

Technical
Program

SPIE / COS 
Photonics Asia

Showcasing Photonics and Optical Technologies and Applications
Conferences · Exhibition

11–15 November 2007 · Jiuhua Grand Convention and Exhibition Center · Beijing, China

High Power Lasers

Semiconductor Lasers and Applications

**Materials, Devices and Sensors for Sensing
and Imaging**

Optics in Health Care and Biomedical Optics

**Solar Energy Technology and Solid State
Lighting**

**MEMS and Nano Technologies and
Applications**

Optical Data Storage

Information Optics and Nonlinear Optics

Advanced Microlithography

Infrared Technologies

Electronic Imaging

Holography

Optical Design and Testing

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Showcasing Photonics and Optical Technologies and Applications

Conferences · Exhibition

11–15 November 2007 · Jiuhua Grand Convention and Exhibition Center · Beijing, China

Welcome to Photonics Asia 2007!

*Photonics Asia 2007
General Chairs*



Bingkun Zhou,
COS President,
Tsinghua University (China)



Brian Culshaw,
2007 SPIE President,
University of Strathclyde (UK)

We would like to welcome all members, attendees, and exhibitors to Photonics Asia 2007. This year's Photonics Asia follows the successful Photonics China 1998, Photonics Asia 2004, conferences held in Beijing, China, and Photonics Asia 2002 conference held in Shanghai, China. This conference showcases the power of light and photonics technologies and applications. Photonics and optical science and engineering are becoming increasingly important as society gradually moves from electron-based technologies and industries to photon-based technologies and industries. Specifically, photonics is becoming increasingly important in health care and medicine, environment and energy, manufacturing, information systems and communications, defense and aerospace, entertainment, economize the sources of energy and green lighting, etc. Many Asian countries are investing heavily to transition from microelectronics-dominated industries to photonics-based. Asian economies are becoming more and more important to the health of the global economy in the 21st century, and Asian Photonics markets are expanding rapidly. No company in the photonics industry can afford to miss this unique symposium.

Photonics Asia is an important event for members of the global photonics community who need to keep up with what is happening in the Asian photonics industry and develop new partnerships and new markets. This meeting provides a unique forum for reporting and review of photonics and optoelectronics disciplines ranging from material and devices to advanced systems and applications. Cutting-edge technologies, applications, product announcements and demonstrations, market analysis and investment opportunities are discussed in various conference sections and the product exhibition.

Again, we extend our warmest greetings to you and hope that you have a rewarding and exciting stay at Photonics Asia.

Photonics Asia 2007 Chairs, Committees, and Cooperating Organizations

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Special Events

Opening Ceremony and Plenary Session

Monday • 9:00 am to 12:10 pm

9:00 am **Opening Ceremony**

9:30 am **Solid State Lighting in China**
Jinmin Li, Institute of Semiconductors, Chinese
Academy of Science

10:10 am **The National Ignition Facility: The World's
Largest Optical System**
Christopher Stolz, Lawrence Livermore National
Lab. (USA)

10:50 am **A Brief Introduction to Biophotonics with
Selected Illustrative Examples**
Arthur Chiou, National Yang-Ming Univ. (Taiwan,
China)

11:30 am **Terahertz Wave Photonics in Gas and Its
Spectroscopic Applications**
X.-C. Zhang, Rensselaer Polytechnic Institute (USA)

Reception/Banquet

Monday • 6:30 to 9:00 pm

Join us for a special reception and banquet. Tickets available for purchase at the Registration Desk.

Registration Hours

Location: 16 District, First Floor for Foreign Attendees-

Location: 10 District, First Floor for Chinese Attendees

Sunday • 1:30 to 10:30 pm

Monday • 7:30 am to 5:00 pm

Tuesday through Thursday • 8:00 am to 4:30 pm

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ROOM 16 district, the third floor, room 110

Monday-Wednesday 12-14 November 2007 · Proceeding of SPIE Vol.6823

High-Power Lasers and Applications IV

Conference Chairs: **Dianyan Fan**, Shanghai Institute of Optics and Fine Mechanics (China); **Robert F. Walter**, Schafer Corp. (USA)

Program Committee: **Jianquan Yao**, Tianjin Univ. (China); **Zuyan Xu**, Institute of Physics (China); **Willy L. Bohn**, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); **Zhaogu Cheng**, Shanghai Institute of Optics and Fine Mechanics (China); **Tomoo Fujioka**, Tokai Univ. (Japan); **Mali Gong**, Tsinghua Univ. (China); **Do-Kyeong Ko**, Kwangju Institute of Science and Technology (South Korea); **Sui-Sheng Mei**, North China Research Institute (China); **Hansheng Peng**, Laser Fusion Research Ctr./CAEP (China); **Liejia Qian**, Fudan Univ. (China); **Fengting Sang**, Dalian Institute of Chemical Physics (China); **Shuangchun Wen**, Hunan Univ. (China); **Yi Su**, Institute of Applied Electronics (China); **Tai Hyun Yoon**, Korea Research Institute of Standards and Science (South Korea); **Shouhuan Zhou**, North China Research Institute of Electro-Optics (China); **Ruxin Li**, Shanghai Institute of Optics and Fine Mechanics (China)

Monday 12 November

SESSION 1

16 district, the third floor, room 110. Mon.1:40 pm to 5:10pm

Solid state Laser

Chairs: **Keith Truesdell; Shouhuan Zhou**

1:40pm: **High-intensity ultra-short pulse UV laser system** (*Invited paper*), Junewen Chen, Chung-Hua Univ. (Taiwan China) [6823-05]

2:10pm: **Incoherent and Coherent Output for Radial Slab Solid-State Laser**, Shiyou Fu, Harbin Institute of Technology (China). Zhaoshuo Tian, Harbin Institute of Technology at Weihai, Department of Opto-Electronic Science (China); Xiangjun Chen, Harbin Institute of Technology at Weihai, Department of Opto-Electronic Science (China)..... [6823-95]

2:30pm: **3-D thermal analysis of rotating-disk solid-state lasers**, Dingxiang Cao, Chinese Academy of Engineering Physics (China) [6823-96]

2:50pm: **Theoretical and experimental investigation of thermal effect in end-pumped Tm,Ho:YLF lasers**, Xinlu Zhang, Harbin Engineering Univ. (China) [6823-01]

Coffee/Tea Break 3:10pm to 3:40pm

3:40pm: **Progress on developing a PW ultrashort laser facility with ns, ps, and fs output pulses** (*Invited paper*), Qihua Zhu, Chinese Academy of Engineering Physics (China) [6823-66]

4:10pm: **Absorption of pump light inside solid state laser medium pumped by long pulse**, Hua Qin, Shandong Univ. of Technology (China) [6823-26]

4:30pm: **The main factors which affect coupling efficiency of high-power semiconductor laser array and Selfoc lens array**, Xiaoping Jiang, Southwest Univ. (China). Desen Liu, Southwest University, School of Physical Science and Technology (China) [6823-75]

4:50pm: **Optimizing the efficiency in diode-pumped Yb3+-YAG disk amplifiers for high-energy nanoseconds pulses**, Dingxiang Cao, Chinese Academy of Engineering Physics (China). Haiwu Yu, CAEP, Research Center of Laser Fusion (China); Wanguo Zheng, CAEP, Research Center of Laser Fusion (China); Shaobo He, CAEP, Research Center of Laser Fusion (China) [6823-60]

Tuesday 13 November

SESSION 2

16 district, the third floor, room 110. Tues.8:30am to 11:20am

Fiber Laser

Chairs: **Keith Truesdell; MaLi Gong**

8:30am: **Expanded wavelength options by Raman mode mixing** (*Invited paper*), Richard Mildren, Macquarie Univ. (Australia)[6823-42]

9:00am: **A tunable hybrid Brillouin-Raman fiber laser**, Hongling Liu, China Jiliang Univ. (China). Guiyan Li, China Jiliang University, Optical & Electronics College (China) [6823-9]

Coffee/Tea Break 9:20am to 9:50am

9:50am: **Design guidelines and characteristics of large flattened-mode photonic crystal fibers** (*Invited paper*), Chujun Zhao, Shanghai Institute of Optics and Fine Mechanics (China) . [6823-15]

10:20am: **The study of self-pulsing behaviors in high-power Yb-doped fiber lasers**, Hu Shuling, Beihang Univ. (China). Chunxi Zhang, Beihang University, Opto-electronics department (China); Shouchao Wang, the military transportation college (China); Hanwei Hu, Beihang University (China); Ou Pan, Beihang University (China) [6823-81]

10:40am: **Highly efficient ultra-low threshold miniature tunable UV cerium fluoride lasers**, Hua Liu, Macquarie Univ. (Australia). David Spence, Macquarie University, Physics department (Australia); David Coutts, Macquarie University, Physics department (Australia); Hiroki Sato, Tohoku university, Institute of Multidisciplinary Research for Advanc (Japan); Tsuguo Fukuda, Tohoku university, Institute of Multidisciplinary Research for Advanc (Japan) [6823-82]

11:00am: **Study on taper gradient index microcylinder lens with gradual focus**, Jianming Hu, Chongqing Normal Univ. (China). Shouyue Wu, Chongqing Normal University, College of physics and information technology (China); Desen Liu, South West University, Physics department (China) [6823-74]

Lunch Break 11:20am to 1:40pm

SESSION 3

16 district, the third floor, room 110. Tues.1:40 pm to 5:30 pm

Beam Control Technology

Chairs: Sui-Sheng Mei

1:40pm: **Modeling self-organized coherent fiber laser array** (*Invited paper*), Zhou Pu, National Univ. of Defense Technology (China). Chen Zilun, National University of Defense Technology (China); XiaoJun Xu, National University of Defense Technology (China); Hou Jing, National University of Defense Technology (China); Zejin Liu, National University of Defense Technology (China) [6823-31]

2:10pm: **Beam cleanup technique based on stochastic parallel gradient descent wavefront control method**, Yonghui Liang, National Univ. of Defense Technology (China). Sanhong Wang, National Univ. of Defense Technology, College of Opto-Electronic Science and Engineering (China); Xuejun Long, National Univ. of Defense Technology, College of Opto-Electronic Science and Engineering (China); Qifeng Yu, National Univ of Defense Technology, College of Opto-Electronic Science and Engineering (China)[6823-56]

2:30pm: **A method of aberration measurement and correction for entire beam path of ICF system**, Ao MingMu, Institute of Optics and Electronics (China). Yang Ping (China); Yang Zeping (China); Li Ende (China); Changhui Rao (China); Wenhan Jiang (China) [6823-25]

2:50pm: **Pulse transmission simulation in the systems including diffraction components by real ray trace**, Xiaotong Li, Zhejiang Univ. (China). Zhaofeng Cen, Zhejiang University, Department of optical engineering (China) [6823-78]

Coffee/Tea Break 3:10 pm to 3:40 pm

3:40pm: **Metamaterial-based low-pass spatial filters for high-power lasers** (*Invited paper*), Yuanjiang Xiang, Hunan Univ. (China). Wenhua Su, Hunan University, Communication Engineering Dept (China); Xiaoyu Dai, Hunan University, Communication Engineering Dept (China); Zhixiang Tang, Hunan University, Communication Engineering Dept (China); ShuangChun Wen, Hunan University, Communication Engineering Dept (China); Dianyuan Fan, Hunan University, Communication Engineering Dept (China) . . . [6823-17]

4:10pm: **Progress on investigation of nonlinear propagation of electromagnetic pulse in metamaterials**, Xiaoyu Dai, Hunan Univ. (China). Zhiwei Zheng, Hunan Univ. Research Ctr of Laser Science and Engineering (China); Yuanjiang Xiang, Hunan Univ. Research Ctr of Laser Science and Engineering (China); Shuangchun Wen, Hunan Univ. Research Ctr of Laser Science and Engineering (China); Zhixiang Tang, Hunan Univ. Research Ctr of Laser Science and Engineering (China); Dianyuan Fan, Hunan Univ. Research Ctr of Laser Science and Engineering (China) [6823-29]

4:30pm: **Mechanisms for chirped-pulse breakup in dispersive media**, Chunnian Deng, Hunan Univ. (China). Zhiwei Zheng, Hunan University, Research Center of Laser Science and Engineering (China); ShuangChun Wen, Hunan University, Research Center of Laser Science and Engineering (China) [6823-13]

4:50pm: **Amplitude-phase control of laser beams: the possibility of increasing the efficiency of turbulent and thermal distortion compensation**, Fedor Kanev, Institute of Atmospheric Optics (Russia). Nailia Makenova, Institute of Atmospheric Optics SB RAS (Russia); Ekaterina Moisey, Institute of Atmospheric Optics SB RAS (Russia) [6823-55]

5:10pm: **Registration of a wavefront including large amount of singular points or singular points of high orders by Shack-Hartmann sensor**, Feodor Kanev, Institute of Atmospheric Optics (Russia). Valerii Aksenov, Institute of Atmospheric Optics SB RAS (Russia); Igor Izmailov, Tomsk State University (Russia); Feodor Starikov, Russian Federal Nuclear Center (Russia) [6823-57]

Wednesday 14 November

SESSION 4

16 district, the third floor, room 110. Tues.8:30 am to 11:40 am

Gas Laser and Others

Chair: Dianyuan Fan

8:30am: **Operation temperature of diode-pumped alkali vapor laser**, Qiang Zhu, Shenzhen Univ. (China). Jianhua Yu, Shenzhen Univ. Optoelectronics Dept (China); Wei Zheng, Shenzhen Univ. (China); Hongyan Quan, Shenzhen Univ. (China) [6823-21]

8:50am: **Studies on large aperture-volume discharge of TEA CO₂ laser**, Yuqi Chen, Huazhong Univ. of Science and Technology (China). Duluo Zuo, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineerin (China); Zuhai Cheng, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineerin (China); Hong Lu, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineerin (China); Weipeng Liang, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineerin (China); Xiao Li, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineerin (China) [6823-14]

9:10am: **Theoretical research of \pm -RF discharge in slab oxygen iodine lasers**, Xueling Zhang, Huazhong Univ. of Science and Technology (China), Xinbing Wang, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineering (China); Guofu Li, Chinese Academy of Sciences, Dalian Institute of Chemical Physics(China); Fan He, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineering (China); Junke Jiao, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineering (China); Yanzhao Lu, Huazhong University of Science and Technology, Institute of Optoelectronics Science and Engineering (China) [6823-34]

Coffee/Tea Break 9:30am to 10:00 am

10:00am: **Ion-channel effects on electron orbits and gain in a quadrupole wiggler**, Mehdi Esmaeilzadeh, Iran Univ. of Science and Technology (Iran). Golshad Kheiri, IUST, Department of Physics (Iran) [6823-80]

10:20am: **Transmission characteristics of THz radiation through metal subwavelength hole arrays**, Yuan Han, Capital Normal Univ. (China). Cunlin Zhang, capital normal university (China)... [6823-93]

10:40am: **Studies on measurement of pulse thrust with repetitive loading**, Harbin Zhao, Zhuangbei Institute of Technology (China). Ming Wen, Academay of Equipment command, Postgraduate department (China); Jian Yang, Academay of Equipment command, Postgraduate department (China) [6823-84]

11:00am: **Study on method of measuring specific impulse of the microlaser plasma thruster**, Tiejun Zhou, Zhuangbei Institute of Technology (China) [6823-88]

11:20am: **Risk and hazard analysis for DF laser system design**, Maitreyee Nanda, Defence Research and Development Organisation (India) [6823-62]

Posters –Tuesday to Wednesday

Time: Tues.12:30pm to Wed. 11:30am

- ✓ **Optical bistability in an end-pumped Tm,Ho:YLF laser at room temperature**, Xinlu Zhang, Harbin Engineering Univ. (China) [6823-2]
- ✓ **Characteristics of three operation schemes in a passively mode-locked all-fiber ring laser**, Chun Mei Ouyang, Tianjin Univ. (China), Lu Chai, Tianjin Univ. (China), Minglie Hu, Tianjin Univ. (China), Ching-Yue Wang, Tianjin Univ. (China) [6823-8]
- ✓ **Some experimental studies on the UV-preionized TEA CO₂ laser propulsion**, Lu Hong, Huazhong Univ. Of Science and Technology (China), Zuo Duluo, Huazhong University of Science and Technology (China) [6823-10]
- ✓ **High-repetition-rate acoustic-optic Q-switched double-clad fiber laser**, Hongming Zhao, Shanghai Institute of Optics and Fine Mechanics (China), Qihong Lou, Shanghai institute of optics and fine mechanics (China), Jun Zhou, Shanghai institute of optics and fine mechanics (China), Fangpei Zhang, Shanghai institute of optics and fine mechanics (China), Jingxing Dong, Shanghai institute of optics and fine mechanics (China), Yunrong Wei, Shanghai institute of optics and fine mechanics (China), Zhijiang Wang, Shanghai institute of optics and fine mechanics (China) [6823-11]
- ✓ **Formation of the second-order hot image in broadband laser systems**, Yonghua Hu, Hunan Univ. (China), Youwen Wang, Hunan Univ. (China), ShuangChun Wen, Hunan Univ. (China), Xiquan Fu, Hunan Univ. (China) [6823-12]
- ✓ **Modeling and resolving calculation of thermal effect in face-pumped high- power heat capacity disk laser**, Feng Huang, Ordnance Engineering College (China), Yue-Feng Wang, Ordnance Engineering College (China) [6823-22]
- ✓ **Dependence of nonlinear hot images of intense laser beams on the thickness of Kerr medium with gain and loss**, Youwen Wang, Hunan Univ. (China), Lifu Zhang, Hunan Univ. (China), Yonghua Hu, Hunan Univ. (China), Shuangchun Wen, Hunan Univ. (China), Xiquan Fu, Hunan Univ. (China) [6823-27]
- ✓ **Watt-level CW output from ceramic Cr₂+:ZnSe laser**, Yong Yang, Shanghai Institute of Optics and Fine Mechanics (China), Yulong Tang, Shanghai Institute of Optics and Fine Mechanics (China), Jianqiu Xu, Shanghai Institute of Optics and Fine Mechanics (China), Yin Hang, Shanghai Institute of Optics and Fine Mechanics (China) [6823-30]
- ✓ **Innovative way to optimize length of amplifying fiber in rapidly Q-switched double-clad fiber lasers**, Lin Huang, Univ. of Electronic Science and Technology (China), ZhiYong Dai, Univ. of Electronic Science and Technology (China), YongZhi Liu, Univ. of Electronic Science and Technology (China), QianShu Zhang, Univ. of Electronic Science and Technology (China) [6823-36]
- ✓ **Analysis of spectral clipping effect in large-aperture chirped-pulse amplification laser systems**, Zhaoyang Li, Shanghai Institute of Laser Plasma (China) [6823-37]
- ✓ **Evaluation of beam quality for high-power lasers**, Hongru Yang, Xian Institute of Applied Optics (China), Lei Wu, Xian Institute of Applied Optics (China), Xuexin Wang, Xian Institute of Applied Optics (China), Jifang Shi, Xian Institute of Applied Optics (China) [6823-41]
- ✓ **Experiment and design optimization of the first-order P-doped fiber Raman lasers using an explicit approach**, Chonghong Huang, Xiamen Univ. (China), Zhiping Cai, Xiamen Univ. (China), Wencai Huang, Xiamen Univ. (China), Guoping Lin, Xiamen Univ. (China), Jiafu Huang, Xiamen Univ. (China), Weiqi Cai, Xiamen Univ. (China), Huiying Xu, Xiamen Univ. (China), Chenchun Ye, Xiamen Univ. (China) [6823-45]
- ✓ **Wavelength tunable Yb³⁺-doped double-clad photonic crystal fiber laser**, Hongxin Su, Hebei Univ. (China), Yigang Li, Nankai Univ. (China), Kecheng Lu, Nankai Univ. (China), Kun Wang, Hebei University (China), Qinglin Guo, Hebei University (China) [6823-51]
- ✓ **Coherent beam combination of fiber laser using 3-axis tip-tilt mirrors based on the stochastic parallel gradient descent algorithm**, Xuejun Long, National Univ. of Defense Technology (China), Yonghui Liang, National Univ. of Defense Technology (China), Xiaojun Xu, National Univ. of Defense Technology (China), Sanhong Wang, National Univ. of Defense Technology (China), Qifeng Yu, National Univ. of Defense Technology (China) [6823-54]
- ✓ **Optimum design of the phase control system of coherent beam combining of fiber amplifiers**, Xiaomeng Zhao, National Univ. of Defense Technology (China), Xiaojun Xu, National Univ. of Defense Technology (China), Zhou Pu, National Univ. of Defense Technology (China), Jing Hou, National Univ. of Defense Technology (China), Jinbao Chen, National Univ. of Defense Technology (China) [6823-59]
- ✓ **The high-power laser study on system of**, Weili Chen, Beijing Institute of Technology (China)..... [6823-61]
- ✓ **Research on SBS and pulse-pumped hybrid Q-switched Er³⁺/Yb³⁺ co-doped fiber laser**, Zhiyong Dai, Univ. Of Electronic Science and Technology of China (China) [6823-77]
- ✓ **Investigation of growth rate in a planar wiggler with ion-channel guiding in the presence of self fields**, Mehdi Esmaeilzadeh, Iran Univ. Of Science and Technology (IRAN), Mehrdad Najafi,IUST (Iran)..... [6823-79]
- ✓ **Laser-induced dispersive fluorescence spectrum and the detection of NO₂**, Guiyin Zhang, North China Electric Power University (China), Yidong Jin, North China Electric Power University (China) [6823-83]
- ✓ **Research on the characteristics of narrow-linewidth master-oscillator fiber power amplifier system**, Fangpei Zhang, Shanghai Institute of Optics and Fine Mechanics (China), Qihong Lou, Shanghai Institute of Optics and Fine Mechanics (China), Jun Zhou, Shanghai Institute of Optics and Fine Mechanics (China) [6823-91]
- ✓ **Irradiance Scintillation on Laser Beam Propagation in the Boundary-Layer Turbulent Atmosphere**, Xiwen Qiang, Xian Jiaotong Univ. (China), Haomiao Ma, Shaanxi Normal University (China) [6823-98]
- ✓ **A laser interference marking system for making diffractive optical variable patterns**, Yun Zhou, Institute of Information Optical Engineering, Soochow University (China), Heng Zhang, Institute of Information Optical Engineering, Soochow University (China), Linsen Chen, Institute of Information Optical Engineering, Soochow University (China) [6823-99]
- ✓ **Low-cost adaptive optical system for a diode-pumped YAG solid state laser system**, Ping Yang, Institute of Optics and Electronics (China), Mingwu Ao, Institute of Optics and Electronics, Chinese Acade, Laboratory on adaptive optics(China);Yuan Liu, Institute of Optics and Electronics, Chinese Acade, Laboratory on adaptive optics (China); Lifang Ma, Institute of Optics and Electronics, Chinese Acade, Laboratory on adaptive optics(China); Bin Xu, Institute of Optics and Electronics, Laboratory on adaptive optics(China); Wenhan Jiang, Institute of Optics and Electronics, Chinese Acade, Laboratory on adaptive optics (China) . [6823-19]
- ✓ **A new technique for side pumping of double-clad fiber lasers**, Dazheng Wang, Institute of Semiconductors (China) [6823-6]
- ✓ **The design of a 100^μm large-mode-area double-cladding single-mode fiber**, Hong Wang, Univ. of Electronic Science and Technology of China (China) [6823-18]

- √ **Simulations on temporospatial distribution of second-harmonic generation at focal point with large-scale segment nonlinear optical crystals**, Tetsuo Harimoto, Univ. Of Yamanashi (JAPAN) [6823-32]
- √ **Experimental research of small-scale self-focusing of ultrashort pulse with orthogonal silk spatial diffraction modulation**, Zehu Feng, Hunan Univ. (China), Xiquan Fu, Hunan Univ. (China), Lifu Zhang, Hunan Univ. (China), Huiwen Xu, Hunan Univ. (China), Shuangchun Wen, Hunan Univ. (China) [6823-38]
- √ **Repetition tunable all-fiber passively Q-switched low-threshold erbium laser**, Gu Chun, Univ. of Science and Technology of China (China), Lixin Xu, Univ. of Science and Technology of China (China), Ming Hai, Univ. of Science and Technology of China (China) [6823-47]
- √ **Numerical simulation on the evolution of Stokes wave in high-power fiber laser**, Hongxin Su, Hebei Univ. (China), Kecheng Lu, Nankai Univ. (China), Yigang Li, Nankai Univ. (China), Kun Wang, Hebei Univ. (China), Qinglin Guo, Hebei Univ. (China) . . . [6823-58]

ROOM: 16 district, second floor, room 116
Monday-Tuesday 12-13 November 2007 • Proceeding of SPIE Vol.6824

Semiconductor Lasers and Applications

Conference Chairs: **Lianghui Chen**, Institute of Semiconductor, CAS (China); **Hiroyuki Suzuki**, NTT Photonics (Japan); **Paul Rudy**, QPC Lasers (USA); **Ninghua Zhu**, Institute of semiconductors, CAS (China);

Program Committee: **Yi Luo**, Tsinghua University (China); **Hongliang Zhu**, Institute of semiconductors, CAS (China); **Yongzhen Huang**; Institute of semiconductors, CAS (China); **Guangdi Shen**, Beijing University of Technology (China); **Guoyi Zhang**, Peking University (China); **Park Liu**, Shagrow Telecom Tech Co., Ltd. (China); **Jeffrey Ungar**, Quintessence Photonics (USA); **Takaaki Kakitsuka**, NTT Photonics Laboratories (Japan); **Fouad Karouta**, Technical University of Eindhoven (Netherlands)

Monday 12 November

SESSION 1

16 district, the second floor, room 116 1:40pm to 3:30pm

Simulation, characteristics and packaging

Chair: **Ninghua Zhu, Fouad Karouta**

1:40pm: **Advances in High Power Semiconductor Diode Lasers** (*Invited paper*), Xiaoyu Ma, Li Zhong, Institute of Semiconductors, Chinese Academy of Sciences (China)..... [6824-1]

2:10pm: **Successful diode laser material processing using application specific micro-optical beam shaping**, Holger Weitz, Frank Kubacki, Tao Lu, Peter Bruns; LIMO GmbH (Germany) [6824-2]

2:30pm: **A new analytic expression for TM-mode spontaneous emission**, Hong-Dong Zhao, Mei Sun, Liying Han, Hong-Li Tian, Ping He, Dong-Tai Guo, He Liu, Hebei University of Technology (China)..... [6824-3]

2:50pm: **Nonlinear dynamic characteristics of pulse-injected semiconductor lasers**, Yu-Shan Juan, Shiou-Yuan Tu, Fan-Yi Lin, National Tsing Hua University (Taiwan China)..... [6824-4]

3:10pm: **Measurement and analysis of microwave frequency response of semiconductor optical amplifiers**, Jian Liu [6824-45]
Coffee/Tea Break 3:30pm to 4:00pm

SESSION 2

16 district, the second floor, room 116 4:00pm to 6:10pm

Simulation, characteristics and packaging

Chair: **Luo Yi, Lijun Wang**

4:00pm: **Fabrication and Characterization of TO Packaged High-Speed Laser Modules** (*Invited Paper*), Ji Min Wen [6824-6]

4:30pm: **The line array of OPS-VECSEL mounted on the silicon microchannel cooler**, Teli Dai, Chongqing Normal University (China); Li Qin, Chanchun Institute of Optics and Fine Mechanics (China); Hong Zhao, Yong Zhou, Chongqing optoelectronics research institute (China) [6824-7]

4:50pm: **A tolerant coupling scheme for pigtailed laser diode module in active alignment process**, Mohamed Fadhali, Rosly Rahman, Jalil Ali, Yusof Munajat, Jasman Zainal, Toto Saktioto, University of Technology Malaysia (Malaysia)..... [6824-8]

5:10pm: **Focusing of diode laser beams: a partially coherent Lorentz model**, Jiong Yang, Huazhong University of Science (China); Guilin Ding, Tingting Chen, Jiangsu University (China); Xiao Yuan, Huazhong University of Science (China) [6824-9]

5:30pm: **Monte Carlo simulation of the modulated effect induced by the stress in Quantum dot**, Zhao Chang, Man Zhao, Beijing Institute of Petrochemical and Technology (China) [6824-10]

5:50pm: **Optical modelling of an Si-based DBR Laser using a nanocrystal Si-sensitized Er-doped silica rib waveguide**, Caterina Ciminelli, Paola Frascella, Mario Armenise, Politecnico di Bari (Italy) [6824-11]

Tuesday 13 November

SESSION 3

16 district, the second floor, room 116 8:30am to 10:30am

Novel semiconductor laser

Chair: **Zhang Guoyi, Takaaki Kakitsuka**

8:30am: **High Efficiency Active Opto-electronic Devices** (*Invited Paper*), Prof. Guangdi Shen, Institute of Semiconductors, CAS (China)..... [6824-12]

9:00am: **Design and fabrication of red light vertical-cavity surface-emitting laser**, Yan Zhang, Yongqiang Ning, Te Li, Jinjiang Cui, Guangyu Liu, Biao Peng, Hangyu Peng, Lijun Wang, CIOMP (China) [6824-13]

9:20am: **Photonic Crystal Micro-lasers on an InGaAsP/InP QW slab** (*Invited Paper*), Wang Hua Zheng, Institute of Semiconductors, CAS (China) [6824-14]

9:50am: **High-brightness semiconductor lasers**, Paul Rudy, Jeffrey Ungar, Mark Osowski, SRobert Lammert, Thomas Stakelon, QPC Lasers Inc (USA) [6824-15]

10:10am: **The materials growth and devices fabrication of high strained InGaAs/InGaAsP long wavelength distributed feedback laser**, Jiaoqing Pan, Institute of Semiconductors, CAS (China) [6824-16]

Coffee/Tea Break 10:30am to 10:50am

SESSION 4

16 district, the second floor, room 116 10:50am to 12:40pm

Semiconductor laser application

Chair: **Paul T. Rudy, Guangdi Shen**

10:50am: **High-power Laser Diodes and their Applications** (*Invited paper*), Wang Lijun, Changchun Inst of Optics Fine Mechanics & Physics (China) [6824-17]

11:20am: **Study on the time delay error for 160GHz OTDM**, Tangjun Li, Beijing Jiaotong Univ. (China) [6824-18]

11:40am: **Experimental study of target detection based on vibration and polarization characteristics**, Changqing Cao, Xidian Univ. (China) [6824-19]

12:00am: **Inclination angle measurement of inertial platform based on LD-PSD**, Yin-guo Huang, Yu-chi Lin, Le Song, Xin Zhou, Tianjin University (China) [6824-20]

Monday/Tuesday Posters

Time: Monday 12:30 pm to Tuesday 11:30 am

- ✓ **An atmospheric aerosol lidar and its experiment in Beijing**, Han Daowen, Anhui Institute of Optics and Fine Mechanics (China) [6824-33]
- ✓ **Retrieval method for aerosol mass concentration vertical distribution based on extinction**, Han Daowen, Anhui Institute of Optics and Fine Mechanics, CAS (China) [6824-34]
- ✓ **Far-field description of laser diode arrays**, Qiang Xu, Changqing Cao, Xiaodong Zeng, Yuying An Xidian Univ. (China) ... [6824-35]
- ✓ **Influence of the light injection on the chaotic carrier fundamental frequency of the VCSELs with opt...**, Shengfang Liu, Guangqiong Xia, Jiagui Wu, Linfu Li, Xi Tang, Zhengmao Wu, Southwest Univ. (China) [6824-36]
- ✓ **Numerical investigations on signal encoding and decoding techniques of the incoherent optical feedba...** Li Xu, Guangqiong Xia, Xiaodong Lin, Yan Fan, Zhaoyun Li, Xiaojuan Yan, Zhengmao Wu, Southwest Univ.(China) [6824-37]
- ✓ **Polarization dependence of the effect of external optical feedback on semiconductor lasers**, Qin Zou, Institut National des TÈlÈcommunications (France); Sheherazade Azouigui, Abderrahim Ramdane, CNRS (France); Badr-Eddine Benkelfat, Institut National des TÈlÈcommunications (France) ... [6824-38]
- ✓ **Beam shaping of stack pulse laser diodes**, Desheng Xin, Jianjia Zhang, Ling Wang, Mengmeng Zhang, Xiguang Ma, Changchun University of Science and Technology (China)..... [6824-39]
- ✓ **Method of cavity surface passivation and decreasing interface states for 808nm high power LDs**, Chun-ling Liu, Yan-ping Yao, Zhongliang Qiao, Bao-xue Bo, Changchun University of Science and Technology (China) [6824-40]
- ✓ **Compact circuit modeling of semiconductor lasers for analog optical link simulations**, Shangjian Zhang, Univ. Of Electronic Sci. and Technol. of China (China); Ninghua Zhu, Institute of Semiconductors, CAS (China); Yong Liu, Univ. of Electronic Sci. and Technol. of China (China)..... [6824-41]
- ✓ **Broad area semiconductor lasers of guass distributed on near diffraction limit**, Zhongliang Qiao , Bo Baoxue, Liu Chunling, Ma Jianli, Jilin province China (China) [6824-42]
- ✓ **Applied research of semiconductor laser on laser beam riding guidance system**, Yixia Qian, Chinese Academy of Sciences (China); Xiaodong Gao, Institute of Optics and Electr (China); Xiaowei Cheng, Institute of Optics and Photonics (China) [6824-43]
- ✓ **Investigation of underwater target detection by using diode-pumped solid-state green-blue lasers**, Lei Wu, Hongru Yang, Xudong Li, Gaoping Li , Xi'an Institute of Applied Optics (China) [6824-44]
- ✓ **Study on detection techniques for laser fuze using pseudorandom code**, Xiaopeng Yan, 5 Zhongguancun Nandajie, Haidian District (China) [6824-45]
- ✓ **The investigation of semi-insulating GaAs photoconductive-semiconductor switches triggered by semico...**, Wei Shi, Xue Liao, Xi'an University of Technology (China) [6824-46]
- ✓ **Calculation and comparison of thermal effect in laser-diode-pumped slab lasers with different pumpin...** Feng Huang, Yue-Feng Wang, Ordnance Engineering College (China) [6824-47]
- ✓ **Temperature characteristics of high-power vertical-cavity surface- emitting lasers**, Changling Yan, Changchun Univ. of Science and Technology (China) [6824-48]
- ✓ **The design of a new concavity heat sink for the high-power semiconductor laser array**, Hong-Dong Zhao ,Mei Sun, Hong-Li Tian, Hebei University of Technology (China) [6824-49]

12:20pm: **Design of diode laser stable output system**, Bo Liu, Harbin University of Science and Technology (China) [6824-21]
Lunch Break 12:40pm to 1:40pm

SESSION 5

16 district, the second floor, room 116 1:40pm to 3:30pm

Semiconductor laser application

Chair: Yongzhen Huang, Jeffrey E. Ungar

1:40pm: **EA modulated DBR Laser by Combination of Selective Area Growth and Quantum Well Intermixing (Invited Paper)**, Ling Juan Zhao, Institute of Semiconductors, CAS [6824-22]
2:10pm: **A CW fixing 3D lidar by double frequencies**, Xiuda Zhang, Huimin Yan, Zhejiang Univ. (China) [6824-23]
2:30pm: **Correlation properties of the chaotic state of a semiconductor laser with optical feedback**, Yun-cai Wang, Haihong Wang, Taiyuan Univ. of Technology (China) [6824-24]
2:50pm: **Investigate the four anions' mixed solution in ocean water background by laser Raman spectroscopy**, Da Teng, Jun Ma, Xining Zhang, Ocean University of China (China) . [6824-25]
3:10pm: **Selection of parameters in laser-amplifier injection locking**, Jianmei Liu, Yunfei Xu, Zhejiang University (China) [6824-26]
Coffee/Tea Break 3:30pm to 4:00pm

SESSION 6

16 district, the second floor, room 116 4:00pm to 6:10pm

Semiconductor laser and related material

Chair: Wan Hua Zheng, Park Liu

4:00pm: **High-Speed Directly Modulated DFB Lasers and Electroabsorption Modulated Lasers Based on AlGaInAs MQWs (Invited Paper)**, Yi Luo, Tsinghua Uni.(China) [6824-27]
4:30pm: **Next-generation high-power, high-efficiency laser diodes in spectra-physics**, Hanxuan Li, Irving Chyr, Denny Brown, Frank Reinhardt, Chia-Hung Chen, Oscar Romero, Robert Miller, Touyen Ngugen, Xu Jin, Kiran Kuppuswamy, Terry Towe, Trevor Crum, Cameron Mitchell, Thomas Truchan, Robert Bullock, Ed Wolak, Jeffrey Mott, James Harrison, Spectra-Physics Lasers, a Division of Newport Corp (USA) [6824-28]
4:50pm: **Demonstration and control of the fast-absorption recovery times of the InGaN/GaN quantum well satura...**, Fen Lin, Ning Xiang, National University of Singapore (Singapore); Peng Chen, Institute of Materials Research and Engineering (Singapore); Soo Jin Chua, National University of Singapore (Singapore); Afshan Irshad, Stefan Roither, Andrius Pugzlys, Andrius Baltuska, Vienna University of Technology (Austria) [6824-29]
5:10pm: **High-power diode laser with beam coupling**, Guangzhi Feng, Lijun Wang, ciomp.CAS (China) [6824-30]
5:30pm: **Strain analysis in pseudomorphically-grown GaN-based multiple epitaxial layers**, Donghyun Jang, Hanyang university (South Korea); Jongin Shim, Hanyang university (South Korea) [6824-31]
5:50pm: **1080nm optically-pumped vertical external cavity surface emitting laser**, Yanrong Song, Peng Zhang, Xinping Zhang, Beijing Univ. of Technology (China); Zhigang Zhang, Peking University (China) [6824-32]

