, Japan

## POSTER PRESENTATIONS

**P01 Backward Phase-matching in Spatially Dispersive Metamaterials** Alexander Popov<sup>1</sup>, Igor Nefedov<sup>2</sup>, Sergey Myslivets<sup>3</sup> <sup>1</sup>Birck Nanotechnology Center, Purdue University, USA, <sup>2</sup>ITMO University, Russian Federation, <sup>3</sup>Siberian Federal University, Russian Federation

**P02 Negative Photodetector Based on a Single InAs Nanowire** Bang Li, Bang Li Li, Xin Yan, Yanbin Luo, Qichao Lu, Xia Zhang, Xiaomin Ren. State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Posts and Telecommunications, China

**P03 A Plasmonic Quantum Well Nanowire near- Infrared Laser** Jiamin Wang, Xin Yan, Qichao Lu, Yanbin Luo, Bang Li, Xia Zhang. State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Post and Telecommunications, China

**P04 Investigation of Crosstalk Reduction for Silicon-based Arrayed Waveguide Grating** Jun Zou, Haoran Huang and Zichun Le. College of Science, Zhejiang University of Technology, 310023 Hangzhou, China

**P05 Highly Sensitive and Robust Detection of Target DNA by Digitally Counting Gold Nanoparticle Dimers** Takaha Mizuguchi, Keiko Esashika, Toshiharu Saiki. Keio University, Japan

**P06 Microwave propagation guided by one dimensional array of strongly coupled split ring resonators** Vanna.C Silalahi, Y.H Chang, Watson Kuo. Department of Physics, National Chung Hsing University, Taiwan

**P07 Coupling strength between split ring resonator and its complementary counterpart** Yu-Han Chang<sup>1</sup>, Wei-Chen Chien<sup>1</sup>, Yu-Zhan Lin<sup>2</sup>, Ye-Shun Lan<sup>3</sup>, Cen-Shawn Wu<sup>3</sup>, Watson Kuo<sup>1</sup> Department of Physics, National Chung Hsing University, Taichung, Taiwan, <sup>2</sup>Department of Physics, National Taiwan University, Taipei, Taiwan, <sup>3</sup>Department of Physics, National Changhua University of Education, Changhua, Taiwan

**P08 LEDs with 3D PhC structure in the surface and their radiation properties** Matej Goraus, Dusan Pudis, Peter Gaso, Daniel Jandura, Maria Figurova Department of Physics, University of Zilina, Slovakia

**P09 Photodiodes and LEDs with polymer PhC structure in the surface and their optical properties** D. Pudiš<sup>1</sup>, L. Šušlik<sup>1</sup>, J. Kováč jr.<sup>2</sup>, M. Tłaczała<sup>3</sup>, W. Dawidowski<sup>3</sup>, J. Kováč<sup>2</sup>, B. Ściana<sup>3</sup>, M. Goraus<sup>1</sup>, P. Gašo<sup>1</sup>, J. Ďurišová<sup>1</sup>, I. Zborowska-Lindert<sup>3</sup> and M. Figurová<sup>1</sup>. <sup>1</sup>Dept. of Physics, University of Žilina, Žilina, Slovakia, <sup>2</sup>Inst. of Electronics and Photonics, Slovak University of Technology, Bratislava, Slovakia, <sup>3</sup>Faculty of Microsystem Electronics and Photonics, Wrocław University of Science and Technology, Wrocław, Poland



## POSTER PRESENTATIONS

**P10 Plasmonic Energy Transformation in Platinum Thin Film** Hung Ji Huang<sup>1</sup>, Bo-Heng Liu<sup>1</sup>, Hai-Pang Chiang<sup>2</sup>, Tsung Sheng Kao<sup>3</sup>, Yuan-Fong Chou Chau<sup>4</sup>, Chi-Hung Hwang<sup>1</sup>. <sup>1</sup>Instrument Technology Research Center, National Applied Research Laboratories, Taiwan, <sup>2</sup>Institute of Optoelectronic Sciences, National Taiwan Ocean University & Institute of Physics, Academia Sinica, Taiwan, <sup>3</sup>Department of Photonics & Institute of Electro-Optical Engineering, National Chiao Tung University, Taiwan, <sup>4</sup>Centre for Advanced Material and Energy Sciences, Universiti Brunei Darussalam, Negara Brunei Darussalam

**P11 Ultraviolet photodetectors with ZnO:Al Nanorods** Chih-Chiang Yang<sup>1</sup>, Kuan-Yu Chen<sup>2</sup>, Zi-Hao Wang<sup>2</sup>, Shin-Ting Yeh<sup>2</sup>, Yan-Kuin Su<sup>1,2</sup>. <sup>1</sup> Department of Electrical Engineering, Kun-Shan University, Tainan 710, Taiwan., <sup>2</sup>The Institute of Microelectronics, Department of Electrical Engineering, and the Advanced Optoelectronic Technology Center, National Cheng Kung University, Tainan 701, Taiwan

