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Part I SOPO 2011 Conference Schedule

Registration May 16~18, 2011

Registration Time	Date	Location
9:00-20:00	May 16 th , 2011	Lobby, 1 st floor, East International Hotel
8:00-18:00	May 17 th , 2011	Lobby, 1 st floor, East International Hotel
8:30-14:00	May 18 th , 2011	Lobby, 1 st floor, East International Hotel

Tuesday Morning, May 17

Time	Activity	Location: Grand Ballroom, 3 rd floor, East International Hotel
8:30-9:00	Opening Ceremony	
9:00-09:40	Plenary Speech: Novel Fiber-based Devices for Sensing Applications Speaker: Prof. Ping Shum , Nanyang Technological University, Singapore	
09:40-10:20	Plenary Speech: Si-based Nano-Structures for Energy Applications and Others Speaker: Prof. Ching-Fuh Lin , National Taiwan University, Chinese Taipei.	
10:20-10:40	Coffee Break	
10:40-11:20	Plenary Speech: Photothermal Effects of Supramolecularly Assembled Gold Nanoparticles for the Targeted Treatment of Cancer Cell Speaker: Prof. Hsian-Rong Tseng , University of California, Los Angeles, USA	
11:20-12:00	Plenary Speech: Nano-structures and luminescence mechanisms of InGaN-quantum well light emitting diodes, and research on ZnO, SiC related advanced optoelectronics materials and structure Speaker: Prof. ZheChuan FENG , National Taiwan University /GA Laboratory, USA	

Tuesday Noon, May 17

12:00 – 13:30	Lunch Buffet	Location: 2 nd floor, East International Hotel
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Tuesday Afternoon, May 17

Time	Activity (Coffee Break 15:20 – 15:40)	Location: 2 nd and 3 rd floor, East International Hotel
14:00 – 17:30	Oral Session 1: Image Processing and Medical Applications	Room 233, 2 nd floor
	Oral Session 2: Laser Technology and Applications	Room 255, 2 nd floor
	Oral Session 3: New Optoelectronic Device Technologies	Room 388, 3 rd floor

Tuesday Evening, May 17

18:30 – 20:00	Welcome Banquet	Location: 2 nd floor, East International Hotel
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Wednesday Morning, May 18

Time	Activity (Coffee Break 10:00 – 10:20)	Location: 2 nd and 3 rd floor, East International Hotel
08:30 – 12:00	Oral Session 4: Optical Communications	Room 233, 2 nd floor
	Oral Session 5: Optical Sensors and Applications	Room 255, 2 nd floor
	Oral Session 6: Optoelectronic Devices and Integration	Room 388, 3 rd floor

Wednesday Noon, May 18

12:00 – 13:30	Lunch Buffet	Location: 2 nd floor, East International Hotel
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Wednesday Afternoon, May 18

Time	Activity (Coffee Break 15:20 – 15:40)	Location: Grand Ballroom ,3 rd floor, East International Hotel
14:00 – 17:30	Poster Session I: Laser Technology, Image Processing and Biomedical Applications Poster Session II: Optical Communications and Optoelectronic Devices	

Thursday Morning, May 19

Conference Tour

Part II Plenary Speeches

Plenary Speech: Novel Fiber-based Devices for Sensing Applications

Speaker: Prof. Ping Shum, Nanyang Technological University, Singapore

Time: 09:00-09:40, Tuesday morning, May 17

Location: Grand Ballroom, 3rd floor, East International Hotel



Abstract:

Optical fiber-based sensing technologies have been widely developed, due to their notable advantages such as electrically-passive operation, light weight, immunity to radio frequency interference and electromagnetic interference, high sensitivity, compact size, corrosion resistance, easily multiplexing and potentially low cost. Several novel fiber-based sensors and technologies developed are presented here, including fiber Bragg grating (FBG) based sensors, photonic crystal fiber (PCF) based sensors, special fiber (nanofiber, double cladding fiber) based sensors and distributed fiber sensing systems.

FBGs as instinctive sensors, are ingeniously designed as two-dimensional (2D) tilt sensors, displacement sensors, accelerometers and corrosion sensors here; PCF based evanescent field absorption sensor, PCF induced Mach-Zehnder interferometer and Fabry-Perot refractometer for temperature and refractive index sensing are presented; based on localized surface Plasmon resonant (LSPR) effect, nano-sized fiber tip with gold nanoparticles are demonstrated for live cell index bio-sensing applications; multiplexing techniques, such as optical low coherent reflectometry (OLCR) and optical frequency domain reflectometry (OFDR), for distributed fiber sensing system are briefly discussed as well.

Plenary Speech: Si-based Nano-Structures for Energy Applications and Others

Speaker: Prof. Ching-Fuh Lin, National Taiwan University, Taiwan, China

Time: 09:40-10:20, Tuesday morning, May 17

Location: Grand Ballroom, 3rd floor, East International Hotel



Abstract:

The foreseeable depletion of fossil fuel and the global warming caused by the carbon dioxide had led to the increasing attention of alternative renewable energy and energy saving. Therefore, crystalline Si-PV devices are quickly spreading and LEDs for lighting are very attractive. In this talk, I will mainly discuss the use of Si-based nanostructures for energy applications.

For the solar cells using Si nanowires, we will discuss two major parts: the combination of the Si nanowires with the organic materials to form p-n junction and the technique to form single crystalline Si thin film to lower the material cost. The fabrication of Si-nanowire/PEDOT solar cells is simple in terms of process steps. The device so far demonstrates a power conversion efficiency of 8.05%. On the other hand, the single crystalline Si thin-film is fabricated using two-step etching technique. The film thickness could be from around 5 μm to 15 μm . For the film of 15 μm , the absorption is 99% in the wavelength range from below 400 nm to 800 nm, then decreases to about 90% at the wavelength 912 nm. The film has very good crystal orientation, almost identical to Si wafer.