- √ **Design and fabrication of the noncircular bottom-emitting VCSEL**, Biao Peng, Yongqiang Ning, CIOMP. CAS (China) [6824-50]
- √ **Preparation and property study of gold-tin alloys for packaging of high-power semiconductor lasers**, Bo Huang, Xin Gao, Bao-Xue Bo, Jinqiang Chen, Changchun University of Science and Technology (China) [6824-51]
- √ **Analysis of spectrum narrowing of diode laser bar**, Xinli Deng, LiJun Wang, CIOMP, ChangChun (China) [6824-52]
- √ **High-efficiency GaAs/AlGaAs quantum well semiconductor laser**, Lin Li, Chunming Wan, Zhanguo Li, Mei Li, Guojun Liu, Changchun Univ of Science & Tech (China) [6824-53]
- √ **Measurement and analysis of microwave frequency response of semiconductor optical amplifiers**, Jian Liu, Institute of Semiconductors, CAS(China); Shang-Jian Zhang, Univ. Electronic Science and Technology of China (China); Yong-Hong Hu, Liang Xie, Yong-Zhen Huang, Ning-Hua Zhu, Institute of Semiconductors, CAS (China) [6824-54]
- √ **Study of the model of laser diode-emitted beam based on multi-mode Gaussian distribution**, Ping Li, Jianqiang Sun, Weirong Guo, Huimin Chen, Kun Li, Beijing Institute of Technology (China) [6824-55]
- √ **A novel high-resolution chaotic lidar with optical injection**, Yun-cai Wang, An-bang Wang, Taiyuan University of Technology (China) [6824-56]
- √ **Analysis of circuit model for vertical-cavity surface-emitting lasers**, Wenguang Wu, China Jiliang University (China) . [6824-57]
- √ **Multi-target ranging using chaotic laser generated from semiconductor laser with optical feedback**, Yun-cai Wang, Bingjie Wang, Taiyuan University of Technology (China) [6824-58]
- √ **Theoretical studies of the effects of dispersion on fiber chaos secure optical communication**, Yun-cai Wang, Jianzhong Zhang, An-bang Wang, Taiyuan University of Technology (China) [6824-59]
- √ **Study on modes-matching of all optical wavelength conversion based on Fabry-Perot laser diode**, Yi An, Yun-cai Wang, Ming-jiang Zhang, Taiyuan University of Technology (China) [6824-60]
- √ **Cooling system of diode-side-pumped Nd:YAG high-repetition-rate Q-switched laser without water**, Ming Ling, Laser Technology Institute, School of Science, Cha (China) . . . [6824-61]
- √ **Comparison of closed-loop and open-loop feedback schemes of message filtering characteristics**, Yun-cai Wang, Yan-li Li, An-bang Wang, Taiyuan University of Technology (China) . . [6824-62]
- √ **Study on low-frequency fluctuations to chaos and the generation of high-dimension chaos in semicondu...**, Yun-cai Wang, Lingqin Kong, An-bang Wang, Hai-hong Wang, Taiyuan University of Technology (China) [6824-63]
- √ **An intersect micro-cylinder lens array used for deformation of the high-power laser diode beam**, Jianming Hu, Chongqing Normal University(China) [6824-64]
- √ **Application of DDS in laser modulation**, Zhang Zhang, Zhejiang Univ. (China) [6824-65]
- √ **Research on the dual-wavelength external-cavity semiconductor laser**, Yan Zhou, Pengfei Jiang, Hua Lin Zeng, Songtao Fan, Jun He, Zhe Wang, Fuzeng Xie, institute of semiconductors, CAS (China) [6824-66]
- √ **All-optical clock division with simultaneous wavelength conversion using a Fabry-Perot laser diode**, Ming-jiang Zhang, Yun-cai Wang, Yi An, Sheng-xiao Niu, Hu-cheng He, Taiyuan Univ. of Technology (China) [6824-67]
- √ **Design for coupling optics in diode-laser end-pumped Yb:YAG lasers**, Peiyao Xue, Changchun Univ of Science and Technology (China) [6824-68]
- √ **Analysis of optical system for two-wavelength laser range finder**, Ming-Fei Chen, National Changhua University of Education (Taiwan China); Kuo-Cheng Huang, Instrument Technology Research Center (Taiwan China); Yu-Pin Chen, Chun-Wei Hu, National Changhua University of Education (Taiwan China) [6824-69]
- √ **The Optimization of the beam of laser**, Xiufeng Sun, Xiaoxuan Xu, Wei Fan, Nankai University (China) [6824-70]
- √ **Beam properties of bottom-emitting 980nm VCSELs**, Jinjiang Cui, Changchun Inst of Optics Fine Mechanics & Physics (China); Yongqiang Ning, Te Li, Yan Zhang, Guangyu Liu, Biao Peng, Yanfang Sun, Li Qin, Lijun Wang, Changchun Institute of Physics, CAS (China) [6824-71]

ROOM: 16 district, third floor, room 108

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Lasers in Material Processing and Manufacturing III

Conference Chairs **ShuShen Deng**, China Daheng Corp. (China); **Akira Matsunawa**, Osaka Univ. (Japan); **Xiao Zhu**, Huazhong Univ. of Science and Technology (China)

Program Committee **Yijian Jiang**, Beijing Univ. of Technology (China); **Keming Du**, EdgeWave GmbH (Germany); **Minlin Zhong**, Tsinghua Univ. (China); **Yan Li**, Peking Univ. (China); **G_nther Weinmann**, Doctor (Germany); **Yongfeng Lu**, Univ. of Nebraska/Lincoln (USA)

Monday 12 November

SESSION 1

16 district, 3 floor, room 108 Mon.1:40pm to 6:10pm

Laser-induced Removal of Materials I

Chairs: **Xiao Zhu; Keming Du**

1:40pm: **Plasma light emission monitoring and penetration status recognition in CO2 laser welding of AZ31B-wrought magnesium alloy** (*Invited paper*), Jiguo Shan, Tsinghua Univ.(China); Jiguo Shan, Tsinghua University, Department of Mechanical Engineering(China); Jing Zhang, Tsinghua University, Department of Mechanical Engineering(China); Xiang Lei, Tsinghua University, Department of Mechanical Engineering(China); Wuzhu Chen, Tsinghua University, Department of Mechanical Engineering (China); Jialie Ren, Tsinghua University, Department of Mechanical Engineering (China) [6825-31]

2:10pm: **Quality control of laser tailor-welded blanks** (*Invited paper*), Qi Yan, Baoshan Iron & Steel Co., Ltd. (China); Ming Lei, Baoshan Iron and Steel Corp., R&D Center (China) . . . [6825-42]

2:40pm: **Study on Processing Control and Seam Shape of High Power Laser welding with filling wire for High thickness steel** (*Invited paper*), Yan Cai, Shanghai Jiao Tong Univ. (China) [6825-54]

3:10pm: **Laser Beam Welding of Aluminum Alloys** (*Invited paper*), Rongshi Xiao, Beijing Univ. of Technology (China) [6825-63]

3:40pm: **Morphology and mechanical characteristics of pulse laser coating-texturing WC-Ni alloying layers**, Daping Wan, Shanghai Jiao Tong Univ. (China) [6825-39]

Tea/Coffee Break 4:00pm to 4:30pm

4:30pm: **Boundary coupled dual-equation numerical simulation on mass transfer in the process of laser cladding**, Yanlu Huang, South China Univ. of Technology(China); Yongqiang Yang, No.381, Rd. Wushan, Guangzhou(China); Guoqiang Wei, No.381, Rd. Wushan, Guangzhou(China); Gongying Liang, No. 28, West Rd. Xianning, Xi'an (China) [6825-40]

4:50pm: **Mechanism of CO2 laser-cutting nonmetallic materials based on wall focusing effects**, Xiaozhu Xie, Guangdong Univ. of Technology (China) [6825-43]

5:10pm: **A study on laser weldability and formability of high-thickness ratio tailor-welded blanks**, Wei Wang, Shanghai Jiao Tong Univ. (China) [6825-44]

5:30pm: **Influence of beam spatial distribution on the laser damage of optical material**, Iijun Qi, Huazhong Univ. of Science and Technology (China); Xiao Zhu, National Eng. Research center for laser processing (China); Changhong Zhu, National Eng. Research center for laser processing (China); Guangzhi Zhu, National Eng. Research center for laser processing (China); Tao Yang, electronics and information engineering department (China) [6825-55]

5:50pm: **Study on microstructure and defects of laser welding of automobile double-linked gears**, Yu Wang, Tianjin Polytechnic Univ. (China); Xi-chen Yang, Tianjin Polytechnic University, Laser Processing Center (China); Jianbo Lei, Tianjin Polytechnic University, Laser Processing Center (China); Chunping Zhao, Tianjin Automobile Gear Factory (China); Hongxin Bi, Tianjin Automobile Gear Factory (China) [6825-59]

Tuesday 13 November

SESSION 2

16 district, 3 floor, room 108 Tues.8:30am to 12:30pm

Laser-induced Removal of Materials II

Chairs: **Matzunawa; Yan Li**

8:30am: **One-step shaping of Ti-Ni biomaterial by selective laser melting** (*Invited paper*), Yong qiang yang, South China Univ. of Technology (China); Yanlu Huang, No.381, Rd. Wushan, Guangzhou (China) [6825-37]

9:00am: **Ceramics Reinforced Metal Base Composite Coatings Produced by CO2 Laser Cladding**(*Invited paper*), Xichen Yang, Tianjin Polytechnic Univ.(China); Yu Wang, Tianjin Polytechnic University, Laser Processing Center(China); Nan Yang, Tianjin Polytechnic University, Laser Processing Center(China) . . [6825-58]

9:30am: **Laser Chemical Vapor Deposition Using in photomask repair** (*Invited paper*), Xiao zhu, Hua Zhong University of Science & Technology (China) [6825-64]

10:00am: **Technological study of laser-cutting silicon steel controlled by rotating gas flow**, Lei Hong, Shanghai Maritime Univ. (China); Chenglong Mi, Shanghai Maritime University (China) [6825-1]

10:20am: **Numerical analysis of cutting glass by dual CO2 laser beams**, Junke Jiao, Huazhong Univ. of Science and Technology (China); Xinbing Wang, Huazhong Univ. of Science and Technology (China); Xueling Zhang, Huazhong Univ. of Science and Technology (China); Wenlong Tang, Huazhong Univ. of Science and Technology (China); Yanzhao Lu, Huazhong Univ. of Science and Technology (China) [6825-2]

Tea/coffee time 10:40am to 11:10am

11:10am: **Optimization of laser processing technique and the parameters for laser transformation hardening with multi-objects**, Gang Wu, Shanghai Maritime Univ.(China); Lei Hong, Shanghai Maritime Univ., Laser Application Lab (China) . . . [6825-8]

11:30am: **Experimental study on micromachining of photosensitive glass using femtosecond laser**, Yinzhong Wu, Ultrafast Laser Laboratory, Tianjin University (China); Ching-Yue Wang, Ultra Laser Laboratory, SPIOEE, Tianjin University (China); Wei Jia, SPIOEE, Tianjin University (China) [6825-13]

11:50am: **Study of time-resolved shadowgraphs of material ejection in intense femtosecond laser**, Nan Zhang, Nankai Univ. (China); Jianjun Yang, Nankai University, Institute of Modern Optics (China); Xiaolei Wang, Nankai University, Institute of Modern Optics (China); Mingwei Wang, Nankai University, Institute of Modern Optics (China); Xiaonong Zhu, Nankai University, Institute of Modern Optics (China) [6825-429]

12:10pm: **Research of transparent materials bulk damage Characteristics by using modulated laser puls**, Guangzhi Zhu, Huazhong Univ. of Science and Technology (China) [6825-56]

Lunch Break 12:30pm to 1:40 pm

SESSION 3

16 district, 3 floor, room 108 Tues.1:40pm to 5:40pm

Laser-induced Deposition of Materials

Chairs: Weinmann;YiJian Jiang

1:40pm: **Femtosecond laser micromachining and microfabrication in transparent materials** (*Invited paper*), Yan Li, Peking Univ. (China); Dayong Liu, Peking University, School of Physics (China); Fengjie Qi, Peking University, School of Physics (China); Hong Yang, Peking University, School of Physics (China); Qihuang Gong, Peking University, School of Physics (China)[6825-19]

2:10pm: **Selective deposition of conductive copper films on glass surfaces using femtosecond laser surface modification and electroless plating**, Jian Xu, Yang Liao, Shanghai Institute of Optics and Fine Mechanics (China) and Graduate Univ. of the Chinese Academy of Sciences (China); Huidan Zeng, East China Univ. of Science and Technology (China); Zenghui Zhou, Haiyi Sun, Shanghai Institute of Optics and Fine Mechanics (China); Juan Song, Xinshun Wang, Shanghai Institute of Optics and Fine Mechanics (China) and Graduate Univ. of the Chinese Academy of Sciences (China); Ya Cheng, Zhizhan Xu, Shanghai Institute of Optics and Fine Mechanics (China); Koji Sugioka, Katsumi Midorikawa, Laser Technology Laboratory, RIKEN (Japan) [6825-10]

2:30pm: **Transparent conducting CuCrO2 films prepared by pulsed laser deposition**, Da Li, Anhui Institute of Optics and Fine Mechanics [6825-16]

2:50pm: **Diamond-like carbon films deposited by femtosecond laser pulses**, Yanlong Guo, Huazhong Univ. of Science and Technology.(China); Xiao Yuan, Huazhong University of Science and Technology, School of Optoelectronics Science and Engineering(China); Shuyun Wang, Wuhan Ordnance Non-Commissioned Officers Academy, Opto-Electronics Facility(China); Changyong Lu, Wuhan Ordnance Non-Commissioned Officers Academy, Opto-Electronics Facility(China); Xiaobing Wang, Wuhan Ordnance Non-Commissioned Officers Academy, Opto-Electronics Facility(China); Yong Chen, Wuhan Ordnance Non-Commissioned Officers Academy(China); Haiyuan Cao, Wuhan Ordnance Non-Commissioned Officers Academy, Opto-Electronics Facility(China); Xu Liu, Wuhan Ordnance Non-Commissioned Officers Academy, Opto-Electronics Facility(China) [6825-30]

Tea/coffee Break 3:10pm to 3:40pm

3:40pm: **Improvement of nanosecond laser ablation quality by pulse-shaping technique**, Xiaodong Wang, Huazhong Univ. of Science and Technology (China); Andreas Michalowski, University Stuttgart, Institut fuer Strahlwerkzeuge (Germany); Friedrich Dausinger, University Stuttgart, Institut fuer Strahlwerkzeuge (Germany); Shenglie Wang, Huazhong University of Science and Technology, School of Optoelectronics Science and Engineering (China); Xinbing Wang, Huazhong University of Science and Technology, School of Optoelectronics Science and Engineering (China); Jinsong Liu, Huazhong University of Science and Technology, School of Optoelectronics Science and Engineering (China) [6825-36]

4:00pm: **The investigation for filter properties of the one-dimensional three sects photonic crystal with symmetrical structure**, Zhiquan Li, Yanshan Univ. (China); Xiuxian Tian, Yanshan University (China); Huibo Wang, Yanshan University (China) [6825-48]

4:20pm: **1.31-µm GalNAs lasers fabricated with pulsed anodic oxidation**, Yun Deng, Changchun Univ. of Science and Technology (China); Yi Qu, Changchun university of science and technology (China); Zhongliang Qiao, Changchun university of science and technology (China); Yuming Wang, Changchun university of science and technology (China); Zhanguo Li, Changchun university of science and technology (China) [6825-21]

4:40pm: **The thickness uniformity modeling for DLC films obtained by PLD**, Zhanglei, Shenzhen Univ. (China) [6825-28]

5:00pm: **Important progress of laser detecting and process controlling for micron and nano-sized defects**, Zhaogu Cheng, Shanghai Institute of Optics and Fine Mechanics (China); Zhiping Zhang, Shanghai Institute of Optics and Fine Mechanics, CAS (China); Zhaoyu Qin, Shanghai Institute of Optics and Fine Mechanics, CAS (China); Huijie Huang, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); Jianqiang Zhu, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China) [6825-45]

5:20pm: **MBE growth of high quality 1.3 µm GalNAs on GaAs**, Minghui You, Changchun Univ. of Science and Technology [6825-4]

Wednesday 14 November

SESSION 4

16 district, 3 floor, room 108 Wed.8:30am to 11:40am

Industrial Systems

Chairs: Yongfeng Lu; Xiahui Tang

8:30am: **Nanomaterial synthesis using laser-induced microplasma in liquid environments** (*Invited paper*), Takeshi Sasaki, National Institute of Advanced Industrial Science and Technology (Japan); Naoto Koshizaki, AIST Japan, Nanoarchitectonics Research Ctr. (Japan) [6825-46]

9:00am: **Study on New type of High Power Transverse Flow CO2 Laser** (*Invited paper*), XiaHui Tang, Hua Zhong University of Science & Technology (China) [6825-65]

9:30am: **Square laser beam of high power transverse flow CO2 laser and application**, Yingxiong Qin, Huazhong Univ. of Science and Technology (China); Xiahui Tang, Huazhong University of Science and Technology, School of Optoelectronics Science and Engineer (China); Rutao Zhong, Huazhong University of Science and Technology, School of Optoelectronics Science and Engineer (China); Zhengjia Li, Huazhong University of Science and Technology, School of Optoelectronics Science (China) [6825-29]

9:50am: **2D FLUENT Numerical Simulation of Velocity Distribution of Powder Flow in Laser Manufacturing**, Nan Yang, Tianjin Polytechnic Univ. (China); Xi-chen Yang, Tianjin Polytechnic University, Laser Processing Center (China) [6825-60]

Tea/coffee time 10:30am to 11:00am

11:00am: **Supercontinuum generation in photonics crystal fibers with a femtosecond pulse**, Shumin Zhang, Hebei Normal Univ.(China); Fuyun Lu, Institute of Physics, Nankai University, Tianjin(China); Xiufeng Yang, Wenjin Rd 194(China) [6825-49]

11:30am: **A tunable erbium-doped fiber laser with power-equalized**, Shumin Zhang, Ultrafast Laser Laboratory, SPIOEE, Tianjin University(China); Li Dan, Hebei Normal University(China); Xiaoqing Li, Hebei Normal University(China); Guangzhen Zhao, Hebei Normal University(China); Zhijun Zhang, Hebei Normal University(China) [6825-66]

Monday/Tuesday Posters

Time: Monday 12:30pm to Tuesday 11:30am

✓ **The application of the machine CNC system in laser marking**, Zhao Wei, Tianjin Univ. (China); Sa Yu, Tianjin Univ. (China) [6825-3]

✓ **A novel differential optical-beam-deflection detection system for measuring laser-generated surface acoustic waves** Yifei Shi, Nanjing Univ. of Science & Technology(China); Zhonghua Shen, Nanjing University of Science and Technology (China); Xiaowu Ni, Nanjing University of Science and Technology (China); Jian Lu, Nanjing University of Science and Technology (China) [6825-6]

✓ **Numerical simulation of the surface crack detection by laser-generated circumferential guided wave in elastic cylinders**, Yifei Shi, Nanjing Univ. of Science & Technology(China); Zhonghua Shen, Nanjing University of Science and Technology (China); Xiaowu Ni, Nanjing University of Science and Technology (China); Jian Lu Nanjing University of Science and Technology (China) [6825-7]

✓ **Mechanical effects during pulsed laser and metals interaction in glycerol-water mixtures**, XiuMei Liu, Nanjing Univ. of Science & Technology (China); Jie He, Nanjing (China); Jian Lu, Nanjing university of Science & Technology (China); NiXiao Wu, Nanjing (China) [6825-9]

✓ **Process investigation of a-Si:H thin films prepared by DC magnetron sputtering**, Chun-ling Liu, Jilin Normal Univ. (China); Chun-wu Wang, Jilin Normal University (China); Yan-ping Yao, Changchun University of Science and Technology (China); Wan-jin Chen, Jilin Normal University (China); Yuxia Wang, Changchun University of Science and Technology (China); Bao-Xue Bo Changchun Univ. of Science and National Key Lab High Power Se (China) [6826-11]

✓ **Research on the laser lap welding properties of Al-Ti dissimilar metal**, ShunHong Liu, Huazhong Univ. Of Science and Technology (China) [6825-14]

✓ **Characteristics of high-peak pulsed-laser-induced damage to fibers**, Xinghai Zhao, Institute of Electronic Engineering (China) [6825-22]

✓ **Switch power supply of fast axial flow CO₂ laser for complex machining**, Li, Huazhong Univ. Of Science and Technology (China) [6825-24]

✓ **Integrated control system of transverse flow CO₂ laser and its application**, Juan, Huazhong Univ. Of Science and Technology (China) [6825-26]

✓ **Microcrystalline Si crystallized by pulsed YAG2... green laser**, Juan, Nankai Univ. (China) [6825-32]

✓ **Simulation of thermal stress in n-type diamond thin films prepared by CVD**, Yongjie Wang, North China Electric Power Univ. (China); Qingxun Zhao, Hebei University, physics department (China); Zhanlong Zhao, North China Electric Power University, Department of physics (China) [6825-34]

✓ **Process analysis of diamond ablation by 157-nm laser**, Li, Wuhan Univ. Of Technology (China) [6825-35]

✓ **Thermal elasto-plastic stress analysis during laser heating of a metal plate**, Chen, Nanjing Univ. of Science & Technology (China); Jian Lu, Nanjing University of Science and Technology, Department of Applied Physics (China); Xiaowu Ni, Nanjing University of Science and Technology, Department of Applied Physics (China) [6825-38]

✓ **Mechanical behavior study of laser-welded joints for DP steel**, Yan, Baoshan Iron & Steel Co., Ltd. (China); Ming Lei, Baoshan Iron and Steel Corp., R&D Center (China) [6825-41]

✓ **Study of temperature measurement with one-dimensional photonic crystal...** Li, Yanshan Univ. (China); Weiwei Cui, Yanshan university, Department of automatic instrumentation (China); Huibo Wang, Yanshan university, Department of automatic instrumentation (China) [6825-47]

✓ **A tunable erbium-doped fiber laser with power-equalized**, Zhang, Hebei Normal Univ. (China); Li Dan, Hebei Normal University (China); Xiaoqing Li, Hebei Normal University (China); Guangzhen Zhao, Hebei Normal University (China); Zhijun Zhang, Hebei Normal University (China) [6825-50]

✓ **Application of Fizeau Fiber Interferometer in Ultrasonic Measure**, Feng, Wuhan Institute of Technology (China) . [6825-51]

✓ **A novel material processing and manufacturing measurement systems by using electronic datum**, Xiong, sichuan (China) [6825-61]

✓ **Green laser trimming system of resistor and its application**, Zemin Chen, Wuhan Huagong Laser Engineering Co., Ltd. (China) [6825-15]

✓ **Characteristics of CW, pulse discharge for high-power transverse flow CO₂ laser and its application**, Hao, Huazhong Univ. of Science and Technology (China); Tang Xiaohui, Huazhong University of Science and Technology (China); Zhang Yang, Huazhong University of Science and Technology (China); Peng Hao, Huazhong University of Science and Technology (China); youqing Wang, Huazhong University of Science and Technology (China) [6825-25]

✓ **Laser direct writing system for nano-lithography**, Fan, Shanghai Institute of Optics and Fine Mechanics (China); Wendong Xu, Shanghai Institute of Optics and Fine Mechanics (China) [6825-27]

✓ **Effects of roughness on laser-texturing of rolls by CO₂ laser**, Changyu, Huazhong Univ. Of Science and Technology (China) [6825-33]

✓ **Pulsed Laser Cladding Repairing Plastic Moulds**, Ming, South China Normal Univ. (China) [6825-52]

✓ **Plasma Characterization of Brass Alloys by Laser Induced Breakdown Spectroscopy**, Li, Ocean Univ. of China (China); Jianglai Wu, Ocean University of China, Department of Physics (China); Kai Cheng, Ocean University of China, Department of Physics (China); Yuan Lu, Ocean University of China, Department of Physics (China); Ronger Zheng, Ocean University of China, Department of Physics (China) [6825-53]

✓ **Laser remanufacturing technology and its application**, Dong Shiyun, Dong Shiyun, Xu Binshi, Liu Weihong, Yan Shixing, Ma Yunzhe, National Key Laboratory for Remanufacturing, 21 Dujiakan, Fengtai (China) [6825-67]

✓ **Fabrication of SiO₂-TiO₂ strip waveguides by laser densification of Sol-Gel films** Aikui Li, Zemin Wang, Jiajun Liu, Xiaoyan Zeng, Huazhong University of Science and Technology, Wuhan (China) [6825-70]

✓ **Investigation on Tribological Behavior of Fe-Based Alloy Coating Formed by Laser Cladding**, Shen Longguang, Zhang Qingmao, Song Jie, Liao Jianhong, South China Normal University (China) [6825-68]

ROOM: 16 district second floor, room 90
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Optics in Health Care and Biomedical Optics III

Conference Chairs: **Xingde Li**, Univ. of Washington (USA); **Qingming Luo**, Huazhong Univ. of Science and Technology (China); **Ying Gu**, General Hospital of PLA (China)

Program Committee: **Jing Bai**, Tsinghua Univ. (China); **Wei R. Chen**, Univ. of Central Oklahoma (USA); **Zhongping Chen**, Univ. of California/Irvine (USA); **Jing Cheng**, Tsinghua Univ. (China); **Zhihua Ding**, Zhejiang Univ. (China); **Ling Fu**, Huazhong Univ. of Science and Technology (China); **Min Gu**, Swinburne Univ. of Technology (Australia); **Masamitsu Haruna**, Osaka Univ. (Japan); **Ho-Pui Ho**, The Chinese Univ. of Hong Kong (Hong Kong China); **Fu-Jen Kao**, National Sun Yat-Sen Univ. (Taiwan, China); **Beop-Min Kim**, Yonsei Univ. (South Korea); **Jun-Heng Li**, Chinese PLA General Hospital (China); **Hong Liu**, Univ. of Oklahoma (USA); **Hui Ma**, Tsinghua Univ. (China); **Vasilis Ntziachristos**, Massachusetts General Hospital (USA); **Yuwen Qin**, National Natural Science Foundation of China (China); **Jianan Y. Qu**, Hong Kong Univ. of Science and Technology (Hong Kong China); **Guiying Wang**, Shanghai Institute of Optics and Fine Mechanics (China); **Kemin Wang**, Hunan Normal Univ. (China); **Lihong V. Wang**, Washington Univ. in St. Louis (USA); **Xunbin Wei**, Fudan Univ. (China); **Shusen Xie**, Fujian Normal Univ. (China); **Da Xing**, South China Normal Univ. (China); **Songlin Xu**, Shanghai Second Medical Univ. (China); **Chih-Chung Yang**, National Taiwan Univ. (Taiwan, China); **Gilwon Yoon**, Seoul National Univ. of Technology (South Korea); **Shaoqun Zeng**, Huazhong Univ. of Science and Technology (China); **Jing Zhu**, Ren Ji Hospital (China)

Monday 12 November

SESSION 1

16 district 2 floor, 90 room Mon.1:40pm to 3:20pm

Optical Coherence Tomography I

Chair: **Xingde Li**, Univ. of Washington (USA)

1:40pm: **Optical Doppler tomography with short-time Fourier transform and Hilbert transform** (*Invited Paper*), Jie Meng, Zhihua Ding, Zhejiang Univ.(China) [6826-89]

2:10pm: **Dynamic OCT for physiological functions of micro-organs in human fingers** (*Invited Paper*), Masamitsu Haruna, Masato Ohmi, Yoshihiro Ueda, Toshie Fuji, Akihiro Yamada, Hiroyuki Saigusa, Mitsuo Kuwabara, Osaka Univ. (Japan) [6826-12]

2:40pm: **A novel approach based on OCT for tongue inspection in traditional Chinese medicine**, Haixin Dong, South China Normal Univ. (China) [6826-118]

3:00pm: **High-speed full range complex Fourier-domain optical coherence tomography using sinusoidal phase-modulating interferometry**, Peng Bu, Xiangzhao Wang, Shanghai Institute of Optics and Fine Mechanics (China); Osami Sasaki, Niigata Univ.(Japan) [6826-73]

Coffee/Tea Break 3:20pm to 3:50pm

SESSION 2

16 district 2 floor, 90 room Mon.3:50pm to 5:40pm

Optical Coherence Tomography II

Chair: **Zhihua Ding**, Zhejiang Univ. (China)

3:50pm: **Enabling Endoscopy Technologies for Clinical Translation of High-resolution Optical Biopsy** (*Invited Paper*), Yuxin Leng, Jiefeng Xi, Michael Cobb, Henry Fu, Daniel MacDonald, Addie Warsen, Kevin Hsu, Joo Ha Hwang, Xingde Li, Univ. of Washington (USA)..... [6826-152]

4:20pm: **Optical coherence tomography endoscopic imaging system using mini-ultrasonic motor**, Qiao Li, Xiaodong Chen, Changlei Gao, Yi Wang, Daoyin Yu, Tianjin Univ. (China) . . [6826-42]

4:40pm: **Two-dimensional image sharpening in optical coherence tomography by deconvolution**, Yiheng Liu, Yanmei Liang, Guoquan Mu, Xiaonong Zhu, Nankai Univ. (China) [6826-21]

5:00pm: **The image of OCT denoising and 3D reconstructing**

method, Xue-Tao Yan, Jun Yang, Libo Yuan, Harbin Engineering Univ. (China) [6826-97]

5:20pm: **High-speed spectral-domain optical coherence tomography at 830nm wavelength**, Kai Wang, Gang Huang, Zhihua Ding, Ling Wang, Zhejiang Univ. (China) [6826-94]

Tuesday 13 November

SESSION 3

16 district 2 floor, 90 room Tues.8:30am to 10:20am

Photoacoustic Imaging

Chair: **Qingming Luo**, Huazhong Univ. of Science and technology (China)

8:30am: **Photoacoustic and thermoacoustic imaging application in cancer early detection and treatment monitoring** (*Invited Paper*), Xing Da, South China Normal Univ. (China) [6826-133]

9:00am: **Photoacoustic spectrometer for breath ammonia analysis**, Wang Zhang, Qingxu Yu, Dalian Univ. of Technology (China). [6826-110]

9:20am: **Noninvasive 3D volumetric photoacoustic imaging with 2D piezocomposite ultrasonic transducer array**, Xuanrong Ji, Xing Da, Liangzhong Xiang, Diwu Yang, South China Normal Univ. (China) [6826-131]

9:40am: **Listening to light by photoacoustic imaging technique**, Liangzhong Xiang, Xing Da, Diwu Yang, Sihua Yang, Zhengwei Zuo, South China Normal University (China) [6826-132]

10:00am: **Sono-Contrast Spectroscopy for Breast Cancer Detection**, Yan Yu, Lydia Liao, Thomas Jefferson Univ. (USA) [6826-159]

Coffee/Tea Break 10:20am to 10:50am

SESSION 4

16 district 2 floor, 90 room Tues.10:50am to 12:20pm

Optical Transducer and Treatment

Chair: Shusen Xie, Fujian Normal Univ. (China)

- 10:50am: **Outcomes and mechanisms of laser immunotherapy in the treatment of melanoma** (*Invited Paper*), Wei R. Chen, Univ. of Central Oklahoma (USA) [6826-150]
- 11:20am: **Laser treatment of cutaneous lesions with image-guided fine spot-scanning irradiation**, Isami Nitta, Xuefeng Zhao, Yoshimasa Takezawa, Yasushi Kan, Tomohiro Maruyama, Yoshitaka Maeda, Akihiro Kanno, Niigata Univ. (Japan) [6826-36]
- 11:40am: **One-dimension dynamic ablation of bovine shank bone with pulse CO2 laser** , Xianzeng Zhang, Shusen Xie, Zhenlin Zhan, Qing Ye, Fujian Normal Univ. (China) [6826-77]
- 12:00pm: **Improved external valvuloplasty, intravenous laser photocoagulation, and local sclerotherapy treatment of primary deep venous valvular insufficiency: long term result**, Chunxi Wang, Chinese PLA General Hospital (China) [6826-104]
- Lunch Break 12:20pm to 1:40pm

SESSION 5

16 district 2 floor, 90 room Tues.1:40pm to 3:10pm

Light-tissue/cell Interaction

Chair: Ling Fu, Huazhong Univ. of Science and technology (China)

- 1:40pm: **Imaging the brain activity in vivo with intrinsic optical imaging and speckle imaging** (*Invited Paper*), Qingming Luo, Huazhong Univ. of Science and Technology(China) [6826-157]
- 2:10pm: **Qualitative and quantitative histopathologic studies of skin damage to 2-micron laser irradiation**, Bo Chen, Sharon Thomsen, Robert Thomas, Ashley Welch, The Univ. of Texas at Austin (USA) [6826-33]
- 2:30pm: **Research on thermal influence of laser radiation on skin with non-trivial geometry**, Ilya Krasnikov, Alexey Seteikin, Amur State Univ. (Russia). [6826-30]
- 2:50pm: **Optical contrast enhancement of high-resolution ocular fundus imaging in vivo using polarimetry**, Hansheng Yang, Yudong Zhang, Institute of Optics and Electronics (China) [6826-105]
- Coffee/Tea Break 3:10pm to 3:50pm

SESSION 6

16 district 2 floor, 90 room Tues.3:50pm to 5:40pm

Light-tissue Interaction and Modeling

Chair: Wei R. Chen, Univ. of Central Oklahoma (USA)

- 3:50pm: **Mechanisms of Light Scattering from Biological Cells and Cell Culture** (*Invited Paper*), Jianan Y. Qu, Hong Kong University of Science and Technology (China) [6826-149]
- 4:20pm: **Photo-induced delayed luminescence of human serum and its dependence on excitation conditions**, Hua Bai, Lie Lin, Ping Chen, Guoqing Tang, Nankai Univ. (China) [6826-90]
- 4:40pm: **Influence of the chopped frequency of light on optical transport characteristics of human skin, including at acupuncture points**, Hongqin Yang, Shusen Xie, Song-Hao Liu, Hui Li, Yuhua Wang, Zhouyi Guo, Zukang Lu, Fujian Normal Univ. (China) [6826-55]
- 5:00pm: **Influence of pressure on the photo-thermal effects of porcine skin**, Wei Gong, Shusen Xie, Hui Li, Fujian Normal Univ. (China) [6826-86]

5:20pm: **Finite element thermal analysis of breast with tumor and its comparison with thermography**, Hongqin Yang, Qingyuan Lin, Yuling Li, Shusen Xie, Zhen Ye, Shuqiang Chen, Fujian Normal Univ. (China) [6826-60]

Wednesday 14 November

SESSION 7

16 district 2 floor, 90 room Wed.8:30am to 10:20am

Multi-photon Microscopy

Chair: Xunbin Wei, Fudan Univ. (China)

- 8:30am: **Analysis of temporal focusing for fast axial scanning** (*Invited Paper*), Rui Du, Runhua Jiang, Kun Bi, Qingming Luo, Shaoqun Zeng, Huazhong Univ. of Science and Technology (China) [6826-81]
- 9:00am: **A novel field of view zoom scanning protocol for simultaneous time-and-spectrum-resolved multifocal multiphoton microscopy** (*Invited Paper*), Junle Qu, Lixin Liu, Yonghong Shao, Hanben Niu, Shenzhen Univ. (China) [6826-139]
- 9:30am: **Fiber optic nonlinear optical microscopy for 3D tissue imaging** (*Invited Paper*), Ling Fu, Huazhong Univ. of Science and Technology, Min Gu, Swinburne University of Technology (Australia) [6826-80]
- 10:00am: **In vivo optical microscopy of the peripheral nerve myelin sheath and blood-nerve barrier for nerve assessment following injury**, Chunqiang Li, Daniel CÔTÉ, Francis Henry, Irene Kochevar, Charles Lin, Massachusetts General Hospital (USA) [6826-147]
- Coffee/Tea Break 10:20am to 10:50am

SESSION 8

16 district 2 floor, 90 room Wed.10:50am to 12:40pm

Raman Spectroscopy and CARS Microscopy

Chair: Guiying Wang, Shanghai Institute of Optics and Fine Mechanics (China)

- 10:50am: **Endoscopic Laser Raman Spectroscopy for Early Lung Cancer Detection** (*Invited Paper*), Haishan Zeng, Michael A. Short, Annette McWilliams, Jianhua Zhao, Harvey Lui, and Stephen Lam, British Columbia Cancer Research Centre (Canada) [6826-151]
- 11:20am: **Heterodyne polarization coherent anti-Stokes Raman scattering microscopy**, Fake Lu , Wei Zheng, Zhiwei Huang, National Univ. of Singapore(Singapore) [6826-34]
- 11:40am: **Surface enhanced Raman spectroscopy on a surface plasmon resonance biosensor platform**, Wu Yuan, Wing-Cheung Law, Ho-Pui Ho, The Chinese Univ. of Hong Kong, Paras Prasad, State University of New York at Buffalo (USA) [6826-71]
- 12:00pm: **Saliva analysis by surface-enhanced Raman spectroscopy (SERS) technique**, Clement Yuen, Wei Zheng, Zhi Wei Huang, National Univ. of Singapore (Singapore) [6826-27]
- 12:20pm: **High wavenumber near-infrared Raman spectroscopy for in vivo detection of cervical precancer**, Jianhua Mo, Wei Zheng, Jeffrey Low, Joseph Ng, Arunachalam Ilancheran, Zhiwei Huang, National Univ. of Singapore (Singapore) [6826-29]
- Lunch Break 12:40pm to 1:40pm

SESSION 9

16 district 2 floor, 90 room Wed.1:40pm to 4:00pm

Fluorescence Spectroscopy and Imaging

Chair: **Jianan Y. Qu**, Hong Kong Univ. of Science and Technology (Hong Kong China)

- 1:40pm: **Optical microscopy with nanometer resolution for single molecule detection** (*Invited Paper*), Guiying Wang, Chen Wang, Guo Fu, Zenghui Zhou, Li Liu, Ruxin Li, Zhizhan Xu, Shanghai Institute of Optics and Fine Mechanics (China) [6826-154]
- 2:10pm: **Studying leukemia metastasis by in vivo imaging and flow cytometer** (*Invited Paper*), Xunbin Wei, Fudan Univ. (China) [6826-114]
- 2:40pm: **Nano-aquarium for dynamic observation of aquatic microorganisms fabricated by femtosecond laser direct writing** (*Invited Paper*), Yasutaka Hanada, Koji Sugioka, Hiroyuki Kawano, Ikuko Ishikawa, Atsushi Miyawaki, Katsumi Midorikawa, RIKEN (Japan) [6826-??]
- 3:00pm: **Development of a real-time optical biopsy system based on time-resolved fluorescence spectroscopy**, Ji-Young Hwang, Jennifer Russell, Mohammed Ehab, Yuan Ye, Qianyu Guo, M. Jamal Deen, Qiyin Fang, McMaster Univ (Canada) [6826-54]
- 3:20pm: **Identification of endogenous fluorophores in the photoreceptors using autofluorescence spectroscopy**, Lingling Zhao, Junle Qu, Hanben Niu, Shenzhen Univ. (China) ... [6826-125]
- 3:40pm: **Wide-field fluorescence sectioning microscopy using dynamic speckle illumination**, Jun Yin, Junle Qu, Yonghong Shao, Lei Wang, Hanben Niu, Shenzhen Univ. (China) [6826-85]
- Coffee/Tea Break 4:00pm to 4:20pm

SESSION 10

16 district 2 floor, 90 room Wed.4:20pm to 6:10pm

Advanced Biomedical and Clinical Diagnosis Systems

Chair: **Da Xing**, South China Normal Univ. (China)

- 4:20pm: **Progress on noninvasive and minimally invasive methods on transcutaneous blood glucose sensing** (*Invited Paper*), Kexin Xu, Rong Liu, Jin Liu, Wenliang Chen, Dachao Li, Zhenhui Du, Tianjin Univ. (China) [6826-140]
- 4:50pm: **Development and characterization of a phase contrast X-ray imaging prototype** (*Invited Paper*), Hong Liu, Xizeng Wu, Univ. of Oklahoma (USA) [6826-153]
- 5:20pm: **Transmission RF diffuse optical tomography instrument for human breast imaging** (*Invited Paper*), Kijoon Lee, Soren Konecky, Regine Choe, Han Ban, Turgut Durduran, Arjun Yodh, Univ. of Pennsylvania (USA) [6826-116]
- 5:50pm: **A method of digital image measurement of specimen deformation based on CCD cameras and ImageJ software and its application in human pelvic biomechanics**, Yongwei Jia, Liming Cheng, Tongji University (China) [6826-02]

Thursday 15 November

SESSION 11

16 district 2 floor, 90 room Thurs.8:30am to 10:20am

Fiber-based Devices for Manipulation and Imaging

Chair: **Shaoqun Zeng**, Huazhong Univ. of Science and Technology (China)

- 8:30am: **Design and implementation of fiber lenses for ultra-small probes used in biomedical imaging** (*Invited Paper*), Youxin Mao, Shoude Chang, Sherif Sherif, Costel Flueraaru, National Research Council Canada (Canada) [6826-13]
- 9:00am: **Localized surface plasmon coupled fluorescence fiber optic biosensor for \pm -fetoprotein detection**, Ying-Feng Chang, Bao-Yu Hsieh, Ying-Chang Li, Chien Chou, National Yang-Ming Univ. (China) [6826-11]
- 9:20am: **Numerical simulation and analysis of a single flat-faced thin fiber optical tweezers**, Zhongfu Wu, Zhihai Liu, Jun Yang, Libo Yuan, Harbin Engineering Univ. (China) [6826-87]
- 9:40am: **Novel fiber optic probe design for depth-resolved fluorescence measurements: Monte Carlo simulations**, Franck Jaillon, Wei Zheng, Zhi Wei Huang, National Univ. of Singapore (Singapore) [6826-28]
- 10:00am: **Two-core single-mode optic fiber as optical tweezers**, Zhongfu Wu, Zhihai Liu, Jun Yang, Libo Yuan, Harbin Engineering Univ. (China) [6826-88]
- Coffee/Tea Break 10:20am to 10:50am