**P12 Employing Star-Shaped Gold/Silver Nanoparticles to Near Infrared Surface-Enhanced Raman Scattering (SERS)** Hai-Pang Chiang<sup>1</sup>, Chih-Hsien Lai<sup>2</sup>, Guo-An Wang<sup>1</sup>, Ding Rong Yang<sup>1</sup>, Tzzy-Jiann Wang<sup>3</sup>, Chih-Ching Huang<sup>1</sup>, Hai-Pang Chiang<sup>1</sup>. <sup>1</sup>National Taiwan Ocean University, Taiwan, <sup>2</sup>National Yunlin University of Science and Technology, Taiwan, <sup>3</sup>National Taipei University of Technology, Taiwan

**P13 Enhanced light-harvesting efficiency by novel conjugated anchoring groups on bi-branched organic sensitizers for dye-sensitized solar cells** Jin-Kyu Kang, Hyo Jeong Jo, Jung Eun Nam, Dae-Hwan Kim, Dae-Kue Hwang. DGIST, Korea, republic of

**P14 Coalescence of Two Gold Nanorods Driven by Linearly Polarized Light** Jiunn-Woei Liaw<sup>1</sup>, Hsueh-Yu Chao<sup>2</sup>, Mao-Kuen Kuo<sup>2</sup>. <sup>1</sup>Department of Mechanical Engineering, Chang Gung University, Taiwan, <sup>2</sup>Institute of Applied Mechanics, National Taiwan University, Taiwan

**P15 Characterization of Colloidal CsPbBr<sub>3</sub> and CsPbBr<sub>1.5</sub>I<sub>1.5</sub> Perovskite Quantum Dots Synthesized by High Temperature Cs-oleate Injection** Chun-Yuan Huang<sup>1</sup>, Wen-Kuei Chuang<sup>2</sup>, Ming-Hsuan Liu<sup>1</sup>. <sup>1</sup>National Taitung University, Taiwan, <sup>2</sup>National Cheng Kung University, Taiwan

**P16 Magneto-Optical Quantum Switches: Spintronics in Excitons** Wen-Hsuan Kuan, Wei-Liang Wu, Kuei-Huei Lin. University of Taipei, Taiwan

**P17 Preparation of ZnO nanorods by hydrothermal method for Non-enzymatic glucose sensing** Kuan Yu Chen<sup>1</sup>, Chih Chiang Yang<sup>2</sup>, Zi Hao Wang<sup>1</sup>, Cheng Ru Lin<sup>3</sup>, Yan Kuin Su<sup>1</sup>. <sup>1</sup>Institute of microelectronics, Taiwan (R.O.C.), <sup>2</sup>Electrical Engineering, Taiwan (R.O.C.), <sup>3</sup>Microelectronic and Optoelectronic, Taiwan (R.O.C.)

## POSTER PRESENTATIONS

**P18 Fast and Sensitive Determination of C-Reactive Protein in Human Serum Samples by a White Light Interference Spectroscopy Sensor** Panagiota Petrou<sup>1,2</sup>, Georgios Koukouvinos<sup>2</sup>, Konstantinos Misiakos<sup>3</sup>, Ioannis Raptis<sup>4</sup>, Dimitrios Goustouridis<sup>4</sup>, Gerhard Jobst<sup>5</sup>, Dimitra Nikita<sup>6</sup>, Aikaterini Karapataki<sup>6</sup>, Sotirios Kakabakos<sup>2</sup> <sup>1</sup>INRASTES, NCSR Demokritos, Greece, <sup>2</sup>Immunoassays-Immunosensors Lab, INRASTES, NCSR Demokritos, Greece, <sup>3</sup>Institute of Nanoscience & Nanotechnology, NCSR Demokritos, Greece, <sup>4</sup>ThetaMetrisis S.A., Greece, <sup>5</sup>Jobst Technologies GmbH, Germany, <sup>6</sup>Henri Dunant Hospital, Greece

**P19 Control of surface phonon polariton confinement with phase change material for tunable surface enhanced infrared spectroscopy** Masaki Nakamura, Masashi Kuwahara, Toshiharu Saiki. Keio University, Japan.

**P20 Plasmonic Lens Structure with variant spacing nano-slits** Yu-Lung Hsiao, and Ruei-Chang Lu Department of Electronic Engineering, National I-Lan University, I-Lan City, I-Lan Country, Taiwan R.O.C.

**P21 Tapered fiber nanoprobe: Comparison of nano structures on tapered optical fiber tips for large EM enhancement** Anuj Dhawan, Priten Savaliya Department of Electrical Engineering, Indian Institute of Technology, Delhi, India