For energy saving, GaN LED is expected to play a very important role for its potential of achieving over 200 lm/W. In addition to lighting efficacy, large-area fabrication and low cost are also important. Current GaN LEDs are mainly based on sapphire wafers. To speed up the LED fabrication and reduce the cost, Si-based white-light LEDs are very attractive. Here we will report the special process to grow ZnO nano or micro-rods with very good alignment toward vertical orientation. Because of the good lattice match between ZnO and GaN, those Si-based ZnO rods could enable the fabrication of GaN LEDs based on Si wafer to reduce cost and to promise production on wafers of beyond 6 inches.

Other applications using Si-photonics will also be briefly addressed.

Plenary Speech: Photothermal Effects of Supramolecularly Assembled Gold Nanoparticles for the Targeted Treatment of Cancer Cell



Speaker: Prof. Hsian-Rong Tseng, University of California, Los Angeles, USA

Time: 10:40-11:20, Tuesday morning, May 17

Location: Grand Ballroom, 3rd floor, East International Hotel

Abstract:

Noble-metal nanostructures with unique photophysical properties have been considered as prime candidate agents for the photothermal treatment of cancer. Typically, the photothermal properties of these nanostructures can be controlled by manipulating their sizes and shapes. Over the past decade, significant endeavors have been devoted to the production of a variety of gold nanostructures, such as nanoparticles, nanoshells, nanorods, and nanocages, which are able to overcome limitations of organic-dye-based photothermal agents, such as low light absorption and undesired photobleaching.

We have recently developed a self-assembly synthetic strategy [1] for preparation of multifunctional supramolecular NPs (SNPs) from different molecular building blocks and loads (i.e., gene, proteins, drugs, reporter systems and their combinations). A diversity of SNPs with variable sizes and biological functions were prepared by simply mixing the molecular building blocks and loads at different ratios. By applying such a supramolecular synthetic strategy size-controlled Au-SNPs [2] for use as a new type of photothermal agent from 2 nm Au colloids and two other molecular building blocks. Subsequent photophysical studies unveiled that the resulting Au-SNPs exhibit proper stability at under physiological conditions, as well as laser-induced microbubble formation as the results of their photothermal character. We used arginine–glycine–aspartic acid (RGD) peptide as a targeting ligand and avb3-positive/negative cells as the corresponding biological system to test the specificity and selectivity of RGD-Au-SNPs and observed selective damage of the avb3-positive cells. We envision that such a supramolecular assembly approach could be used to assemble other “small” inorganic nanoparticles for broader application in materials science and biomedicine; 2) diverse functional building blocks and therapeutic loads (e.g., DNA, proteins, drugs) could be packaged into Au-SNPs, the laser-induced disassembly of which could be used as a controlled release mechanism; and 3) a two-photon laser could be employed to overcome the tissue-penetration limitation.

Plenary Speech: Nano-structures and luminescence mechanisms of InGaN-quantum well light emitting diodes, and research on ZnO, SiC related advanced optoelectronics materials and structure

Speaker: Prof. ZheChuan FENG, National Taiwan University /GA Laboratory, USA

Time: 11:20-12:00, Tuesday morning, May 17

Location: Grand Ballroom, 3rd floor, East International Hotel



Abstract:

Energy-efficient and environmentally friendly solid-state light sources, in particular GaN-based light emitting diodes (LEDs), are currently revolutionizing an increasing number of applications, and bring apparent benefits to vast areas of development, such as lighting, communications, biotechnology, imaging, and medicine. It is expecting that LEDs may replace the traditional light bulbs and tubes to achieve a new lighting echo. InGaN/GaN multiple quantum wells are the key components of these commercial devices emitting UV-green and white light, acting as the active layer, which can exhibit intense luminescence despite of a high dislocation and defects density existed. However, despite an impressive commercial success, the mechanism of luminescence from InGaN/GaN is not yet well-understood and the physical origin of efficient light generation is unveiled incompletely.

This presentation reviews our wide range of studies on the nano-structural features, the correlation with optical properties and luminescence emission mechanisms from a large number of InGaN/GaN MQW LEDs, prepared by metalorganic chemical vapor deposition (MOCVD). Analytical techniques of photoluminescence (PL), PL excitation (PLE), time resolved PL (TRPL), high-resolution (HR) X-ray diffraction (XRD) and HR transmission electron microscopy (TEM) have been used to investigate InGaN-LEDs. They have shown the excellent optical and structural properties, evidenced by HRXRD with high order (some up to 10th order) QW XRD satellite peaks and fine fringes and by HRTEM with sharp MQW structures and V-shaped defects. The quantum dot like structure features are revealed to exist within the MQW structures, which leads to unique T-behaviors of PL spectra. Quantum confined Stokes effect was observed from the comparison of PL and PLE measurements, even at room temperature (RT). TRPL exploration with the variation of detecting energy and temperature and modeling analyses together with above other analytical investigation have provided new insights of physics on the luminescence mechanism of InGaN/GaN MQWs. Different mechanisms and arguments from literature are introduced and discussed.