SESSION 12

16 district 2 floor, 90 room Thurs.10:50am to 12:20pm

Nanomedicine

Chair: **Kexin Xu**, Tianjin Univ. (China)

- 10:50am: **Optical contrast agents of both metal binding and tumor targeting** (*Invited Paper*), Yunpeng Ye, Walter Akers, Sharon Bloch, Anthony Agee, Baogang Xu, Samuel Achilefu, Washington Univ. School of Medicine (USA) [6826-76]
- 11:20am: **In Vivo Non-invasive fluorescence imaging using near-infrared fluorescent quantum Dots**, Haiyan Chen, Yueqing Gu, China Pharmaceutical Univ. (China) [6826-143]
- 11:40am: **Intracellular distribution of core-multishell QDs in cancer cells**, Yan Liu, Ping Chen, Lie Lin, Guoqing Tang, Nankai Univ. (China) [6826-106]
- 12:00pm: **Multifunctional nanoprobe for biological applications based on surface-enhanced Raman scattering**, Zhuyuan Wang, Changgui Lu, Binfeng Yun, Guohua Hu, Yiping Cui, Southeast Univ. (China) [6826-112]
- Lunch Break 12:20pm to 1:20pm

SESSION 13

16 district 2 floor, 90 room Thurs.1:20pm to 3:00pm

Photodynamic Therapy and Optical Techniques in Clinic I*Chair: Haishan Zeng,*

British Columbia Cancer Research Centre (Canada)

1:20pm: **Diblock copolymers to deliver hydrophobic photosensitizers for photodynamic therapy**, Buhong Li, Fujian Normal Univ., Brian Wilson, Univ. of Toronto (Canada) [6826-115]1:40pm: **Synthesis and dual fluorescence property of novel dihydroxy phosphorus tetrabenzotriazacorrole derivatives**, Lei Huang, Fushi Zhang, Zhongyu Li, Chen-Ho Tung, Tsinghua Univ. (China) [6826-98]2:00pm: **Comparison between HMME mediated photodynamic therapy using 413nm and 532nm for port wine stains: a mathematical simulation study**, Ying Wang, Ying Gu, Chinese PLA General Hospital(China) [6826-43]2:20pm: **Insight into the effectivity of bim in photodynamic therapy mediated apoptosis**, Xianwang Wang, Da Xing, Qun Chen, Yanchun Wei, Jiaying Song, South China Normal Univ. (China) [6826-160]2:40pm: **The effect of oxygen on photobleaching of hematoporphrin monomethyl ether (HMME) in different solutions**, Ying Wang, Ying Gu, Chinese PLA General Hospital (China) [6826-44]

Coffee/Tea Break 3:00pm to 3:30pm

SESSION 14

16 district 2 floor, 90 room Thurs.3:30pm to 4:50pm

Photodynamic Therapy and Optical Techniques in Clinic II*Chair: Ying Gu, Chinese PLA General Hospital (China)*3:30pm: **Theoretical investigation of thermal retinal response to photodynamic therapy or choroidal neovascularization**, Hongxia Chen, Ying Gu, Gang Cheng, Zaifu Yang, Haixia Qiu, Chinese PLA General Hospital (China) [6826-53]3:50pm: **Foscan-PDT induced apoptosis in nasopharyngeal carcinoma cells**, Christine Yow, Naiki Mak, Zheng Huang, The Hong Kong Polytechnic Univ. (China) [6826-75]4:10pm: **Determination of the optical properties of vascular tissue: potential applications in vascular-targeting photodynamic therapy**, Yongbin Tian, Ping Chen, Lie Lin, Zheng Huang, Heping Xu, Nankai Univ. (China) [6826-117]4:30pm: **Calpain mediates AIF-regulated caspase-independent pathway in cisplatin-induced apoptosis**, Lei Liu, Xing Da, South China Normal Univ. Wei. R. Chen, University of Central Oklahoma (USA) [6826-135]

Tuesday/Wednesday Posters

Time: Tuesday 12:30pm to Wednesday 11:30am

- ✓ **Common path endoscopic optical coherence tomography with outside path compensation**, Yaliang Yang, Zhihua Ding, Jie Meng, Zhejiang Univ. (China) [6826-82]
- ✓ **Spectrally-resolved multiphoton imaging of ex-vivo bronchial wall**, Shuangmu Zhuo, Jianxin Chen, Xingshan Jiang, Tianshu Luo, Quangan Liu, Rong Chen, Shusen Xie, Fujian Normal Univ. (China) [6826-4]
- ✓ **Absolute measurement of flow velocity vector using time-domain doppler optical coherence tomography**, Ying Zhu, Zhihua Ding, Zhejiang University. (China) [6826-95]
- ✓ **Wavelength-encoded OCT imaging using swept source**, Ling Wang, Zhihua Ding, Tong Wu, Kai Wang, Zhejiang Univ. (China) [6826-96]
- ✓ **Thermoacoustic and photoacoustic imaging of biological tissue with different contrasts and properties**, Liming Nie, Xing Da, Guo Hua, South China Normal Univ. (China) [6826-130]
- ✓ **Noninvasive mapping of subcutaneous vasculature with high resolution photoacoustic imaging**, Yeqi Lao, Xing Da, Sihua Yang, South China Normal Univ. (China) [6826-136]
- ✓ **Depth-dependence of SHG and TPEF intensity in biotissue**, Nenrong Liu, Yishen Qiu, Xianzeng Zhang, Fujian Normal Univ. (China) [6826-103]
- ✓ **Microscopic observation and mechanism discussion for the changes of rat skin after interacted by intense pulse light**, Shulian Wu, Hui Li, Yuhong Fang, Shusen Xie, Fujian Normal Univ. (China) [6826-26]
- ✓ **Real-time 3D image fusion based on wavelet transform in microscope auto-focusing system**, Liqun Xu, Zi Ye, Xinxin Yan, Feihong Yu, Zhejiang Univ. (China) [6826-41]
- ✓ **STED microscopy with azimuthally-polarized depletion beam in homogeneous medium**, Suhui Deng, Li Liu, Ya Cheng, Ruxin Li, Zhizhan Xu, Shanghai Institute of Optics and Fine Mechanics (China) [6826-121]
- ✓ **Spatial propagation of femtosecond pulses in AOD based random scanning two-photon microscope**, Xiaohua Lv, Derong Li, Shaoqun Zeng, Huazhong University of Science and Technology.(China) [6826-155]
- ✓ **Compensation of the dispersion with an AOD in random scanning two-photon microscope**, Songchao Xue, Kun Bi, Shaoqun Zeng, Huazhong Univ. of Science and Technology (China) [6826-156]
- ✓ **Sensitivity analysis of spectral surface plasmon resonance biosensing system**, Xin Hong, 73 Grantchester Meadows, Cambridge, CB3 9JL (United Kingdom) [6826-18]
- ✓ **Near-infrared Raman spectroscopy for optical diagnosis of gastric precancer**, Seng Khoon Teh, Wei Zheng, Khok Yu Ho, Ming Teh, Khay Guan Yeoh, Zhiwei Huang, National University of Singapore. (Singapore) [6826-31]
- ✓ **The influence of experiment design on model precision in noninvasive glucose sensing by near-infrared spectroscopy**, Rong Liu, Huijuan Zhao, Kexin Xu, Tianjin Univ. (China) . [6826-39]
- ✓ **Preliminary study on Raman spectra of nasopharyngeal carcinoma in vitro**, Yongzeng Li, Rong Chen, Shangyuan Feng, Wei Huang, Shusen Xie, Fujian Normal Univ. (China) Jianji Pan, Fujian Provincial Tumor Hospital. (China) Haishan Zeng, BC Cancer Agency (Canada) [6826-70]
- ✓ **Surface-enhanced Raman spectroscopy of urine by an ingenious near-infrared Raman spectrometer**, Shangyuan Feng, Rong Chen, Fujian Normal Univ. (China) [6826-71]

- √ **Light transport model of frequency domain in n-layered mismatched tissue**, Xichang Wang, Yantai Univ. (China) [6826-03]
- √ **The light transport of finite size flat beam in multi-layered tissue**, Zhaokun Meng, Yantai Univ. (China) [6826-04]
- √ **Palm/finger print image matching technique used to eliminate the effect of measured position changes on optical probe-based measurement**, Jingying Jiang, Jing Gao, Wei Chen, Kexin Xu, Tianjin Univ. (China) [6826-16]
- √ **Three-dimensional biological microscopic image restoration with local regularization parameter based on wavelet domain**, Chen Hua, Wei Wei, Fuying Huang, School of Computer and Electronics and Information (China) [6826-32]
- √ **Diffuse optical tomography by dual-grid FEM strategy**, Yiwen Ma, Shaorun Gong, Fang Yang, Feng Gao, Tianjin Univ. (China) [6826-38]
- √ **Study on selective thermal effect of intense pulsed light (IPL)**, Yuhong Fang, Wei Gong, Shusen Xie, Fujian Normal Univ. (China) [6826-59]
- √ **Propagation of ultrasound modulation scattering signal in multi-layer scattering media: simulations and experiments**. Lili Zhu, Hui Li, Shaofeng Yang, Lihui Chen, Fujian Normal Univ. (China) [6826-61]
- √ **Near infrared spectrum simulation applied to human skin for diagnosis**, Yi-Chin Fang, Wei-Chi Zheng, National Kaohsiung First Univ. (China Taiwan) [6826-62]
- √ **Time-resolved breast tomographic imaging with panel detection mode: system and methodology preliminary** Xue Yuan, Miao Hui, Jingyi Wang, Huijuan Zhao, Feng Gao, Tianjin Univ. (China) [6826-78]
- √ **Three-dimensional image reconstruction for time-domain fluorescence molecular tomography based on generalized pulse spectrum technique**, Limin Zhang, Feng Gao, Huiyuan He, Pingqiao Ruan, Huijuan Zhao, Tianjin Univ. (China) [6826-06]
- √ **Frequency-domain inverse Monte Carlo simulation for the diagnosis of the early cervical cancer based on NIR diffuse measurement**, Huijuan Zhao, Zhaoxia Wang, Du Zhen, Ying-ting Jiang, Miao Hui, Tianjin Univ. (China) [6826-08]
- √ **Study plasma disintegration based on fluorescence spectroscopy**, Shumei Gao, Jiangnan Univ. (China) [6826-17]
- √ **Design and implementation of a fluorescence detection system for phenylketonuri screening**, Yuezhi Li, Xu Gang, Shenzhen Univ. (China), Xuemin Wang, Tianjin Univ. (China) [6826-20]
- √ **Laser-induced fluorescence image processing system for localization of nasopharyngeal carcinoma**, Lina Liu, Shusen Xie, Fujian Normal Univ. (China) [6826-22]
- √ **Measurement of intracellular pH (pHi) in a single living cell using fluorescent probe and fiber optic nanoprobe**, Qinmiao Chen, Yishen Qiu, Zhihao Chen, Na Fang, Gaoming Li, Fujian Normal Univ. (China) [6826-25]
- √ **Study on characteristic intrinsic fluorescence spectra of urine from ovarian cancer patients**, Jun Lu, Shumei Gao, School of Science, Jiang Nan Univ. (China) [6826-66]
- √ **Methods of observation on fluorescence micro-imaging for microalgae**, Lin Ou, Fujian Normal Univ. (China) [6826-84]
- √ **Research on fluorescence spectra of cancer blood**, Ying Liu, Kunxiang Liu, Xuzhou Normal Univ. (China) [6826-122]
- √ **Study on absorption spectrum of human high blood fat serum based on wavelet denoise**, Xin Guo, Zhimin Zhao, Weihua Zhu, Lexin Wang, Nanjing Univ. of Aeronautics and Astronautics. (China) [6826-126]
- √ **Study on effect of cholesterol consistency of human serum's infrared absorption spectrum**, Zhimin Zhao, Weihua Zhu, Xin Guo, Nanjing Univ of Aeronautics and Astronautics. (China); Hongbing Yao, Jiangsu Univ. (China) [6826-127]
- √ **Nucleoplasmic viscosity of living cells investigated by fluorescence correlation spectroscopy**, Lifang Liang, Xing Da, Tongshen Chen, Yihui Pei, MOE Key Lab of Laser Life Science and Inst., South China Normal Univ. (China) [6826-137]
- √ **Investigation of cholesterol concentration based on serum fluorescence spectra**, Weihua Zhu, College of Science, Hohai Univ. (China); Zhimin Zhao, College of Science, Nanjing Univ. of Aeronaut. (China) [6826-138]
- √ **CP-FEM-MC model applied to determine the best constant contact pressure in optical probe-based measurement**, Jingying Jiang, Wenjun Zhang, Chenxi Li, Kexin Xu, Tianjin Univ. (China) [6826-14]
- √ **Analysis and design of stereoscopic display in 3D endoscope**, Dawei Feng, Changchun Univ. of Science and Technology. (China) [6826-74]
- √ **Effect of HMME-PDT with different parameters in rabbit ear model: a possible way for hypertrophic scarring**, Hong Cai, Ying Gu, Chinese PLA Hospital. (China) [6826-46]
- √ **Optimal excitation wavelength for discrimination of nasopharyngeal carcinoma**. Buhong Li, Fujian Normal Univ. (China) [6826-51]
- √ **Analysis of proteinase activation by optic sensor during TRAIL-induced apoptosis**, Juqiang Lin, Fujian Normal Univ. (China)[6826-91]
- √ **Measurement of proteinase activation during multi-drug induced apoptosis by FRET technique**, Juqiang Lin, Rong Chen, Fujian Normal Univ. (China); Zhihong Zhang, Shaoqun Zeng, Qingming Luo, Huazhong Agricultural Univ. (China) [6826-93]
- √ **Simulation and modeling on the effects of cell proliferation of *Platymonas subcordiformis* irradiated by laser**, Lin Ou, Fujian Normal Univ.(China) [6826-100]
- √ **The interaction of chlorophyll derivative photosensitizer CPD3 with human breast cancer DNA**, Yang Zhang, Chen Ping, Lie Lin, Guoqing Tang, Nankai Univ. (China) [6826-107]
- √ **Classification of FTIR cancer data using wavelets and BPNN**, Cungui Cheng, Zhejiang Normal Univ. (China) [6826-148]
- √ **Targeting research of temperature sensitive nano-hydrogels using a near infrared imaging system**, Jian Zhang, Yueqing Gu, China Pharmaceutical Univ. (China) [6826-144]
- √ **Measurement of Rice Plant Height by Optical Imaging**, Kun Bi, Zhi Li, Zheng Fang, Qingmign Luo, Shaoqun Zeng, Qian Liu, Huazhong Univ. of Science and Technology (China) . . . [6826-158]
- √ **Dynamic activation of Src induced by low-power laser irradiation in living cells mediated by reactive oxygen species**, Juntao Zhang, Xuejuan Gao, Xing Da, South China Normal Univ. (China) [6826-134]
- √ **Insight into the effectivity of Bim in photodynamic therapy mediated apoptosis**, Xianwang Wang , Qun Chen, Yanchun Wei, Jiaying Song, South China Normal Univ. (China) [6826-160]

Room: 16 district, third floor, room 117

Monday-Tuesday 12-13 November 2007 • Proceeding of SPIE Vol. 6827A

Quantum Optics and Applications in Computing and Communications

Conference Chairs: **Guangcan Guo**, University of Science and Technology of China (China); **Songhao Liu**, South China Normal University (China)

Program Committee: **Hoi Fung Chau**, University of Hong Kong (Hong Kong China); **Byoung S. Ham**, Inha Univ. (South Korea); **Osamu Hirota**, Tamagawa University, (Japan); **Ling-An Wu**, Institute of Physics (China); **Andrew C. Yao**, Tsinghua University (China); **Kunchi Peng**, Shanxi University (China); **Jianwei Pan**, University of Science and Technology of China (China); **Weiping Zhang**, East China Normal University (China); **Mingsheng Zhan**, Wuhan Institute of Physics and Mathematics, CAS (China); **Shiqun Li**, Tsinghua University (China); **Luming Duan**, University of Michigan (USA)

Monday 12 November

SESSION 1

16 district, the third floor, room 117. Mon. 1:40pm to 3:00pm

Chairs: **Guangcan Guo**

1:40pm: **The separability of the evolved tripartite Gaussian state**, Xiao-yu Chen, Zhejiang Gongshang University (China) . . . [6827A-3]

2:00pm: **The thermal entanglement in a spin-1 Heisenberg XXZ chain**, Huiying Ni, Suzhou University (China), Jianxing Fang, Suzhou University (China) [6827A-5]

2:20pm: **Entanglement generation with coherent light via cross-Kerr-nonlinearity**, Zhi-Ming Zhang, South China Normal University (China), Jian Yang, South China Normal University (China), Yafei Yu, South China Normal University (China) [6827A-7]

2:40pm: **Teleportation under supervision: a reliable way to secure direct communication**, Yue Li, Huazhong University of Science and Technology (China), Yu Liu, Huazhong University of Science and Technology (China) [6827A-8]

Coffee/Tea Break 3:00pm to 3:30pm

SESSION 2

16 district, the third floor, room 117. Mon. 3:30 pm to 5:50 pm

Chairs: **Guangcan Guo**

3:30pm: **Long-distance decoy state quantum key distribution in telecom dark fiber**, Wei Chen, University of Science and Technology (China), Zhengfu Han, University of Science and Technology of China (China), Zhenqiang Yin, University of Science and Technology of China (China), Guo Wei, University of Science and Technology of China (China), Guangcan Guo, Key lab of quantum information, USTC, CAS (China) [6827A-11]

3:50pm: **Intercept-resending attack on quantum secret sharing based on Smolin bound entangled states**, Yafei Yu, South China Normal University (China) [6827A-17]

4:10pm: **A decoherence limit of quantum computation**, Li Yang, Graduate University of Chinese Academy of Sciences (China) [6827A-10]

4:30pm: **Single atoms in a far-off-resonance optical dipole trap**, Jing Wang, Shanxi University (China) [6827A-15]

4:50pm: **Single cold atoms in a far-off-resonance optical dipole trap**, Jing Wang, Shanxi University (China) [6827A-16]

5:10pm: **The entanglement condition of non-Gaussian state prepared by photon subtraction from two-mode squeeze....**, Xiaoyu Chen, Zhejiang Gongshang University (China) [6827A-2]

5:30pm: **Calibration research of analog detector based on correlated photons**, Jianjun Li, Chinese Academy of Sciences (China) [6827A-6]

Tuesday 13 November

SESSION 3

16 district, the third floor, room 117. Tues. 8:30am to 10:30am

Chairs: **Songhao Liu**

8:30am: **The study of single photon detector for quantum key distribution**, Zhengjun Wei, South China Normal University (China), Jindong Wang, South China Normal University (China), Peng Zhou, South China Normal University (China), Li Kaizhen, South China Normal University (China), Changjun Liao, South China Normal University, Song-Hao Liu, South China Normal University (China) [6827A-20]

8:50am: **Photonic technology in quantum information challenges quantum limitation**, Song-Hao Liu, South China Normal University (China), Changjun Liao, South China Normal Univ. (China) [6827A-22]

9:10am: **Light tunneling in epsilon-negative and mu-negative pair**, Tuanhui Feng, Tongji University (China), Yunhui Li, Tongji University (China), Hong Chen, Tongji University (China) [6827A-25]

9:30am: **Polarization coding and decoding by phase modulation in polarizing sagnac interferometers**, Liu/South China Normal Univ. (China) [6827A-29]

9:50am: **Experimental creation of high intensity three-photon Greenberg-Horne-Zeilinger entangled state**, Chunyan Wang, Weifang University (China) [6827A-28]

10:10am: **All-fiber pulsed sources of corrected photons pairs with high brightness for quantum information pro....**, Xiaoying Li, Tianjin University (China) [6827A-19]

Monday/Tuesday Posters

Time: Monday 12:30pm to Tuesday 11:30am

✓ **A quantum mathematical model to state single photon (electron) double-slit experiment, Fraunhofer a....**, Akbar Rahmani Nejad, Civil Aviation Organization (Iran) [6827A-1]

✓ **Complex amplification and non-symmetric amplitude damping of two-mode Gaussian state**, Li-Zhen Jiang, Zhejiang Gongshang University (China) [6827A-4]

✓ **Quantum authentication based on secret-order-transmitting particles**, Shan-Shan Huang, Huazhong University of Science and Technology (China) [6827A-9]

✓ **Probabilistic teleportation of two-unknown entangled atomic states without Bell-State measurement**, Xiaoyan Zhou, soochow University (China) Jianxing Fang, Soochow University (China) [6827A-12]

- √ **Quantum key distribution networks layer model**, Hao Wen, University of Science and Technology of China (China), Zhengfu Han, University of Science and Technology of China (China), Pei-Ling Hong, University of Science and Technology of China (China), Guangcan Guo, University of Science and Technology of China (China) [6827A-13]
- √ **Quantum Kirchhoff equation and energy fluctuation of mesoscopic electron resonator with linear dissipation**, Cui Yuanshun, Huaiyin Teachers College (China) [6827A-14]
- √ **Quantum interference in an $\bar{\sigma}$ system using a low frequency driving field**, Lijun Yang, Hebei University (China), Lianshui Zhang, Hebei University (China), Xiaomin Feng, Hebei University (China), Qinglin Guo, Hebei University (China) [6827A-18]
- √ **An infrared single photon detector based on avalanche photodiodes with transmission lines**, Jindong Wang, South China Normal University (China), Zhengjun Wei, South China Normal Univ. (China), Changjun Liao, South China Normal Univ. (China), Song-Hao Liu, South China Normal Univ. (China) [6827A-23]
- √ **The entanglement of optical NOON state in the damping and thermal noise environment**, Liang-Neng Wu, China Jiliang University (China), Li-Zhen Jiang, Zhejiang Gongshang University (China) [6827A-24]
- √ **Security strategy of EPR type protocol of quantum key distribution**, Chong Xiang, Loie (China), Li Yang, Graduate University of Chinese Academy of Sciences (China)... [6827A-27]
- √ **Transmit more than one classical bit with one photon**, Li Yang, Graduate University of Chinese Academy of Sciences (China) [6827A-21]
- √ **Quantum key distribution in deep space network**, Jili Wu, AFEU (China) [6827A-26]

Room: 16 District, second floor, room 79
Monday-Tuesday 12 - 13 November 2007 • Proceedings of SPIE Vol. 6827B

Advances in Optical Data Storage Technology

Conference Chairs: **Guofan Jin**, Tsinghua Univ. (China); **Kees A. Schouhamer Immink**, Turing Machines, Inc. (Netherlands); **Keiji Shono**, Fujitsu Labs. Ltd. (Japan)

Program Committee: **Dianyong Chen**, Philips Research East Asia (China); **Tow Chong Chong**, National Univ. of Singapore (Singapore); **Fuxi Gan**, Shanghai Institute of Optics and Fine Mechanics (China); **Qingsheng He**, Tsinghua Univ. (China); **Ken-ichi Itoh**, Fujitsu Labs. Ltd. (Japan); **Takeshi Matsui**, Ricoh Co., Ltd. (Japan); **Takeo Ohta**, Ovonic Phase Change Institute (Japan); **Yoshihiro Okino**, Kansai Univ. (Japan); **Longfa Pan**, Tsinghua Univ. (China); **No-Cheol Park**, Yonsei Univ. (South Korea); **Ailun Rong**, Beihang Univ. (China); **H. Sadik**, Call & Recall Inc. (USA); **Luping Shi**, National Univ. of Singapore (Singapore); **Han-Ping David Shieh**, National Chiao Tung Univ. (Taiwan, China); **Shiquan Tao**, Beijing Univ. of Technology (China); **Motoyasu Terao**, Hitachi, Ltd. (Japan); **Din-Ping Tsai**, National Taiwan Univ. (Taiwan, China); **Kiichi Ueyanagi**, Fuji Xerox Co., Ltd. (Japan); Paul Weijenberg, (Netherlands)

Tuesday 13 November

SESSION 1

16 District, the Second floor, Room 79 Tue. 8:30am to 11:00am

Holographic data storage

Chair: **Qingsheng He**, Tsinghua University (China)

8:30am: **Multiplexed recording of holograms in doubly doped LiNbO₃ crystals** (*Invited paper*), Zhuqing Jiang, Xiong Li, Yanbin Sun, Shiquan Tao, Beijing Univ. of Technology (China) . . . [6827B-50]

9:00am: **Enhancements of recording and readout for the photopolymer holographic disk system by using** (*Invited paper*), Liangcai Cao, Zhen Zhao, Huarong Gu, Haoyun Wei, Qingsheng He, Guofan Jin, Tsinghua University (China) [6827B-55]

9:30am: **Encrypted Fourier holographic data storage with variable data reference wave for optical information**, M.K. Sheeja, SCT College of Engineering (India); Longfa Pan, Tsinghua Univ.(China); Jianshe Ma, Tsinghua Univ. (China) [6827B-33]

9:50am: **Optical discrete Walsh transform based on volume holographic correlator**, Qiang Ma, Ren Wei, Liangcai Cao, Qingsheng He, Guofan Jin, Tsinghua University (China) . . [6827B-42]

Coffee/Tea Break 10:10am to 10:40am

10:40am: **Application of phase masks in volume holographic data storage system and correlators**, Wei Ren, Qiang Ma, Liangcai Cao, Qingsheng He, Guofan Jin, Tsinghua University (China) . . [6827B-44]

SESSION 2

16 District, the Second floor, Room 79 Tue. 11:00am to 2:10pm

Optical Storage Material

Chair: **Shiquan Tao**, Beijing Univ. of Technology (China)

11:00am: **Coherent scattering noise properties of a blue laser sensitized holographic photopolymer material** (*Invited paper*), Yuhong Wan, Shiquan Tao, Beijing Univ. of Technology (China) [6827B-48]

11:30am: **Dibenzotetraaza [14] annulene materials for recordable blue laser optical disc**, Yuejing Bin, Fuqun Zhao, Lei Huang, Zhongyu Li, Fushi Zhang, Tsinghua University (China) [6827B-47]

11:50am: **Experimental research on electrically controllable holography in KLTN: Cu crystal**, Qianli Zhai, Yue Zhang, Shiquan Tao, Guoqing Liu, Yuhong Wan, Zhuqing Jiang, Beijing Univ. of Technology (China) [6827B-52]

Lunch Break 12:10pm to 1:30pm

1:30pm: **Direct readout based on the UV-vis spectral changes: toward the most convenient nondestructive data ...**, Zihui Chen, Tsinghua University (China) [6827B-34]

1:50pm: **Study on the holographic characteristics of photopolymer sensitized by acridine orange**, Daoguang Tang, Yong Xiao, Henan University (China) [6827B-32]

SESSION 3

16 District, the Second floor, Room 79 Tue. 2:10pm to 5:30pm

Optical disk Storage system

Chair: **Longfa Pan**, Tsinghua Univ. (China)

2:10pm: **Optical head design using prism-type holographic optical element for small form factor applications** (*Invited paper*), Hsi-Fu Shih, National Chung Hsing University (Taiwan China), Yuan-Chin Lee, ITRI (Taiwan China), Yi Chiu, National Chiao Tung University (Taiwan China) [6827B-51]

2:40pm: **The progress of ultrahigh density near-field optical storage pre-investigated** (*Invited Paper*), Shi Pan, Dalian University of Technology (China) [6827B-54]

Coffee/Tea Break 3:10pm to 3:40pm

3:40pm: **Modulation codes for multilevel run-length limited read-only optical disc** (*invited paper*), Hua Hu, Longfa Pan, Tsinghua University (China) [6827B-43]

4:10pm: **Analysis and design of suspension wire in the optical pick-up actuator**, Buqing Zhang, Jianshe Ma, Longfa Pan, Tsinghua Univ. (China); LanYing Wu, University of science and technology (China); LongYun Xu, University of Shanghai for Science and Technology (China) [6827B-35]

4:30pm: **Collimating and beam shaping system for blu-ray disc optical pick-up**, Lihua Li, Tsinghua University (China) . . [6827B-33]

4:50pm: **PRML detection of multilevel run-length limited DVD system**, Hua hu, Longfa Pan, Tsinghua University (China)[6827B-46]

5:10pm: **Coherent scattering noise properties of a blue laser sensitized holographic photopolymer material**, Yuhong Wan, Beijing Univ. of Technology (China) [6827B-48]

Monday/Tuesday Posters

Time: Monday 12:30 pm to Tuesday 11:30 am

- √ **Study of the image quality based on MTF in volume hologram storage system**, Tao Geng, Harbin Engineering University (China) [6827B-39]
- √ **Computer calculation and simulation in confocal multilayer optic storage**, Pinchun Kang, Xiamen University (China) [6827B-31]
- √ **A photopolymer material sensitized by acridine orange for holographic storage**, Daoguang Tang, Yong Xiao, Ruoping Li, Caixia Sun, Mingju Huang, Henan University (China) . . [6827B-36]
- √ **Tunable superresolution in the super high-density optical storage**, Maojin Yun, Qingdao Univ. of Science and Technology (China); Mei Wang, Weijin Kong, Qingdao Univ. (China) [6827B-37]
- √ **Investigation of structure and optical properties of Nd, Zn double-doped LiNbO₃ crystals**, Tao Zhang, Tao Geng, Harbin Engineering University (China) [6827B-38]
- √ **Phase modulation based holographic data storage with reference wave encryption**, Mingzhao He, Liangcai Cao, Qingsheng He, Guofan Jin, Tsinghua University (China) [6827B-40]
- √ **Optimization of the geometrical shape of the aperture in holographic data storage system**, Huarong Gu, Songfeng Yin, Qiaofeng Tan, Liangcai Cao, Qingsheng He, Guofan Jin, Tsinghua University (China) [6827B-41]
- √ **High accurate volume holographic correlator with 4000 parallel correlation channels**, Kai Ni, Zongyao Qu, Liangcai Cao, Ping Su, Qingsheng He, Guofan Jin, Tsinghua University (China) [6827B-45]
- √ **Focus servo subsystem design for hybrid magneto-optical recording testing system**, Zhu Qing, Wendong Xu, Shanghai Institute of Optics and Fine Mechanics (China) [6827B-49]
- √ **Embedded system of image storage based on fiber channel**, Xiaodong Chen, Wanxin Su, CIOMP (China) [6827B-53]

Room: 16 district, second floor, room 80
Tuesday-Wednesday 13 - 14 November 2007 • Proceedings of SPIE Vol.6827C

Advanced Microlithography Technology

Conference Chairs: **Chris A. Mack**, Lithoguru.com (USA); **Jinfeng Kang**, Peking Univ. (China); **Jun-en Yao**, Beijing Institute of Aeronautics and Astronautics (China)

Program Committee: **Christopher J. Progler**, Photronics, Inc. (USA); **Alek C. Chen**, ASML Taiwan Ltd. (Taiwan, China); **Kohji Hashimoto**, Toshiba Corp. (Japan); **Chin-Hsiang Lin**, Taiwan Semiconductor Manufacturing Co., Ltd. (Taiwan, China); **Ming Liu**, Institute of Microelectronics (China); **Chienming Wang**, Semiconductor Manufacturing International Corp. (China); **Yanqui Li**, Institute of Electrical Engineering (China)

Tuesday 13 November

SESSION 1

16 District, the Second floor, Room 80 Tue. 8:30am to 10:10am

Leading Edge Optical Lithography

Chair: **Vivek Singh**, Intel (USA)

- 8:30am: **45nm & Beyond Lithography Approach** (*Invited paper*), Oliver Li, SMIC (China) [6827C-76]
- 9:00am: **Evolution as applied to optical lithography** (*Invited paper*), Donis Flagello, ASML (USA) [6827C-77]
- 9:30am: **The contact hole solutions for future logic technology nodes**, Alek Chen, ASML Taiwan Ltd (Taiwan China); Steven Hansen, ASML (USA) [6827C-72]
- 9:50am: **Impact of source polarization on the imaging of line and space features at 45-nm half-pitch node**, Zhou Yuan, Yanqiu Li, Institute of Electrical Engineering (China) [6827C-73]
- Coffee/Tea Break 10:10AM to 10:40AM

SESSION 2

16 District, the Second floor, Room 80 Tue. 10:40am to 3:00pm

Computational Lithography and OPC

Chair: **Donis Flagello**, ASML (USA)

- 10:40am: **Computational Lithography – the New Enabler of Moore’s Law** (*Invited paper*), Vivek Singh, Intel (USA) . . . [6827C-81]
- 11:10am: **RET and computational lithography at 45-nm and beyond** (*Invited paper*), Frank Schellenberg, Mentor Graphics (USA) [6827C-79]
- 11:40am: **A novel method for measuring the coma aberration of lithographic projection optics by relative image...**, Qiongyan Yuan, Xiangzhao Wang, Zicheng Qiu, Shanghai Institute of Optics and Fine Mechanics (China); Fan Wang, National Engineering (China); Mingying Ma, National Engineering Research Center for Lithography (China) [6827C-75]
- 12:00pm: **Free-standing SU-8 gratings fabricated by sacrificial layer-assisted UV curing imprint**, Xudi Wang, Hefei University of Technology (China); Zhijun Zhang, University of Science and Technology of China (China); Yanlin Liao, Anhui University (China); Liangjin Ge, Shaojun Fu, University of Science and Technology of China (China) [6827C-64]
- Lunch Break 12:20PM to 1:40PM
- 1:40pm: **Advances in OPC technology and development of ZOPC tool** (*Invited paper*), Xiaolang Yan, Zheng Shi, Ye Chen, Qijun Chen, Zhejiang University (China) [6827C-71]
- 2:10pm: **Lithography Options for the 32nm Half Pitch Node and Their Implications on Resist Technology** (*Invited paper*), Roel Gronheid, Imec (Belgium) [6827C-80]
- 2:40pm: **A novel model calibration system based on sampling on mask and TCC matrix**, Shan-hu Shen, Zhejiang university (China) [6827C-70]
- Coffee/Tea Break 3:00PM to 3:30PM

SESSION 3

16 District, the Second floor, Room 80 Tue. 3:30pm to 4:10pm

New-generation Lithography Technologies

Chair: **Mike Adel**, KLA-Tencor (Israel)

- 3:30pm: **Analysis of the resolution doubling technique of high-resolution gratings by x-ray lithography**, Jie Ma, Xiaoli Zhu, Changqing Xie, Institute of Microelectronics, CAS (China) [6827C-83]
- 3:50pm: **Phase-type focusing grating based on micro-optics technique** (*Contributed*), Changbao Hu, Zhenjiang He, Yiping XU, Huosheng He, School of Physics & Telecom Engineering, South Chi (China) [6827C-67]
- 4:10pm: **Research on the filter system of making diffractive micro-lens**, Sunchunhua Xiaosun, Nanchang Hongkong University (China) [6827C-62]

SESSION 4

16 District, the Second floor, Room 80 Tue. 4:10pm to 5:20pm

Metrology for Lithography

Chair: **Chris Mack**, Lithoguru.com (USA)

- 4:30pm: **Challenges of transitioning from linear to high order overlay control** (*Invited paper*), Mike Adel, KLA-Tencor (Israel) [6827C-78]
- 5:00pm: **Bare wafer metrology challenges in microlithography at 45-nm node and beyond**, Chunsheng Huang, KLA-Tencor Corp. ADE (USA) [6827C-68]
- 5:20pm: **Photo system based on scanning electron microscope for IC chip inspection**, Liu Wei, Shandong University of Technology (China) [6827C-63]

Tuesday/Wednesday Posters

Time: Tuesday 12:30pm to Wednesday 11:30am

- ✓ **Slope-integrated methodology for OPC model calibration**, Liang Zhu, Mark Lu, Dion King, Yili Gu, Steve Yang, Grace Semiconductor Manufacturing Corp (China); Gensheng Gao, Mentor Graphics Corp (China) [6827C-58]
- ✓ **Layout optimization for thick-film resist overlay metrology**, Liang Zhu, James Li, Brian Zhou, Yili Gu, Steve Yang, Grace Semiconductor Manufacturing Corp (China) [6827C-60]
- ✓ **Study on the MEMS Technique of Flat Capacitance Sensor with Double Equipotential Rings in Ultra-precise Optical Measurement**, Xiao-dong Yang, Jian-huan Zhang, Xiamen Univ. (China) [6827C-61]
- ✓ **Analysis of property of HSQ in electron-beam lithography**, Min Zhao, BaoQing Chen, ChangQing Xie, XiaoLi Zhu, Min Liu, Institute of Microelectronics, CAS (China) [6827C-66]
- ✓ **2 nm Reorientation & Repeatability Parallel Electronic Datum System**, Xiang-Wen Xiong, Zhongheng High-Tech Inc (China) [6827C-74]

Room: 16 district, third floor, room 115

Monday-Wednesday 12-15 November 2007 • Proceeding of SPIE Vol.6828

Light-Emitting Diode Materials and Devices II

Conference Chairs: **Jian Wang**, South China Univ. of Technology (China); **Changhee Lee**, Seoul National Univ. of Technology (South Korea); **Hezhou Wang**, Zhongshan Univ. (China)

Program Committee: **Gang Yu**, CBrite, Inc. (USA); **Ching W. Tang**, Univ. of Rochester (USA); **Yanbing Hou**, Beijing Jiaotong Univ. (China); **Yong Qiu**, Tsinghua Univ. (China); **Franky So**, Univ. of Florida (USA); **Yuguang Ma**, Jilin Univ. (China)

Monday 12 November

SESSION 1

16 district, the third floor, room 115. Mon.1:40pm to 3:10pm

Organic Optoelectronic Materials I

Chair: Changhee Lee; Jian Pei

- 1:40pm: **Bipolar host materials for red and green phosphorescent OLEDs** (*Invited paper*), Jang Kwon, Kyunghee Univ. (South Korea) [6828-35]
- 2:10pm: **pi-Conjugated Dendrimers as Blue Light-Emitting Materials**, Yuguang Ma, Peking Univ. (China) [6828-43]
- 2:30pm: **New OLED materials for solution processing**, Xuhui Zhu, South China Univ. of Technology (China) [6828-46]
- 2:50pm: **Small Molecules with Ambipolar Transporting Properties for Efficient OLEDs**, Yong Qiu, Tsinghua Univ. (China) [6828-34]
- Coffee/Tea Break 3:10 pm to 3:40pm

SESSION 2

16 district, the third floor, room 115. Mon.3:40pm to 5:10pm

Organic Optoelectronic Materials I I

Chair: Fenglian Bai; Jang H. Kwon

- 3:40pm: **Nanosized Gradient p-Conjugated Thienylethynylene Dendrimers for Light- Harvesting: Synthesis and Properties** (*Invited paper*), Jian Pei, Peking Univ. (China) [6828-47]
- 4:10pm: **Organic luminescent nanowires – fabrication and characterization**, Alan Ng, Univ. of Hong Kong (Hong Kong China) [6828-30]
- 4:30pm: **Studying the effect of polymer molecular weight and solvent on the photoluminescence of dye-doped polymer oled**, Ezeddin Mohajerani, Shahid Beheshti Univ. (Iran) [6828-20]
- 4:50pm: **A stable red emission in polymer light emitting diodes based on phenothiazine derivative**, Huayu Cao, Peking Univ. (China) [6828-18]

