

# Technical Program

29th June 2019

New Century International Auditorium

Time	Speaker name	Title of presentation	Session Chair
8:40-8:50		Introduction of distinguished guests	Ying Ding
8:50-9:00	John Marsh	Welcome speech	
9:00-9:45	John Marsh (Keynote)	Photonic integration for the cloud: a revolution in the communication and storage of data.	
9:45-10:25	Bocang Qiu (Keynote)	Design and manufacture of high power semiconductor lasers	
10:25-10:50	Group photo and Tea break		
10:50-11:25	Keith Wilcox (Invited)	Recent Advances in Semiconductor Disk Lasers	Nelson Sze-Chun Chan
11:25-11:55	Yuanyao Lin (Invited)	Modelling the coherent modal interactions in Q-switched optical vortex lasers	
11:55-12:25	Efrat Raz Moyal (Invited)	Scribeless Cleaving for Substrate Downsize, Singulate and Cross section - Cleanroom Compatible	

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Session 1 and 2

Conference Room No. 1

	Time	Title of presentation and authors	Session Chair
S1-1	13:30-14:00	Advances in Biophotonics (to be confirmed) Kaige Wang (Invited)	Ce Zhang
S1-2	14:00-14:30	Real-time signal processing with graphics processing unit and hash table based logarithm calculation in swept source optical coherence tomography Jun Zhang (Invited)	
S1-3	14:30-15:00	AlPcS-loaded gold nanobipyramids with high two-photon efficiency for photodynamic therapy in vivo Jun Liu, <u>Jing Wang</u> , Xiao Xiao, Jiangfang Wang, Xiaolu Zhuo (Invited)	
S1-4	15:00-15:30	Multi-channel brain neural signal sensing detection system Tao Chen (Invited)	
	15:30-16:00	Tea break	
S2-1	16:00-16:30	Labs on Chip, but not Just Ce Zhang (Invited)	Jun Zhang
S2-2	16:30-17:00	Label-free molecular imaging of biomedical samples with multivariate analysis method Shuang Wang (Invited)	
S2-3	17:00-17:15	Effect of fluorescence quenching of Coumarin 102 in 405nm/532nm CW-STED	

		Wenxuan ZHAO, Wei ZHAO, Chen ZHANG, Xiaoqiang FENG, Haiyun QIN, Guiren WANG, and Kaige WANG	
S2-4	17:15-17:30	Multi-wavelength Yb-doped Fiber Laser <u>Kaile Wang</u> , Zengrun Wen, Baole Lu, Xinyuan Qi, Jintao Bai	
S2-5	17:30-17:45	To be determined	

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Session 3 and 4

Conference Room No. 2

	Time	Title of presentation and authors	Session Chair
S3-1	13:30-14:10	Photonic Integrated Circuits as Terahertz Generation Sources <u>Lianping Hou</u> , John H. Marsh (Invited)	Charlie Ironside
S3-2	14:10-14:40	Versatile Photonic Microwave Generation Using Feedback and Injection Dynamics of Semiconductor Lasers Jia-Xin Dong and <u>Sze-Chun Chan</u> (Invited)	
S3-3	14:40-15:10	Ultra-bright single photon and entangled photon sources based on quantum dots in broadband photonic nanostructures <u>Juntao Li</u> , Yuming Wei, Beimeng Yao, Ying Yu, Jin Dong Song, Saimon Filipe Covre da Silva, Marcelo Davanço, Jake Iles-Smith, Kartik Srinivasan, Armando Rastelli, Jin Liu, and Xue-Hua Wang (Invited)	
S3-4	15:10-15:30	Low noise quantum dot mode locked lasers directly grown on a CMOS compatible silicon substrate <u>S. Liu</u> , J. Norman, A. Gossard, and J. Bowers	
	15:30-16:00	Tea break	
S4-1	16:00-16:30	Micro-LED's history, current progress and future trends Zheng Gong (Invited)	Lianping Hou
S4-2	16:30-16:55	Micro-LED Array (to be confirmed) Weiling Guo (Invited)	
S4-3	16:55-17:20	Progress of GaN-based blue and green laser diodes <u>Jianping Liu</u> , Aiqing Tian, Lei Hu, Xiaoyu Rei , Liqun Zhang, Shuming Zhang, Deyao Li, Hui Yang (Invited)	
S4-4	17:20-17:45	Optically pumped InGaN/GaN multiple quantum wells laser diodes selectively grown on Si (111) substrates Xiaobiao Han, Yuebo Liu, Yuan Ren, Yaqiong Dai, Longkun Yang, Wanqing Yao, Jieying Xing, Zhisheng Wu, Yang Liu, <u>Baijun Zhang</u> (Invited)	

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Session 5 and 6

Conference Room No. 1

	Time	Title of presentation and authors	Session Chair
S5-1	8:50-9:20	High Performance Single Crystalline Perovskite Optoelectronic Devices <u>Yanxia Cui</u> (Invited)	Fei Gao
S5-2	9:20-9:50	Perovskite – a Wonder for Photovoltaic & Optoelectronic Applications <u>Shengzhong</u> (Frank) Liu, Dong Yang, Yucheng Liu, Kui Zhao, Zhiwen Jin (Invited)	
S5-3	9:50-10:15	Charge Photogeneration and Recombination Processes in Polymer Solar Cells <u>Wei Zhang</u> , Arkady Yartsev (Invited)	
S5-4	10:15-10:30	Semiconductor nanowall arrays as efficient light confinement structures potentially applicable for high-performance photovoltaic devices Junshuai Li	
	10:30-10:50	Tea break	
S6-1	10:50-11:20	Nanoanalysis of optoelectronic devices using Focused Ion Beam microscopy combined with time of flight secondary ion mass spectrometry <u>C. N. Ironside</u> and W. D. A. Rickard (Invited)	Xinlong Xu
S6-2	11:20-11:50	Charge carrier recombination in semiconductors <u>Arkady Yartsev</u> , Wei Zhang, Pierre-Adrien Mante, Xiaojun Su, Xianshao Zou, Magnus Borström (Invited)	
S6-3	11:50-12:20	Improvement of the properties of Cu oxide film <u>Fei Gao</u> , Rongrong Gao, Hao Liu, Zhou Yang, Xiaodong Hua, Xin Wu, and Shengzhong (Frank) Liu (Invited)	