Part III Oral Sessions

Oral Session 1: Image Processing and Medical Applications

Chair: Prof. Koichi Shimizu

Room 233, 2nd floor, East International Hotel

14:00-17:30, Tuesday, May 17

Paper ID	Paper Title	Author	Affiliation
20964	The Block Diagonally-Relaxed Orthogonal Projection Algorithm for Compressed Sensing Based Tomography	Jiehua Zhu	Georgia Southern University, United States
20688	The Research to Pretreatments of Infrared Images	Tao Liu	The Second Artillery Qing Zhou Qetty Officer College, China
21040	Reconstruction of three-dimensional structure in turbid medium by scattering suppression	Koichi Shimizu	Hokkaido University, Japan
20742	Efficient scene classification based on maximum entropy policy and visual attention	Shuo Chen	Northeastern University, China
20508	A Phase Congruency Based Corner Detector for Images Under Different Illuminations	Fei Xie	Nanjing University, China
20921	Rotation-invariant human detection scheme based on polar-HOGs feature and double scales direction estimation	Li Wang	Northeastern University, China
20086	Study on Hydrolysis Process of Polyacrylonitrile Fibers with Visualization Technique	Jin-fang Chen	WIT, China
20738	A GPU-Based 3D Image Synthesizing Method for Real-Time Multiview Autostereoscopic Displays	Xiao-Qing Xu	School of Electronics Information Engineering, Sichuan University, China
20148	A Research on an Algorithm for Removing Bowtie Effect	Yan Li	Beijing Institute of Space Mechanics & Electricity, China
20204	High-performance FPGA Implementation of Discrete Wavelet Transform for Image Processing	Qijun Huang	Wuhan University, China
20792	The Impact Simulation of Attitude Error to The Imaging of the Push-Broom Scanners with Linear Image Sensors	Yan Li	Beijing Institute of Space Mechanics & Electricity, China
20467	Transmission spectrum imaging analysis of Coriex Phellodendri chinensis	Qingxia Meng	Department of Physics, Jinan University, Guangzhou, China

Oral Session 2: Laser Technology and Applications

Chair: Prof. Xingyu Zhang

Room 255, 2nd floor , East International Hotel

14:00-17:30, Tuesday, May17

Paper ID	Paper Title	Author	Affiliation
20934	Periodical Channel Waveguide in KTP Formed by Ion-exchange and Ion implantation	Zhenhua Qin	Shandong University, China
20951	LiNbO3 Whispering-Gallery Mode Micro-resonator	C. Y. J. Ying	University of Southampton, United Kingdom
21058	The Investigation on the 1.53 μm Photoluminescence of Magnetron-Sputtered Er _{0.2} Re _{1.8} Si ₂ O ₇ (Re=Yb, Y) Thin Films	Bing Wang	Peking University, China
20098	Study of scattering characteristics of atmospheric aerosol particles based on infrared laser	Hong Lin	Wuhan University, Wuhan
20736	Mode locking phenomenon in an actively Q-switched intracavity Raman laser	Lei Li	Shandong University, China
20141	Numerical Study on the Chaotic Dynamics in the Array of Coupled Lasers with Frequency Modulation	Jianqiu Cao	National University of Defense Technology, China
20608	Investigation on continuous wave laser performance of a-cut Tm,Ho:YAIO ₃ crystal at room temperature	Kejian Yang	Konstanz University, Germany
20670	Stable actively Q-switched and mode-locked YVO ₄ -Nd:YVO ₄ laser	Ping Li	Shandong University, China
20626	Composite waveguide for THz difference frequency generation	Guobin Ren	College of Science, Minzu University of China, China
21200	A Study on Manipulation of Terahertz Waveforms Based on Difference Frequency Generation	Jianjun Ma	Shandong University of Science and Technology, China
20972	CW dual-wavelength and 1110 nm operation of LD side-pumped Nd: GGG laser	Xingyu Zhang	Shandong University
20736	Mode locking phenomenon in an actively Q-switched intracavity Raman laser	Xingyu Zhang	Shandong University

Oral Session 3: New Optoelectronic Device Technologies

Chair: Prof. Hiro Amekura

Room 388, 3rd floor , East International Hotel

14:00-17:30, Tuesday, May17

Paper ID	Paper Title	Author	Affiliation
20623	Melting of metal nanoparticles and effects on the surface plasmon resonance	Hiro Amekura	Nat Inst for Mater Sci (NIMS), Japan
20653	Study on Optical Constant of Ultrathin Aluminum Films Deposited by Molecular Beam Epitaxy	Shang Gao	Shandong University, China
21113	Design of Resonant Optical Nano-antenna for 1.55 μ m wavelength	Zhan ling Li	Anhui Normal University, China
21252	High concentration silver/organic or silver/inorganic nanocomposites and their optical properties	Abbas Babapour	Harbin Institute of Technology, China
20630	The photocurrent improvement of inverted polymer solar cells using ZnPc to extend light absorption range	Liang Shen	State Key Laboratory on Integrated Optoelectronics, China
20924	Fabrication Technology and Characterization of PTCDA/p-Si Photo-Electronic Detector	Li Xia	Peking University, China
20570	Structural and photoluminescence properties of Ga _{2-2x} In _{2x} O ₃ films prepared on μ -Al ₂ O ₃ (0001) by MOCVD	Jin Ma	Shandong University, China
20709	Photochromism and Optical Recording of a Novel Photochromic Diarylethene bearing Thiazole and Biphenyl Unit	Hongliang Liu	Jiangxi Science & Technology Normal University, China
20704	Synthesis, Photochromism Properties of A Hybrid Diarylethene with A Six-membered Aryl Unit	Duohua Jiang	Jiangxi Science & Technology Normal University, China
20635	synthesis, photochromism properties of a hybrid diarylethene with biphenyl	Weijun Liu	Jiangxi Science & Technology Normal University, China
20712	Synthesis and Properties of a Novel Diarylethene with a Benzene Unit	Peijian Yan	Jiangxi Science & Technology Normal University, China
20789	PECVD Grown SiO ₂ Film Process Optimization	Ping Song	Shandong University, China
21008	Crossing microring resonator	Huaxiang Yi	Peking University, China
20455	On a Scalable, Non-Blocking Optical Router for Photonic Networks-on-Chip Designs	Xianfang Tan	University of Nevada, Las Vegas, United States
20670	Stable actively Q-switched and mode-locked YVO ₄ -Nd:YVO ₄ laser	Ping Li	Shandong University