Tuesday 13 November

SESSION 3

16 district, the third floor, room 115. Tues.8:00am to 9:30am

Organic Optoelectronic Materials III

Chair: Byung Doo Chin; Yanbing Hou

- 8:00am: **Red light emitting compounds based on 3D conjugated structure with intra- molecular charge transfer** (*Invited paper*), Fenglian Bai, Institute of Chemistry Red light emitting compounds based on 3D conjugated structure with intramolecular charge transfer. (China) [6828-41]
- 8:30am: **Organic White Light-Emitting Diodes Using a New DCM Derivative as a Doping Molecule**, Hwang, Kumoh National Institute of Technology [6828-52]
- 8:50am: **Color tunable conductive vinyl copolymers for OLED applications**, Louis Leung, Hong Kong Baptist Univ. (Hong Kong China) [6828-2]
- 9:10am: **Synthesis and electroluminescent properties of a new rare-earth europium complex**, Fan Wei, Changchun Univ. of Science and Technology (China) [6828-8]
- Coffee/Tea Break 9:30 pm to 10:00pm

SESSION 4

16 district, the third floor, room 115. Tues.10:00am to 12:10pm

Organic Optoelectronic Devices I

Chair: Junbiao Peng; Zhiyuan Xie

- 10:00am: **R&D advance on white OLEDs for lighting** (*Invited paper*), Dongge Ma, Changchun Institute of Applied Chemistry [6828-51]
- 10:30am: **Methods for Balanced Charge Carriers and, Byung Chin**, Byung Chin, Material Science and Technology Division. (USA) [6828-39]
- 10:50am: **Color-controllable Light Emitting Devices**, Dechun Zou, Peking Univ. (China) [6828-38]
- 11:10am: **High-Efficiency Red Light-Emitting Devices Using Copolymer Containing Charged Iridium Complex in the Side Chain**, Jian Wang, South China Univ. of Technology. (China) [6828-45]
- 11:30am: **Study of MIC Poly-Si anode based on organic light emitting device**, Yang Li, Nankai Univ. (China) [6828-9]
- 11:50am: **Efficient Non-Doped Organic Light-Emitting Diodes Based on Small-Molecule Emitters**, Yu Liu, Jilin Univ. (China) [6828-40]
- Lunch Break 12:10pm to 1:30pm

SESSION 5

16 district, the third floor, room 115. Tues.1:30pm to 3:30pm

Organic Optoelectronic Devices II*Chair: Dongge Ma; Xiaoxuan Xu*

- 1:30pm: **Saturated red polymer light emitting material and display** (*Invited paper*), Junbiao Peng, South China University of Technology (China) [6828-49]
- 2:00pm: **Host engineering for high efficiency in phosphorescent organic light emitting diodes**, Jun Yeob Lee, Dankook Univ. (South Korea) [6828-48]
- 2:50pm: **Enhanced electron injection in inverted top-emitting OLEDs with n-Si cathode by using Cs₂CO₃ buffer layer**, Shuming Chen, Sun Yat-Sen Univ. (China) [6828-16]
- 3:10pm: **Improved efficiency in top-emitting OLEDs with p-Si anode**, Yongbo Yuan, Sun Yat-Sen Univ. (China) [6828-15]
- Coffee/Tea Break 3:30pm to 4:00pm

SESSION 6

16 district, the third floor, room 115. Tues.4:00pm to 5:30pm

Process and Applications*Chair: Dechun Zou; Jian Wang*

- 4:00pm: **Properties of Polymers Fabricated in Presence of Electric Field** (*Invited paper*), Yanbing Hou, Beijing Jiaotong Univ. (China) [6828-36]
- 4:30pm: **Study on the Degradation of PLEDs by In-Situ Micro-Raman Spectroscopy**, Xiaoxuan Xu, Nankai Univ. (China) [6828-44]
- 4:50pm: **A novel TFT-LCD drive method based on quantum genetic algorithm**, Zhijie Tang, Shanghai Univ. (China) . . . [6828-7]
- 5:10pm: **Electrically-tunable polarization-independent grating based on polymer-stabilized liquid crystals**, Ezeddin Mohajerani, Shahid Beheshti Univ. (Iran) [6828-21]

Wednesday 14 November**SESSION 7**

16 district, the third floor, room 115. Wed.8:00am to 9:40am

Inorganic Devices I*Chair: Jun Ho Lee*

- 8:00am: **The fabrication of high-brightness and high-power InGaAlP single-side red LED** (*Invited paper*), Xiaoli Wang, Tianjin Polytechnic University. (China) [6828-26]
- 8:30am: **Effects of pretreatment for sapphire on GaN optical properties** (*Invited paper*), Dongsheng Peng, Institute of Optoelectronics Shenzhen University. (China) [6828-17]
- 9:00am: **Online non-contact detection for LED chips**, Ping Li, Chongqing University. (China) [6828-28]
- 9:20am: **Study of chroma balance based on grating spectrometer**, Wenjun Sun, Harbin Normal Univ. (China) [6828-4]
- Coffee/Tea Break 9:40am to 10:10am

SESSION 8

16 district, the third floor, room 115. Wed.10:10am to 12:10pm

Inorganic Devices II*Chair: Pingjuan Niu*

- 10:10am: **LED light coupler design for a very thin lightguide** (*Invited paper*), Jun Ho Lee, Kongju National Univ. (South Korea) [6828-1]
- 10:40am: **Modified side emitting light emitting diodes for the bottom-lit backlight module** (*Invited paper*), Chi-Feng Chen, National Central Univ. (Taiwan) [6828-33]
- 11:10am: **A new gold bump-making method for high power LED flip chip**, Hongwei Liu, Tianjin polytechnic University. (China) [6828-29]
- 11:30am: **Enhanced light extraction efficacy from AlGaInP red LED with holographically-generated two-dimension...**, Yanling Li, Tianjin Polytechnic University. (China) [6828-27]
- 11:50am: **Growth GaN with SiNx interlayer by MOCVD on Si(111) substrates**, Zhanguo Li, Changchun University of Science and Technology [6828-3]

SESSION 9

16 district, the third floor, room 115. Wed.1:30pm to 3:20pm

Inorganic Materials and applications*Chair: Ruisheng Zheng*

- 1:30pm: **Lasing with the Shortest Wavelength in Substituted ZnO and a New Concept of Lasing in Nanocrystal** (*Invited paper*), Cairong Ding, Zhongshan (Sun Yat-Sen) University. (China) [6828-42]
- 2:00pm: **Effect of hydrogen dilution on photoluminescent properties of nanocrystalline SiC films deposited by...**, Wei Yu, hebei university. (China) [6828-19]
- 2:20pm: **Synthesis and luminous characteristics of Ba₂SiO₃Cl₂:Eu²⁺, Mn²⁺ Phosphor for white LED**, Changyu Shen, China Jiliang University. (China) [6828-6]
- 2:40pm: **Color uniformity in high-power RGB LED modules using different LED arrays**, Tu Yan, China Jiliang University. (China) [6828-25]
- 3:00pm: **A novel submersible phytoplankton fluorometer with multi-wavelength light emitting diode array as ex...**, Zhigang Wang, Anhui Institute of Optics and Fine Mechanics. (China) [6828-5]
- Coffee/Tea Break 3:20pm to 3:50pm

Tuesday to Wednesday Posters**Time: Tuesday 12:30pm to Wednesday 11:30am**

- ✓ **Trans-cis-trans photoisomerization as an all-optical switching in azo-dye-doped polymer waveguide**, Ezeddin Mohajerani, Shahid Beheshti Univ. (Iran) [6828-22]
- ✓ **A new method of YAG:Ce phosphor fabrication**, Xiaosong Zhang, Tianjin Univ. of Technology (China) [6828-31]
- ✓ **Preparation And Luminescence Properties SrAl₂O₄:Tb VUV Phosphor**, Xiaosong Zhang, Tianjin Univ. of Technology (China) [6828-32]

Room: 16 district, second floor, room 72
Monday-Wednesday 12-14 November 2007 • Proceeding of SPIE Vol.6829

Advanced Materials and Devices for Sensing and Imaging

Conference Chairs: **Anbo Wang**, Virginia Polytechnic Institute and State Univ. (USA); **Yimo Zhang**, Tianjin Univ. (China); **Yukihiro Ishii**, Tokyo Univ. of Science (Japan)

Program Committee: **Jun Chen**, Tokyo Polytechnic Univ. (Japan); **Xiangang Luo**, Chengdu Opto-Electric Institute, (China); **Kazuhiko Oka**, Hokkaido Univ. (Japan); **Ribun Onodera**, Univ. of Industrial Technology (Japan); **Yukitoshi Otani**, Tokyo Univ. of Agriculture and Technology (Japan); **Gang-Ding Peng**, Univ. of New South Wales (Australia); **Yunjiang Rao**, Chengdu Univ. of Electronic Science and Technology (China); **Osami Sasaki**, Niigata Univ. (Japan); **Tsutomu Shimura**, Univ. of Tokyo (Japan); **Hongbo Sun**, Jilin Univ. (China); **Mitsuo Takeda**, Univ. of Electro-Communications (Japan); **Yaolin Wang**, Shanghai Institute of Micro-Systems (China); **Hai Xiao**, Univ. of Missouri –Rolla (USA); **Miao Yu**, Univ. of Maryland (USA)

Monday 12 November

SESSION 1

16 district, the second floor, room 72 Mon.1:00pm to 2:50pm

Advanced Materials and Applications

Chair: **Hong-Bo Sun**

1:00pm: **Photorefractive effect of ferroelectric liquid crystals with application of alternating electric field** (*Invited Paper*), Takeo Sasaki, Tokyo Univ. of Science (Japan) [6829-19]

1:30pm: **Study of channel character of solar blind UV communication**, Yi Tang, Guoqiang Ni, Beijing Institute of Technology (China) [6829-82]

1:50pm: **Fabrication, characterization, and optimization of ion-exchanged optical waveguide**, Rajesh Kumar, Sikkim Manipal Institute of Technology (India); Gopal Thapa, Sonia Ghaninder, Sikkim Manipal Institute of Technology (India); Sachin Sharma, Krishna Institute of Technology (India); Sanjay Dahal, Sikkim Manipal Institute of Technology (India); Dharmendra Kumar, Krishna Institute of Technology (India) [6829-10]

2:10pm: **Preparations of Bi³⁺-doped TiO₂ thin films and study of characteristics on photocatalytic activity**, Guofeng Pan, Ping He, Yicai Sun, Hebei University of Technology (China) [6829-60]

2:30pm: **FDTD simulation on wave propagation in a beam splitter by an anisotropic metamaterial slab**, MaoYan Wang, (China); Jian Wu (USA); Jun Xu, UESTC (China) [6829-81]

Coffee/Tea Break 2:50pm to 3:20pm

SESSION 2

16 district, the second floor, room 72 Mon.3:20pm to 5:20pm

Laser Interferometry & Optical Profilometry

Chair: **Jun Chen**, Tokyo Polytechnic Univ. (Japan)

3:20pm: **Sinusoidal wavelength-scanning interferometers for shape measurements** (*Invited Paper*), Osami Sasaki, Niigata Univ. (Japan) [6829-56]

3:50pm: **Depth scanning with wavelength-stepped laser-diode interferometer** (*Invited Paper*), Ribun Onodera, Univ. of Industrial Technology (Japan); Yukihiro Ishii, Tokyo University of Science (Japan) [6829-84]

4:20pm: **Phase-shifting laser diode Sagnac interferometer for surface profile measurement**, Takamasa Suzuki, Masato Shirai, Osami Sasaki, Niigata Univ. (Japan) [6829-33]

4:40pm: **Multi-period fringe projection interferometry using back-propagation method for shape measurement of...**, Hai Huan, Osami Sasaki, Takamasa Suzuki, Niigata University (Japan) [6829-91]

5:00pm: **Surface profile detection for nano-structures by Mueller matrix**, Tomohito Kuwagatio, Yasuhito Mizutani, Tokyo Univ. of Agriculture and Technology (Japan); Mitsuhito Ishihara, TAKAOKA ELECTRIC MFG. CO., LTD. (Japan); Yukitoshi Otani, Tokyo Univ. of Agriculture and Technology (Japan) [6829-87]

Tuesday 13 November

SESSION 3

16 district, the second floor, room 72 Tue.8:30am to 10:10am

Optical Metrology, Sensing, and Imaging

Chair: **Ribun Onodera**

8:30am: **Impact of variable-refractive-index air medium on optical imaging by thermal disturbance** (*Invited Paper*), Zhan-Hua Huang, Jia-Jia Chen, Meng Zhu, Yin-Xin Zhang, Huai-Yu Cai, Tianjin University (China) [6829-6]

9:00am: **Influence of angle misalignment on detection polarization coupling in white light interferometer** (*Invited Paper*), Hongxia Zhang, Wencai Jing, Dagong Jia, Tianhua Xu, Kun Liu, Yimo Zhang, Tianjin University (China) [6829-34]

9:30am: **UV-VUV spectral irradiance responsivity calibration for remote sensing radiometer**, Huang Yu, Shu Rong Wang, CIOMP (China) [6829-48]

9:50am: **Design of the microscopic imaging spectroscopy based on linear tunable filter and its application**, Jin Wang, Tianjin Univ. (China) [6829-65]

Coffee/Tea Break 10:10am to 10:40am

SESSION 4

16 district, the second floor, room 72 Tue.10:40am to 11:50am

Optical Metrology and Range Measurement*Chair: Yun-Jiang Rao*

10:20am:**Absolute distance measurements using a fiber tip sensor based on frequency scanning interferometry** (*Invited Paper*), Yanmei Han, Greg Moss, John Dale, John Green, Armin Reichold, Oxford University (United Kingdom) [6829-70]

10:50am:**Study on key techniques for synthetic aperture lidar system**, Changqing Cao, Xidian Univ. (China) [6829-1]

11:10am:**Precision circular target location in vision coordinate measurement system**, Zhijing Yu, Dongrui He, Civil Aviation University of China(China); Xiayan Si, Northeast Dianli University(China); Xinxin Li, Civil Aviation University of China (China) [6829-35]

11:30pm:**Application of improved cubic convolution interpolation in circular target location**, Zhijing Yu, Civil Aviation University of China (China); Xiayan Si, Northeast Dianli University (China); Dongrui He, Lei Zhang, Qingji Gao, Civil Aviation University of China (China) [6829-37]

Lunch Break 11:50am to 1:30pm

SESSION 5

16 district, the second floor, room 72 Tue. 1:30pm to 3:20pm

Materials and Devices for Optical Metrology*Chair: Yukitoshi Otani, Tokyo Univ. of Agriculture and Technology (Japan)*

1:30pm:**Microfabrication of conducting polymers by two-photon excitation** (*Invited Paper*), Jun Chen, Masakazu Hori, Katsumi Yamada, Shuichi Kawabata, Tokyo Polytechnic Univ. (Japan) [6829-43]

2:00pm:**Online measuring method for PCB film using linear CCD**, Ye Ting, Kaihua Wu, Hangzhou Dianzi University (China) . . [6829-44]

2:20pm: **Self-compensation effect of the as in-situ impurity in MCT: first-principles study**, Lizhong Sun, Xiangtan University (China); Xiaosuang Chen, Wei Lu, Shanghai Institute of Technical Physics (China) [6829-22]

2:40pm: **Research on structural properties of ZnO thin films deposited on different substrates**, Ximing Chen, Tianjin University of Technology (China) [6829-79]

3:00pm:**Measurement method of absolute temperature of metal features in Si and mask matrix using pump-probe ...**, Roman Kris, Danny Grossman, Moshe Langer, Applied Materials (Israel) [6829-83]

Coffee/Tea Break 3:20pm to 3:40pm

SESSION 6

16 district, the second floor, room 72 Tue. 3:40pm to 5:40pm

Measurement Systems for Sensing Devices*Chair: Xiangang Luo*

3:40pm: **Snapshot imaging polarimeter by use of birefringent wedge prisms** (*Invited Paper*), Kazuhiko Oka, Hokkaido Univ. (Japan) [6829-80]

4:10pm: **Birefringence dispersion mapping by geometric phase shifter** (*Invited Paper*), Yukitoshi Otani, Tokyo Univ. of Agriculture and Technology (Japan); Toshitaka Wakayama, Saitama Medical University (Japan) [6829-86]

4:40pm: **Frequency stabilization of a semiconductor laser using both the Rb saturated absorption profiles and...**, Kenji Nakano, Shinya Maehara, Mitsusuke Yanagisawa, Kohei Doi, Takashi Sato, Masashi Ohkawa, Takeo Maruyama, Niigata Univ. (Japan); Seiji Kawamura, National Astronomical Observatory of Japan (Japan) [6829-30]

5:00pm: **Effect of misalignment on rotating coupling efficiency of Dove prism**, Dagong Jia, Changsong Yu, Wencai Jing, Hongxia Zhang, Yimo Zhang, Tianjin Univ. (China) [6829-38]

5:20pm: **Preparation of ZnO by Sol-Gel and analysis of its voltage-sensitive property**, Ping He, Guofeng Pan, Hebei University of Technology (China) [6829-46]

Wednesday 14 November**SESSION 7**

16 district, the second floor, room 72 . . . Wed. 8:30am to 10:00am

Materials and Devices for Fiber Sensors 1*Chair: Takamasa Suzuki, Niigata Univ. (Japan)*

8:30am: **Scanned Talbot interferometer based on fiber translation for changing written** (*Invited Paper*), Chuan Li, Kunming University of Science and Technology (China); Yi-Mo Zhang, Tie-gen Liu, Jun-feng Jiang, Tianjin University (China) [6829-4]

9:00am: **Influence of birefringence dispersion on spatial resolution of a distributed stress sensor using bir...**, Tianhua Xu, Wencai Jing, Hongxia Zhang, Cen Huang, Kun Liu, Dagong Jia, Yimo Zhang, Tianjin University (China) [6829-45]

9:20am: **A New Fiber Fabry-Perot Cavity Sensor**, Yingjun Gao, Jinan Univ. (China) [6829-85]

9:40am: **Fabrication of intensity-based fiber optic pH sensor**, Sanjay Dahal, Shibabrata Basak, Sarmila Dutta, Sikkim Manipal Institute of Technology (India); Sachin Sharma, Dharmendra Kumar, Krishna Institute of Technology (India); Sanjay Dahal, Sikkim Manipal Institute of Technology (India) [6829-11]

Coffee/Tea Break 10:00am to 10:30am

SESSION 8

16 district, the second floor, room 72 .. Wed. 10:30am to 11:30pm

Materials and Devices for Fiber Sensors 2

Chair: Yaolin Wang,

- 10:30am: **Study of fiber's photosensitivity with boron doped in the fiber's core**, Tu Feng, Yangtze Optical Fibre and Cable Co Ltd. (China) [6829-77]
- 10:50pm: **A New Fiber Fabry-Perot Cavity Sensor**, Yingjun Gao, Jinan Univ. (China) [6829-85]
- 11:10am: **Application research of distributed optical fiber temperature sensor in harbor equipment**, Jianfeng Wang, China Jiliang University (China) [6829-51]
- Lunch Break 11:30am to 2:00pm

SESSION 9

16 district, the second floor, room 72 Wed. 2:00pm to 4:30pm

CCD and C-MOS Technologies

Chair: Kazuhiko Oka, Hokkaido Univ. (Japan)

- 2:00pm: **Recent progress in the key technique of novel miniature dispersive spectrometers** (*Invited Paper*), Huaidong Yang, Guofan Jin, Tsinghua Univ. (China) [6829-53]
- 2:30pm: **Research of anti-blooming array CCD image sensor**, Wang Jian, School of Electronic Information Engineering (China) [6829-14]
- 2:50pm: **The measurement of motion picture resolution of digital television with CCD pursuit eye tracking sys...**, Liu Fang, Beijing Institute of Technology (China) [6829-24]
- 3:10pm: **The measurements of optical characterization for CMOS**, Min Song, Yongjun Lu, Yanling Qu, Dalian Nationalities University (China) [6829-42]
- 3:30pm: **Online measuring method for PCB film using linear CCD**, Ye Ting, Kaihua Wu, Hangzhou Dianzi University (China) . [6829-44]
- 3:50pm: **A CdSe quantum dot photodetector for hyperspectral imaging in the visible region**, Joel Therrien, Amir Dindar, Univ of Massachusetts/Lowell (USA) [6829-69]
- 4:10pm: **A method for measuring modulation transfer function of CCD device in remote camera with grating patt...**, Yuheng Chen, Xinhua Chen, Weimin Shen, Soochow University (China) . [6829-12]

Tuesday/Wednesday Posters

Time: Tuesday 12:30pm to Wednesday 11:30am

- ✓ **Fiber-based on SPR sensor with calibration function**, Zhiyi Zhang, Ping Zhao, Fengguo Sun, Gaozhi Xiao, National Research Council Canada (Canada); Yaming Wu, Chinese Academy of Sciences (China) [6829-2]
- ✓ **A novel viewpoint for explaining thermal degradation mechanism of fiber Bragg gratings**, Wenhua Wang, Huguanglake (China) [6829-8]
- ✓ **Signal processing methods in a single-photon counting system**, Li Rui, Du Min, Yanping Chen, Institute of Precision Instrument (China) [6829-9]
- ✓ **Study on microstructure of amorphous GaAs and hydrogen-doped amorphous GaAs thin films**, Yanping Yao, Chunling Liu, Baoxue Bo, State Key Lab on High Power Laser Diodes (China) [6829-13]
- ✓ **Experimental research on dimensional measurement of hot parts based on CCD**, Juan Wang, HePing (China) ... [6829-15]

- ✓ **A new camera calibration method for phase-measuring profilometry**, Di Wu, Beijing Information Science & Technology University (China) [6829-18]
- ✓ **Investigations of fluorescence resonance energy transfer between CdTe quantum dot donors and gold na...**, Shichao Xu, Jimei Zhang, Quanxi Dong, Tianjin Polytechnic University (China); Sun Bo, Nankai University (China) [6829-25]
- ✓ **Design of quantum efficiency measurement system for variable doping GaAs photocathode**, Liang Chen, Yang Kai, China Jiliang University (China) [6829-27]
- ✓ **Analytical discussion of semiconductor lasers for gravitational wave detection**, Tomoyuki Uehara, Akira Sato, Takashi Sato, Masashi Ohkawa, Takeo Maruyama, Niigata Univ. (Japan); Seiji Kawamura, National Astronomical Observatory (Japan) . [6829-28]
- ✓ **Camera calibration method used in computer vision coordinate measurement systems**, Zhijing Yu, Civil Aviation University of China (China) [6829-32]
- ✓ **Three-dimensional space positioning and image feature extraction for workpiece**, Bing Ye, Hu Yi, Hefei Univ. Of Technology (China) [6829-49]
- ✓ **Dynamic displacement measurement of Low-E membrane reactor by PSD based on laser-triangulation metho...**, Baoqiang Li, Yao Zhang, Tiegeng Liu, Tianjin University (China) . . . [6829-50]
- ✓ **Output characteristics of Q-switched fiber laser based on electro-optic ceramics**, Wengang Guo, Nankai University (China) [6829-52]
- ✓ **Target recognition in a turbid medium with backscattered polarization patterns**, Lanqing Xu, Fujian Normal Univ. (China); Xinmiao Xu, Fuzhou University (China); Yongping Zheng, Fujian Normal Univ. (China); Wanjun Su, Fuzhou University; Jinpai Lin Fujian, Normal Univ. (China) [6829-54]
- ✓ **An advanced wavelength calibration process for portable UV-VIS spectrometers with multichannel detec...**, Xingyue Huang, Huaidong Yang, Qingsheng He, Guofan Jin, Tsinghua University (China) [6829-55]
- ✓ **Hydrogen sensors based on Pt-AlGaIn/GaN schottky diode**, Xinhua Wang, Xiaoliang Wang, Chun Feng, Cui Bai Yang, Junxi Wang, Institute of Semiconductors (China) [6829-57]
- ✓ **Effect of pixel active area shape on imaging quality of CMOS active pixel sensor**, Hong Fan, Donghua University (China) [6829-58]
- ✓ **A laser-based digital measurement system for detecting displacements/deflections of a remote object**, Mark Tang, (China) [6829-59]
- ✓ **Design and signal processing of a sector SSPA for PM2.5 monitoring**, Kaihua Wu, Li Ma, Miao Guo, Peng Jiang, Hangzhou Dianzi University (China) [6829-61]
- ✓ **Signal processing method of the diameter measurement system based on CCD parallel light projection m...**, Qing Song, Sijia Zhu, Han Yan, Wenqian Wu, Beijing Univ. of Posts and Telecommunications (China) [6829-63]
- ✓ **Study on the operating range in solar blind ultraviolet detecting system**, Cheng Yang, Qinyong Zeng, Dayang Zhu, Univ. of Electronic Science and Technology of China (China); Chunquan Gan, Southwest Institute of Technical Physics (China) .. [6829-64]
- ✓ **Novel liquid photoacoustic cells with inner multi-beam photoacoustic source**, Jian Yang, Yong Zhao, Shi-Yuan Yang, Tsinghua Univ. (China) [6829-66]
- ✓ **A fiber grating dual-parameter sensor of ditrignon cantilever beam for measurement of strain and temp...**, Jinlong Zhang, Chongxiu Yu, Beijing University of Posts and Telecommunication (China) [6829-72]

- √ **Development of new optical fiber toluene sensor**, Shinzo Muto, Yasunari Fujii, Satoshi Honma, Masayuki Morisawa, Univ. of Yamanashi (Japan) [6829-73]
- √ **Development of polymer optical waveguide-type alcohol sensor**, Shinzo Muto, Junichi Nagata, Satoshi Honma, Masayuki Morisawa, Univ. of Yamanashi (Japan) [6829-74]
- √ **Plastic optical fiber sensor system for detecting multi-point gas leakages**, Shinzo Muto, Hiroshi Suzumori, Satoshi Honma, Masayuki Morisawa, Univ. Of Yamanashi (Japan) [6829-75]
- √ **Improvement of plastic optical fiber microphone based on moisture pattern sensing in devoiced breath**, Shinzo Muto, Tomohito Taki, Satoshi Honma, Masayuki Morisawa, Univ. Of Yamanashi (Japan) [6829-76]
- √ **Stable continuous wave multiwavelength and ultrashort pulse Yb-doped fiber laser**, Chenchou Tu, Nankai Univ. (China)[6829-31]
- √ **Study on a novel optical readout ferroelectric device based on MIS for uncooled infrared imaging**, Jianhuan Qin, Shanghai Institute of Technical Physics (China) [6829-41]
- √ **A practical fingerprint sensor and process system based on DSP**, Chongjie Ran, University of Electronic Science and Technology of Institution of Electronics Engineering (China) [6829-3]
- √ **Portable optical instrument for crop growth monitoring and leaf area index measurement**, Wenjiang Huang, NERCITA (China) [6829-7]
- √ **A new FBG demodulation system based on Lab VIEW**, Xiaoyan Shen, Yuchi Lin, Tianjin Univ. (China) [6829-20]
- √ **Ammonia molecular beam epitaxy of Al_xGa_{1-x}N for solar-blind detection**, Xiaoyan Wang, Xiaoliang Wang, Baozhu Wang, Hongling Xiao, Cuimei Wang, Junxue Ran, Hongxin Liu, Institute of Semiconductors, CAS (China) [6829-36]
- √ **Optimization on uniformity of GRIN-rod lenses' optical properties**, Xianli Lang, Heifei Univ. of Technology(China); Lv Tao, China University of Geosciences (China) [6829-39]
- √ **Growth and characterisation of InSb Films on GaAs substrate grown using molecular beam epitaxy**, Lin Li, Guojun Liu, Zhanguo Li, Changchun Univ. of Science & Tech. (China) [6829-40]
- √ **Real-time 3D image based on LED array photo-electrical phase shift range finder**, Deyong He, Tianpeng Zhao, Jun Xu, Huanqin Wang, University of Science & Technology of China (China) [6829-78]
- √ **RF Reactive Sputter Si-C-B-N Thin Films for Thin Film High Temperature Sensors**, Yu Jun, Zhejiang Gongshang Univ. (China) [6829-88]
- √ **Ultra precision parallel electronic datum optical metrology system of systems**, Xiang-Wen Xiong, Zhongheng High-Tech Inc (China) [6829-89]
- √ **3D space positioning and image feature extraction for workpiece**, Bing Ye, Yi Hu, Hefei Univ. of Technology (China)[6829-90]
- √ **Interferometric sensing for measuring the complex amplitudes of a 3-D object by R, G and B tunable l...**, Jun Sato, Yukihiro Ishii, Tokyo University of Science (Japan) [6829-92]
- √ **Multiple phase-shifting white-light interferometry for quantitative envelope detection**, Tomotake Terasawa, Atsushi Wada, Yukihiro Ishii, Tokyo University of Science (Japan) [6829-93]
- √ **Fabrication of long-lasting phosphorescence glass spheres SrAl₂O₄:Eu²⁺, Dy³⁺**, Lv Hao, Aimei Liu, Xiaogan Univ. (China) [6829-17]

Room: 16 district, second floor, room 73

Monday-Wednesday 12-14 November 2007 • Proceeding of SPIE Vol.6830

Advanced Sensor Systems and Applications

Conference Chairs: **Yun-Jiang Rao**, Univ of Electronic Science & Technology of China (China); **Yan-Biao Liao**, Tsinghua Univ. (China); **Gang-Ding Peng**, Univ. of New South Wales (Australia)

Program Committee: **Xiaoyi Bao**, Univ. of Ottawa (Canada); **ByoungHo Lee**, Seoul National Univ (Korea); **Lin Zhang**, Aston Univ. (UK); **David D Sampson**, Univ. of Western Australia (Australia); **Ian M. Bassett**, Univ. of Sydney (Australia); **Weimin Chen**, Chongqing Univ. (China); **Kin S. Chiang**, City Univ. of Hong Kong (Hong Kong, China); **Wei Jin**, Hong Kong Polytechnic Univ. (Hong Kong, China); **Tongyu Liu**, Intelligent Sensor Systems Ltd. (UK); **Hwa Yaw Tam**, Hong Kong Polytechnic Univ. (Hong Kong, China); **David Jackson**, Univ. of Kent (UK); **K. T. V. Grattan**, City Univ. (UK); **David Webb**, Aston Univ. (UK); **Okihiro Sugihara**, Tohoku Univ. (Japan); **Ping Shum**, Nanyang Technological Univ. (Singapore); **K. Thyagarajan**, Indian Institute of Technology (India); **Reinhardt Willsch**, Institute for Physical High-Technology (IPHT) Jena (Germany); **Shizhuo Yin**, Pennsylvania State Univ. (USA); **Libo Yuan**, Harbin Engineering Univ. (China); **Jinping Ou**, Harbin Institute of Technology (China)

Monday 12 November

SESSION 1

16 district, the second floor, room 73 Mon.1:40pm to 5:00pm

Fiber grating sensors

Chairs: Yun-Jiang Rao

1:40pm: **Recent developments of Bragg gratings in PMMA and TOPAS polymer optical** (*Invited Paper*), David Webb, Photonic Research Group (UK); Kyriacos Kalli, Higher Technical Institute (Cyprus); Karen Carroll, Photonic Research Group United Kingdom; Peter Zhang, Photonic Research Group (Kingdom); Michalis Komodromos, Frederick Institute of Technology(Cyprus); Alexander Argyros, Australian Photonics Cooperative Research Centre (Australia); Maryanne Large, Australian Photonics Cooperative Research Centre (Australia); Grigoriy Emiliyanov, COM?DTU Department of Communications(Denmark); Ole Bang COM?DTU Department of Communications (Denmark); Eric Kjaer, Technical University of Denmark (Denmark) [6830-135]

2:10pm: **Highly sensitive liquid level sensor based on etched fiber Bragg grating**, Binfeng Yun, Southeast University (China); Na Chen, Southeast University (China); Yiping Cui, Southeast University (China) [6830-61]

2:30pm: **An in-line in-fibre ring cavity multiparameter sensor with a tuneable refractive**, Paul Childs, Univ. of New South Wales (Australia); Ian Leung, Univ. of New South Wales (Australia); Allan Wong, Univ of New South Wales (Australia); Gang-Ding Peng ,Univ. of New South Wales (Australia) [6830-11]

2:50pm: **Bend insensitive long-period gratings written with a CO2 laser in fiber with parabolic-index cladding**, Filip Todor, Institute of Photonics and Electronics AS CR,v.v.i (Czech Republic); Miroslav Chomat, Institute of Photonics and Electronics AS CR,v.v.i Czech (Republic); Daniela Berkova, Institute of Photonics and Electronics AS CR,v.v.i Czech (Republic); Jiri Ctyroky ,Institute of Photonics and Electronics AS CR,v.v.i Czech (Republic); Vlastimil Matejcek, Institute of Photonics and Electronics AS CR,v.v.i Czech (Republic); Ivan Kasik ,Institute of Photonics and Electronics AS CR,v.v.i Czech (Republic); Jiri Dunovsky, Faculty of Mechanical Engineering, CTU in Prague (Czech Republic); Alexandr Jancarek, Faculty of Nuclear Sciences and Physical Eng (Czech Republic) [6830-48]

3:10pm: **Experimental study of the thermal properties of Moiré long period gratings**, Paul Childs, Univ of New South Wales(Australia); Kan Gao CETC No.23 Research Institute (China) [6830-10]

Coffee/Tea Break 3:30pm to 4:00pm

4:00pm: **Fiber grating current array based on tunable fiber laser**, Yubin Guo, Jilin Univ. (China)... [6830-90]

4:20pm: **Monitoring the Como railway bridge based on FBG sensor system and Haar wavelet transform**, Jianzhong Zhang, Harbin Engineering University (China) [6830-25]

4:40pm: **Numerical investigation on the multi-channel optical fiber surface plasmon resonance sensor using the...**, Junghyun Park, Seoul National University (South Korea); Hwi Kim, Seoul National University (South Korea); ByoungHo Lee, Seoul National University (South Korea)... [6830-137]

Tuesday 13 November

SESSION 2

16 district, the second floor, room 73 Tue.8:30am to 12:10pm

Fiber interferometric and distributed sensors

Chair: David Webb

8:30am: **Novel fiber optic refractive-index sensor based on Fabry-Perot interferometer with photonic crystal ...** (*Invited Paper*), Ming Deng, Chongqing University (China); Yun-Jiang Rao, Chongqing University (China) [6830-46]

9:00am: **PGC demodulating scheme based on CORDIC algorithm for interferometric optical fiber sensor**, Zhenguo Jing, Tsinghua university (China); Min Zhang, Tsinghua university (China); Liwei Wang, Tsinghua university (China) Kai Yin, Tsinghua university (China); Yanbiao Liao, Tsinghua university (China) [6830-77]

9:20am: **Three-dimensional finite element model of thermal transient effect in IFOG fiber coil**, Maochun Li, Tianjin Univ. (China); Jun-feng Jiang, Tianjin Univ. (China); X. Steve Yao, Tianjin Univ. (China); Tie-gen Liu, Tianjin Univ. (China); Youwei Zhou, Tianjin Univ. (China) [6830-34]

9:40am: **A novel distributed fiber optic crack sensor for concrete structures**, Wentao Zhang, Chinese Academy of Sciences(China); Jingyun Dai, Shijiazhuang Railway Institute (China); Baochen Sun, Shijiazhuang Railway Institute (China); Yanliang Du, Shijiazhuang Railway Institute (China) [6830-119]

10:00pm: **The use of BOTDR to evaluate the thermal effects on fiber residual strain of optical fiber cables**, Yuangang Lu, Nanjing Univ. (China); Cunlei Li, Nanjing Univ. (China); Liang Wang, Nanjing Univ. (China); Xuping Zhang, Nanjing Univ. (China) [6830-39]

Coffee/Tea Break 10:20am to 10:50am

- 10:50am: **Fiber-optic humidity sensor based on multimode interference**, Enbang Li, Tianjin University (China) [6830-110]
- 11:10am: **Study on EFPI pressure sensors for HT/HP oilwell**, Qi Wang, Dalian University of Technology (China); Qingxu Yu Dalian University of Technology (China) [6830-103]
- 11:30am: **Polarization analysis in the distributed optical fiber sensor based on Sagnac/Mach- Zehnder interfere...**, Jun Wu, Chongqing University (China); Weimin Chen, Chongqing University (China); Jing Tan, Chongqing University (China) [6830-123]
- 11:50am: **Study on the threshold of stimulated Brillouin scattering**, Yuming Dong, Nanjing University (China); Xuping Zhang, Nanjing University (China); Liang Hao, Nanjing University (China) [6830-120]

Wednesday 14 November

SESSION 3

16 district, the second floor, room 73 Wed.8:30am to 11:40am

Fiber-optic and laser sensing

Chair: Yan-Biao Liao

- 8:30am: **Perimeter security system based on fiber optic disturbance sensor**, Tian Lan, Beijing University of Aeronautics and Astronautics (China); Chunxi Zhang, Beijing University of Aeronautics and Astronautics (China); Lijing Li, Beijing University of Aeronautics and Astronautics (China); Guangming Luo, Beijing University of Aeronautics and Astronautics (China); Chen Li, Beijing University of Aeronautics and Astronautics (China) [6830-57]
- 8:50am: **Demodulation method study of quadrature polarized laser interference signal based on nonlinearity co...**, Xinxing Wang, Harbin Engineering University (China); Yang Jun, Harbin Engineering University (China); Zhihai Liu, Harbin Engineering University (China); Libo Yuan, Harbin Engineering University (China) [6830-79]
- 9:10am: **Rapid and quantitative measuring of telomerase activity using an electro- chemiluminescent sensor**, Xiaoming Zhou, South China Normal University (China); Da Xing, South China Normal University (China); Debin Zhu, South China Normal University (China); Li Jia, South China Normal University (China) [6830-13]
- 9:30am: **A low-cost humidity sensor fabricated by coating optical fused fiber coupler with solgel material**, Fu-Fei Pang, Shanghai Univ. (China); Ping Xu ,Shanghai Univ. (China); Min Wang, Shanghai Univ. (China); Tingyun Wang, Shanghai Univ. (China) [6830-71]
- Coffee/Tea Break 9:50am to 10:20am
- 10:20am: **Aerial remote sensing automatic control system for UAV**, Pengqi Gao, Peking University (China); Lei Yan, Peking University (China); Hongying Zhao, Peking University (China) [6830-89]
- 10:40am: **Turbulence and wind velocity measurements under differential image motion meter**, Vladimir Lukin, Institute of Atmospheric Optics (Russia); Lavriniv Valer'evich, Institute of Atmospheric Optics (Russia); Nina Botugina ,Institute of Atmospheric Optics (Russia); Oleg Emallev, Institute of Atmospheric Optics (Russia); Viktor Nosov, Institute of Atmospheric Optics (Russia) [6830-29]
- 11:00am: **A pupil-scanning device for the measurement of sensor focus on large aperture tracking telescopes**, David Imrie, Optikos Corporation (USA); Stephen Fantone, Optikos Corporation (USA); Jian Zhang, Optikos Corporation (USA) [6830-118]
- 11:20pm: **Glacier facies mapping using multi-temporal Envisat: ASAR data of Gangotri Glacier**, Gulab Singh, Indian Institute of Technology Bombay (India); Gopalan Venkataraman, Indian Institute of Technology Bombay India [6830-8]