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Session 7 and 8

Conference Room No. 2

	Time	Title of presentation and authors	Session Chair
S7-1	8:50-9:25	Super-Channel Technology for Coherent Optical Fiber Communication System Yuan Shi (Invited)	Zhihong Liu
S7-2	9:25-10:00	Design of a hybrid vertical cavity laser <u>Anjin Liu</u> , Bo Yang (Invited)	
S7-3	10:00-10:30	Photonic Integration of InP-based few-mode devices <u>Dan Lu</u> and Lingjuan Zhao (Invited)	
	10:30-10:50	Tea break	
S8-1	10:50-11:20	Highly reliable ultrafast fiber lasers and theirs applications <u>Zhiguo Lv</u> , Zhi Yang, Feng Li, Qianglong Li, Xiaojun Yang, Yishan Wang, and Wei Zhao (Invited)	

S8-2	11:20-11:40	To be determined Lei Hou	Bocang Qiu
S8-3	11:40-11:55	Narrow bandwidth Q-switched fiber laser based on unpumped Er-doped fiber <u>Zengrun Wen</u> , Kaile Wang, Baole Lu, Xinyuan Qi, and Jintao Bai	
S8-4	11:55-12:05	The generation of chirality controllable femtosecond LG01 vortex beam <u>Shulin Zhang</u> , Guoying Feng, Sha Wang, Shouhuan Zhou	
S8-5	12:05-12:20	High Linearity Fiber Temperature Sensor Based on DSSMS Fiber Structure <u>Jianchang Tan</u> , Guoying Feng, Shulin Zhang	

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Session 9 and 10

Conference Room No. 2

	Time	Title of presentation and authors	Session Chair
S9-1	14:30-15:05	Mode Engineering of High Power Semiconductor Lasers Cunzhu Tong (Invited)	Keith Wilcox
S9-2	15:05-15:25	Modeling of InP-Based Coupled Cavity Semiconductor Snail Laser Diodes <u>Xing. Dai</u> , Jack. Mulcahy, Frank. H. Peters	
	15:25-15:50	Tea break	
S10-1	15:50-16:20	THz Technology for Two-dimensional Materials <u>Xinlong Xu</u> , Chuan He, Yuanyuan Huang, Lipeng Zhu (Invited)	Arkady Yartsev
S10-2	16:30-16:55	Fast and broadband photoresponse of few-layer GeSe field-effect transistor <u>Hongquan Zhao</u> , Yuhui Yang, Dahua Zhou, Xuan Shi, Yuzhi Li, Chunxiang Wang (Invited)	
S10-3	16:55-17:10	Enhanced photoresponsivity in carbon quantum dots-coupled graphene/silicon Schottky-junction photodetector <u>Xiaoxu CHEN</u> , Chao YANG, Hao ZHOU, Guoying FENG, and Shouhuan ZHOU	

1st July 2019

Session 11 and 12

Conference Room No. 2

	Time	Title of presentation and authors	Session Chair
S11-1	9:00-9:30	Terahertz Detectors Based on GaN High Electron Mobility Transistors <u>Zhihong Liu</u> , Haowen Hou, Jinghua Teng, Tomás Palacios, and Soo-Jin Chua (Invited)	
S11-	9:30-10:50	Electrical/optical modulation of Mm-wave/THz	

2		resonant tunneling diode transmitter <u>Jue Wang</u> , Joana S. Tavares, Abdullah Al-khalidi, Jose M. L. Figueiredo, Luis M. Pessoa, and Edward Wasige	Baijun Zhang
S11-3	10:00-10:15	Spectral Linewidth Reduction of Quantum Cascade Lasers by Strong Optical Feedback <u>B. B. Zhao</u> , X. G. Wang, and C. Wang	
S11-4	10:15-10:30	High sensitivity refractive index measuring instrument based on laser heterodyne interference <u>Xi Ding</u> , Guoying Feng, Shouhuan Zhou	
	10:30-10:50	Tea break	
S12-1	10:50-11:20	Optical dual-beam lithography (ODBL) for nanofabrication: challenges and applications Yaoyu Cao (Invited)	Hongquan Zhao
S12-2	11:20-11:35	Interactions between nanoparticles and polymers in the diffusion boundary layer during freezing colloidal suspensions <u>Jiaxue You</u> , Jincheng Wang, Lilin Wang, Zhijun Wang	
S12-3	11:35-11:50	Gradational pavement cracks segmentation using FIS <u>Amna Khatoon</u> , Asad Ullah, Zhaoyun Sun, Ishfaq Ahmad	
S12-4	11:50-12:05	To be determined <u>Asad Ullah</u> , Amna Khatoon, Zhaoyun Sun, Ishfaq Ahmad	

All Poster presenters should prepare electronic files for electronic display board in advance.

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Poster Session 1 and 2

Conference Room No. 2

	Time	Title of presentation and authors
P1-P10	13:40-14:20	To be determined
P11-P20	17:10-18:00	To be determined