Oral Session 4: Optical Communications

Chair: Prof. Vinod Kumar Singh

Room 233, 2nd floor , East International Hotel

8:30-12:00, Wednesday, May18

Paper ID	Paper Title	Author	Affiliation
21169	Research and Applitcation of Connected Interferometry Measurement Signal Processing Method	Lue Chen	Beijing Aerospace Control Center, China
20183	Study of the Methods to Realize Gray Scale for LCoS Based on Sub-frame Modulation	Cuiying Chen	1. Shenzhen LIWEI Digital Technology Co., Ltd.
20926	Magnetooptics of non- Kramers Eu ³⁺ (4f ₆) ions in garnets	U. V. Valiev	National University of Uzbekistan, Uzbekistan
20766	Far field analysis of fiber laser phased array for free-space communication	Sisi Zhao	Beijing University of Technology, China
20814	Anti-Reflection for Self-Collimated Beams Using Graded Index Coupler	Xiaopeng Shen	Southeast University, China
21255	A 2D-Torus Based Packet Switching Optical Network-on-Chip Architecture	Lei Zhang	University of Nevada, Las Vegas, United States
20916	Impact of SRS and FWM on Performance of Optical Star WDM Networks	Sridhar Iyer	Netaji Subhas Institute of Technology, India
20636	Study of Automated Erbium Doped Fiber amplifiers Measuring System	Houhui Liang	China Jiliang University, China
20462	A Parallel Algorithm for Digital Post Compensation in Optical Fiber Communications	Qun Zhang	Minnesota State University, Mankato, United States
20878	Properties of the time delay signature in mutually coupled semiconductor lasers	Xi Tang	Southwest University, China
20856	The study of transmission characteristics of a 17×17 all fluorinated polyimide arrayed waveguide grating multiplexer	Wenbin Guo	State Key Laboratory on Integrated Optoelectronics, China
20034	Designing of Endlessly Single-Mode Highly Polarization Maintaining Birefringent Photonic Crystal Fiber with Low Confinement Loss at Wavelength 1.55μm	Vinod Kumar Singh	I S M Dhanbad, India
20504	A Novel Method of Inducing Phase Shifts in Fiber Bragg Grating Without Using Phase Mask	Hongbo Wang	PLA Uni of Science And Technology, China
20610	Compensation of moire fringe sinusoidal deviation in photoelectrical encoder based on tunable filter	Yan Wang	Harbin Institute of Technology, China
20113	Study on the nonlinearity of the photodiode in a microwave photonic link	Jun Hong	southeast univesty, China

Oral Session 5: Optical Sensors and Applications

Chair: Prof. Guoguang Rong

Room 255, 2nd floor , East International Hotel

8:30-12:00, Wednesday, May18

Paper ID	Paper Title	Author	Affiliation
20656	Study of small radial stresses sensing using polarization properties of fiber Bragg grating	Yiping Wang	Nanjing Normal University, China
20400	Porous Silicon Microcavity Biosensor for Rapid and Real-time Glucose Detection	Guoguang Rong	Shanghai Jiao Tong University, China
20998	Stability Analysis of Distributed Optical Fiber Temperature Sensor (DTS) System	Chuanlong Hu	Institute of Optoelectronic Technology, China
20618	A Novel Fiber Bragg Grating Accelerometer with Vertical High Frequency and Horizontal Low Frequency	Yinyan Weng	Northwest University, China
20476	The Effect of Refractive Index Modification Position and Duty Cycle on Performance of LPFGs	Youwang Hu	College of Mechanical and Electrical Engineering, Central South University, China
20038	Integrated Electro-optical E-field Sensor Based on Directional Coupler	Bo Wang	Tsinghua University, China
21031	Influences of gyro biases on ship angular flexure measurement	Jia-Xing Zheng	National University of Defense Technology, China
20594	A Novel Optical Method to Detect DNA Concentration using Lock-in amplifier	Mingtian Li	Sichuan University of ScienceEngineering, China
20661	Design of the area array CCD driving circuit based on AD9923A	Mo Site	Sichuan University, China
20754	A novel temperature-insensitive fiber Bragg grating sensor for pressure measurement	Chuan Zhong	China Jiliang University, China
20655	Design of Diode Laser Sensor Based on TDLAS for Rocket Based Combined Cycle	Yang Bin	Northwestern Polytechnical University, China

Oral Session 6: Optoelectronic Devices and Integration

Chair: Prof. Andrey Stepano(Invite Speaker)

Room 388, 3rd floor , East International Hotel

8:30-12:00, Wednesday, May18

Paper ID	Paper Title	Author	Affiliation
20822	Holographic Fabrication of Photonic Crystals by Double-beam Exposure Method for Improving the Extraction Efficiency of LED	Linhui Wang	Shandong University, China
20146	Breakdown Voltage and On-Resistance Comparison of IGBTs Based on 4H-SiC and Si	YuanshouCai	GanNan Normal University Ganzhou, China
21262	Mode Analysis for In-Plane Emission Microdisk Resonator	Chu-Cai Guo	Institute Of Semiconductors,CAS, China
20776	Measurement of the Optical Properties Using Genetic Algorithm Optimized Neural Networks	Zhang Lianshun	civil aviation university of China, China
20556	A Comparison of Multilayer Medium Thin Film And Long-Period Waveguide Grating Filters for Waveguide Amplifiers	Haiyan Chen	Yangtze University, China
21043	The degree of polarization-induced-fading for fiber-optic sensor based on 3×3 coupler	Yabin Zhang	Harbin Engineering University, China
21124	A new Physical model for Waveguide-Separated Absorption Charge Multiplication-Avalanche Photodetector	Ava Salmanpour	Shiraz University, Iran, Islamic Republic of
21104	Group Delay Enhancement of SRS Slow-Light in a SOI Waveguide via p-i-n Structure	Hassan Kaatuzian	Amirkabir University of Technology, Iran
21239	InGaN multiple quantum well blue LED grown on patterned sapphire substrates	Lianshan Wang	Huazhong Univ. of Sci. & Tech., China
20478	An improved ohmic contact to n-type N-face GaN for extremely low voltage-operated vertical light emitting diodes	Liancheng Wang	Institute of Semiconductors, China