Monday/Tuesday Posters

Time: Monday 12:30pm to Tuesday 11:30am

- ✓ **The PGC demodulation of fiber optic interferometer utilizing unstable multimode DBR fiber laser**, Ma Lina, National University of Defense Technology (China) [6830-3]
- ✓ **The influence of pump power on the spectral peak shift of whispering gallery modes**, Jiyou Wang, Beijing Univ. Of Technology (China) [6830-4]
- ✓ **Study on weight-in-motion system based on chirped fiber gratings**, Dongsheng Zhang, Wuhan University of Technology (China) [6830-9]
- ✓ **Processing techniques for compensating for multiple scattering in TDM and other spectrally-shadowed ...**, Paul Childs, Univ. of New South Wales (Australia); Gang-Ding Peng, Univ. of New South Wales (Australia) [6830-12]
- ✓ **A hybrid interrogation technique for fiber Bragg grating and extrinsic Fabry-Perot interferometric s...**, Jiang Yi, Beijing Institute of technology (China) [6830-14]
- ✓ **A highly precise fiber sensor by use of counting demodulation**, Shiya He, Beijing Univ. of Technology (China); Haijun Li, Beijing Univ. of Technology (China); Shuyang Hu, Beijing Univ. of Technology (China); Wei Liu, Beijing Univ. of Technology (USA); Kuanxin Yu, Beijing Univ. of Technology (USA) [6830-18]
- ✓ **A novel Sagnac fiber sensor**, Wei Liu, Beijing Univ. of Technology (China); Shiya He Beijing Univ. of Technology (USA); Shuyang Hu, Beijing Univ. of Technology (USA); Tiecheng Guo, Beijing Univ. of Technology (USA); Kuanxin Yu, Beijing Univ. of Technology (China) [6830-19]
- ✓ **Multiplexing technique using amplitude-modulated chirped fiber Bragg gratings with applications in t...**, Allan Wong, University of New South Wales (Australia); Paul Childs, University of New South Wales (Australia); Gang-Ding Peng, University of New South Wales (Australia) [6830-20]
- ✓ **A fiber optic hydrophone with an acoustic filter**, Zefeng Wang, National Univ. Of Defence Technology (China) [6830-21]
- ✓ **Research on the acceleration responsivity of the fiber-optic air-backed mandrel hydrophones**, Kai Yin, Tsinghua Univ. (China); Min Zhang, Tsinghua Univ. (China); Liewei Wang, Tsinghua Univ. (China); Tianhuai Ding, Tsinghua Univ. (China); Hongpu Zhou, Tsinghua Univ. (China); Yanbiao Liao, Tsinghua Univ. (China) [6830-23]
- ✓ **Label-free antigen detection based on spectral surface plasmon resonance**, Xin Hong, 73 Grantchester Meadows, Cambridge (UK) [6830-26]
- ✓ **Ground target detection, classification, and sensor fusion in distributed fiber seismic sensor netwo...**, Huaifei Xing, Chinese Academy of Sciences, Institute of Semiconductors (China) [6830-27]
- ✓ **Ring fiber optic sensor system**, Qi-ren Zhuang, Hua-qiao University (China); Jiaxian Wang, Hua-qiao University (China) [6830-28]
- ✓ **The application of the FFT algorithm associated with CZT in the demodulation of Fabry-Perot pressure...**, Xiajuan Dai, Nanjing Normal Univ. (China) [6830-31]
- ✓ **High-performance multiplexed vibration sensor system based on fiber lasers**, Hao Xiao, Institute of Semiconductors (China); Yongjie Wang, Institute of Semiconductors (China); Fang Li, Institute of Semiconductors (China); Yuliang Liu, Institute of Semiconductors (China) [6830-35]
- ✓ **Two-core optical fiber and its sensing characteristics**, Xue Wang, Harbin Engineering University (China); Shigang Zhao, Harbin Engineering University (China); Libo Yuan, Harbin Engineering University (China) [6830-38]

- √ **A novel fiber-optic system for methane detection**, Xijun Wu, Yanshan University (China), Yutian Wang, Yanshan University (China); Leilei Chen, Yanshan University (China), Xinyan Huang, Yanshan University (China) [6830-42]
- √ **Self-mixing Doppler effect in an EDFR laser and its application to particle size measurement**, Mingyi Liu, Nanjing Normal University(China); Ming Wang, Nanjing Normal University (China) [6830-43]
- √ **Hydrogen peroxide sensor using laser grade dye rhodamine B**, Amitansu Pattanaik, DRDO Residential Complex (India); P. ahare, Delhi University (India); Maitreyee Nanda, DRDO (India) . [6830-52]
- √ **Dynamic light intensity detection system of aerodrome assistance light**, Zhijing Yu, Civil Aviation University of China (China); Jiye Song, Northeast Dianli University (China); Jianshu Gao, Civil Aviation University of China (China); Qingji Gao, Civil Aviation University of China (China) [6830-54]
- √ **Study of spectrum flattening of ASE fiber source based on long period fiber grating**, Huimin Yue, University of Electronic and Technology of China (China); Yongzhi Liu, University of Electronic and Technology of China (China) [6830-58]
- √ **Research on the sensing characteristic of blazed fiber Bragg grating**, Zhengrong Tong, Tianjin University of Technology (China); Weihua Zhang, Tianjin University of Technology (China) . [6830-62]
- √ **Sensitivity of chemical sensor based on fiber Bragg gratings**, Zhaofang Meng, Beijing University of Posts and Telecommunication (China); Xinzhu Sang, Beijing University of Posts and Telecommunication (China); Binbin Yan, Beijing University of Posts and Telecommunication (China) [6830-63]
- √ **Study on multispectral mode of multi-mode airborne digital camera system**, Xue Liu, Institute of Remote Sensing Applications (China); Quanjun Jiao, Institute of Remote Sensing Applications (China); Junyong Fang, Institute of Remote Sensing Applications (China); Bing Zhang, Institute of Remote Sensing Applications (China); Lanfen Zheng, Institute of Remote Sensing Applications (China); Qingxi Tong, Institute of Remote Sensing Applications (China)..... [6830-64]
- √ **The influence of Fabry-Perot tunable filter on dynamic strain sensing system**, Kun Liu, Tianjin University (China); Wencai Jing, Tianjin University (China); Tiegeng Liu, Tianjin University (China); Yimo Zhang, Tianjin University (China); Dagong Jia, Tianjin University (China); Hongxia Zhang, Tianjin University(China); Gangding Peng, University of New South Wales (Australia) [6830-65]
- √ **AWG eletro-optical wavelength demoulation system without temperature effect**, Xu Wan, Zhejiang Normal Univ. (China); Baojin Peng, Zhejiang Normal Univ.(China); Hongzhen Jin, Zhejiang Normal Univ. (China) [6830-66]
- √ **Study on location of analog source of optical fiber acoustic emission**, Yijun Liang, Harbin Engineering University (China); Junfeng Liu, Harbin Engineering University (China); Linlin Mu, Harbin Engineering University (China) [6830-74]
- √ **Study on demodulation algorithm of fiber optic Fabry-Perot sensors based on spectrum adjusting**, Wentao Zhang, Chinese Academy of Sciences (China); Jingyun Dai., Shijiazhuang Railway Institute (China); Baochen Sun, Shijiazhuang Railway Institute (China); Yanliang Du, Shijiazhuang Railway Institute (China) [6830-75]
- √ **FBG sensor network in the monitoring of Qinghai-Tibet Railway**, Wentao Zhang, Chinese Academy of Sciences (China); Jingyun Dai, Shijiazhuang Railway Institute(China); Baochen Sun, Shijiazhuang Railway Institute (China); Yanliang Du, Shijiazhuang Railway Institute (China) [6830-82]
- √ **Applications of fiber optic concrete sensors in Liaohe Bridge**, Wentao Zhang, Chinese Academy of Sciences (China); Jingyun Dai, Shijiazhuang Railway Institute (China); Baochen Sun, Shijiazhuang Railway Institute (China); Yanliang Du, Shijiazhuang Railway Institute (China) [6830-85]
- √ **Research and experiment on wave plate error of polarized laser interferometer**, Li Duan, Harbin Engineering University (China); Jun Yang, Harbin Engineering University (China); Zhihai Liu, Harbin Engineering University (China), Libo Yuan, Harbin Engineering University (China) [6830-93]
- √ **Long-cavity-length composite-cavity fibre laser with single longitudinal mode and narrow linewidth**, Ian Leung, University of New South Wales (Australia), Gang Ding Peng, University of New South Wales (Australia), Paul Childs, University of New South Wales (Australia) [6830-94]
- √ **Strain-related characteristics of composite cavity fibre lasers**, Ian Leung, University of New South Wales (Australia); Gang Ding Peng, University of New South Wales(Australia); Allan Wong, University of New South Wales(Australia) [6830-96]
- √ **Laser interferometer nanometer vibration measurement experiment based on LabVIEW workbench**, Binbin Liu, Harbin Engineering University (China); Jun Yang, Harbin Engineering University (China); Libo Yuan, Harbin Engineering University (China) [6830-97]
- √ **Direct and simultaneous detection of strain and temperature using Brillouin and Raman scattering in ...**, Haiyun Xia, Beihang University (China); Yuanhong Yang, Beihang University (China) [6830-109]
- √ **Mean wavelength stable SFS with variable parameter control technology**, Jinjin Guo, Beihang university (China), Yuanhong Yang, beihang university (China); Tong Shen, beihang university(China); Guancheng Zhao, beihang university (China) [6830-112]
- √ **FBG loadcell technology and WIM application**, Weilai Li, Wuhan Univ. of Technology (China) [6830-116]
- √ **Kerr effect in a passive optical ring-resonator gyroscope using a hollow-core photonic-band fiber**, Xiujuan Yu, Tsinghua Univ. (China); Yanbiao Liao, Tsinghua university (China) [6830-124]
- √ **Flow velocity measurements using self-mixing effect inside a single-mode VCSEL with polymer optical ...**, RongSheng Zheng, University of Science and Technology of China (China); HuaQiao Gui, University of Science and Technology of China (China); KaiQun Lin, University of Science and Technology of China (China); Hai Ming, University of Science and Technology of China (China) [6830-127]
- √ **Application of CMOS APS star tracker with large FOV in attitude and angular velocity determination**, Dail Lu, China Institute of Fine Optical Mechanism and Phys (China); Jin Guang, CIOMP (China) [6830-128]
- √ **A novel biosensor for rapid identification of high-temperature-resistant species**, Lingrui Zhang, South China Normal University (China); Xing Da, MOE Key Laboratory of Laser Life Science (China) [6830-130]
- √ **Determination of damages of photosynthetic metabolism caused by herbicides using a delayed fluoresce...**, Lingrui Zhang, South China Normal University (China); Xing Da, MOE Key Laboratory of Laser Life Science (China) [6830-132]
- √ **Analysis of Effects of energy and pulse width on underwater Lidar system**, Min Wang, Huazhong Univ of Science and Technology (China); Kecheng Yang, Huazhong Univ. of Science and Technology (China); Zheng Yi., Huazhong Univ. of Science and Technology (China); Min Xia, Huazhong Univ. of Science and Technology (China); Jionghui Rao, Huazhong Univ of Science and Technology (China) [6830-138]

- √ **Design of a low-noise EDFA for the application**, Liao Yi, China National University of Defense Technology (China) . . . [6830-140]
- √ **The principle of linear phase retrieval wave-front sensor and experiment research**, Min Li, Institute of Optics and Electronics, CAS (China); Xinyang Li, Institute of Optics and Electronics, (China) [6830-88]
- √ **Passive photon-counting image system based on APD arrays**, Songfeng Kou, Nanjing University of Science and Technology (China); Qian Chen, Nanjing University of Science and Technology (China) [6830-5]
- √ **Optical fiber Bragg grating sensors embedded into intelligent biomedical clothing for healthcare**, Xiaogang Yu, Tianjin Polytechnic University (China); Changyun Miao Tianjin Polytechnic University (China); Enbang Li Tianjin University (China); Jiangtao Xi, University of Wollongong (Australia); Rui Wang, Tianjin Polytechnic University (China); Hongqiang Li, Tianjin Polytechnic University (China); Liyan Niu, Tianjin Polytechnic University (China); Cheng Zhang ,Tianjin Polytechnic University (China) [6830-6]
- √ **Twisting Sagnac-like optical fiber deformation sensing system based on white light low-coherence tec...**, Fengjun Tian, Harbin Engineering Univ. (China) [6830-22]
- √ **Fabrication of temperature-insensitive chirped fiber grating force sensor**, Jiang Meng, Nankai Univ. (China); Weigang Zhang Nankai University (China); Jin Long Nankai University (China); Changjun Liu Nankai University (China) [6830-32]
- √ **Study on time-division multiplexing fiber grating hydrophone with a tunable pulsed laser**, Haibin Zhou, Nankai University (China) [6830-55]
- √ **Studies on some key issues in the digital demodulation method of active homodyne laser vibration mea...**, Wan Di, Harbin Engineering University (China) [6830-80]
- √ **Application research of distributed optical fiber temperature sensor in harbor equipment**, Jianfeng Wang, China Jiliang University (China) [6830-87]
- √ **Error analysis of fiber ring laser rotating sensor**, Ming Zhang, Beijing Institute of Technology (China) [6830-92]
- √ **Meteorological visibility measurements by a micro-pulsed lidar during the 2006 Qingdao International...**, Jinjia Guo, Ocean University of China (China) [6830-98]
- √ **Design on the imaging testing apparatus of linear TDI CCD remote camera**, Yaxia Liu, Beijing Institute of Clothing Technology (China) [6830-102]
- √ **Numerical simulation of optical transmission process in a hollow fiber**, Wei Wang, Tianjin University(China); Enbang Li, Tianjin University (China) [6830-107]
- √ **Temperature dependence of differential modal delay measurement of a few-mode fiber using optical fre...**, Wei Tao, Gwanju Institute of Science and Technology (South Korea) [6830-133]

Room: 16 district, second floor, room 93

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Nanophotonics, Nanostructures, and Nanometrology II

Conference Chairs **Xing Zhu**, Peking Univ. (China); **Stephen Y. Chou**, Princeton Univ. (USA); **Yasuhiko Arakawa**, the Univ. of Tokyo (Japan)

Program Committee **Yong Chen**, Ecole normale supérieure (France); **Bert Hecht**, Univ. Basel (Switzerland); **Lin Huang**, Veeco Metrology Group (USA); **Seongsin M. Kim**, Stanford Univ. (USA); **Olivier J. F. Martin**, École Polytechnique Fédérale de Lausanne (Switzerland); **Motoichi Ohtsu**, The Univ. of Tokyo (Japan); **Seung-Han Park**, Yonsei Univ. (South Korea); **Din-Ping Tsai**, National Taiwan Univ. (Taiwan, China); **Jia Wang**, Tsinghua Univ. (China); **Daozhong Zhang**, Institute of Physics (China); **Jiasen Zhang**, Peking Univ. (China)

Monday 12 November

SESSION 1

16 District the second floor, 93 Room . . Monday 2:00pm to 3:20pm

Near-field Optics and Surface Plasmon Polariton

Chair: Xing Zhu, Peking University (China)

2:00pm: **Photonic quasicrystal micro-cylinder mode**, Zheyu Fang, Peking University (China); Tao Dai, Peking University (China); Xing Zhu, Peking University (China); Pei Zhang, Peking University (China) [6831-53]

2:20pm: **Large Goos-Hanchen displacement of evanescent waves in near-field enhanced configuration**, YanZhang, Shanghai Univ. (China); Chun-Fang Li, Shanghai Univ.(China); Xi Chen, Shanghai Univ.(China) [6831-17]

2:40pm: **Analysis of resonant properties in surface plasmon polaritons nanocavities** Chuan-Fei Hu, Beijing Jiaotong Univ. (China). [6831-1]

3:00pm: **Evolution of microscopic interaction force and interpretation for major well-known optical phenomena**, Ruogu Zhu, China Jiliang Univ. (China) [6831-7]

Coffee/Tea Break 3:20pm to 3:50pm

SESSION 2

16 District the second floor, 93Room Mon.3:50pm to 5:50pm

Metamaterials

Chair: Jia WANG, Tsinghua University (China)

3:50pm: **Study on measuring accuracy in nanoparticle measurement of photon correlation spectroscopy**, Chaoxing Chen, South China Normal University (China); Guangling Yang, South China Normal University (China); Peng Han, South China Normal University (China); Jiebin Huang, South China Normal University (China); Guiqiang Liu, South China Normal University (China); Shucang Zhou, South China Normal University (China) [6831-35]

4:10pm: **Nanometrology based on white-light spectral interferometry**, Huifang Chen, China Jiliang University (China); Weijian Tian, China Jiliang University (China) [6831-37]

4:30pm: **Gold nanosandwiches with negative permeability/negative permittivity**, Jianjun Chen, Institute of Semiconductors (China); Zhongchao Fan, Institute of Semiconductor (China); Fuhua Yang, Institute of Semiconductor (China) [6831-49]

4:50pm: **Broad-band local field enhancement of a 2D nanocavity**, Xiao-Xing Su, Beijing Jiaotong Univ. (China). [6831-48]

5:10pm: **Calculation of PBG structures in quasicrystals using FEM**, Kumar Singh, B.R.a.BiharUniversity Muzaffarpur (India); R. Srivastava, Department of Physics, L.S.College (India) . . . [6831-44]

5:30pm: **Fourier plasmonics: diffractive focusing of in-plane surface plasmon polariton waves**, Liang Feng, University of California, San Diego (USA); Vitaliy Lomakin, University of California (USA); Yeshiahu Fainman, University of California (USA) [6831-50]

Tuesday 13 November

SESSION 3

16 District the second floor, 93 Room Tue.8:30am to 9:40am

Photonic crystals

Chair: Edris Faizabadi,

K.N.Toosi University of Technology (Iran)

8:30am: **An ultracompact refractive index gas-sensor based on photonic crystal microcavity (Invited Paper)**; Xiaoling Wang, Beijing Institute of Machinery (China) [6831-16]

9:00am: **Comment on properties of one-dimensional photonic crystals containing negative refraction materials**, Changbao Hu, South China Normal University (China); Yiping Xu, South China Normal University (China); Huosheng He, South China Normal University (China). [6831-24]

9:20am: **Peculiar bandgap shift effect of elliptical stick-ball diamond photonic crystals**, Xian-Zi Dong, Technical Institute of Physics and Chemistry, CAS (China); Zheng-Bin Sun, Technical Institute of Physics and Chemistry, CAS (China); Zhi-Yuan Li, Institute of Physics, CAS(China); Xuan-Ming Duan, Technical Institute of Physics and Chemistry, CAS (China). [6831-12]

Coffee/Tea Break 9:40am to 10:00am

SESSION 4

16 District the second floor, 93 Room Tue.11:00am to 12:40pm

Optical characterization

Chair: Kumar Singh, B.R.a.Bihar University (India)

10:00am: **Simulation of optical surfaces and their PSD study**, Shuyi Gan, University of Science and Technology of China (China); Yinhe Bao, Hefei University of Technology (China); Yilin Hong, University of Science and Technology of China (China); Xiangdong Xu, University of Science and Technology of China (China); Liu Ying, University of Science and Technology of China (China); Shaojun Fu, University of Science and Technology of China (China) . . . [6831-30]

10:20am: **Specimen preparation methods for nanoindentation testing of biomaterials: a review**, Jiyu Sun, College of Biological and Agricultural Engineering (China); Jin Tong, College of Biological and Agricultural Engineering (China); Zhijun Zhang, Renmin Street 5988 (China) [6831-18]

10:40am: **Study on thickness uniformity of large area DLC thin films deposited by femtosecond pulse laser**, Jinfan Liu, Huazhong University of Science and Technology (China); Guangzhi Zhang, Huazhong University of Science and Technology (China); Xiao Yuan, Huazhong University of Science and Technology (China) . [6831-40]

11:00pm: **Investigation on the laser transmission properties of nanofluids**, Ming Qian, Nanjing University of Science and Technology (China); Xiaowu Ni, Nanjing University of Science and Technology (China); Zhonghua Shen, Nanjing University of Science and Technology (China); Jian Lu Nanjing University of Science and Technology (China); Qiang Li, Nanjing University of Science and Technology (China); Yimin Xuan, Nanjing University of Science and Technology (China)..... [6831-6]

11:20am: **Tunable control of self-collimation beam splitters**, Aaron Matthews, Australian National Univ. (Australia); Andrey Miroschnichenko, Australian National Univ. (Australia); Yuri Kivshar, Australian National Univ. (Australia) [6831-27]

11:40am: **Extension to lower refractive indices for omnidirectional reflection in one-dimensional photonic cry...**, Peng Han, South China Normal University (China) [6831-34]

12:00am: **A novel 2D beam combiner in two-dimension photonic crystal**, Xinhui Zhao, Harbin Institute of Technology (China); Yao Yong, Harbin Institute of Technology (China); Weijie Shi, Harbin Institute of Technology (China); Liu Chao, Harbin Institute of Technology (China) [6831-22]

12:20pm: **The design, fabrication and characterization of GaAs-based RTT with groove gate structure**, Weilian Guo, Tianjin Polytechnic Univ. (China); Pingjuan Niu, Tianjin Polytechnic Univ. (China); Changyun Miao, Tianjin Polytechnic Univ. (China); Wei Wang, Tianjin Polytechnic Univ. (China); Xin Yu, Tianjin Polytechnic Univ. (China); Yaohui Shang, Tianjin Polytechnic Univ. (China); Zhen Feng, Tianjin Polytechnic Univ. (China); Guoping Tian, Tianjin Polytechnic Univ. (China); Yali Li, Tianjin Polytechnic Univ. (China); Yongqiang Liu, Tianjin Polytechnic Univ. (China); Mingwen Yuan, Tianjin Polytechnic Univ. (China); Xiaobai Li, Tianjin Polytechnic Univ. (China) . [6831-51]

SESSION 5

16 District the second floor, 93 Room Tue.2:00pm to 3:40pm

Calculation of nanostructures

Chair: Jiaren Liu, National Research Council Canada

2:00pm: **The energy levels of a nano-ring in the presence of quantum barriers**, Edris Faizabad, K.N.Toosi University of Technology (Iran); Shideh Ahmadi, K.N.Toosi University of Technology (Iran); Parisa Robot Sarpushi, K.N.Toosi University of Technology (Iran) [6831-25]

2:20pm: **Continuous parameter atom lithography**, Yang Wu, Lois (China); Li Yang, Graduate University of Chinese Academy of Sciences (China) [6831-38]

2:40pm: **Multiple channeled filtering in one-dimensional photonic quantum-well and super-lattice structures**, Jiebin Huang, South China Normal University (China); Peng Han, South China Normal University (China); Chaoxiong Chen, South China Normal University (China); Guanling Yang, South China Normal University (China)..... [6831-21]

3:00pm: **High efficiency fiber to waveguide optical coupler in silicon-on-insulator-based slot waveguides**, Yan Liu, Institute of Semiconductors, Chinese Academy of Sc (China); Shaowu Chen, Institute of Semiconductors, Chinese Academy of Sc (China); Jinzhong Yu, Institute of Semiconductors (China) [6831-43]

3:20pm: **Analysis of effect factors for second harmonic generation in the centro-symmetric materials photonic...**, Jianping Shi, Anhui normal university (China) [6831-4]

Coffee/Tea Break 3:40pm to 4:00pm

SESSION 6

16 District the second floor, 93 Room Tue.4:00pm to 5:10pm

Quantum dots

Chair: Xing Zhu, Peking University (China)

4:00pm: **Luminescent CdTe/CdS core-shell and CdTe/CdS/ZnS multi-layer quantum dots: synthesis and investigati...**, Shichao Xu, Tianjin Polytechnic Univ. (China); Jimei Zhang, Tianjin Polytechnic Univ. (China); Xiuyun Song, Tianjin Polytechnic Univ. (China); Dai Zhao, Tianjin Polytechnic Univ. (China); Sun Bo, Nankai University (China) [6831-20]

4:20pm: **Surface-enhanced Raman scattering of core-shell Au nanoparticle film**, Xin Hong, 73 Grantchester Meadows (UK) [6831-8]

4:40pm: **Mechanisms of plasmon-induced charge separation and recombination at gold nanoparticle supported on ...**, Luchao Du, National Institute of Advanced Industrial Science (Japan); Akihiro Furube., National Institute of Advanced Industrial Science (Japan); Kohjiro Hara, National Institute of Advanced Industrial Science (Japan); Ryuzi Katoh, National Institute of Advanced Industrial Science (Japan); Masanori Tachiya (Japan) [6831-19]

4:10pm: **Electronic states in an infinite random binary quantum wire in the presence of electric field**, Edris Faizabadi, K.N.Toosi University of Technology (Iran) [6831-41]

4:30pm: **Kinetic Monte Carlo simulation of the modulated effect induced by the stress effects in Quantum dots**, Zhao Chang, Beijing institute of petrochemical and Technology (China) . [6831-54]

4:50pm: **Excitonic Quantum Interference in a Quantum Dot Chain with a Ring**, Suc-Kyoung Hong, Korea University, (South Korea); Seog Woo Nam, Korea University (South Korea); Kyu Hwang Yeon, Chungbuk National University (South Korea) [6831-55]

Tuesday/Wednesday Posters

Time: Tuesday 12:30am to Wednesday 11:30 am

✓ **Effect of scatterers shape between coupling channels on the photonic crystal coupler**, Chunying Guan, Harbin Engineering University (China); Libo Yuan, Harbin Engineering University (China) [6831-2]

✓ **Properties of ITO thin films prepared by APS-assisted EB evaporation**, Guangzong He, HIOE (China) [6831-5]

✓ **Preparation of poly(4-vinylpyridine)/CdTe quantum dots**, Zhao Dai, Tianjin Polytechnic University (China); Jimei Zhang, Tianjin Polytechnic University (China); Shichao Xu, Tianjin Polytechnic University (China); Ping Li, Tianjin Polytechnic University (China); Ning Guo, Tianjin Polytechnic University (China) [6831-9]

✓ **Influence of SDBS on stability of Al₂O₃ nano-suspensions**, Xian-Ju Wang, GSI (China) [6831-11]

✓ **The surface treatment of silicon wafer by microwave downstream plasma etching**, Hui Ju, Nagoya University (Japan) [6831-13]

✓ **Threshold behavior of defect modes in one-dimensional active photonic crystal**, Wang Hong, Shenzheng University (China); Yanling Han, Shenzheng University (China); Zhengbiao Ouyang, Shenzheng University (China) [6831-14]

✓ **Dispersion-induced localized modes in weakly random media**, Wang Hong, shenzheng university (China); Yanling Han, shenzheng university (China); Zhengbiao Ouyang, shenzheng university (China) [6831-15]

- √ **Thermal treatment for lasing wavelength tuning of quantum dot laser diodes**, Kwang Woong Kim, Korea University (South Korea); Kyung Wuk Jung, Korea Institute of Science and Technology (South Korea); Hong Yoon, Korea Institute of Science and Technology (South Korea); Sung Pil Ryu, Korea Institute of Science and Technology (South Korea); Nam Ki Cho, Korea Institute of Science and Technology (South Korea); Jin Dong Song, Korea Institute of Science and Technology (South Korea); Won Jun Choi, Korea Institute of Science and Technology (South Korea); Jung Il Lee, Korea Institute of Science and Technology (South Korea); Jung Ho Park, Korea University (South Korea) [6831-23]
- √ **Accurate vibration detection of a rough surface**, Hua Lin Zeng, Institute of Semiconductors (China); Yan Zhou, Institute of Semiconductors (China); Songtao Fan, Institute of Semiconductors (China) [6831-26]
- √ **Fabrication of InGaN quantum dots by periodically interrupted growth in MOCVD**, Seung-Kyu Choi, Kookmin University (South Korea); Jae-Min Jang, Kookmin University (South Korea); Sung-Hak Yi, Kookmin University (South Korea); Jung-A Kim, Kookmin University (South Korea); Woo-Gwang Jung, Kookmin University (South Korea) [6831-28]
- √ **Properties of aluminum doped zinc oxide thin film by sol-gel process**, Sung-Hak Yi, Kookmin Univ. (South Korea); Seung-Kyu Choi, Kookmin Univ. (South Korea); Jae-Min Jang, Kookmin Univ. (South Korea); Jung-A Kim, Kookmin Univ. (South Korea); Woo-Gwang Jung, Kookmin Univ. (South Korea) [6831-29]
- √ **Fabrication of CoFe nanostructures by holographic lithography**, Zijun Zhang, Univ. of Science and Technology of China (China); Xudi Wang, Hefei Univ. of Technology (China); Yin Liu, University of Science and technology of China (China); Shaojun Fu, University of Science and technology of China (China); Youmei Chen, University of Science and technology of China (China); Yuxian Guo, University of Science and technology of China (China); Xiangdong Xu, University of Science and technology of China (China); Pengshou Xu, University of Science and technology of China (China); Jianwang Cai, Chinese Academy of Science (China) [6831-31]
- √ **Blue light emission from controlled multilayer comprising of thin amorphous and nanocrystalline sili...**, Wei Yu, Hebei University (China); Shuangkui Cui, Hebei University (China); Jie Du, Hebei University (China); Ligong Li, Hebei University (China); Guang-Sheng Fu, Hebei University (China) [6831-32]
- √ **Realization of super-narrow pass-band and super-narrow transmission-angle filters with one-dimension...**, Depeng Mao, Shenzhen Univ. (China); Zhengbiao Ouyang, Shenzhen University (China); Yuancong Zhong, Shenzhen University (China) . [6831-33]
- √ **Structural and optical properties of doped silicon nanocrystals: first principle calculation**, Guangsheng Fu, Hebei University (China); Huixia Gao, Hebei University (China); Wanbing Lu, Hebei university (China); Wenge Ding, Hebei University (China); Wei Yu, Hebei University (China) [6831-42]
- √ **Optical modulator using silicon photonic crystals/nano-montmorillonite**, Jiusheng Li, China Jiliang Univ. (China) [6831-47]
- √ **Influence of nano-scale dimension on properties of transmission in metallic gratings with narrow sli...**, Yong Cao, University of Science and Technology of China (China); Pei Wang, University of Science and Technology of China (China); Xiaojin Jiao, University of Science and Technology of China (China); Changjun Min, University of Science and Technology of China (China); Hai Ming, University of Science and Technology of China (China) [6831-52]
- √ **Analysis of effect factors for second harmonic generation in the centro-symmetric materials photonic...**, Jianping Shi, Anhui normal university (China) [6831-4]
- √ **Thermal treatment for lasing wavelength tuning of quantum dot laser diodes**, Kwang Woong Kim, Kyung Wuk Jung, Hong Yoon, Sung Pil Ryu, Nam Ki Cho, Jin Dong Song, Won Jun Choi, Jung Il Lee, Jung Ho Park, Korea University (South Korea)[6831-23]
- √ **High performance multiwavelength InAs/InGaAsP quantum dot laser at 1.6 um**, Jiaren Liu, National Research Council Canada (Canada); Zhenguo Lu, National Research Council Canada (Canada); Sylvain Raymond, National Research Council Canada (Canada); Philip Poole, National Research Council Canada (Canada); Pedro Barrios, National Research Council Canada (Canada); Grzegorz Pakulski, National Research Council Canada (Canada); Daniel Poitras, National Research Council Canada (Canada) [6831-3]
- √ **Preparation and upconversion emission of fluoro-oxide**, Xia Li, china jiliang university (China) [6831-10]
- √ **Design of nanometrological AFM based on 3D double FP interferometer**, Yu Huang, China Jiliang Univ. (China); Ruogu Zhu, China Jiliang Univ.(China); Benyong Chen, Zhejiang university of science and technology (China) [6831-36]
- √ **New formalism in evaluation of the ground and few excited states of one dimensional Hubbard nanostru...**, Edris Faizabadi, K.N.Toosi University of Technology (Iran) [6831-39]
- √ **InAs/GaAs quantum dots morphology and optical properties**, Jianghong Yao, TEDA College, hongda street 23, TEDA, Tianjian (China) [6831-45]
- √ **Confined Optical Fields Based on Surface Plasmon Polaritons**, Qingyan Wang, Jia Wang, Shulian Zhang, Tsinghua University (China) [6831-56]
- √ **Near-field intensity distribution from a bow-tie aperture VCSEL with its polarization state improved**, Hongfeng Gai, Jia Wang, Qian Tian, Wei Xia, Xiangang Xu Tsinghua University (China) [6831-57]

Room: 16 district, second floor, room 76

Monday-Wednesday 12-14 November 2007 • Proceeding of SPIE Vol.6832

Holography, Diffractive Optics and Applications

Conference Chairs: **Yunlong Sheng**, Univ. Laval (Canada); **Dahsiung Hsu**, Beijing Univ. of Posts and Telecommunications (China); **Chongxiu Yu**, Beijing Univ. of Posts and Telecommunications (China);

Program Committee: **Jiabi Chen**, Shanghai Univ. for Science and Technology (China); **Linsen Chen**, Suzhou Univ. (China); **Chunlei Du**, Institute of Optics and Electronics (China); **Hai Ming**, Univ. of Science and Technology of China (China); **Hoang-Yan Lin**, Industrial Technology Research Institute (Taiwan, China); **Jeng-Yang Chang**, National Central Univ. (Taiwan, China); **Xiacong Yuan**, Nanyang Technological Univ. (Singapore); **Min Gu** Swinburne Univ. of Tech (Australia); **Anzhi He**, Nanjing Univ. of Science and Tech (China); **Dahe Liu**, Beijing Normal Univ. (China); **Toyahiko Yatagai**, Univ. of Tsukuba (Japan); **Changhe Zhou**, Shanghai Institute of Optics and Fine Mechanics (China)

Monday 12 November

SESSION 1

16 district the second floor, 76 Room Mon.2:00pm to 4:00pm

Photonics Crystals

Chair: **Yunlong Sheng**, Univ. Laval (Canada)

2:00 pm: **Third-generation optical data storage based on nanophotonics** (*Invited paper*); Min Gu, Swinburne Univ of Technology (China) [6832-7]

2:30 pm: **Enhancement of external quantum efficiency of LEDs by fabricating photonic crystal in ITO p-contact** ..., Han Lin, Xiamen University (China) [6832-32]

2:50 pm: **Photonic bandgap properties of nanostructured materials fabricated with glancing angle deposition**, Matthew Hawkeye, Univ of Alberta (Canada) [6832-69]

3:10 pm: **Holographic femtosecond laser processing by use of a liquid crystal spatial light modulator** (*Invited paper*); Yoshio Hayasaki, The University of Tokushima (Japan) [6832-22]

3:40 pm: **Fabrication of metallic 2D photonic crystals by holography**, V. Vadivelan, Centre for Development of Imaging Technology (India) [6832-113]

Coffee/Tea break 4:00pm to 4:20pm

SESSION 2

16 district the second floor, 76 Room Mon.4:20pm to 6:10pm

Digital Holography I

Chairs: **Dahsiung Hsu** Beijing Univ. of Posts and Telecommunications (China);

4:20pm: **Improving reconstruction with optical diffraction field in Fresnel digital holography** (*Invited paper*); Dayong Wang, Beijing Univ. of Technology (China) [6832-37]

4:50pm: **Comparison of reconstruction algorithms in lensless Fourier Transform digital holography**, Jie Zhao, Beijing Univ. of Technology (China) [6832-77]

5:10pm: **Wavefront reconstruction research on the phase-type digital holograph**, Junchang Li, Kunming University of Science and Technology (China) [6832-44]

5:30pm: **A method for compressing off-axis digital hologram with spectrum shifting**, Yong Li, Zhejiang Normal University (China) [6832-2]

5:50pm: **Surface contour measurement by LC-SLM digital phase-shifting holography**, Qinghe Song, kunming university of science and technology (China) [6832-23]

Tuesday 13 November

SESSION 3

16 district the second floor, 76 Room Tues.8:30am to 9:40am

Diffraction of NanoStructures

Chairs: **Jeng-Yang**,

Chang, National Central Univ. (Taiwan, China)

8:30am: **Study on phase retardation characteristics of subwavelength metallic holes** (*Invited paper*); Yuan Duan, Institute of Optics and Electronics (China) [6832-99]

9:00am: **Phase modulation by arranging square holes with variant widths in a metallic film**, Yanzhong Chen, Institute of Optics and Electronics (China) [6832-97]

9:20am: **Mechanism of coupling and interference in nano slit**, Yunlong Sheng, Univ. Laval (Canada) [6832-5]

Coffee/Tea break 9:40am to 10:10 am

SESSION 4

16 district the second floor, 76 Room . . . Tues.10:10am to 12:00pm

Diffraction and Micromanipulation

Chairs: **Jiabi Chen**,

Shanghai Univ. for Science and Technology (China)

10:10am: **High sensitivity biochemistry nanosensor using rhombic silver nanostructure array**, Shaoli Zhu, Institute of Optics and Electronics (China) [6832-98]

10:30am: **Generation of vector beams and their focal properties**, Xi-Lin Wang, Nanjing University (China) [6832-36]

10:50am: **Generation of phase-shift patterns in optical-far-field and its applications** (*Invited paper*); Wei-Feng Hsu, National Taipei Univ. of Technology (Taiwan) [6832-75]

11:20am: **Transverse optical trapping of spherical particle with strong absorption in a focused Gaussian beam**, Yanfeng Zhang, Nankai University (China) [6832-29]

11:40am: **Evaluation of fiber coupling coefficient by a deformal cell**, Paul Brule-Bareil Laval Univ. (Canada) [6832-3]

Lunch Break 12:00pm to 1:30 pm

SESSION 5

16 district the second floor, 76 Room Tues.1:30pm to 3:40 pm

3D imaging and Displays

Chairs: Toyohiko Yatagai Univ. of Tsukuba (Japan)

- 1:30pm: **Optical scanning holography: a review of fundamentals** (*Invited paper*); Ting-Chung Poon, Virginia Tech. (USA) . . [6832-31]
- 2:00pm: **Application of bi-grating diffraction imaging on the display of ordinary transmission hologram with**, Weiping Zhang, Guangxi Univ. (China) [6832-71]
- 2:20pm: **Talbot grating for color separation in color liquid crystal display**, Yan Zhang, Tsinghua University (China).....[6832-65]
- Coffee/Tea break 2:40pm to 3:00pm
- 3:00pm: **Color laser holographic display of virtual 3D scene**, Yimin Lou, Yingbing road 688# Jinhua Zhejiang (China) . . [6832-63]
- 3:20pm: **Design of diffractive color separation grating for optimized power and color performance**, Chia-Sheng Yeh , National Taiwan University (China)..... [6832-89]

SESSION 6

16 district the second floor, 76 RoomTues.3:40pm to 5:10pm

Diffractive Optical Elements

Chairs: Chanhe Zhou Shanghai Institute of Optics and Fine Mechanics (China)

- 3:40pm: **Polarizing beam splitter of deep-etched silicon grating** (*Invited paper*); Jijun Feng, Shanghai Institute of Optics and Fine Mechanics (China) [6832-80]
- 4:10pm: **Real-time Dammann grating based on miniaturized three-dimensional endoscopic imaging system**, Xiaoxin Wang, Shanghai Institute of Optics and Fine Mechanics (China) . [6832-19]
- 4:30pm: **Study on encoding technique of phase-shifting unit based on LC-SLM**, Yanmei Wu, Kunming university of science and technology (China) [6832-24]
- 4:50pm: **Design of diffractive beam shaper for transforming a Gaussian beam to a square uniform beam** , Ku-Hui Hsu , National Taiwan University (China) [6832-92]

Wednesday 14 November

SESSION 7

16 district the second floor, 76 Room Wed.8:30am to 10:10am

Grating Fabrication

Chairs: Chunlei Du, Institute of Optics and Electronics (China)

- 8:30am: **Fabrication of 200 nm period x-ray transmission gratings by electron beam lithography**, Xiaoli Zhu , Institute of Microelectronics, CAST (China) [6832-107]
- 8:50am: **Fabrication method of flat-field holographic concave gratings**, Qian Zhou, Tsinghua University (China) [6832-35]
- 9:10am: **Study on the fabrication of low-gradient photoresist grating masks**, Quan Liu, Soochow University (China) . . . [6832-18]
- 9:30am: **The study and application of dual wavelength (red and blue) sensitive water-resisting photopolymer**, Wei Yang, Capital normal university (China) [6832-50]
- Coffee/Tea break 9:50am to 10:20am

SESSION 8

Viewing Poster papers Wed.10:20am to 12:00pm

SESSION 9

16 district the second floor, 76 Room Wed.1:40pm to 3:00pm

Digital Holography II

Chair: Chongxiu Yu, Beijing Univ. of Posts and Telecommunications (China);

- 1:40pm: **Imaging technique for three-dimensional microstructure by digital holography**, Huaying Wang, Beijing University of Technology (China) [6832-60]
- 2:00pm: **Low-density microporous polymeric foams measurement with digital microscopic image plane holography**, Qieni Lu, Tianjin University (China) [6832-90]
- 2:20pm: **Sample test on the tilt angle of object light illumination in digital holographic 3D surface shape d....**, Zujie Peng, Kunming University of Science and Technology(China) [6832-42]
- 2:40pm: **Automatic compensation for phase aberration in digital**, Guangjun Wang, Beijing University of Technology(China); Huaying Wang, Beijing University of Techn- ology(China); Jie Zhao, Beijing University of Technology(China); Yizhuo Zhang, Beijing University of Technology (China); Dayong Wang, Beijing University of Technology (China) [6832-66]
- Coffee/Tea break 3:00pm to 3:40pm

SESSION 10

16 district the second floor, 76 Room Wed.3:40pm to 5:20pm

Volume Holograms

Chairs: Dahe Liu, Beijing Normal Univ. (China)

- 3:40 pm: **Study on water-resisting photopolymer holographic recording material sensitized to two wavelengths** He-Ling Zhang, Capital Normal University (China); Meng Yan, CNU (China) [6832-57]
- 4:00 pm: **Angle amplifier based on multiplexed volume holographic gratings in the Fe:LiNbO3 crystal**, Liangcai Cao, Tsinghua Univ. (China); Qingsheng He, TsinghuaUniv. (China); GuofanJin, Tsinghua Univ. (China) [6832-118]
- 4:20 pm: **Volume holographic wavelength filters based on transmissive-writing and orthogonal-readout scheme**, Xiaodan Zheng, Beijing University of Technology (China); Shiquan Tao, Beijing University of Technology (China); Dong Liu, Beijing University of Technology (China); Dayong Wang, Beijing University of Technology (China) [6832-87]
- 4:40 pm: **The design and performance test of the transversal modulator with KDP crystal ≥ 63 used in optic....**, Fei Chen, Beijing University of Posts and Telecommunications (China) [6832-28]
- 5:00 pm: **Speckle-angular multiplexing approach for holographic storage in photopolymer materials**, Ning Liu, Beijing University of Technology (China) [6832-104]

Thursday 15 November

SESSION 11

16 district the second floor, 76 Room Thu. 8:30am to 9:40am

Applications I

Chairs: Xiaocong Yuan,

Nanyang Technological Univ. (Singapore);

8:30 am: **Beam deflection measurement using Moire deflectometry and Talbot interferometry** (*Invited paper*); Po Chung, City University of Hong Kong (China) [6832-110]

9:00 am: **An improved system for measuring the SNR of holographic anti-counterfeiting labels**, Jin He, Tianjin University (China); Tiegeng Liu, Tianjin University (China) [6832-108]

9:20 am: **Encrypted Fourier holographic data storage with variable data reference wave for optical information...**, M. Sheeja, Ctr. for Development of Imaging Technology (India) [6832-112]

Coffee/Tea break 9:40am to 10:00am

SESSION 12

16 district the second floor, 76 Room . . . Thu.10:00am to 12:00pm

Applications II

Chairs: Hoang Yan Lin, Industrial Technology Research Institute (Taiwan, China)

10:00 pm: **A multi-beam holographic light concentrator for solar applications**, T. Shaji Sam, Centre for Development of Imaging Technology (India) [6832-114]

10:20am: **Analysis of static coded-aperture imaging spectrometer**, Xingzhi Gong, Zhejiang University (China); LiangCheng, Zhejiang University (China); ZiYe, Zhejiang University (China); FeihongYu Zhejiang University (China) [6832-39]

10:40 am: **Polynomial phase mask for extending depth-of-field optimized by simulated annealing**, Nicolas Caron, Yunlong Sheng, Univ Laval (Canada) [6832-6]

11:00pm: **Optics and image processing techniques of one-step holographic stereogram**, Jincheng Wang, Ocean Univ. of China (China); Jia Yu, Ocean Univ. of China (China); Qiuju Xiao Ocean Univ. of China (China); Qiang Zhong, Ocean Univ. of China (China) [6832-20]

11:20 am: **Circuit design and control research on an optical switching module integrated by PS transformation a...**, Ping Xu, Shenzhen University (China) [6832-81]

11:40 am: **A novel planar integrated optical correlator**, Jiayong Liu, Shenzhen Univ. (China) [6832-78]

Tuesday/Wednesday Posters

Time: Tuesday 12:30pm to Wednesday 11:30am

✓ **Transmission-type holographic screen for displaying projected three-dimensional images with large vi...**, Xiangsu Zhang, Xiamen Univ. (China); Shou Liu, Xiamen Univ. (China); Hai Zhang, Xiamen Univ. (China); Xuechang Ren, Xiamen Univ. (China) [6832-1]

✓ **Multi-annular phase plate for extended depth-of-field imaging system**, Xutao Mo, Tianjin University (China); Wenyao Liu, Tianjin University (China); Jinjiang Wang, Tianjin University (China) [6832-4]

✓ **Polarization-based holography of Fresnel-zone-plate convolution without motion**, Ping Sun, Beijing Normal Univ. (China) [6832-8]

✓ **Fabrication of holographic Fresnel lens used as solar concentrator**, Xuechang Ren, Xiamen University (China); Shou Liu, Xiamen Univ. (China); Xiangsu Zhang Xiamen Univ. (China); Xiaoyun Chen Xiamen Univ. (China) [6832-9]

✓ **Virtual display: unidirectional diffusing image screen for extension of screen region using mirror i...**, Kunio Sakamoto, Shimane Univ. (China); Mariko Adachi, Shimane Univ. (Japan) [6832-10]

✓ **Three-dimensional imaging on virtual display with extended screen using mirror image**, Kunio Sakamoto, Shimane Univ. (Japan); Hiroyuki Fukuda, Shimane Univ. (Japan) [6832-11]

✓ **Reflective mirror with holographic optical element for extension of screen region using mirror image**, Kunio Sakamoto, Shimane Univ. (Japan); Koji Uchida Shimane Univ. (Japan) [6832-12]

✓ **Obtaining three-dimensional image by using two-wavelength digital holography and phase contouring me...**, Tian Qing, Zhejiang Normal University (China); Hui Wang, Zhejiang Normal University (China); Hongzhen Jin Zhejiang Normal University (China); Yong Li Zhejiang Normal University (China) [6832-16]

✓ **Near-field diffraction analysis and simulation about nanascale of Fresnel zone plate**, Jiang Ji, Institute of Microelectronic of Chinese Science Ac (China); Changqing Xie, Institute of Microelectronic of Chinese Science Ac(China); Qiang Fu, Changchun Institute of Technolog (China); Xipin Xue, Changchun Institute of Technology (China); Xiaoli Zhu, Institute of Microelectronic of Chinese Science Ac (China); Xinhua Liu, Institute of Microelectronic of Chinese Science Ac (China); Ming Liu, Institute of Microelectronic of Chinese Science Ac (China) [6832-17]

✓ **Diffraction from grating surfaces of a negative index metamaterial**, Min Cheng, Minjiang Univ. (China) [6832-40]

✓ **Digital image processing for optical correlation recognition of aviation photographs**, Yifan Sun, Tsinghua University (China); Qiaofeng Tan, Tsinghua University (China); Liangcai Cao, Tsinghua University (China); Qingsheng He, Tsinghua University (China); Guofan Jin, Tsinghua University (China) [6832-41]

✓ **Research on a novel high gain model for dispersive spectrographic systems**, Cheng Liang, Zhejiang university (China); Ye Zi, Zhejiang university (China); XingzhiGong (China); Feihong Yu (China) [6832-45]

✓ **Fabrication of multimode interference couplers based on digital micromirror system**, SuMei Wu, Nanchang University of Aeronautics (China); Xingdao He, NanChang University of Aeronautics (China); Huaming Wu, Huazhong University of Science and Technology (China); Chenbo Shen, Zhejiang Public Information Limited Company (China) [6832-46]

✓ **A method of implementing a light beam with arbitrary polarization by diffraction phase elements (DPE...**, ChunHui Niu, Beijing Information Science and Technology University (China) . [6832-47]

✓ **The dispersive system of a mini-spectrometer**, ChunHui Niu, Beijing Information Science and Technology University (China) [6832-48]

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✓ **Study of numerical reconstruction for three-dimensional shape using digital holograms**, Hongzhen Jin, Lihong Ma, Yong Li, Qing Tian, Hui Wang, Zhejiang Normal University (China)..... [6832-56]

✓ **Numerical simulation of beam propagation through atmospheric turbulence for laser radar**, Wuguang He, Jian Wu, Univ. of Electronic Science and Technology of China (China) . [6832-59]

- √ **Real-color rainbow hologram with wide viewing angle obtained by the combination of computer and opti...**, Liangqin Gan, Hui Wang, Yong Li, Hongzhen Jin, Zhejiang Normal University (China) [6832-61]
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- √ **Resolution enhancement of photon sieve based on apodization**, Guanxiao Cheng, Tingwen Xing, Yong Yang , Institute of Optics and Electronics, CAS (China); Jianling Ma, Taishan College (China) [6832-68]
- √ **Analysis of a photopolymer sensitized by whole visible light** , Ruoping Li , Sulian Wang, Hai Lu, Daoguang Tang, Yong Xiao, Mingju Huang, Henan University (China) [6832-70]
- √ **Experimental research of CCD/LCD in holographic interferometry**, Yin Na, Lintao Li, Hongtao Wang, Fei Guo, Wengsheng Wang, Changchun University of Science and Technology (China) [6832-72]
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- √ **Studying on surface topographic measurement using digital holography**, Yunxu Sun, Yong Yao, Harbin Institute of Technology (China) [6832-74]
- √ **The study of Talbot effect using the state-vector function**, Jianwei Zhong, Hangzhou Dianzi University(China), Zhixin Yao, Bailiang Pan, Zhejiang University (China) [6832-76]
- √ **Focusing properties and focal depth of amplitude modulation Gaussian beams**, Jinsong Li, College of Optics and Electronics (China) [6832-79]
- √ **Study on fiber position sensor based on wavelength-encoding plane**, Jun Lou, Weijian Tian, China Jiliang University (China), Shaojun Fu, Univ of Science and Tech (China); Zhijun Meng, Weiping Yao, China Jiliang University (China) [6832-82]
- √ **WDM implemented by multiple volume gratings in photorefractive LiNbO3 crystal**, Hongmei Liu, Xiaona Yan, Rong Zhu, Chen Yang, Shanghai University (China) [6832-83]
- √ **Analysis of the effect of recording conditions on grating formation in holographic photopolymers**, Tao Zhang, Beijing University of Technology (China) [6832-84]
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- √ **Plasmonic nanostructure-based optical probe working**, Yongqi Fu, Chunlei Du, Xiangang Luo, Institute of Optics and Electronics (China); Wei Zhou, Lennie Lim, Nanyang Technological University (China) [6832-93]
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- √ **Imaging by a sub-wavelength metallic lens with a large field of view**, Chongxi Zhou, Shaoyun Yin, Lfang Shi, Xanfang Luo, hunlei Du, Institute of Optics and Electronics (China)... [6832-96]
- √ **Replication of holographic lens used as multiplexer/demultiplexer in fiber optic communication**, Xuechang Ren, Shou Liu, Xiangsu Zhang, Xiaoyun Chen, Xiamen Univ. (China) [6832-101]
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- √ **The study of optical characteristics of multi-layer diffractive optical elements**, Hui Dong, Changchun Univ. of Science and Technology (China) [6832-111]
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- √ **Study of a new style Holographic Grating That Can Be Used for Wavelength-Division Demultiplexer**, Yan Sui, Heling Zhang, Fuquan Hu, Wei Yang, Physics department, capital normal university (China); [6832-150]
- √ **Research on improved image reconstruction algorithms of OCT based on incomplete projection data**, Xiaochun Tang , Nanchang Institute of Aeronautical Technology(China); Yi-Qing Gao, Nanchang Institute of Aeronautical Technology (China) [6832-27]
- √ **Study on resolution of digital holographic microscopy**, Huaying Wang, Hebei University of Engineering(China); Guangjun Wang, Beijing University of Technology (China); Jie Zhao, Beijing University of Technology (China); Dayong Wang, Beijing University of Technology (China) [6832-62]
- √ **Optical system with off-axis holographic lens group for fabricating large-size photonic crystals**, Shaoran Huang, xiamen university (China) [6832-21]
- √ **A new software subdivision method for grating fringe based on Fourier transform**, Wusheng Luo, changsha nudt (China)[6832-30]
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Monday 12 November

SESSION 1

16 district 3 floor, 112 room Mon.1:40pm to 5:20pm

Electronic imaging system

Chairs: Yanqiu Li

- 1:40pm: **Photo-collection representation based on viewpoint clustering** (*Invited Paper*), Alexander Sibiryakov, Mitsubishi Electric (United Kingdom) [6833-87]
- 2:10pm: **High speed real-time wavefront processing system for a solid-state laser system**, Yuan Liu, Institute of Optics and Electronics (China) [6833-48]
- 2:30pm: **Optical imaging system MTF measuring method based on digital images**, Shihu Zhao, Peking Univ. (China) ... [6833-107]
- 2:50pm: **Research on the two-dimensional performance model for LLL imaging systems**, Kecong Ai, Xi'an Inst of Applied Optics (China) [6833-42]
- 3:10pm: **Simulated photon images**, Lei Zhao, Beijing Institute of Technology (China) [6833-71]
- Coffee/Tea Break 3:30pm to 4:00pm
- 4:00pm: **Automatic optical inspection for chip components based on local principal wave probability**, Jianjie Wu, Huazhong Institute of Electro-optics Technology (China) [6833-129]
- 4:20pm: **Network video transmission system based on SOPC**, Zhengbing Zhang, Yangtze University (China) [6833-64]
- 4:40pm: **A 3D model retrieve method integrating shape distribution and self-organizing feature map**, Meifa Huang, Guilin University of Electronic Technology (China) [6833-61]
- 5:00pm: **The application of coded excitation technology in medical ultrasonic Doppler imaging**, Weifeng Li, Tianjin Univ. (China) [6833-47]

Tuesday 13 November

SESSION 2

16 district 3 floor, 112 room Tue.8:30am to 12:10pm

Image processing I

Chairs: Chung-Sheng Li

- 8:30am: **Integrated optical 3D digital imaging based on DSP scheme** (*Invited Paper*), Xiaodong Wang, Shenzhen University (China) [6833-55]
- 9:00am: **Embedded video monitoring system based on the OMAP**, Zhen-Hua Xia, Yangtze University (China) [6833-58]
- 9:20am: **Elimination of intra-page crosstalk noise in holographic data storage by using pixel spread function**, Huangyong Wang, Beijing University of Technology (China) [6833-120]
- 9:40am: **An image quality assessment algorithm used for JPEG compressed image**, Ruiling Li, BeiJing institute of technology (China) [6833-73]
- 10:00am: **The system integration of the image processing**, Qixing Chen, Institute of Optics and Electronics CAS (China) ... [6833-141]
- Coffee/Tea Break 10:20am to 10:50am
- 10:50am: **An improved SUSAN algorithm for electronic image stabilization of the UAV video image**, Hongying Zhao, Peking University (China) [6833-105]
- 11:10am: **A new method for stabilization of video images with large moving object**, Pengqi Gao, Peking University (China) [6833-103]
- 11:30am: **World of technology**, Razark Gbogbo, OTENG BROTHERS (Ghana) [6833-2]
- 11:50am: **Simulation estimation of 5-parameter global motion with Fourier transform**, Zhengbing Zhang, Yangtze University (China) [6833-65]

SESSION 3

16 district 3 floor, 112 room Tue.1:40pm to 5:40pm

Image processing II

Chairs: Minerva M. Yeung

- 1:40pm: **Despeckling algorithm on ultrasonic image using adaptive block-based singular value decomposition** (*Invited Paper*), Sae-Bae Napa, King Mongkut's Institute of Technology Ladkrabang (Thailand) [6833-20]
- 2:10pm: **A Nonlinear Prediction Filtering Algorithm**, Maotao Xiong, Institute of Optics and Electronics CAS (China) [6833-142]
- 2:30pm: **Analysis of the enrichment jet plane engine's UV image histogram**, Shengli Chang, National Univ of Defense Technology (China) [6833-19]
- 2:50pm: **A rapid iris location algorithm based on geometrical feature of the gray curve and gray distribution**, Yunxin Wang, Tianjin Univ. (China) [6833-52]
- 3:10pm: **Size measurement of standing and sitting position based on human animation**, Baozhen Ge, Tianjin University (China) [6833-123]
- Coffee/Tea Break 3:30pm to 4:00pm
- 4:00pm: **An improved sub-aperture algorithm for airborne SAR imaging under arbitrary aircraft maneuvers**, Yong Li, Nanjing University (China) [6833-128]
- 4:20pm: **A new sub-pixel imaging algorithm based on multi-resolution filtering and its real-time realizing te...**, Jian Zhang, Security Printing Institute of People's Bank (China) [6833-62]
- 4:40pm: **Two fast algorithms of image inpainting**, He Yuqing, Tianjin University (China) [6833-99]
- 5:00pm: **A new fingerprint matching method based on ridge tracing**, Chongjie Ran, University of Electronic Science and Technology (China) [6833-7]
- 5:20pm: **A new mean shift tracking method of moving target in cluttered background**, Heng Zhang, National University of defense Technology (China) [6833-97]

Wednesday 14 November

SESSION 4

16 district 3 floor, 112 room Wed.8:30am to 11:50am

Target detection and Image registration

Chairs: Yanqiu Li

- 8:30am: **A novel digital watermarking system based on Web Services** (*Invited Paper*), Zude Zhou, Wuhan University of Technology (China) [6833-144]
- 9:00am: **A vision-based detection algorithm for unmarked road**, Qingji Gao, Civil Aviation University of China (China) [6833-75]
- 9:20am: **Detection of infrared small targets in a starry background**, Jinhui Cui, Harbin Engineering University (China) [6833-112]
- 9:40am: **Road and linear structure automatic extraction**, Qiwei Hao, Beijing Institute of Technology (China) [6833-102]
- 10:00am: **Fast Hough transform for automatic bridge extraction**, Qiwei Hao, Beijing Institute of Technology (China) [6833-83]
- Coffee/Tea Break 10:20am to 10:50am

- 10:50am: **A coarse registration method of range image based on SIFT**, Xiaoli Liu, Shenzhen Univ. (China) [6833-68]
- 11:10am: **Research on registration algorithm for check seal verification**, Shuang Wang, Tianjin University (China) . . . [6833-104]
- 11:30am: **Image matching based on epipolar and local homography constraints**, Lichun Li, (China) [6833-115]

SESSION 5

16 district 3 floor, 112 room Wed.1:40pm to 5:30pm

Image recognition and fusion

Chairs: Chung-Sheng Li

- 1:40pm: **Fast intellectual recognition of autocar tire character based on canny operator**, Huang Zhanhua, Tianjin University (China) [6833-3]
- 2:00pm: **Analysis on niche genetic algorithm-based nonparametric curve recognition**, Wei Wei, Hebei University of Technology (China) [6833-4]
- 2:20pm: **Online recognition of group actions in intelligent meeting scenario**, Xiang Zhang, Tsinghua University (China) [6833-136]
- 2:40pm: **Classification of multi-textures based on co-occurrence matrices**, Liu Zheng, Tianjin University (China) [6833-24]
- 3:00pm: **Rock images classification using principle component analysis and spatial frequency measurement**, Tossaporn Kachanuban, King Mongkut's Institute of Technology Ladkrabang (Thailand) [6833-77]
- Coffee/Tea Break 3:20pm to 3:50pm
- 3:50pm: **An improved fusion algorithm of video sequence**, Fengfei Zhou, Xi'an 205 Institute (China) [6833-81]
- 4:10pm: **Implementation of real-time Laplacian pyramid image fusion processing based on FPGA**, Yajun Song, Beijing Institute of Technology (China) [6833-86]
- 4:30pm: **An image fusion of quincunx sampling lifting scheme and small real-time DSP-based system**, Qiang Wang, China Ordnance Equipment Group 208 Institute (China).....[6833-96]
- 4:50pm: **An image segmentation approach based on chaotic ant colony algorithms**, Pan Zhongliang, South China Normal University (China) [6833-84]
- 5:10pm: **A hybrid image segmentation algorithm based on edge detection, thresholding and region growing**, Zhiming Xie, Fujian Normal University (China) [6833-89]

Thursday 15 November

SESSION 6

16 district 3 floor, 112 room Thur.8:30am to 12:00pm

Color image processing and coding

Chairs: Dazun Zhao

- 8:30am: **Color component prediction in multispectral space based on rotated principal component analysis**, Faqiang Xu, Wuhan University (China) [6833-26]
- 8:50am: **New color image processing with color filter array for single chip camera**, Jinjiang Wang, Tianjin University (China) [6833-27]
- 9:10am: **Color image quality metric for realistic image rendition**, Man-Jun Xiao, Beijing Institute of Technology (China) ... [6833-101]
- 9:30am: **Color transfer based on hot contrast and steerable pyramid for visible and infrared images**, Lingxue Wang, Beijing Institute of Technology (China) [6833-110]
- Coffee/Tea Break 9:50am to 10:20am
- 10:20am: **A low-complexity multiple-regions-of-interest image coding based on different degrees of interest**, Li-Bao Zhang, Beijing Normal Univ. (China) [6833-40]
- 10:40am: **A new region-of-interest image coding method**, Ruixin Wang, Wuhan University of Science and Technology (China) [6833-138]
- 11:00am: **Fractional Levy Stable Motion for modeling speckle image**, Xutao Li, South China University of Technology (China) [6833-92]
- 11:20am: **Frame transfer CCD driving circuit design for space camera**, Xinhua Chen, Suzhou University (China) [6833-90]

Wednesday/Thursday Posters

Time: Wednesday 12:30pm to Thursday 11:30am

- ✓ **Robust non-rigid registration of medical images with incomplete image information using adaptive nor...**, Binjie Qin, Shanghai Jiao Tong University (China) [6833-1]
- ✓ **DSP implementation of wavelet image enhancement**, Wenruo Bai, Tianjin University of Technology (China) [6833-5]
- ✓ **Point spread function estimation based on wavelet transform for image restoration**, Xiaoxuan Chen, Harbin Institute of Technology (China) [6833-6]
- ✓ **Proposals to set up the new performance model for thermal imaging system**, Kecong Ai, Xi'an Institute (China) [6833-9]
- ✓ **Air touch: new feeling touch-panel interface you don't need to touch using audio input**, Kunio Sakamoto, Shimane Univ. (Japan) [6833-10]
- ✓ **Liquid crystal layer provides virtual display using mirror image of polarized display monitor for ex...**, Kunio Sakamoto, Shimane Univ. (Japan) [6833-11]
- ✓ **Arenani: pointing and information query system for object beyond your reach**, Kunio Sakamoto, Shimane Univ. (Japan) [6833-12]
- ✓ **Deco-video: video editing and viewing browser enables playback of movie contents reproduced by using...**, Kunio Sakamoto, Shimane Univ. (Japan) [6833-13]
- ✓ **Light path indication system for route guidance in public facilities**, Kunio Sakamoto, Shimane Univ. (Japan) ... [6833-14]

- ✓ **Handheld route guidance system using projected direction indicator for outdoor usage**, Kunio Sakamoto, Shimane Univ. (Japan) [6833-15]
- ✓ **Multiframe blind deconvolution of atmospheric turbulence-degraded images based on filter**, Jianming Huang, Institute of Optics and Electronics (China) [6833-21]
- ✓ **Impact and improvement of shutter synchronism on multi-sensor imaging system**, Junyong Fang, Beijing Institute of Technology (China) [6833-22]
- ✓ **Research on smearing elimination of remote sensing images**, Yuheng Chen, Soochow University (China) [6833-23]
- ✓ **Research of x-ray nondestructive detector for high-speed running conveyor belt with steel wire ropes**, Jun-Feng Wang, Tianjin Polytechnic University (China) [6833-25]
- ✓ **Online maintaining appearance model using particle**, Siying Chen, Beijing Institute of Technology (China) [6833-28]
- ✓ **Image segmentation based on two-level and parallel fire pulse coupled neural networks (PCNN) in complex environment**, Zhenming Peng, University of Electronic Science and Technology of China (China) [6833-30]
- ✓ **Robust adaptive non-rigid image registration based on joint salient point sets in the presence of tu...**, Binjie Qin, Shanghai Jiao Tong Univ. (China) [6833-32]
- ✓ **Video surveillance system based on MPEG-4**, Jing Ge, HuaZhong University (China) [6833-33]
- ✓ **IFS (Iterated Function Systems) -based image geometry transform**, Zhengbing Zhang, Yangtze University (China) [6833-34]
- ✓ **Analyses of images in dielectric electric discharge**, Yafeng He, Hebei University (China) [6833-35]
- ✓ **Research on adaptive Kalman filter based on interacting multiple models**, Yong Zhang, Institute of Optics and Electronics (China) [6833-36]
- ✓ **Research on parameterized design method of virtual target track**, Yong Zhang, Institute of Optics and Electronics (China) [6833-37]
- ✓ **Medical image retrieval based on local texture statistic model**, Li-Bao Zhang, Beijing Normal Univ. (China) [6833-39]
- ✓ **An ROI-Codec-supported rate control algorithm in video compression**, Ziyin Li, China Jiliang University (China) . [6833-41]
- ✓ **A symbol-map wavelet zero-tree image coding algorithm**, Xiaodong Wang, Shenzhen University (China) [6833-43]
- ✓ **Development of low light level and wide dynamic range visible nephogram imaging technology**, Wujun Xu, Donghua University (China) [6833-45]
- ✓ **Fast content-based image retrieval using dynamic cluster tree**, Jinyan Chen, Tianjin University (China) [6833-46]
- ✓ **A robust approach for detecting infrared small dim targets**, Yong Yang, University of Electronic Science and Technology (China) [6833-49]
- ✓ **A method of improving the accuracy of sub-pixel localization of digital image**, Jianwei Zhang, Institute of optics and electronics (China) [6833-50]
- ✓ **Application of a partial differential equation in image processing**, Huijuan Wang, North China Electric Power University (China) [6833-53]
- ✓ **Research on on-line grading system for pearl defect based on machine vision**, Jilin Zhou, Hangzhou Dianzi University (China) [6833-54]
- ✓ **Video semantics discovery from video captions and comments**, Rongteng Wu, Tianjin University (China) [6833-56]

- √ **Real-time distortion correction for visual inspection systems based on FPGA**, Danhua Liang, Tianjin University (China)[6833-57]
- √ **Fabrication of large area mercuric iodide polycrystalline films and basic performance**, Jianbao Gui, Huazhong Univ of Science and Technology (China) [6833-60]
- √ **Low-contrast small target image enhancement based on rough set theory**, Yong Yang, University of Electronic Science and Technology (China) [6833-63]
- √ **Research on 3D visualization of fault diagnosis system for photoelectric tracking device**, MingLiang Hou, Institute of Optics and Electronics CAS (China) [6833-76]
- √ **Design and implementation of timing generator of frame transfer array CCD camera**, Jiankang Zhou, Suzhou University (China) [6833-78]
- √ **Research on measuring technology of geometrical parameter of minute parts based on image processing**, Xiaoyan Jia, Guilin University of Electronic Technology (China)..... [6833-79]
- √ **Design of intelligent fault diagnosis system for photoelectric tracking device based on virtual tech...**, MingLiang Hou, Institute of Optics and Electronics CAS (China) [6833-82]
- √ **A novel median-contourlet for image denoising application**, Jinping He, Beijing Institute of Technology (China) [6833-85]
- √ **Application of 8051 MCU in protocols conversion of CCD camera**, Jinhua Liu, Beijing Institute of Technology (China) [6833-88]
- √ **An ARM-based wavefront processor for adaptive optical system**, Lifang Ma, Institute of Optics and Electronics CAS (China) [6833-91]
- √ **Simultaneous non-rigid registration and segmentation of brain MRI in presence of a large space-occup...**, Xianjun Sun, Shanghai Jiao Tong University (China) [6833-93]
- √ **A new method for extra-low SNR multi-spectral image processing by empirical mode decomposition**, Chao Liu, HIT Campus Shenzhen University Town Xili (China) [6833-94]
- √ **Image analyzing and processing of the patterns in dielectric barrier discharge**, Hongfang Wang, Hebei Univ. (China) [6833-95]
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- √ **Study on defect detection of IC wafer based on morphology**, Wen Zhou, ChangChun, 130012 (China) [6833-131]
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- √ **Wavelet fusion based super-resolution restoration of projection onto convex set**, Yuzhen Cao, Tianjin University (China)[6833-139]
- √ **Driving techniques for high-frame rate CCD camera**, Weiqiang Guo, Changchun Institute of Optics (China) [6833-140]
- √ **Study of Image Processing System Based on Parallel Structure of Multi-DSP**, Jianxun Song, Institute of Optics and Electronics CAS (China) [6833-143]
- √ **Fluvial particle characterization using artificial neural network and spectral image processing**, Bim Prasad Shrestha, Kathmandu University [6833-149]
- √ **Computational analysis of Pelton bucket tip erosion using digital image processing**, Bim Prasad Shrestha, Kathmandu University [6833-150]

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Optical Design and Testing

Conference Chairs: **Yongtian Wang** **Theo Tschudi** **Jannick Rolland** **Kimio Tatsuno**

Monday 12 November

SESSION 1

16 District the third floor, 113 Room Mon.1:40pm to 3:20pm

Nano- and Micro-optics

Chair: **Theo Tschudi**

- 1:40pm: **Nano-glass imprinting technology for next-generation optical devices** (*Invited paper*), Junji Nishii, AIST (Japan) . . . [6834-18]
2:10pm: **Technological strategy for advanced micro- and nano-structured optical elements** (*Invited paper*), Hisao Kikuta, Osaka Prefecture Univ. (Japan) [6834-159]
2:40pm: **Bending insensitive optical curl patch cords based on holey-fibers for FTTH**, Chang Hyun Jung, Chi-Hwan Ouh, Ki-Sun Ryu, Hee-Jeon Kang, OPTOMAGIC Co., Ltd; Young-Geon Han, Hanyang University; Sang-Bae Lee, Korea Institute of Science & Technology (South Korea) [6834-1]
3:00pm: **Theoretical analysis of square GRIN lens**, Zhou Zigang, Chen Kai, Zhang Ren, Southwest University of Science and Technology (China) [6834-5]
Coffee/Tea Break 3:20pm to 3:50 pm

SESSION 2

16 District the third floor, 113 Room Mon.4:20pm to 5:30pm

Illumination system design

Chair: **Hisao Kikuta**

- 3:50pm: **Backlight Pattern Optimization** (*Invited paper*), William Cassarly, Optical Research Associates (USA) [6834-191]
4:20pm: **Polarimetry of illumination for 193-nm lithography used for manufacture of high-end LSIs** (*Invited paper*), Hiroshi Nomura, Toshiba Corp. Semiconductor Company (Japan) [6834-8]
4:50pm: **A novel highly-integrated light guide plate using micro-optical technique**, Ping Xu, Xiangxian Chen, Jiefeng Huang, Lili Wan, Kai Wang, Jiayong Liu, Shenzhen University (China) [6834-73]
5:10pm: **Optical characteristics of light pipe in illumination system**, Zhijie Liao, Tingwen Xing, Institute of Optics and Electronics (China) [6834-102]

Tuesday 13 November

SESSION 3

16 District the third floor, 113 Room Tue.8:30am to 10:30am

Astronomical and space optics

Chair: **Jannick Rolland**

- 8:30am: **The Alignment Induced Aberrations of the Next Generation of Ground-Based Astronomical Telescopes** (*Invited paper*), Kevin Thompson, Optical Research Associates; Tobias Schmid, Jannick Rolland, Univ. of Central Florida (USA) [6834-187]
9:00am: **Research on electric method for testing co-phasing error** (*Invited paper*), Weirui Zhao, Genrui Cao, Beijing Institute of Technology (China) [6834-121]
9:30am: **Imaging analysis of optical sparse aperture systems with multiple-array configuration designs**, Dayong Wang, Juan Zhao, Ji Han, Beijing University of Technology (China); Hongfeng Guo, Chinese Academy of Science (China) [6834-52]
9:50am: **Light-weight, fibre-coupled diode-laser pump-module for a space-borne laser altimeter**, Thomas Brand, Paul Zolichowski, Matthias Haag, Bernd Koehler, Jens Biesenbach, Dilas Diodenlaser GmbH (Germany) [6834-142]
10:10am: **The optical design of a double pass cross-dispersed echelle spectrograph for extremely high precision**, Bo Zhao, Jian Ge, Univ. of Florida (USA) [6834-104]
Coffee/Tea Break 10:30am to 11:00am

SESSION 4

16 District the third floor, 113 Room Tue.11:00am to 12:10pm

Head-mounted display design

Chair: **Yongtian Wang**

- 11:00am: **Beyond the Desktop: Emerging Technologies for Supporting 3D Collaborative Teams** (*Invited paper*), Jannick Rolland, University of Central Florida (USA) [6834-193]
11:30am: **Design of hybrid refractive-diffractive objective lens of head-mounted projective displays**, Yang Zhang, Chang Chun University of Science and Technology (China) [6834-109]
11:50am: **Research-oriented Teaching in optical design course and its function in education**, Zhaofeng Cen, Xiaotong Li, Zhejiang University (China) [6834-155]
Lunch break 12:10pm to 1:20pm

SESSION 5

16 District the third floor, 113 Room Tue.1:20pm to 3:20pm

Compact optics

Chair: Kevin Thompson

- 1:20pm: **Dynamic aberration compensation by use of nematic liquid-crystal device** (*Invited paper*), Theo Tschudi, Darmstadt University of Technology (Germany) [6834-192]
- 1:50pm: **Optical design, fabrication, and evaluation of optical systems using free-shaped prism** (*Invited paper*), Hisashi Ohde, Tetsuo Nagata, OLYMPUS CORPORATION (Japan) [6834-131]
- 2:20pm: **Rotating-type miniature camera-phone zoom-lens system**, Junewen Chen, Chung-Hua, Univ. (Taiwan China) [6834-12]
- 2:40pm: **Design of an objective lens for optical disc systems employing a blue laser by scalar diffraction si...**, Naoki Yamagata, Shuichi Takeuchi, Kenzo Yamanaka, Daisuke Koreeda, Koichi Maruyama, Pentax Corp. (Japan) [6834-172]
- 3:00pm: **Study on mathematical modeling for optical pickup virtual analyzer**, Xuemin Cheng, Graduate School at Shenzhen/ Tsinghua Univ. (China) [6834-153]
- Coffee/Tea Break 3:20pm to 3:50pm

SESSION 6

16 District the third floor, 113 Roo Tue.3:50pm to 5:40pm

Interferometry in optical testing

Chair: Qun Hao

- 3:50pm: **New low-cost metrology system for mass production use** (*Invited paper*), Yves Gilliland, Jan Fehse, Christian Zellweger, Thomas Bl_mel, Markus Bosse, Ralph Neubert, FISBA OPTIK AG (Switzerland) [6834-23]
- 4:20pm: **A compact, high-speed, desktop turnkey measurement system for the characterization of the surface to...**, Stephen Fantone, Jian Zhang, David Imrie, Optikos Corporation (USA) [6834-150]
- 4:40pm: **Mach-Zehnder optical interferometric polarimeter using two reference beams with different heterodyne...**, Hongbing Liu, Yudong Li, Guoxin Cui, Yanfeng Zhang, Jing Chen, Jingjun Xu, Qian Sun, Nankai University (China) [6834-34]
- 5:00pm: **New interferometric algorithm for the measurement of phasing errors in spherical segmented-mirrors s...**, Yu Fei, Beijing Institute of Technology (China) [6834-25]
- 5:20pm: **Inhomogeneous radial shearing technique**, Zahra Ghadiani, University Of Tehran (Iran) [6834-164]

Wednesday 14 November

SESSION 7

16 District the third floor, 113 Room Wed.8:30am to 9:40am

Testing for aspheric surfaces

Chair: Yves Gilliland

- 8:30am: **Study on testing larger asphericity in non-null interferometer** (*Invited paper*), Yongying Yang, Dong Liu, Yibing Shen, State Key Lab. of Modern Optical Instrumentation. (China) [6834-180]
- 9:00am: **System optimization of radial shearing interferometer for aspheric testing**, Dong Liu, Yongying Yang, Yibing Shen, State Key Lab. of Modern Optical Instrumentation. (China) [6834-178]
- 9:20am: **Error analysis of sub-aperture synthesis for testing surface**, Liu Xu, Yongying Yang, Liu Dong, Chunhua Lu, Zhejiang university. (China) [6834-112]
- Coffee/Tea Break 9:40am to 10:10am

SESSION 8

16 District the third floor, 113 Room Wed.10:10am to 11:40am

Novel system design

Chair: Dayong Wang

- 10:10am: **Optics for Digital Photography** (*Invited paper*), Karl Lenhardt, Jos Schneider Optische Werke (Germany) ... [6834-195]
- 10:40am: **Design of a reconnaissance pod system for air vehicle**, Haeng Bok Lee, Agency for Defense Development. (South Korea) [6834-78]
- 11:00am: **Compact hyperspectral imaging system with holographic convex gratings**, Ji Qun, Shen Min, Soochow Univ. (China) [6834-51]
- 11:20am: **Design of a lens system within mobile terminal**, Jinfan Liu, Huazhong University of Science and Technology; Jie Ding, Beijing Institute of Technology (China) [6834-158]
- 11:40am: **Singlet mega-pixel resolution lens**, Chen-Hung Lin, Hoang-Yan Lin, National Taiwan Univ.; Horng Chang, Fu Jen Catholic University; Rong-Seng Chang, National Central University (Taiwan China)..... [6834-136]
- Lunch break 12:00pm to 1:50pm

SESSION 9

16 District the third floor, 113 Room Wed.1:50pm to 3:30pm

Wavefront sensing and coding

Chair: Yongying Yang

- 1:50pm: **High-resolution imaging of phase-distorted extended object using SPGD algorithm and deformable mirro...**, Huizhen Yang, Xinyang Li, Wenhan Jiang, IOE. CAS(China) [6834-19]
- 2:10pm: **Wavefront sensing**, Melquiades Garcia-Soto, INAOE. (Mexico) [6834-177]
- 2:30pm: **Wavefront error correction with stochastic parallel gradient descent algorithm**, Jiaguo Liu, Lin Li, Xinqi Hu, Beijing Institute of Technology. (China) [6834-41]
- 2:50pm: **Design of objective lenses to extend the depth-of-field based on wavefront coding**, Tingyu Zhao, Zi Ye, Wenzi Zhang, Weiwei Huang, Feihong Yu, Zhejiang University (China) .. [6834-62]
- 3:10pm: **Strehl ratio analysis for wavefront coding system**, Wenzi Zhang, Zi Ye, Tingyu Zhao, Feihong Yu, Zhejiang University. (China) [6834-68]
- Coffee/Tea Break 3:30pm to 4:00pm

SESSION 10

16 District the third floor, 113 Room Wed.4:00pm to 5:10pm

Optical measurement

Chair: HuaiDong Yang

- 4:00pm: **A generalized temporal-phase unwrapping algorithm** (*Invited paper*), Jindong Tian, Peng Xiang, Xiao Bo Zhao, Shenzhen Univ. (China) [6834-72]
- 4:30pm: **Bare wafer inspection based on Kinfe-edge testing**, Jun Ho Lee, Kongju National Univ. ; Yong Min Kim, Mierae Technology (South Korea) [6834-4]
- 4:50pm: **Research of light reflex surface defects detection technology**, Jiajun Tian, Yao Yong, Yunxu Sun, Weijie Shi, Harbin Institute of Technology. (China) [6834-118]