Part IV Poster Sessions

I. Laser Technology, Image Processing and Biomedical Applications

Grand Ballroom ,3rd floor, East International Hotel

14:00-17:30, Wednesday, May18

Paper ID	Paper Title	Author
20387	Study on Fluorescence Spectroscopy Characteristics of Isopropanol-Water Solution	Caiqin Han
20225	Enhancement of Photodynamic therapy induced cytotoxicity in K562 cells by genistein	Sun Dan
20395	A New Beam Combination of Fiber Laser Array	Jing Chen
20958	A Block Components Average Algorithm for Compressed Sensing Based Tomography	Xiezhang Li
20376	Entanglement Laser Holograph	Xiang-Yang Yu
20427	Efficient iterative algorithm with unknown reference phases in phase shifting interferometry	Zhuo Li
20247	Phone keys recognition based on multi-channel Gabor filter	Jianmin Yao
20166	The research on vegetation coverage spatio-temporal change within one year based on MODIS image	Jian Wu
20413	Remote optical sensing of bubble films in water by image processing	Zhi-Guo Ma
21202	Accurate motion detection in dynamic scenes based on ego-motion estimation and optical flow segmentation combined method	Xiaqiong Yu
20847	Segmentation by fusion of features in multiple color spaces and texture features based on PRI	Liangmei Hu
20757	A Fingerprinting Utilizing Chaos-Based Watermarking Techniques	Jing Ge
21158	Efficient Prediction Structure for Key Pictures in Multiview Video Coding	Junyan Huo
20347	Image Preprocessing Methods in Face Recognition	Haiyang Zhang
21025	Numerical simulation for thrust generation process of laser ablated polymer	Nanlei Li
20838	The application of laser welding on Left Ventricular Assist Device (LVAD)	Yu Fan
21154	Hydrothermal synthesis and photoluminescence properties of zinc oxide crystals with controllable morphology	Shengyu Jing
21127	Experimental testing and identification of Laser Diode dynamic model	Wu Wen-Feng
20959	Fabrication of subwavelength metallic structures using laser interference lithography	Haiying Li
20931	Study on the optical properties of lithium borate glass doped with Nd ³⁺	Shiliang Wu
20190	Fluorescence decay dynamics of Pr ³⁺ ions doped in PbWO ₄ crystal	F. B. xiong
20255	Laser and Thermo-Optical Characterization of Nd:YAG Ceramics	Jan Jabczynski
21192	Design of a Novel LD-induced Hyper-spectral Imager for Breast Cancer Diagnosis based on VHT Grating	Yibing Hou
20988	Theoretical research of KTP crystal used as both intracavity voltage-increased electro-optic Q-switch and optical parametric generator	Yuping Zhang
20982	Enlargement of zero average index gaps frequency range of multiple-channeled filters by the use of heterostructures containing negative-index materials	Huiyun Zhang
20042	Competition between two lasing modes in dual-colour emission from highly scattering media	Hai Liu
20331	Analysis and Design of High-Performance Coherent Population Trapping Passive Atomic Clock System Based on Vertical-Cavity Surface-Emitting Laser	Chao Guan

Paper ID	Paper Title	Author
21134	The influence of randomness on threshold property of two-dimensional disordered media with uniaxial scatterers	Hai Liu
20126	Beam propagation factor of elegant Hermite-Gaussian beams propagating through gain and absorbing media	Youquan Dan
21257	Room temperature electrically pumped four-port square resonator microlasers	Jian-Dong Lin
20614	Coupling problem of sapphire fiber transmission Er:YAG laser	Wang Fu
20609	Alpha discharge electron concentration and ionization rate effect on spatial intensity variation between the all-metal slab waveguide electrodes of CO ₂ laser	Zhiming Li
20224	Research on laser ranging system based on time delay estimation	Wei Xu
20082	The application of polarization microscopy in observing the dissolution processes of electrospun drug-loaded nanofibers	Deng-Guang Yu
20363	Preparation and Characterization of NaYF ₄ :Yb ³⁺ /Er ³⁺ Bio-upconversion fluorescence Microcrystallines	Zhiqiang Feng
20731	Discrimination of Amanita mushrooms using Fourier transform infrared difference spectroscopy and cluster analysis	Youming Shi
21099	A further study on the representation method of plant photosynthetic capacity based on unsaturated light-induced delayed fluorescence intensity	Ying Li
20324	High brightness fiber-coupling technique for high power diode laser bars	Seyed Hamed Ghasemi
21247	Visible Fourier Transform Spectrometer Based on Double Beam-folding Interferometers	Xuzhu Wang
20221	Effect Of Cs ⁺ , Ag ⁺ , Fe ³⁺ Doping And Ag ⁺ , Fe ³⁺ Co-doping Contents On Photocatalytic Activity Of TiO ₂ Films	Su-juan Zhang
21150	Microwave Lumped-Element Circuit Modeling for an SOA-Integrated SGDBR Laser	Hui Lv
20198	Pulsed Power Modulated Driving Technology with High Output Power for Laser Fuze	Jing Guo
20828	Thermal Analysis of GaAs-Based High Power Laser Diodes Related to Degradation	Yanbin Qiao
20567	Polarization-controlled switchable multiwavelength erbium-doped fiber laser with cascaded fiber Bragg gratings	Yang Yang
20022	Optimization of Short Pulse Generation for Yb ³⁺ :YAG in an Active CW-Injected Ring Cavity	Zhiyun Huang
20258	Q-switched Ho:YAG Laser Pumped by a Tm: fiber Laser	Jacek Kwiatkowski
20360	Broadband chirped pulse amplification processes with hybrid-widened linewidth	Ying Zhang
20403	Performance evaluation of high power PPLN OPO influenced by cavity configurations and thermal effects	Guangyuan He
20751	High power intracavity infrared PPMgLN OPO	Zhongxing Jiao
20156	1 MW peak power, sub-nanosecond master oscillator fiber power amplifier	Zhao Jian
21246	Design of Seabed Terrain Aided Navigation System Based on the Technology of Laser Bathymetry	Yi-Fei Zhang
20368	Optimum design of spatial filter pinhole in high power solid laser system	Xin Zhang
20506	Application of Cavity Deformable Mirror in PW Facility with U-turn Reverser	WanJun Dai
20874	Thermal Lensing Spectroscopy Analysis of Er:YAG Crystal Rod	Ting Hu
21197	Optimal Design Study of Optical Cavity for Compact Terahertz Free-electron Laser Oscillator	Ping Tan
20294	Thermal analysis of 300W-QCW Diode Laser with copper foam heatsink	ehsan farsad