Thursday 15 November**SESSION 11**

16 District the third floor, 113 Room Thur.8:30am to 10:20am

Optical system analysis and optimization

Chair: Yifan Huang

- 8:30am: **Optimization of sampled imaging system with baseband response squeeze model** (*Invited paper*), Huaidong Yang, Guofan Jin, Tsinghua Univ. (China) [6834-145]
- 9:00am: **Development in local and global optimization methods**, Quanxin Ding, Institute of Electro-optical Equipment of AVIC.; Hua Liu, Luoyang Institute of Electro-Optical Equipment (China) [6834-91]
- 9:20am: **Analysis of infrared radiation from optical window with graded temperature distribution**, Xiaotong Li, Zhaofeng Cen, Zhejiang University. (China) [6834-154]
- 9:40am: **Using Monte Carlo method for evaluating the imaging through a disturbed medium with random distribut....**, Qiangsheng Liu, Zhjiang University. (China) [6834-53]
- 10:00am: **Comparison of ray-tracing methods in self-adaptive grid for inhomogeneous medium**, Shitao Deng, Xiaotong Li, Zhaofeng Cen, Qiangsheng Liu, Zhejiang University. (China) [6834-15]
- Coffee/Tea Break 10:20am to 10:50am

SESSION 12

16 District the third floor, 113 Room Thur.10:50am to 12:10pm

Optical testing and system alignment

Chair: Jindong Tian

- 10:50am: **Electrically-calibrated pyroelectric detector for high-accuracy calibration of UV radiation**, Xiumei Shao, Yuehua Yu, Jieying Ding, Jiaxiong Fang, Shanghai Institute of Technical Physics. (China) [6834-94]
- 11:10am: **New method for measuring optical gauge's deviation angle with mutually perpendicular dual-frequency ...**, Jianrong Ren, Jiaming Lin, Chuan He, Guilan Zou, Beijing Institute of Technology. (China) [6834-123]
- 11:30am: **Novel method based on DDE technology for computer-aided alignment**, Yifan Huang, Li Lin, Beijing Institute of Technology. (China) [6834-129]
- 11:50am: **Research on measurement of lens centering errors based on image processing**, Guimei Dong, Yuchi Lin, Yin-guo Huang, Tianjin University. (China) [6834-98]

Wednesday/Thursday Posters

Time: Wednesday 12:30 pm to Thursday 11:30 am

- ✓ **Optical design of a synthetic aperture ladar antenna system**, Changqing Cao, Xidian Univ.(China) [6834-2]
- ✓ **Design of a wide field-of-view infrared scene projector**, Zhenyu Jiang, Lin Li, Beijing Institute of Technology (China) [6834-6]
- ✓ **Improved first Rayleigh Sommerfeld method for investigating microlens array with long focal depth an...**, Juan Liu, Beijing Jiaotong Univ. (China) [6834-7]
- ✓ **Optical system design of long-wave infrared zoom lens**, Zhang Liang, Luoyang Electro-optical Equipment Institute (China) [6834-9]
- ✓ **Median filter in multiple-environment testing conditions for low-level-light sight devices measureme...**, Youtang Gao, Nanjing Univ of Science & Technology (China) [6834-10]
- ✓ **Multi-alkali photocathode thermal performance analysis of image intensifier based on low-high temper...**, Youtang Gao, Nanjing Univ of Science & Technology (China) [6834-11]
- ✓ **Influence of temperature on fractal dimension of dynamic scattered light intensity signal of ultrafi...**, Jin Shen, Boxue Tan, Shandong University of Technology (China) [6834-13]
- ✓ **A practical fingerprint recognition system**, Chongjie Ran, University of Electronic Science and Technology of Institution of Electronics Engineering (China) [6834-14]
- ✓ **The effect of radius mismatch on segmented telescopic system performance**, Dewen Cheng, Yongtian Wang, Muhammad Talha, Jun Chang, Beijing Institute of Technology (China) [6834-17]
- ✓ **Extrapolation method to extend the dynamic range of the Shack-Hartmann wave-front sensor**, Huaqiang Li, Changhui Rao, Shuangliu 350#, Chengdu (China) [6834-20]
- ✓ **Application of a white-light interferometric measuring system as co-phasing the segmented primary mi...**, Helun Song, Hao Xian, Wenhan Jiang, Changhui Rao, Jian Huang, Shengqian Wang, Institution of Optics & Electronics, CAS,China (China)....[6834-22]
- ✓ **Coaxiality measurement system used to measure position and angle deviation**, Guojun Wu, Xi'an Institute of Optics and Precision mechanics (China) [6834-26]
- ✓ **Particle size measurement system of the aerosol time-of-flight mass spectrometer optimization study**, Wenwu Zhao, Lab of Environmental Spectroscopy (China) [6834-27]
- ✓ **Dark point arithmetic: a new method to test periodic structures of optical instruments**, Debin Cai, Yu Song, Department of Physics, USTC (China) [6834-31]
- ✓ **Spherical aberration correction of Gaussian beam**, Qinghui Li, Xidian University (China) [6834-32]
- ✓ **Measurement of self-organization pattern in dielectric barrier discharge by a special photoelectroni...**, Zengchao Zhao, Lifang Dong, Hebei Univ. (China) [6834-33]
- ✓ **Astigmatism analysis by matrix methods in white cells**, Kexin Chen, Li Xu, Huaidong Yang, Qingsheng He, Tsinghua University (China) [6834-35]
- ✓ **Study on the photo-electrical characteristics of different patterns in dielectric barrier discharge ...**, Yuyan Qi, Lifang Dong, Hebei Univ. (China) [6834-36]
- ✓ **Design of panoramic annular lens with long focal length using cemented lenses**, Shuang Niu, Zhejiang Univ. (China) [6834-37]
- ✓ **FPGA design in LCD reticule image generator used for optical measurement**, Liu Hao, Beijing Institute of Technology (China) [6834-38]
- ✓ **Simulation of the measurement precision of wavefront time-domain algorithm**, Tang Lei, Qun Hao, Qiudong Zhu, Xiting Zhao, Beijing Institute of Technology (China) [6834-40]

- √ **Athermalization for infrared dual field-of-view optical system**, Changcheng Yang, Shenghui Li, Huazhong Institute of Electro-Optics (China) [6834-42]
- √ **Aberration Theory for the Design of Plane-symmetric Optical Systems**, Lijun Lu, Shanghai Univ. (China) [6834-44]
- √ **Comparison of signals under top-hat beam and Gaussian beam excitations in surface thermal lens**, Mingqiang Liu, Bincheng Li, Honggang Hao, Chinese Academy of Sciences (China) [6834-49]
- √ **Microscope auto-focusing system with the self-adaptive mountain-climbing search method based on PC C...**, Liqun Xu, Zi Ye, Jianping Wu, Xinxin Yan, Feihong Yu, Zhejiang University (China) [6834-50]
- √ **Modulation transfer function measurement of charge-coupled devices using frequency- variable fringe p...**, Liefeng Zhao, Zhejiang Univ. (China) [6834-54]
- √ **Analysis of resolution criterion and aberrations for Fizeau interferometer**, Shengqian Wang, Changhui Rao, Wenhan Jiang, Institute of Optics and Electronics (China) [6834-55]
- √ **Gradual variation in sagittal radius+compensation in optical path: design in Czerny-Turner spectromet...**, Li Xu, Kexin Chen, Xingyue Huang, Huidong Yang, Minqiang Wang, Qingsheng He, Guofan Jin, Tsinghua Univ. (China) [6834-57]
- √ **Observation of aerosol with a compact lidar over Hefei, China**, Zeng-dong Liu, Anhui Institute of Optics and Fine Mechanics (China) [6834-59]
- √ **The effect of beam incident angles on cube corner retro-reflector measurement accuracy**, Wanli Liu, State Key Lab of Precision Measuring Technology (China) [6834-63]
- √ **The optimal design of TIR lens for improving LED illumination uniformity and efficiency**, Yankun Zhen, Xi'an Shiyou University; Wenzhi Zhang, Feihong Yu, Zhejiang University (China) . [6834-67]
- √ **Design of double refractive pattern recognition system for optical low pass filter**, Xiaoyan Li, China Jiliang Univ.; Shangzhou Jin, Le Wang, China Jiliang University (China) [6834-69]
- √ **A subpixel localization method based on edge diffraction**, Wang Hua, Peng Zi, Xiang Cheng, Foshan Univ. (China) [6834-71]
- √ **Evaluation of the sphericity measurement uncertainty for the fiber-point diffraction interferometer**, Lingfeng Chen, Beijing Institute of Technology (China) [6834-74]
- √ **A new method of evaluating counting efficiency based on signal amplitude response function**, Juan Yang, Fang Gu, Bao-Min Bian, Jian Lu, Nanjing University of Science and Technology (China) [6834-75]
- √ **Research on design of optimum phase mask for wavefront coded imaging system**, Hui Zhao, Huajun Feng, Qi Li, Zhejiang Univ. (China) [6834-80]
- √ **Analysis and design of conformal optical system based on ray tracing**, Dongxi Li, Changchun Institute of Optics (China)[6834-81]
- √ **Preliminary analysis and experiment of thermal influence on a large-aperture mirror**, Wei jie Hu, Peng Xu, Hua-Peng Zhang, Lei Zhao, Guang-Chun Bian, Yu Xin, Xinqi Hu, Beijing Institute of Technology (China) [6834-82]
- √ **Research of grid computing system applied in optical simulation**, Wei-Wei Jin, Zhjiang Univ. (China) [6834-85]
- √ **Laser-generated surface acoustic waves for detection of surface-Breaking defects based on two-wave m...**, Gang Yan, Jian Lu, Ling Yuan, Zhonghua Shen, Xiaowu Ni, Nanjing University of Posts and Telecommunications (China) [6834-86]
- √ **The application of MATLAB in optical alignment**, Shu Xiao, No 7186A Weixing Rd Changchun (China) [6834-89]
- √ **Wavefront aberration analysis and testing accuracy evaluation for the large-aberration aspheric syst...**, Junmiao Weng, Yongying Yang, Liu Dong, Zhejiang Univ. (China) [6834-93]
- √ **A robust and efficient point matching method for stereovision measurement using dynamic programming**, Peng Sun, Naiguang Lu, Beijing Information Science & Technology Univ. (China) [6834-97]
- √ **Highly precise nonlinear error calibrating system based on Fabry-Parot interferometer**, Jichi Ma, Yan Li, Chunyong Yin, Tsinghua University (China) [6834-99]
- √ **Experimental study on dual frequency laser interferometer with mid-frequency difference**, Ya Zhang, Yan Li, Shulian Zhang, Tsinghua University (China) [6834-100]
- √ **Measurement of target deformation under laser shock with laser beam shading technique**, Gang Dai, Zhonghua Shen, Jian Lu, Xiaowu Ni, Nanjing University of Science and Technology (China) [6834-101]
- √ **CCD-based on-line thickness measurement system for calendar**, Lifeng Guo, Yuming Fan, Guoxiong Zhang, Tianjin University (China) [6834-103]
- √ **A digital optical autocollimation method for measuring 2D small angle**, Lulu Ma, Bixi Yan, Naiguang Lv, Beijing Institute of Machinery (China) [6834-105]
- √ **A specially-designed optical system for measurement of the characteristic of square super-lattice pa...**, Haitao Zhao, Lifeng Dong, Hebei University (China) [6834-107]
- √ **An optical method of online measurement for the thickness of thin films**, Min Song, Yongjun Lu, Yanling Qu, Dalian Nationalities University (China) [6834-108]
- √ **Research on field correctors of infrared space optical remote sensor**, Bin Hui, Yuntian Pei, Jingzhen Li, Shenzhen university (China) [6834-111]
- √ **An absolute measurement method of spherical lens aberration**, Shuo Wu, Dingguo Sha, Jiaming Lin, Taogeng Zhou, Lingfeng Chen, Beijing Institute of Technology (China) [6834-113]
- √ **Finite element analysis of R-C telescope system in atmospheric sounding interferometer**, Qin Qin, Yong-Jie Gu, Shanghai Second Polytechnic University; Jin-Ping Tao, Ansys-China Shanghai Office (China) [6834-115]
- √ **Research on color encoding structured light 3D measurement technology**, Yuanyuan Fu, Guozhong Liu, Beijing Institute of Machinery (China) [6834-116]
- √ **Simulation of atmospheric turbulence layers with phase screens by JAVA**, Xiaofang Zhang, Wenqin Chen, Yu Xin, Jixiang Yan, Beijing Institute of Technology (China) [6834-117]
- √ **Research on electric method for testing co-phasing error**, Weirui Zhao, Genrui Cao, Beijing Institute of Technology (China) [6834-121]
- √ **Application of MATLAB in optical alignment**, Shu Xiao, Yong Tang, Changchun University of Science and Technology (China) [6834-122]
- √ **A novel method of lens initial structure selection: study on structures-aperture relationship of fin...**, Na Liu, Tianjin Univ. (China) [6834-128]
- √ **Design of an FT-NIR spectrometer for online quality analysis of traditional Chinese medicine manufac...**, Ren Zhu, Lan Wu, Shiming Wang, Xiangdong Xu, Zhihua Ding, Zhejiang Univ. (China) [6834-130]
- √ **Research on measurement of visible light transmittance of telescope system**, Jing Lu, Xiang Yang, Changchun Univ. of Science and Technology (China) [6834-132]

- √ **Study on CAD-based laser guiding measurement technology**, Yonggang Yan, Jianfei Ouyang, Wanli Liu, Fei Xia, Henan Polytechnic Univ. (China) [6834-137]
- √ **Specular surface measurement by using a moving diffusive structured light source**, Hongwei Guo, Tao Tao, Shanghai Univ. (China) [6834-139]
- √ **Infrared telephoto lens design of hybrid optoelectronic joint transform correlator**, Fei Guo, Hongtao Wang, Lintao Li, Yin Na, Wensheng Wang, Changchun University of Science and Technology (China) [6834-140]
- √ **Information entropy characteristic of the light-scattering signal amplitude distribution of aerosol**, Fang Gu, Juan Yang, Bao-Min Bian, Anzhi He, Nanjing University of Science and Technology (China) [6834-141]
- √ **Optical measurement of discharge pattern in dielectric barrier discharge system**, Weili Liu, Hebei Univ. (China) [6834-144]
- √ **Michelson interferometer in a 2D photonic crystal utilizing self-collimation effect**, Xiyao Chen, Minjiang Univ. ; Yishen Qiu, Yufei Wang, Fujian Normal University; Guimin Lin, Minjiang Univ. ; Hailian Hong, Bo Ni, Fujian Normal University; (China) [6834-146]
- √ **Optical fiber method for measuring flatness error of small plane**, Shan Jin, Yong Lv, Beijing Institute of Machinery (China) [6834-147]
- √ **Area testing study of arbitrary shape plane object based on CCD matrix**, Shuhua Jiang, Dongyue Liu, Wensheng Wang, Changchun University of Science and Technology (China) [6834-148]
- √ **Equipment for 2D profile measuring of aspheric microscope condenser in mass production**, Xuemin Cheng, Graduate School at Shenzhen/Tsinghua Univ.; Jianshe Ma, Tsinghua University; Yi Zhang, Motic (China) [6834-149]
- √ **A novel optical tweezers system**, Xiuzhou Feng, Jianxing Fang, Chongyang Zhao, Suzhou University (China) [6834-151]
- √ **Optical design of free-form bicycle lamp**, Tian Chao, Chuanzi Chen, Wang Jing, Zhe Jiang University (China) [6834-152]
- √ **Design of a panoramic lens using CODE V**, Jie Ding, Beijing Institute of Technology (China) [6834-156]
- √ **Design of a lens system within mobile terminal**, Jinfan Liu, Huazhong University of Science and Technology; Jie Ding, Beijing Institute of Technology (China) [6834-158]
- √ **Research and design optical system of biochemical analyzer based on the narrow-band pass filter**, Zexin Xiao, Kuan Chen, electromechanical engineer academy (China) [6834-160]
- √ **Stable second harmonic generated 461nm blue radiation using an external ring cavity**, Yang Zhao, Beijing Jiaotong University (China) [6834-163]
- √ **Influence of high-order dispersion to femtosecond solitons**, Zhiquan Li, Zhongzhen Li, Yang Liu, Yanshan University (China) [6834-165]
- √ **Distributed optical fiber sensor for multi-point temperature measurement**, HuiBo Wang, Zhihua Bai, Zhiquan Li, Yanshan University (China) [6834-166]
- √ **Dual-FOV refractive/diffractive LWIR optical system design**, Lingjie Wang, CIOMP (China) [6834-167]
- √ **Error analysis for integrating sphere of color measuring system**, Shangzhong Jin, Yuan Kun, China Jiliang University (China) [6834-169]
- √ **Analytical method of genetic algorithm in fiber grating**, Wenwen Yin, Yanshan University (China) [6834-170]
- √ **Technology of wavelength tuning based on refractive optical lever and its application in optical spe...**, Yishen Qiu, Huizhen Xu, Yang Gao, Fujian Normal University (China) [6834-171]
- √ **Scene simulation optics in testing of dual-field angle infrared imagers**, Yawei Zheng, Xi'an Institute of Applied Optics (China) [6834-173]
- √ **Design of infrared zoom system with rotating lens group**, Li Yong, Huazhong Institute of Electro-optics (China) [6834-174]
- √ **Calibration optical frequency sweeping of tunable laser source for optical frequency-domain reflecto...**, Wei Tao, Gwanju Institute of Science and Technology (China) [6834-176]
- √ **Research on a system and method of automatic whole-field measurement of optical glass stress**, Lijun Zhang, Beijing Institute of Technology (China) [6834-181]
- √ **Design of mid-wavelength infrared dual field-of-view optical system**, Xiong Tao, Changcheng Yang, Huazhong Institute of Electro-Optics; Hongyun Gao, Wuhan University of Technology (China) [6834-182]
- √ **A Prototype System for High Precision 3D Measurement Based on Grating Method**, Zhongwei Li, Congjun Wang, Huazhong University of Science and Technology (China) [6834-184]
- √ **A novel ellipsometer for measuring the thickness of the oxide layer on the surface of the silicon sp...**, Jitao Zhang, Xiaoshan Zhou, Yan Li, Tsinghua Univ. (China) [6834-106]
- √ **Comparison between transmitted and reflected thermal lens techniques**, Honggang Hao, Bincheng Li, Mingqiang Liu, Institute of Optics and Electronics, Chinese Academy of Sciences (China) [6834-48]
- √ **Measuring temperature-gradient by imaging method base on atmosphere refraction**, Feng-gang Xiao, Jianguo Liu, Zong Zeng, Zeng-dong Liu, Anhui Institute of Optics and Fine Mechanics (China) [6834-56]
- √ **Optical system design of long-focal-length, large-format CCD aerial reconnaissance camera**, Yixian Qian, Chengdu Institute of Optics and electronics of CAST; Xiaodong Gao, Changchun University of Science and Technology; Xiaowei Cheng, Wei Liang, Chinese Academy of Sciences (China) [6834-58]

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Infrared Technologies and Applications

Conference Chairs: **Yi Cai**, Kunming Institute of Physics (China); **Haimei Gong**, Shanghai Institute of Technical Physics (China); **Jean-Pierre Chatard**, ULIS (France)

Program Committee: **Yuping Cui**, Jinhang Institute of Technical Physics (China); **Jianzhong Han**, North China Research Institute of Electro-Optics (China); **Weiqi Jin**, Beijing Institute of Technology (China); **Yongzhi Liu**, Univ. of Electronic Science and Technology of China (China); **Jianguo Wang**, Shanghai Institute of Technical Physics (China); **Hui Huang**, Kunming Institute of Physics (China)

Monday 12 November

SESSION 1

16 district, the second floor, room 92 Mon. 1:40pm to 3:30pm

Infrared Materials/Devices and Their Application!

Chairs: Yi Cai, Jean-Pierre Chatard

1:40pm: **New architecture for TECless operation of uncooled microbolometers developed at LETI** (*Invited paper*), François Simoens, Michael Tchagaspanian, Agnes Arnaud, Pierre Imperinetti, Gilles Chamming, Jean-Jacques Yon, CEA (France); Jean-Luc Tissot, ULIS (France); Gerard Destefanis, CEA (France) . . . [6835-74]

2:10pm: **Traceable Calibration and Characterisation of Infrared Detectors and Detector Arrays and Matrices**, Evangelos Theocharous, National Physical Lab (United Kingdom); Jihong Fan, Xudong Li, Xi'an Institute of Applied Optics (China); Xiqi Hou, Xi'an Institute of Applied Optics Xiqi Hou [6835-24]

2:30pm: **New Concept System Research and Development Base on Advanced Infrared Detectors**, Quanxin Ding, Hua Liu, Luoyang, Institute of Electro-Optical Equipment (China) [6835-26]

2:50pm: **InGaAs 256x1 Element Linear Short Wavelength Infrared Detector Array Assembly**, Xue Li, Shanghai Institute of Technical Physics (China); Weiqi Jin, 5 South Zhongguancun Street, Haidian District (China) [6835-27]

3:10pm: **Performance Analysis of 256 Element 2.2µm InGaAs Linear Photovoltaic Detector Arrays**, Kefeng Zhang, Shanghai Institute of Technical Physics (China) [6835-29]

Coffee/Tea Break 3:30pm to 4:00pm

SESSION 2

16 district, the second floor, room 92 Mon. 4:00pm to 5:10pm

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4:00pm: **Electronic Property and Optical Absorption in Amorphous Hg_{0.5}Cd_{0.5}Te Semiconductor** (*Invited paper*), Liang Wang, Shanghai Institute of Technical Physics (China) [6835-23]

4:30pm: **Chemical Trend of the Au in-situ Impurity in MCT: First-Principles Study**, Jiliang Han, H. Shu, G. Zhou, Xiangtan University (China); Xiaoshuang Chen, Chinese Academy of Science (China); Wei Lu, Chinese Academy of Science (China); Lizhong Sun, Xiangtan University (China) [6835-35]

4:50pm: **Hydrogen Passivation of the Mercury Vacancy Defect in MCT: First-Principles Study**, Xiaodong Qu, H. Shu, G. Zhou, Xiangtan University (China); Xiaoshuang Chen, Chinese Academy of Science (China); Wei Lu, Chinese Academy of Science (China); Lizhong Sun, Xiangtan University (China) [6835-37]

Tuesday 13 November

SESSION 3

16 district, the second floor, room 92 Tues.8:30am to 10:20am

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8:30am: **Near-infrared Photodetectors Based on Mercury Indium Telluride single crystals** (*Invited paper*), Lei Xiao Zhang, Luoyang Institute of Electro-Optical Equipment (China) [6835-48]

9:00am: **Performance and reliability characteristic of Stirling cryocoolers in China**, Xinguang Liu, Y. Wu, Li He, Shanghai Institute of Technical Physics (China) [6835-40]

9:20am: **Spatial Light Modulator Based on Sheared Polymer Network Liquid Crystal**, Yanling Luo, Xi'an 205 Institute (China) [6835-50]

9:40am: **Properties of Au/Pt/Ti Contact to p-InP by Rapid Thermal Processing**, Yanqiu Lv, Luoyang Optoelectronic Institute; Hengjing Tang, Bing Han, Xiaoli Wu, Kefeng Zhang, Xue Li, Haimei Gong, Shanghai Institute of Technical Physics (China) . . . [6835-56]

10:00am: **A Novel Vibration Control System for Stirling Cryocoolers**, Baoyu Yang, Yinong Wu, Yajie Tang, Hua Fu, Guohua Lu, Shanghai Institute of Technical Physics (China) [6835-62]

Coffee/Tea Break 10:20am to 10:50 am

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10:50am: **Uncooled Amorphous Silicon 160 x 120 IRFPA with 25µm Pixel-pitch for Large Volume Applications** (*Invited paper*), Michel Vilain, Jean-Luc Tissot, ULIS (France); ZI Les Iles Cords, VEUREY VOROIZE (France); Jean-Jacques Yon, AgnArnaud, CEA (France) [6835-105]

11:20am: **Innovative on-chip packaging applied to uncooled IRFPA**, Geoffroy Dumont, Agn Arnaud, Pierre Imperinetti, Wilfried Rabaud, Claire Vialle, Eric Mottin, Franis Simoens, Nathalie Baclet, Gilles Grand, CEA (France) [6835-63]

11:40am: **Design and Simulation of A 512x1 Readout Circuit for Focal Plane Array**, Yaoqiao Li, Jiexiong Fang, Xue Li, Jieying Ding, Hui Zhu, Shanghai Institute of Technical Physics (China) . . [6835-76]

12:00pm: **The formation and elimination of inclusions in CdZnTe crystals**, Congfeng Liu, Shanghai Institute of Technical Physics (China) [6835-79]

Lunch Break 12:20pm to 1:40pm

SESSION 5**16 district, the second floor, room 92 Tues.1:40pm to 3:20pm****Infrared Materials/Devices and Their Application!***Chairs: Yi Cai*

- 1:40 pm: **The Analysis of the Thermal Stress of FPA Assembly**, Haiyan Zhang, shanghai institute of technical physics (China) [6835-80]
- 2:00 pm: **The Device for Observing the Solar on Moon in Multi-spectrum**, Huang Gang, Zhe Jin, Chao Zheng, Kaili Chu, Qirong Xiao, Beijing Institute of Technology (China) [6835-94]
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- 3:00 pm: **Progress in Cooled IR Detectors and New Developments**, Philippe Tribolet, Sofradir R&D Technologies and Products (France) [6835-85]
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- 3:50pm: **Subpixel boundary backward recursive reconstruction algorithm for uncontrollable microscan to FPA an...**, Yinan Chen, Weiqi Jin, Lei Zhao, Beijing Institute of Technolog (China) [6835-13]
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- 4:30 pm: **Dual spectral imaging system**, Wang Hai, Anping Geng, Huazhong Institute of Electro-Optics (China) [6835-17]
- 4:50 pm: **MODIS-based analysis of snow distribution and change in Emin River Basin, Xinjiang, China**, Zhihui Liu, Jingxiang Gao, China University of Mining and Technology (China)..... [6835-19]

Wednesday 14 November**SESSION 7****16 district, the second floor, room 92 Wed.8:30am to 9:30am****Infrared Imagers/Systems and Their Application!a***Chairs: François Simoens, Yi Cai*

- 8:30 am: **Performance evaluation on thermal imaging systems with the square integral method based on MRTD chan....**, Jihui Wang, Beijing Institute of Technology (China); Weiqi Jin, 5 South Zhongguancun Street, Haidian District(China) . . [6835-28]
- 8:50 am: **Studies of dynamic infrared scene projection technology based on digital micromirror device (DMD)**, Hu Yu, xi'an 205 institute (China) [6835-57]
- 9:10 am: **Study on pulsed phase analysis of depth measurement for infrared thermal wave nondestructive evaluat....**, Yanhong Li, Beijing Institute of Technology (China) [6835-69]
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- 10:00 am: **Ultrasonic infrared thermal wave nondestructive evaluation for crack detection of several aerospace ...**, Weichao Xu, Jingling Shen, Cunlin Zhang, Lichun Feng, Capital Normal University (China) [6835-71]
- 10:20 am: **The design for detecting oxynitride chemiluminescence base on the heterostructure infrared device**, Caisheng Xiang, South China Normal University (China)..... [6835-82]
- 10:40 am: **Optical path layout and moving mirror driving method of wavemeter based on Michelson interferometer**, Liqiang Wang, Tianjin University of Technology and Education (China) . . [6835-89]
- 11:00 am: **Applications of dynamic infrared thermography for petrochemical process heaters**, Piotr Pregowski, PIRS (Poland); Grzegorz Goleniowski, Wojciech Komosa, Waldemar Korytkowski, PKN ORLEN S.A. (Poland); Slawomir Zwolenik, neoVISION (Poland) [6835-32]
- 11:20 am: **Research on preprocessing techniques based on difference in infrared point target image**, Dongyun Zhang, School of Phsical Electronics; Xiaofeng Li, uestc(China) [6835-47]
- 11:40 am: **MTF testing algorithms for sampled thermal imaging systems**, Jian Zhang, Stephen Fantone, David Imrie,Optikos Corp (USA) [6835-86]
- 12:00 am: **Generation of infrared scene using semiconductor converter**, Yujie Zhao, xi'an 205 institute (China) [6835-59]
- Lunch Break 12:20pm to 1:40pm

SESSION 9**16 district, the second floor, room 92 . . . Wed.1:40 Pm to 3:00 pm****Infrared Imagers/Systems and Their Application!***Chairs: Haimei Gong, Yi Cai*

- 1:40 pm: **Quantitative analysis of peanut oil content in mixed edible oil using near-infrared spectroscopy**, Huacai Chen, Fuli Liu, China Jiliang University (China) [6835-99]
- 2:00 pm **Calibration of laser speedometer with stimulant target**, Yanmei Cui, Beijing mailbox 1066 (China) [6835-107]
- 2:20 pm **Infrared and visible image fusion algorithm based on contourlet transform and PCNN**, Le Song, Yuchi Lin, Xin Zhou, Yinguo Huang, Tianjin University (China) [6835-2]
- 2:40 pm: **Technology for low-cost PIR security sensors**, Kevin Liddiard (Australia) [6835-97]

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- ✓ **Infrared and visible image fusion algorithm based on contourlet transform and PCNN**, Le Song, Yuchi Lin, Xin Zhou, Yinguo Huang, Tianjin University (China) [6835-02]
- ✓ **High uniformity InGaAs linear mesa-type SWIR focal plane arrays**, Hengjing Tang, Haimei Gong, shanghai institute of technical physics (China) [6835-03]
- ✓ **Iterative infrared image restoration**, Tian Si, NanJing University of science and Technology (China) [6835-06]
- ✓ **A kind of real-time infrared image enhancement algorithm**, Tian Si, NanJing University of science and Technology (China) [6835-07]

- √ **Growth and characteristics of ZnTe <110> single crystals based on the terahertz detectors**, Reng Wang, Shanghai Institute of Technical Physics (China); Weizheng Fang, SITP (China); Caihong Zhang, Nanjing Univ. (China); Huier Zhang, Shanghai Institute of Technology (China); Jun Shao, Chinese Academy of Sciences (China); Shuhong Hu, Chinese Academy of Sciences (China); Lei Zhang, Chinese Academy of Sciences (China); Pei Zhao, Ning Dai, Shanghai Institute of Technica (China); Xuemin Shen, Shanghai Institute of Technica (China) [6835-08]
- √ **Application of contourlet transform in infrared image denoising**, Xin Zhou, Yuchi Lin, Le Song, Yinguo Huang, Tianjin University (China) [6835-10]
- √ **Study on the thermal field change and affecting factors in urban and suburban areas of Hangzhou City...**, Xiuju Wu, Qian Cheng, Zhejiang Gongshang University (China) [6835-11]
- √ **Retrieval of atmospheric water content and transmittance computation of thermal bands based on MODTR...**, Qian Cheng, Xiuju Wu, Zhejiang Gongshang University (China) [6835-12]
- √ **Fast curvelet transform based nonuniformity correction for IRFPA**, Liquan Dong, Weiqi Jin, Xiaoxiao Zhou, Beijing Institute of Technology (China) [6835-20]
- √ **The distribution of grating-coupled field of quantum well infrared photodetector using FDTD method**, Hongbo Chen, Xiaoshuang Chen, Shanghai Institute of Technical Physics (China); Yong Zeng, 500 Yu Tian Road (China); Wei Lu, Dayuan Xiong, Shanghai Institute of Technical Physics (China) [6835-25]
- √ **An optical model of wide field of view superspectral imager**, Zhiping He, Weiming Xu, Jianjun Jia, Rong Shu, Jianyu Wang, Shanghai Inst of Technical Phy (China) [6835-33]
- √ **The research for a system of binocular stereo vision based on the near-infrared imaging characterist...** Pengwei Zhang, Academy of Armored Force Engineering(China) [6835-34]
- √ **Study on the predicted model of crop leaf water status by the NIR band of ground reflectance and spa...**, Quanjun Jiao, Xue Liu, Bing Zhang, Bo Liu, Institute of Remote Sensing Applications, CAS (China) [6835-38]
- √ **Cryogenic experiment investigation of optical system**, Jinxiang Qu, Shanghai Institute of Technical Physics (China) [6835-42]
- √ **IMMPDA algorithm for infrared target tracking based on multifeature fusion**, Jin Zhang, Qinzhang Wu, Jianxun Song, Institute of Optics and Electronics (China) [6835-43]
- √ **New technology of photoelectric reconnaissance based on exploitation of quantum effects**, Kai Yang, Liang Chen, China Jiliang University (China) [6835-44]
- √ **Automatic target detection in dual band infrared imagery**, Jiancheng Yu, Guilin Chen, Shengli Sun, Shanghai Institute of Technical Physics (China) [6835-45]
- √ **The side-passivation research on LWIR HgCdTe detector**, Qinfei Xu, Haimei Gong, Shanghai Institute of Technical Physics (China) [6835-46]
- √ **Pseudo-color coding method of infrared images based on human vision system**, Xiao Zhang, Tingzhu Bai, Beijing Institute of Technology (China) [6835-49]
- √ **Research of subpixel location algorithm based on image correlation**, Fuwen Li, Chao Xu, Weiqi Jin, Beijing Institute of Technology (China) [6835-52]
- √ **A novel infrared image fusion algorithm based on contourlet transform**, Yajun Song, Guoqiang Ni, Kun Gao, Beijing Institute of Technology (China) [6835-54]
- √ **Infrared dim small target track predicting using least squares support vector machine**, Guangping Wang, Kun Gao, Guoqiang Ni, Beijing Institute of Technology (China) [6835-58]
- √ **The research of detection range of LWIR dispersive hyperspectral remote sensor**, Hong Xu, Xiangjun Wang, Tianjin University (China) [6835-60]
- √ **A preliminary study on laser-induced defects in InGaAs photovoltaic detectors**, Hongyang Liu, Shanghai Institute of Technical Physics (China) [6835-64]
- √ **Study of SW/MW two-color heterojunction HgCdTe material**, Qingzhu Wei, Jun Wu, Yan Wu, Xiangliang Fu, Lu Chen, Weiqiang Wang, Meifang Yu, Yimin Qiao, Gao Wang, Li He, Shanghai Institute of Technical Physics (China) [6835-72]
- √ **A study of surface defects induced by source material on MBE-grown HgCdTe epilayers**, Xiangliang Fu, Weiqiang Wang, Qingzhu Wei, Jun Wu, Lu Chen, Yan Wu, Li He, Shanghai Institute of Technical Physics (China) [6835-73]
- √ **The research of range-gated laser night vision system on cars**, Yan Zhou, Hualin Zeng, Institute of Semiconductors (China) [6835-77]
- √ **Infrared target tracking using multisensor data fusion**, Jin Zhang, Yu Lu, Hao Zhu, Qinzhang Wu, Institute of Optics and Electronics, Chinese Acade (China) [6835-78]
- √ **Analysis of thermal stress damage in single-crystal silicon induced by 1064-nm long-pulse laser**, Yanbei Chen, Lu Jian, Ni Xiaowu, Nanjing Univ. of Science & Technology (China) [6835-87]
- √ **A robust sub-pixel edge detection method of infrared image based on tremor-based retinal receptive f...**, Kun Gao, Beijing Institute of Technology (China) [6835-90]
- √ **Fast response pyroelectric detector-preamplifier assembled device that can survive acute concussion**, Bai Piji, Kunming institute of physics (China) [6835-91]
- √ **Study of uncooled thermal imaging system with multiple working temperatures**, Junju Zhang, Benkang Chang, nanjing university of sci. &tech (China) [6835-96]
- √ **Research on 10.6-μm laser beam monitoring in CO2 laser launching system**, Yali Shi, Changchun Institute of Optics (China); Yunguo Gao, ciomp (China); Lei Zhang, Weijie Deng, Changchun Institute of Optics, Fine Mechanics (China) [6835-103]
- √ **Based on householder transform of the Zernike polynomial wavefront fitting method to solve active op...**, Wangfu Guo, Changchun Institute of Optics (China) [6835-104]
- √ **Design of hand-held cooling thermal camera**, Zhijie Zhang, Huazhong Institute of Electro-Optics(China) [6835-106]
- √ **A new image enhancement algorithm in IR image sequences**, Songfeng Kou, Qian Chen, Nanjing University of Science and Technology (China) [6835-01]
- √ **Infrared image denoising based on wavelet and curvelet transform**, Xin Zhou, Yuchi Lin, Le Song, Yinguo Huang, Tianjin University (China) [6835-09]
- √ **A PDE-based noise removal method in infrared image processing**, Le Song, Yuchi Lin, Xin Zhou, Yinguo Huang, Tianjin University (China) [6835-18]
- √ **Application of correlation analysis to determination of the cotton content by NIR spectroscopy**, Ni Kai, china jiliang university (China) [6835-30]
- √ **Nonuniformity correction of uncooled microbolometer imaging system working at multiple substrate tem...**, Lianjun Sun, Nanjing University of Science & Technology (China) [6835-36]
- √ **Influence of data pre-processing on NIR prediction model for textile fiber chemical properties**, Ni Kai, china jiliang university(China) [6835-39]
- √ **Dual-band IR image registration based on improved corner feature**, Liang Huang, Huazhong Institute of Electro-Optics (China) [6835-51]

- √ **The research on the honeycomb plane used in the radiant coolers**, Liying Fu (China) [6835-65]
- √ **Adsorption of water on 13X molecular sieve**, Hongyan Xu, shanghai institute of technical physics (China) [6835-66]
- √ **Efficient heat conduct by applying thermal switches**, Zhou Yong, shang hai institute of technical physics(China... [6835-67]
- √ **Design of a recursion filter for infrared image real-time processing**, Bing Zhou, Ordnance Engineering College (China) [6835-70]
- √ **Feature extraction of aerial artificial target based on gradient invariant**, Yabing Chen, Ordnance Engineering College (China); Lihui Sun, Ordnance Engineering College (China)..... [6835-84]
- √ **Wide-range high-power laser illumination for surveillance monitoring**, Songtao Fan, Institute of Semiconductors (China) [6835-88]
- √ **Application of improved BP neural network in infrared spectroscopy**, Mingzheng Gao, Huoming Zhang, Shangzhong Jin, China Jiliang University (China) [6835-92]
- √ **The application of correlation analysis technology on quantificational inspecting of textile fiber b...**, Jinchao Chai, China Jiliang University (China) [6835-93]
- √ **Baking reliability study of the passivation film of HgCdTe**, Qingjun Liao, Xiaoning Hu, Shanghai Institute of technical physics (China) [6835-95]
- √ **Approaching to nonuniformity correction using Hough transform**, Ehsan Koohestani, Ali Homaei, Rayan-Electronics (Iran) [6835-98]

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- 8:50 am: **Studies of dynamic infrared scene projection technology based on digital micromirror device (DMD)**, Hu Yu, xi'an 205 institute (China) [6835-57]
- 9:10 am: **Study on pulsed phase analysis of depth measurement for infrared thermal wave nondestructive evaluat....**, Yanhong Li, Beijing Institute of Technology (China) [6835-69]
- Coffee/Tea Break 9:30am to 10:00am

SESSION 8**16 district, the second floor, room 92 . . Wed.10:00 am to 12:20 pm****Infrared Imagers/Systems and Their Application***Chairs: François Simoens, Yi Cai*