Paper ID	Paper Title	Author
20333	A Study on AuGeNi Ohmic Contact to n-GaAs Using Microstructural Characteristics	Payman Abbasi
20807	Modeling and simulation of BRDF of typical targets	Huimin Chen
20802	Numerical simulation of echo power for semi-active laser detection	Huimin Chen
20986	Full-field Thickness Measuring of Photoresist on Spherical Surface in Lithography Techniques	Huimin Chen
20334	Relationship Between Concentration, Time And Surface Roughness Of GaAs Wafer In Lapping Process: An Experimental Investigation	Payman Abbasi

II. Optical Communications and Optoelectronic Devices

Grand Ballroom ,3rd floor, East International Hotel

14:00-17:30, Wednesday, May18

Paper ID	Paper Title	Author
20386	Designing Method of Projector Type Vehicle Headlamp Reflector Based on the Variable Ellipse Profile	Zhang Jinyong
20496	Generation of Modulated Ultra-wideband Signals	Guo dan Sun
20541	Performance Improvement in an Optical Fiber FP Resonator Based Microwave and Millimeter Wave Generation	Haiyan Chen
20431	High sensitive multiplexed FBG micro-seismic monitoring system	Haifeng Qi
21068	A DFB-FL wavelength shift interrogating scheme based on C2H2 absorption spectrum	Fujun Song
20117	High spatial resolution Brillouin optical fiber sensing technology by using spectrum fitting with Origin	Shengpeng Wan
20426	Demodulation System Based on Long Period Fiber Grating for Seismic Wave Sensor	Rui Zhou
20122	Propagation properties of partially coherent hollow Gaussian beams in atmospheric turbulence	Yangli Ai
20799	Survey on Quantum Secret Communication	Jialiang Li
20346	Diffraction properties of ultrashort pulsed beam with arbitrary polarization state by a reflection volume holographic grating in LiNbO3 crystal	Yingyan Yi
20026	Comparison of antireflective characteristics between square pillar and columned sub-wavelength structures	Qiyuan Xu
20114	Nonlinear modeling Of MEMS Deformable Mirror based on Neural Network	Jie Li
21249	Fabracton of SWNTs/PDMS composite film using in Optical Limiting	Qiang Lv
20254	Ab Initio Calculation and Study of Luminescence Properties of SrTiO3:Pr3+ materials codoped with metal ions	Xuwen Wang
20937	Design and optimization of wide angle passivation and antireflection coating for N-type high efficiency silicon solar cells	Lisheng Wang
20833	Annealing Characters of KTP Crystal Formed with He+-ions at High Dose and Low Energy	Jiao-Jian Yin
20871	Substrate Temperature Influence on Properties of Amorphous Silicon-Germanium Thin Films Prepared by RF-PECVD	Long Gu
21233	Optical properties of Ge and Si embedded structure from ab initio calculation	Min-gang Zhang
20863	Synthesis, kinetics and applications properties of a new hybrid photochromic diarylethene	Renjie Wang

Paper ID	Paper Title	Author
20576	Synthesis of new photochromic diarylethenes bearing five and six ring aryls for optical storage	Shiqiang Cui
20703	Synthesis and Property upon a New Photochromic Diarylethene bearing an Isoxazole Moiety	Hui Li
20072	Group velocity dispersion of 1-D plasmon waveguides	Yuee Li
20314	WDM/TDM Hybrid GPON Technology	Yang Liu
20319	Quantum secret sharing of key in networks	Yang Zhang
20307	Routing and Wavelength Assignment Strategy in Distributed Multi-domain DWDM Network	Ke Wang
21057	Demonstration of Transport and Protection Schemes in a Multi-service Testbed for MPLS-TP Networks	Zhihui Zhang
20912	Optimization of generalized phase-shifting interferometry iterative algorithm	Jie Li
20969	Simultaneous Measurement of Surface Shape and Optical Homogeneity with Dual-wavelength Phase-Shifting Digital Holography	Xiaoyi Zheng
21061	A method for simultaneously measuring phase retardation and fast axis of any wave plate	Wei Wang
20408	Design of Single-Polarization Single-Mode photonic crystal fiber	Zhaojin Wang
20942	Investigation of DWDM over OCDMA System Based on Parallely Combined SSFBG Encoder/Decoders	Huayong Zheng
21069	Impact of ADC Bandwidth and Clipping Ratio on COF-PON Systems Based on Spatial Coding and Subcarrier Multiplexing	Tianjiao Xia
21201	Analysis of the Short-Term Stability of High Precise Atomic Frequency Transfer over Telecommunication Networks	Yanwu Cao
21021	Applications Study of Distributed Optical Fiber Sensor System in Coal Mine	Chuanlong Hu
20514	The Investigation on Photosensitivity of Polymer Optical Fiber	XiaoHong Sun
20633	A FBG sensor based on EDFL with hybrid edge filter	Jing Zhang
21208	Theoretical investigation on refractive index sensor based on Bragg grating in micro/nanofiber	Ruibing Liang
20824	PMD Camera Calibration Based on Adaptive Bilateral Filter	Jun Gao
20209	Signal Processing for Modulation Transfer Function Test Bench	Yuheng Chen
21120	Doppler-Shift Measurement with Fizeau Fringe Imaging Technique	Shen Fa-Hua
20107	A novel Vox thermosensitive thin film for microbolometer arrays	Xiqu Chen
20194	Research on Technique of Pulse Laser Fuze Anti- Electromagnetic Interference	Ying Feng
20352	Process Monitoring and Damage Detection in Composites Using FBG Sensors	Xiao-fu Li
21054	An all-optical photoacoustic spectrometer for remote detection of acetylene gas in power transformer	Qiaoyun Wang
21132	The statistical fractal character of random signal Generated by Optical Sensor in Optical Particle Counter	Juan Yang
21143	Hydrogen Sensitivity and Mechanism of Pd/V2O5 Thin Films	Haihu Yu
21205	Displacement Sensor Based on SMS Fiber Structure	Ruohui Wang
21251	Improving the Sensitivity of SPR Sensing Using MAP Information Fusion Algorithm	Xie Zeng
20771	A Compact Metal Bellows-based Fiber Bragg Grating Accelerometer for Structural Health Monitoring	Jinghua Zhang

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20767	A Sagnac Loop Sensor for Refractive Index Measurement	Juan Kang
21146	Software design of FBG temperature demodulation system based on wavelet denoising	Wenxia Hu
20913	Application of a Low-cost Optical Probe with a Cone Prism in Applanation Tonometry	Xueyong Zhang
21243	Modeling and Experimental Study on Magneto-optical Modulation Based on Rectangular Wave and Sine Wave	Zhaosen Fu
20728	The depolarization effect of wedge depolarizer for polychromatic light	Yan Liu
20391	Research on optical properties for the exponential-doped Ga _{1-x} Al _x AsGaAs photocathode	Jing Zhao
20158	Balanced Detection with Single Photoreceiver	Hui-Kang Teng
20908	long wavelength infrared continuous zoom optical system	Hong-yun Gao
21030	Strawberry Silver/SiO ₂ Structure: Synthesis And Its Optical Resonances	Zhijun Jia
20208	Theoretical study on electronic structure and conductivity of Y-doped ZnO	Lanli Chen
20811	Research on Online Measurement System with Multi-vision for Large Size Forgings	Jiangang Tang
20859	Optoelectronic Properties and Holographic Optical Recording of a Photochromic Diarylethene Having a Pyrrole Unit	Haixin Ding
20866	Property of a Novel Unsymmetrical Diarylethene Bearing a Benzothiophene for Optical Recording	Taofeng Wang
20212	The optical design of cubic phase plate testing system	Yingchao Xu
20338	A new method of measuring torsional vibration based on high-speed linear array CCD	Fuqiang Jiang
20669	Investigation on Single-Mode-Multimode-Single-Mode Fiber Structure	Yu Zhao
20753	Spectral Characteristics of Multiple and Cascaded Phase-Shifted Fiber Bragg Grating	Chuan zhong
20747	YAG and quantum dots hybrid white light-emitting diodes	Ke Li
20669	Investigation on Single-Mode-Multimode-Single-Mode Fiber Structure	Yu Zhao
20636	Study of Automated Erbium Doped Fiber amplifiers Measuring System	Houhui Liang
20624	Mie Theory Simulation of the Effect on Light Extraction by 2-D Nanostructure Fabrication	Jiajian Zhong
21164	A high precision constant current source applied in LED driver	Hongtao Mu
21177	Near Complete Remote Preparation of Bipartite Entangled State using Lossy Beam Splitters	Xiaobo Wang
20556	Measurement of progressive addition lens' power using Moiré Deflection Technology	H. Chen
20566	Measurement of progressive addition lens' power using Moiré Deflection Technology	Qin Wang

Part V Instructions for Presentations

Oral Presentation

Devices Provided by the Conference Organizing Committee:

- Laptops (with MS-Office & Adobe Reader)
- Projectors & Screen
- Laser Sticks

Materials Provided by the Presenters:

- PowerPoint or PDF files

Duration of each Presentation:

- Regular Oral Session: 15 Minutes of Presentation, 3 Minutes of Q&A
- Plenary Speech: 30 - 40 Minutes of Presentation, 5 Minutes of Q&A

Poster Presentation

Materials Provided by the Conference Organizing Committee:

- X Racks & Base Fabric Canvases (60cm×160cm, see the figure below)
- Adhesive Tapes or Clamps

Materials Provided by the Presenters:

- Home-made Posters

Requirement for the Posters:

- Material: not limited, can be posted on the Canvases
- Size: smaller than 60cm×160cm
- Content: for demonstration of the presenter's paper

Requirement for the Presenters:

- Stand beside their Posters throughout the Session, and discuss with the readers about their papers



Part VI Hotel Information

About Hotel

East International Hotel makes its debut as a Five Star class hotel which covers 100,000 square meters and is built as the first garden like hotel in Wuhan. There are landscape with colorful views of lakes and hills circling around the whole hotel. Besides, its professional management group will provide you the best quality of service for your accommodation.

Address: No.19 South Eastlake Road, Wuchang, Wuhan, Hubei, P.R.China
中国湖北省武汉市武昌区东湖南路19号

URL: <http://www.east-hotel.com.cn>

Tel: +86-027- 5971 8888

Fax: +86-027- 5971 8888

Traffic Infomation

Tian He Airport: 45km, 90 minutes ride

Wuchang Railway Station: 8km, 20minutes ride

Wuhan Railway Station: 20km, 40minutes ride

For non-Chinese author, please show the following info to the driver if you are taking a taxi:

请送我到：易斯特国际酒店
武昌区东湖南路19号

Please take me to:

No.19 South Eastlake Road,Wuchang,Wuhan ,City

Part VII Tourism Information

Schedule:

8:00 Meet the travel agency

8:30-9:45 **Wuhan University** -is widely known for its most beautiful campus in China with more than one hundred years of history. The university has rolling physical features with the scenic LuoJia Hill and the beautiful East Lake by its side. Wuhan University is directly under the ministry of education key comprehensive university, as well as the national 985 project and 211 project key construction university.

10:00-11:40 **East Lake** -is China's largest lake within a city. The lake covers 33 square kilometers and stretches far into the distance. Ancient pagodas and temples scattered in 34 verdant hills around the lake make the scenic spot more historic and imposing. You'll enjoy yourself in Tingtao Pavilion and Moshan Hill.

12:00-13:00 Lunch

13:00-15:00 **Hubei Provincial Museum** -holds more than 20 million pieces of cultural relics, including class A heritage 640 (sets), national treasure 16 (sets). It exhibits pottery, porcelain, bronze ware, Qimu, Bamboo Slips, ancient musical instruments, ancient scroll, bronze sword of Gou Jian (King of Yue), spears and bronze carvings of King Fu Chai and so on, which are of high historical, scientific and artistic value.

15:00-17:00 **The River Beach Park ("Jiangtan Gongyuan" in Chinese)** - is located along the Changjiang River in Wuhan. It is divided into three areas: Sightseeing Area, Center Square Area, Relaxation Activity Area. There are green trees, beautiful flowers, statues and sculptures in the park. It is a good place for the people to come for relaxation. The following destination is **Pedestrian Street of Jiangnan Road**, which is a famous business road with more than a hundred years of history.

Wish you a pleasant trip in Wuhan!

Contact Us

Organizing Committee

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Tel: +86 130 1803 5105

The 4th Int'l Symposium on Photonics and Optoelectronics (SOPO 2012)

IEEE 光学光电子国际学术会议

21st ---23rd, May, 2012, Shanghai, China

conference website (会议网址) : www.sopoconf.org/2012/

The International Symposium on Photonics and Optoelectronics (SOPO 2012) will be held from 21st to 23rd, May in Shanghai, China. SOPO 2012 will bring together top researchers from Asian Pacific areas, North America, Europe and around the world to exchange research results and address open issues in all aspects of Photonics and Optoelectronics.

The conference proceedings will be published by IEEE, and the accepted papers will be indexed by Ei Compendex and ISTP.

Topics: The conference is soliciting state-of-the-art research papers in the following areas of interest:

Laser Technology and Applications

- Laser physics and nonlinear optics
- Gas lasers and applications
- Solid state lasers: technology and devices
- Semiconductor lasers, tunable and multi-wavelength lasers
- Laser materials, fabrication and characterization
- Laser material processing
- Tera-hertz sources & detection
- Tera-hertz propagation

Image Processing

- Image acquisition, reconstruction, restoration and fusion
- Image transformations: wavelet theory, space theory, geometrical transforms and restoration
- Image analysis: motion estimation, segmentation, object tracking and pattern recognition
- Visualization: 3D visualization, holography and display systems
- Image information management: coding, cryptography, watermarking, storage and retrieval, resolution enhancement
- Medical imaging, surveillance, security, remote sensing and multimedia
- Systems or devices for optical and digital image processing

Optical Communications

- Optical fiber communication
- Free-space optical communication
- Optical communication networks
- Optical transport network
- Coding and signal processing
- Modulating retro-reflector
- Intensity modulation
- Optical wireless
- Optical carrier

Optoelectronic Devices & Integration

- Optical sensors and applications
- Fiber-optic sensor and networks
- White LED and related technologies
- High performance semiconductor optical amplifiers
- Advanced optoelectronics device fabrication technologies
- Nonlinear optical devices and all-optical signal processing
- Electro-optic modulators and related advanced modulation format technologies
- Advanced radio-over-fiber devices and related technologies
- Intelligent optoelectronic devices and optical switching
- Grating-based devices and related technologies
- Nano technologies and their application in optoelectronics devices
- Slow and fast light devices and related technologies
- Free-space communications related devices and technologies
- New optoelectronic device materials and processing
- Silicon Photonics

Medical and Biological Applications

- Biomedical optics
- Laser medical diagnostics and therapeutics
- Optical coherence tomography
- Advanced biological microscopy
- Photochemistry and photobiology
- Laser tissue interactions and laser surgery
- Minimally invasive optical diagnostics
- Photo-acoustic techniques
- Optics in biotechnology
- Optical-system engineering for medicine

Important Dates

Paper submission due : **Oct. 28, 2011**
Acceptance notification : **Dec. 12, 2011**
Conference : **May 21-23, 2012**