- 10:00 am: **Ultrasonic infrared thermal wave nondestructive evaluation for crack detection of several aerospace ...**, Weichao Xu, Jingling Shen, Cunlin Zhang, Lichun Feng, Capital Normal University (China) [6835-71]
- 10:20 am: **The design for detecting oxynitride chemiluminescence base on the heterostructure infrared device**, Caisheng Xiang, South China Normal University (China) [6835-82]
- 10:40 am: **Optical path layout and moving mirror driving method of wavemeter based on Michelson interferometer**, Liqiang Wang, Tianjin University of Technology and Education (China) . . . [6835-89]
- 11:00 am: **Applications of dynamic infrared thermography for petrochemical process heaters**, Piotr Pregowski, PIRS (Poland); Grzegorz Goleniowski, Wojciech Komosa, Waldemar Korytkowski, PKN ORLEN S.A. (Poland); Slawomir Zwolenik, neoVISION (Poland) [6835-32]
- 11:20 am: **Research on preprocessing techniques based on difference in infrared point target image**, Dongyun Zhang, School of Phsical Electronics; Xiaofeng Li, uestc(China) [6835-47]
- 11:40 am: **MTF testing algorithms for sampled thermal imaging systems**, Jian Zhang, Stephen Fantone, David Imrie,Optikos Corp (USA) [6835-86]
- 12:00 am: **Generation of infrared scene using semiconductor converter**, Yujie Zhao, xi'an 205 institute (China) [6835-59]
- Lunch Break 12:20pm to 1:40pm

SESSION 9**16 district, the second floor, room 92 . . . Wed.1:40 Pm to 3:00 pm****Infrared Imagers/Systems and Their Application***Chairs: Haimei Gong, Yi Cai*

- 1:40 pm: **Quantitative analysis of peanut oil content in mixed edible oil using near-infrared spectroscopy**, Huacai Chen, Fuli Liu, China Jiliang University (China) [6835-99]
- 2:00 pm **Calibration of laser speedometer with stimulant target**, Yanmei Cui, Beijing mailbox 1066 (China) [6835-107]
- 2:20 pm **Infrared and visible image fusion algorithm based on contourlet transform and PCNN**, Le Song, Yuchi Lin, Xin Zhou, Yinguo Huang, Tianjin University (China) [6835-2]
- 2:40 pm: **Technology for low-cost PIR security sensors**, Kevin Liddiard (Australia) [6835-97]

Wednesday –Thursday Posters

Time: Wednesday 12:30pm to Thursday 11:30am

- ✓ **Infrared and visible image fusion algorithm based on contourlet transform and PCNN**, Le Song, Yuchi Lin, Xin Zhou, Yinguo Huang, Tianjin University (China) [6835-02]
- ✓ **High uniformity InGaAs linear mesa-type SWIR focal plane arrays**, Hengjing Tang, Haimei Gong, shanghai institute of technical physics (China) [6835-03]
- ✓ **Iterative infrared image restoration**, Tian Si, NanJing University of science and Technology (China) [6835-06]
- ✓ **A kind of real-time infrared image enhancement algorithm**, Tian Si, NanJing University of science and Technology (China) [6835-07]
- ✓ **Growth and characteristics of ZnTe <110> single crystals based on the terahertz detectors**, Reng Wang, Shanghai Institute of Technical Physics (China); Weizheng Fang, SITP (China); Caihong Zhang, Nanjing Univ. (China); Huier Zhang, Shanghai Institute of Technology (China); Jun Shao, Chinese Academy of Sciences (China); Shuhong Hu, Chinese Academy of Sciences (China); Lei Zhang, Chinese Academy of Sciences (China); Pei Zhao, Ning Dai, Shanghai Institute of Technica (China); Xuemin Shen, Shanghai Institute of Technica (China) [6835-08]
- ✓ **Application of contourlet transform in infrared image denoising**, Xin Zhou, Yuchi Lin, Le Song, Yinguo Huang, Tianjin University (China) [6835-10]
- ✓ **Study on the thermal field change and affecting factors in urban and suburban areas of Hangzhou City....**, Xiuju Wu, Qian Cheng, Zhejiang Gongshang University (China) [6835-11]
- ✓ **Retrieval of atmospheric water content and transmittance computation of thermal bands based on MODTR....**, Qian Cheng, Xiuju Wu, Zhejiang Gongshang University (China) [6835-12]
- ✓ **Fast curvelet transform based nonuniformity correction for IRFPA**, Liqun Dong, Weiqi Jin, Xiaoxiao Zhou, Beijing Institute of Technology (China) [6835-20]
- ✓ **The distribution of grating-coupled field of quantum well infrared photodetector using FDTD method**, Hongbo Chen, Xiaoshuang Chen, Shanghai Institute of Technical Physics (China); Yong Zeng, 500 Yu Tian Road (China); Wei Lu, Dayuan Xiong, Shanghai Institute of Technical Physics (China) [6835-25]
- ✓ **An optical model of wide field of view superspectral imager**, Zhiping He, Weiming Xu, Jianjun Jia, Rong Shu, Jianyu Wang, Shanghai Inst of Technical Phy (China) [6835-33]
- ✓ **The research for a system of binocular stereo vision based on the near-infrared imaging characterist...** Pengwei Zhang, Academy of Armored Force Engineering(China) [6835-34]
- ✓ **Study on the predicted model of crop leaf water status by the NIR band of ground reflectance and spa....**, Quanjun Jiao, Xue Liu, Bing Zhang, Bo Liu, Institute of Remote Sensing Applications, CAS (China) [6835-38]
- ✓ **Cryogenic experiment investigation of optical system**, Jinxiang Qu, Shanghai Institute of Technical Physics (China) [6835-42]
- ✓ **IMMPDA algorithm for infrared target tracking based on multifeature fusion**, Jin Zhang, Qinzhang Wu, Jianxun Song, Institute of Optics and Electronics (China) [6835-43]
- ✓ **New technology of photoelectric reconnaissance based on exploitation of quantum effects**, Kai Yang, Liang Chen, China Jiliang University (China) [6835-44]
- ✓ **Automatic target detection in dual band infrared imagery**, Jiancheng Yu, Guilin Chen, Shengli Sun, Shanghai Institute of Technical Physics (China) [6835-45]
- ✓ **The side-passivation research on LWIR HgCdTe detector**, Qinfei Xu, Haimei Gong, Shanghai Institute of Technical Physics (China) [6835-46]
- ✓ **Pseudo-color coding method of infrared images based on human vision system**, Xiao Zhang, Tingzhu Bai, Beijing Institute of Technology (China) [6835-49]
- ✓ **Research of subpixel location algorithm based on image correlation**, Fuwen Li, Chao Xu, Weiqi Jin, Beijing Institute of Technology (China) [6835-52]
- ✓ **A novel infrared image fusion algorithm based on contourlet transform**, Yajun Song, Guoqiang Ni, Kun Gao, Beijing Institute of Technology (China) [6835-54]
- ✓ **Infrared dim small target track predicting using least squares support vector machine**, Guangping Wang, Kun Gao, Guoqiang Ni, Beijing Institute of Technology (China) [6835-58]
- ✓ **The research of detection range of LWIR dispersive hyperspectral remote sensor**, Hong Xu, Xiangjun Wang, Tianjin University (China) [6835-60]
- ✓ **A preliminary study on laser-induced defects in InGaAs photovoltaic detectors**, Hongyang Liu, Shanghai Institute of Technical Physics (China) [6835-64]
- ✓ **Study of SW/MW two-color heterojunction HgCdTe material**, Qingzhu Wei, Jun Wu, Yan Wu, Xiangliang Fu, Lu Chen, Weiqiang Wang, Meifang Yu, Yimin Qiao, Gao Wang, Li He, Shanghai Institute of Technical Physics (China) [6835-72]
- ✓ **A study of surface defects induced by source material on MBE-grown HgCdTe epilayers**, Xiangliang Fu, Weiqiang Wang, Qingzhu Wei, Jun Wu, Lu Chen, Yan Wu, Li He, Shanghai Institute of Technical Physics (China) [6835-73]
- ✓ **The research of range-gated laser night vision system on cars**, Yan Zhou, Hualin Zeng, Institute of Semiconductors (China) [6835-77]
- ✓ **Infrared target tracking using multisensor data fusion**, Jin Zhang, Yu Lu, Hao Zhu, Qinzhang Wu, Institute of Optics and Electronics, Chinese Acade (China) [6835-78]
- ✓ **Analysis of thermal stress damage in single-crystal silicon induced by 1064-nm long-pulse laser**, Yanbei Chen, Lu Jian, Ni Xiaowu, Nanjing Univ. of Science & Technology (China) [6835-87]
- ✓ **A robust sub-pixel edge detection method of infrared image based on tremor-based retinal receptive f....**, Kun Gao, Beijing Institute of Technology (China) [6835-90]
- ✓ **Fast response pyroelectric detector-preamplifier assembled device that can survive acute concussion**, Bai Piji, Kunming institute of physics (China) [6835-91]
- ✓ **Study of uncooled thermal imaging system with multiple working temperatures**, Junju Zhang, Benkang Chang, nanjing university of sci. &tech (China) [6835-96]
- ✓ **Research on 10.6-μm laser beam monitoring in CO2 laser launching system**, Yali Shi, Changchun Institute of Optics (China); Yunguo Gao, ciomp (China); Lei Zhang, Weijie Deng, Changchun Institute of Optics, Fine Mechanics (China) [6835-103]
- ✓ **Based on householder transform of the Zernike polynomial wavefront fitting method to solve active op....**, Wangfu Guo, Changchun Institute of Optics (China) [6835-104]
- ✓ **Design of hand-held cooling thermal camera**, Zhijie Zhang, Huazhong Institute of Electro-Optics(China) [6835-106]
- ✓ **A new image enhancement algorithm in IR image sequences**, Songfeng Kou, Qian Chen, Nanjing University of Science and Technology (China) [6835-01]
- ✓ **Infrared image denoising based on wavelet and curvelet transform**, Xin Zhou, Yuchi Lin, Le Song, Yinguo Huang, Tianjin University (China) [6835-09]
- ✓ **A PDE-based noise removal method in infrared image processing**, Le Song, Yuchi Lin, Xin Zhou, Yinguo Huang, Tianjin University (China) [6835-18]

- √ **Application of correlation analysis to determination of the cotton content by NIR spectroscopy**, Ni Kai, china jiliang university (China) [6835-30]
- √ **Nonuniformity correction of uncooled microbolometer imaging system working at multiple substrate tem...**, Lianjun Sun, Nanjing University of Science & Technology (China) [6835-36]
- √ **Influence of data pre-processing on NIR prediction model for textile fiber chemical properties**, Ni Kai, china jiliang university(China) [6835-39]
- √ **Dual-band IR image registration based on improved corner feature**, Liang Huang, Huazhong Institute of Electro-Optics (China) [6835-51]
- √ **The research on the honeycomb plane used in the radiant coolers**, Liying Fu (China) [6835-65]
- √ **Adsorption of water on 13X molecular sieve**, Hongyan Xu, shanghai institute of technical physics (China) [6835-66]
- √ **Efficient heat conduct by applying thermal switches**, Zhou Yong, shang hai institute of technical physics(China) . . . [6835-67]
- √ **Design of a recursion filter for infrared image real-time processing**, Bing Zhou, Ordnance Engineering College (China) [6835-70]
- √ **Feature extraction of aerial artificial target based on gradient invariant**, Yabing Chen, Ordnance Engineering College (China); Lihui Sun, Ordnance Engineering College (China)..... [6835-84]
- √ **Wide-range high-power laser illumination for surveillance monitoring**, Songtao Fan, Institute of Semiconductors (China) [6835-88]
- √ **Application of improved BP neural network in infrared spectroscopy**, Mingzheng Gao, Huoming Zhang, Shangzhong Jin, China Jiliang University (China) [6835-92]
- √ **The application of correlation analysis technology on quantificational inspecting of textile fiber b...**, Jinchao Chai, China Jiliang University (China) [6835-93]
- √ **Baking reliability study of the passivation film of HgCdTe**, Qingjun Liao, Xiaoning Hu, Shanghai Institute of technical physics (China) [6835-95]
- √ **Approaching to nonuniformity correction using Hough transform**, Ehsan Koohestani, Ali Homaei, Rayan-Electronics (Iran) [6835-98]

Room: 16 district, second floor, room 77

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Information Optics and Photonics Technologies

Conference Chairs: **Guoguang Mu**, Nankai Univ. (China); **Feijun Song**, China Daheng Group, Inc. (China); **Francis T. S. Yu**, The Pennsylvania State Univ. (USA); **Suganda Jutamulia**, Univ. of Northern California (USA)

Program Committee: **Ken Yuh Hsu**, National Chiao Tung Univ. (Taiwan, China); **Kazuyoshi Itoh**, Osaka Univ. (Japan); **Soo-Gil Kim**, Hoseo Univ. (South Korea); **Byoung-ho Lee**, Seoul National Univ. of Technology (South Korea); **Sar Sardy**, Univ. of Indonesia (Indonesia); **Kehar Singh**, Indian Institute of Technology Delhi (India); **Jun Uozumi**, Hokkai-Gakuen Univ. (Japan); **Joewono Widjaja**, Suranaree Univ. of Technology (Thailand); **Pochi Yeh**, Univ. of California/Santa Barbara (USA); **Shizhuo Stuart Yin**, The Pennsylvania State Univ. (USA); **Shiquan Tao**, Beijing Univ. of Technology (China); **Yunan Sun**, Beijing Institute of Technology (China); **Jinghui Xie**, Beijing Institute of Technology (China)

Monday 12 November

SESSION 1

16 District the second floor, 77 Room Mon.1:40pm to 3:30pm

Holography and Information Optics

Chair: Feijun Song

1:40pm: **Angular division multiplexing in pulsed digital holography for measurements of high resolutions** (*Invited paper*), Hongchen Zhai, Nankai Univ. (China) [6837-76]

2:10pm: **Known plain text attack on the double phase encoding and its implementation with parallel hardware**, Hengzheng Wei, Xiang Peng, Shenzhen University, Institute of Optoelectronics(China); Haitao Liu, Songlin Feng, Chinese Academy of Science, Shanghai Institute of Microsystem and Information (China) [6837-9]

2:30pm: **Digital image measurement of specimen deformation based on CCD cameras & Imagej software: An applica...**, Yongwei Jia, Liming Cheng, Guangrong Yu, Zuquan Ding, Tongji Univ. (China) [6837-73]

2:50pm: **1D Fourier transform in optical information processing**, Jutamulia/Univ. of Northern California (American) [6837-75]

3:10pm: **Algorithm and analysis for adaptive optics expand system**, Quanxin Ding, Chunjie Guo, Meng Cai, Institute of Electro-optical Equipment of AVIC(China); Hua Liu, Luoyang Institute of Electro-Optical Equipment (China) [6837-10]

Coffee/Tea Break 3:30pm to 4:00pm

SESSION 2

16 District the second floor, 77 Room Mon.4:00pm to 5:50pm

Pattern Recognition and Correlators

Chair: Suganda Jutamulia

4:00pm: **An image-encoded Mach-Zehnder joint transform correlator for polychromatic pattern recognition with ...** (*Invited paper*), Chulung Chen, Chungcheng Lee, Yuan Ze University, Electrical Engineering (Taiwan, China) [6837-56]

4:30pm: **Rotation-invariant color pattern recognition based on the joint fractional Fourier transform correla...**, Yupei Zhang, Weimin Jin, Yingbing Road 668(China) [6837-17]

4:50pm: **Application of JTC in recognition and real-time tracking of moving targets**, Yu Chen, Hua Miao, Wensheng Wang, Qunxian Zhu, Changchun University of Science and Technology (China) [6837-46]

5:10pm: **Zone-processing joint extended fractional Fourier transform correlator**, Weimin Jin, Institute of Information Optics, Zhejiang Normal University (China); Caijie Yan, Zhejiang Lishui Vocational & Technical Coll(China); Yupei Zhang, Institute of Information Optics, Zhejiang Normal University(China) . . [6837-37]

5:30pm: **Rotation invariant pattern recognition using circular harmonic, Hough, and Fourier transforms**, Wenhua Hu, National University of Defense Technology, Research Institute of Tech-Physics (China) [6837-12]

Tuesday 13 November

SESSION 3

16 District the second floor, 77 Room Tue.8:30am to 9:20am

Photonic and Optical Computing

Chair: Feijun Song

8:30am: **Application of optical tweezers using DOE and SLM to control of beads with information-DNA for photo...** (*Invited paper*), Mingjie Zheng, Yusuke Ogura, Jun Tanida, Osaka University, Information photonics, Yamadaoka Suita (Japan) [6837-72]

9:00am: **A novel optical digital processor based on digital micromirror device**, Jia Hui, Xiujuan Li, Wenhua Hu, Jiannan Zhang, Jiankun Yang, National University of Defense Technology, Tech-Physical Research Center of Science College (China) . . . [6837-18]

SESSION 4

16 District the second floor, 77 Room Tue.9:20am to 10:00am

Optical Fibers

9:20am: **Analysis on the Gaussian approximation of LP01 mode**, Lianhuang Li, Fuyuan Guo, Fujian Normal University, Institute of Laser and Optoelectronics Technology (China) [6837-64]

9:40am: **A novel scheme for simultaneously realizing optical millimeter-wave generation and remote photonic d...**, Hong Wen, Lin Chen, ShuangChun Wen, Hunan University, School of Communication and Computer (China) [6837-57]

Coffee/Tea Break 10:00am to 10:30am

SESSION 5

16 District the second floor, 77 Room Tue.10:30am to 12:00pm

Wave and Physical Optics*Chair: Suganda Jutamulia*

10:30am: **Three-dimensional beaming of surface plasmon polaritons generated by metallic subwavelength holes** (*Invited paper*), Hiw Kim, Junghyun Park, Byoungho Lee, Seoul National University, School of Electrical Engineering (South Korea) [6837-70]

11:00am: **The research about the position of frequency spectrum of Fourier transform in the application of asp....**, Junmiao Weng, Yongying Yang, Dong Liu, Yibing Shen, Yongmo Zhuo, Zhejiang University, optical department (China) [6837-66]

11:20am: **Optical sampling using a PPLN waveguide for optical network monitoring**, Maotong Liu, Aiyang Yang, Yu-nan Sun, Beijing Institute of Technology, 405 Staff Rm Dept of Op Eng Sch of Info Tech (China) [6837-55]

11:40am: **The application of underwater optics and its development**, Pei Lv, Xi'an Institute of Optics and Precision Mechanic, Photoelectric Measuring Laboratory (China) [6837-39]

Lunch Break 12:00pm to 1:40pm

SESSION 6

16 District the second floor, 77 Room Tue.1:40pm to 2:40pm

Novel Devices and Techniques*Chair: Shiquan Tao, Beijing University of Technologies*

1:40pm: **Duobinary RZ and dark RZ signals generation using only one differential Mach-Zehnder modulator**, Jing He, Lin Chen, Limin Liu, Yufeng Shao, ShuangChun Wen, Hunan Univ. Research Ctr of Laser Science and Engineering (China) [6837-21]

2:00pm: **Transmission performance of optical millimeter wave generated by one modulator**, Cheng Huang, Chen Lin, ShuangChun Wen, Hunan Univ. Research Ctr of Laser Science and Engineering (China) [6837-19]

2:20pm: **Theoretic analysis of pulse shaping by using nonlinear optical loop mirror based on crystal fiber**, Shaohui Li, Beijing Institute of Technology, 441 Lab/Opto-Electronic Engineering Dept (China) [6837-26]

Coffee/Tea Break 2:40pm to 3:10pm

SESSION 7

16 District the second floor, 77 Room Tue.3:10pm to 4:40pm

Optical Communications*Chair: Shiquan Tao*

3:10pm: **The application of the diversity in mobile free-space optical communications**, Yingchun Li, Shanghai Uni., Communication college (China) [6837-25]

3:30pm: **Encoding and transmission of orthogonally optical label switching using DQPSK payload and MD-RZ labe....**, YuFeng Shao, ShuangChun Wen, Lin Chen, Hunan Univ., Communication Engineering Dept (China) [6837-29]

Monday/Tuesday Posters

Time: Monday 12:30 pm to Tuesday 11:30 am

- √ **Novel method in solving non-polarizing condition in frustrated total internal reflection layers**, Jin Hui Shi, Zheng Ping Wang, Harbin Engineering University, School of Science (China) [6837-2]
- √ **Study on the quality control of online detection**, Xiaoling Zhang, Baofeng Zhang, tianjin university of technology (China); Yuchi Lin, tianjin university (China); Xiaofei Li, tianjin university of technology (China) [6837-3]
- √ **Novel sub-terahertz wave modulator based on photonic crystals**, Jiusheng Li, Centre for THz Research, China Jiliang University (China) [6837-4]
- √ **Study of Fourier transform spectrometer based on Michelson interferometer wave-meter**, Yuexiang Peng, Beijing University of Technology, College of Applied Science (China) [6837-5]
- √ **The six-photon and five-photon ultraviolet upconversion luminescence of ZBLAN material**, Xiaobo Chen, Beijing Normal University (China); Zeng-Fu Song, Peking University, Physics School (China); Xiong Jun, Guojian Yang, Ce Wang, Yuhua Liu, Xiaoduan Chen, Yusong Liu, Yafei Wang, Beijing Normal University (China) [6837-7]
- √ **Larger depth of field for optical imaging methods**, Jinjiang Wang, tianjin university no.4 lab of o&e college of pi&oe (China) [6837-11]
- √ **Characterization of the dispersion of chirped fiber Bragg grating through Fourier transform spectrom....**, Qingshan Chen, Beijing institute of machinery, electronics information engineering (China) [6837-13]
- √ **Improved LSB matching steganography with histogram characters reserved**, Zhihong Chen, Tianjin University Xinyuan uptown 8-5-401, (China) [6837-14]
- √ **Performance analysis of successive interference cancellation scheme for optical CDMA using modified**, Tawfig Eltaif, Univ. Kegansaan Malaysia, PTL-IMEN-UKM (Malaysia); Hossam Shalaby, Alexandria university, electrical eng. Department, Alexandria university (Egypt); Sahbudin Shaari, Univ Kegansaan Malaysia, PTL-IMEN-UKM (Malaysia); Mohammad Hamarsheh, Multimedia University, Faculty of information science and technology (Malaysia) [6837-15]
- √ **Thermoelastic mechanical process analysis of the laser-generated Lamb wave in thin fiber reinforced**, Jijun Wang, Baiqiang Xu, Jiangsu University, Faculty of Science (China); Zhonghua Shen, Xiaowu Ni, Jian Lu, Nanjing University of Sci. & Tech., Dept. of Appl. Physics (China) [6837-16]
- √ **Extraction of guided waves by diffraction of 2D hexagonal lattices fabricated on the surface of wave....**, Xiaoyun Chen, Shou Liu, Xiangsu Zhang, Xuechang Ren, Xiamen Univ, Physics Dept (China) [6837-22]
- √ **Field depth extension of 2D barcode scanner based on wavefront coding and projection algorithm**, Tingyu Zhao, Zi Ye, Wenzhi Zhang, Weiwei Huang, Feihong Yu, Zhejiang University, Room 332 No.3 teaching building (China) [6837-24]
- √ **Performance analysis on a new binary amplitude-based phase-only-encoded barcode**, Xu Wu, Jiasheng Hu, Dalian University of Technology, School of Electronic and Information Engineering (China) [6837-27]
- √ **Universal description of the optical coherence**, Yan Huang, Yishen Qiu, Fujian Normal University (China) [6837-28]
- √ **All-optical wavelength converter based on self-phase modulation in highly nonlinear photonic crystal....**, Huangping Yan, Yuanqing Huang, Zihua Weng, Ruifang Ye, Yiju Wang, Zhaoxi Wu, Jin Wan, Xiamen Univ. (China) [6837-30]

- √ **1.5- μ m band tunable wavelength conversion based on fan-out grating in QPM-LN**, Yiju Wang, Yuanqing Huang, Zihua Weng, Huangping Yan, Ruifang Ye, Jiangong Zhu, Xiamen University, Dept. of Mechanical and Electronic Engineering (China) [6837-32]
- √ **Study on the spectral combination characteristic of grating**, Lingyu Wan, Guangxi Univ., College of Physics Science and Technology (China) [6837-36]
- √ **Influence of temperature on holographic gratings fabricated in photopolymers**, Dejun Feng, School of Information Science and Engineering, Shandong University (China) [6837-40]
- √ **An improved optic-electronic hybrid encoding technique for validation**, Kenan Wu, Jiasheng Hu, Yong Lin, Dalian University of Technology, School of Electronics and Information Engineering(China) [6837-41]
- √ **Detecting of Brillouin shift and speed sound in water**, Xingdao He, Nanchang Hangkong University, Institute of Automation (China) [6837-42]
- √ **MMI power splitters based on the annealed proton exchange (APE) technology**, Jianmin Cui, Beijing Institute of Technology, Optoelectronic Engineering Dept (China) [6837-48]
- √ **A new calibration approach of rotor axes for 3D measurement system**, Qingyang Wu, Jingzhen Li, Shenzhen university, College of Electronic Sci. & Tech.(China); Xianyu Su, Sichuan university, Opto-Electronics Department (China); Bin Hui, Fan Yang, shenzhen university, College of Electronic Sci. & Tech. (China)... [6837-49]
- √ **Performance of optical DPSK and DQPSK in 40-G bit/s transmission systems**, Jie Gao, Beijing Institute of Technology, Opto-Electronic Engineering (China) [6837-51]
- √ **Feature extraction on detecting target in clutter background with wavelet transform**, Hui Dong, Chunjie Li, Shibo Chu, Wensheng Wang, Changchun University of Science and Technology (China) [6837-52]
- √ **Enhancement technology of the joint transform power spectrum**, Chunjie Li, Fanghan Chen, Shibo Chu, Jiawei Zhao, Wensheng Wang, Changchun University of Science and Technology (China) [6837-53]
- √ **Application of joint transform correlator in detection of infrared target**, Fanghan Chen, Chunjie Li, Dongyue Liu, Wensheng Wang, Changchun University of Science and Technology (China) [6837-54]
- √ **Self-reference hologram**, Lin Ma, Xidian Univ., Lab 501 Technical Physics Dept (China); Ying Zong Wang, Shaanxi Normal University, College of Physics and Information Technology (China) . [6837-58]
- √ **Tracking technology of moving target**, Hua Miao, Yu Chen, Fanghan Chen, Wensheng Wang, Changchun University of Science and Technology (China) [6837-60]
- √ **Electromagnetic transmission of T-shape periodic metallic grating**, Yanhua Wang, Harbin Institute of Technology, Department of Physics (China); Yan Zhang, Capital Normal University, Department of Physics (China) [6837-65]
- √ **New photonic bandgap of single negative materials**, Yuan Zeng, Jiadong Xu, Northwest polytechnical University, shool of electronic information (China) [6837-68]
- √ **Measurements of the hexagonal super-lattice state**, Weixia Xie, Lifang Dong, Hebei University, College of Physics Science & Technology (China) [6837-69]
- √ **Study on optimization of resource allocation in OBS networks**, Jian Xin Wang, Dawei Man, Yu Song, xiamen univ., civil engineering (China) [6837-71]
- √ **Implementation of OFDM multimode fiber communication system in the Simulink environment**, Wei Xie, Room 301, apart.5 nanhuxiaoqu.jilin university, Rm 301 Apart 5, Nanhuxiaoqu, Changchun (China); Guijun Hu, Department of Optical Communication, College of Communication Engineering (China).[6837-1]
- √ **Study and design of a new type of Lyot depolarizer**, Min Wang, Fujian Normal University, Key Laboratory of Photoelectronic Technology (China) ; Naiyu Wang, Muwang Huang, Foctek Optoelectronics Co.Ltd (China) [6837-50]
- √ **The application of optical wavelet transform on image edge enhancement**, Zhiwei Yuan, Xiamen Univ., DMEE (China) [6837-6]
- √ **Design and analysis of ultrafast magneto-optic switch**, Xu Chen, Xiamen Univ., Mechanical and Electronic Engineering Dept (China) [6837-8]
- √ **A new method for the measurement of retardation based on modulated polarization light**, Ling Fan, Beijing Jiaotong Univ., School of Science (China); Feijun Song, China Daheng Group, Inc.(China) [6837-20]
- √ **Fluorescence properties of Eu(TTFA)3-doped SiO2 hybrid microspheres**, Changqing Huang, China Jiliang University, College of Optics & Electronics (China) [6837-33]
- √ **A transform algorithm for moirÉ tomography to reconstruct fields with opaque objects**, Song Yang, NUST, Applied Physics Dept (China) [6837-34]
- √ **Coherence and spectrum of light scattering on quasi-homogeneous random media**, Yu Xin, YanRu Chen, Qi Zhao, MuChun Zhou, Nanjing University of Science and Technology, Department of Optical Engineering(China) [6837-43]
- √ **Development of system for measuring beam coherence polarization matrix (BCPM)**, Gaoming Li, Yishen Qiu, Qinmiao Chen, Na Fang, Zhihao Chen, fujian normal university, Fujian Provincial Key Laboratory of Photonic Techn (China)... [6837-45]
- √ **A faster compress coding arithmetic based on fractal**, Li-min Qi, Tianjin University, Opto-electronics engineering (China) [6837-47]

ROOM: 16 district, second floor, room 78

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Optoelectronic Devices and Integration II

Conference Chairs: **Xuping Zhang**, Nanjing Univ. (China); **Hai Ming**, Univ. of Science and Technology of China (China); **Maggie Yihong Chen**, Omega Optics, Inc. (USA)

Program Committee: **Kin Seng Chiang**, City Univ. of Hong Kong (Hong Kong China); **Xuejun Lu**, Univ. of Massachusetts/Lowell (USA); **Gang-Ding Peng**, Univ. of New South Wales (Australia); **Ping Shum**, Nanyang Technological Univ. (Singapore); **Hwa-Yaw Tam**, The Hong Kong Polytechnic Univ. (Hong Kong China); **Suning Tang**, Crystal Research, Inc. (USA); **Joel M. Therrien**, Univ. of Massachusetts/Lowell (USA); **Xiaoyi Bao**, Univ. of Ottawa (Canada); **Xuliang Han**, Brewer Science, Inc. (USA); **Xiaoli Dai**, Communications Research Ctr. Canada (Canada)

Monday 12 November

SESSION 1

16 district, 2 floor, 78 room Mon.1:40pm to 3:40pm

Photonic Crystal And Photonic Bandgap Materials And Devices

Chairs: Zhang Xuping

1:40pm: **Highly dispersive photonic crystal fiber for beamforming** (*Invited paper*), Maggie Chen, Omega Optics, Inc.; Harish Subbaraman, Peiyan Cao, Ray Chen, The University of Texas at Austin (USA) [6838-112]

2:10pm: **Adenine detection by photonic crystal fiber based surface enhanced Raman scattering probe** (*Invited paper*), Mingshan Li, Changxi Yang, He Yan, Guofan Jin, Tsinghua University; Lantian Hou, Guiyao Zhou, Yanshan University (China) . . . [6838-59]

2:40pm: **Transmission spectrum of Fabry-Perot interferometer based on photonic crystal**, Yufei Wang, Yishen Qiu, Hailian Hong, Bo Ni, Fujian Normal Univ.; Xiyao Chen, Guiming Lin, Minjiang University (China) [6838-71]

3:00pm: **Photonic crystal coupled-resonator waveguide**, Chongjun Jin, Sun Yat-Sen Univ. (China) [6838-49]

3:20pm: **Enhancing the extraction efficiency of ZnS:Mn TFEL by photonic crystals structure**, Jinwei Li, Yurong Jiang, Wei Xue, Jin Xu, Beijing Institute of Technology (China) [6838-52]

Coffee/Tea time 3:40pm to 4:10pm

SESSION 2

16 district, 2 floor, 78 room Mon.4:10pm to 5:30pm

Fiber And Guided-wave Lasers And Amplifiers

Chairs: Maggie Chen

4:10pm: **Analysis of erbium-doped segmented-cladding fiber for optical amplification** **Jiwen Yang**, Jiwen Yang, Hai Ming, University of Science and Technology of China; Kin Seng Chiang, City University (China) [6838-18]

4:30pm: **Experimental study on passively mode-locked erbium-doped fiber laser using SESAM**, Ji Fan, Lixin Xu, Rui Zheng, Ming Hai, University of Science and Technology (China) [6838-19]

4:50pm: **Pulse operation of a single-mode single-polarization Yb-doped DFB fiber laser with pump modulation**, Gu Chun, Univ. of Science and Technology of China (China) [6838-125]

5:10pm: **Characteristics of the dual-forward pumped L-band ASE fiber source**, Xiulin Wang Jimei Univ.; Wencai Huang, Minghao Sun, Benrui Zheng, Huiying Xu, Zhiping Cai, Xiamen University (China) [6838-25]

Tuesday 13 November

SESSION 3

16 district 2 floor, 78 room Tue.8:30am to 12:20pm

Integrated Optics and Photonic Integrated Circuits

Chairs: Lu Xujun; Zhang Xuping

8:30am: **High-Speed Laser Beam Attenuators Based on Electro-Optic Bragg Gratings**, **Tang** (*Invited paper*), Suning Tang, Yuanji Tang, Baofeng Duan, Xiao Wang, Thomas Hartwick, Crystal Research, Inc; James Foshee, AFRL/IFGD (USA) [6838-130]

9:00am: **Design and fabrication of a low crosstalk multichannel CMOS OEIC receiver module** (*Invited Paper*), Haobo Zhu, Lu-Hong Mao, Changliang Yu, Tianjin Univ.; Chen Hongda, Chinese Academy of Science (China) [6838-38]

9:30am: **An interdigitated diffusion-based In(0.53)Ga(0.47)As lateral PIN photodiode**, P. Susthitha Menon, Kumarajah Kandiah, Abang Annuar Ehsan, Sahbudin Shaari, Univ. Kebangsaan Malaysia (USA) [6838-19]

Coffee/Tea time 9:50am to 10:20am

10:20am: **Simulation and design of high-Ge content photodetector on SiGe buffers** (*Invited Paper*), Huan Li, Pingjuan Niu, Tianjin Polytechnic University; Junyi Li, Institute of Semiconductors (China) [6838-115]

10:50am: **A novel in-fiber optical switch based on two-core optical fiber** (*Invited Paper*), Zhihai Liu, Jun Yang, Zhongfu Wu, Libo Yuan, Harbin Engineering University (China) [6838-66]

11:20am: **Three-wavelength 3x3 rearrangeable router switch**, Haifeng Zhou, Zhejiang Univ. (China) [6838-14]

11:40am: **Low-loss vertically coupled polymeric electro-optic switch**, Guohua Hu, Yiping Cui, Bin Feng Yun, Changgui Lu, Zhuyuan Wang, Southeast University (China) [6838-34]

12:00pm: **Pulse response research of avalanche photodiode for range detection application**, Yanbing Jiang, Huimin Yan, Qimin Wang, ZheJiang University (China) [6838-26]

Lunch Break 12:20pm to 1:40pm

SESSION 4

16 district 2 floor, 78 room Tue.1:40pm to 3:10p m
Fiber And Guided-wave Lasers And Amplifiers

Chairs: Tang Suning

- 1:40pm: **High-Q rib waveguide microring resonators in silicon-on-insulator** (*Invited paper*), Qingzhong Huang, Jinzhong Yu, Shaowu Chen, Xuechen Xu, Institute of Semiconductors (China) [6838-123]
- 2:10pm: **Characteristics of Yb-Er co-doped Al₂O₃ waveguide amplifiers with different geometry structures**, Shufeng Li, Wenxuan Zhu, Changlie Song, Dalian Univ. of Technology; Chengren Li, Liaoning Normal University; Zhongfan Liu, Dalian University (China) [6838-114]
- 2:30pm: **Realization of SOI submicrometer optical waveguide components**, Xuejun Xu, Jinzhong Yu, Shaowu Chen, Xiaoguang Tu, Qingzhong Huang, Chinese Academy of Sciences (China) [6838-124]
- Coffee/Tea time 2:50pm to 3:20pm

SESSION 5

16 district 2 floor, 78 room Tue.3:20pm to 5:30pm
Devices For Photonic Applications

Chairs: Ming Hai

- 3:20pm: **Mechanisms and high performances of chlorine-treated GaN ultraviolet photodetectors** (*Invited paper*), Ching-Ting Le, Hsin-Ying Lee, Chih-Chien Lin, Po-Sung Chen, National Cheng Kung University (China) [6838-122]
- 3:50pm: **All-optical tunable delay line based on wavelength conversion and fiber dispersion**, Zhefeng Hu, Junqiang Sun, Lei Liu, Jian Wang, Huazhong University of Science and Technology (China) [6838-106]
- 4:10pm: **Experiment about series photoconductive switches triggered by laser pulse**, Wei Shi, Xue Liao, Xi'an University of Technology (China) [6838-60]
- 4:30pm: **Characterization of high-speed optoelectronics devices based on optical and electrical spectra analysis**, Ji Min Wen, Tao Zhang, Ning Hua Zhu, Institute of Semiconductors (China)[6838-449]
- 4:50pm: **Methods to speed up the gain recovery time of an SOA**, Zhi Wang, Wang Yongjun, Qingwen Meng, Zhao Rui, Beijing Jiaotong Univ. (China) [6838-24]
- 5:10pm: **Temperature dependence of PL spectrum in researching InGaAs/GaAs single quantum well**, Wei Fan, Xiaoxun Xu, Xiufeng Sun, Nankai University (China) [6838-128]

Wednesday 14 November

SESSION 6

16 district, 2 floor, 78 room Wed.8:30am to 12:10pm
Fiber And Guided-wave Lasers And Amplifiers

Chairs: Luo Xianggang; Lee Ching-Ting

- 8:30am: **High-power low-RIN fiber laser based on Brillouin optoelectronic oscillator** (*Invited paper*), Y. Song, X. Zhang, Nanyang Univ. (China) [6838-57]
- 9:00am: **Double-pass bidirectional pump broadband L-band erbium-doped superfluorescent fiber source**, Hua Wang, Yigang Li, Nankai Univ. (China) [6838-47]
- 9:20am: **ASE estimation in erbium-doped fibers using coupled amplitude equations for phase-sensitive configurations**, Amita Kapoor, Rashmi Singh, Enakshi Sharma, Univ. of Delhi (India) [6838-65]

- 9:40am: **Chaotic depolarization in a SOA fiber ring**, Chunhua Wang, Zhaoming Huang, Yufei Zhang, Changliang Gao Shanghai Univ. (China) [6838-70]
- Coffee/Tea time 10:00am to 10:30am
- 10:30am: **Waveguide polarization encoding/decoding modules for free-space quantum key distribution** (*Invited Paper*), Xuejun Lu, Univ. of Massachusetts/Lowell, (USA) [6838-118]
- 11:00am: **Open top ridge waveguide temperature insensitive refractometer** (*Invited Paper*), Xiaoli Dai, Communications Research Ctr. (Canada) [6838-53]
- 11:30am: **Compact variable optical attenuator based on the W type waveguide**, Wei Qi, Xiaoqing Jiang, Hui Yu, Jianyi Yang, Minghua Wang, Zhejiang Univ. (China) [6838-9]
- 11:50am: **Design of passive polarization beam splitter in silicon-on-insulator waveguides**, ChaoJun Yan, Three Gorges University; Qili Zhou, Hangzhou Dianzi University; Junli Wan, Tian Yang, Three Gorges University (China) [6838-12]

SESSION 7

16 district 2 floor, 78 room Wed.1:40pm to 5:20pm
Surface Plasmon Nanolithography, Plasmonic Waveguide and Devices

Chairs: Han Xueliang; Maggie chen

- 1:40pm: **Plasmonic nanolithography: from near field to far field** (*Invited paper*), Xiangang Luo, Institute of Optics and Electronics (China) [6838-104]
- 2:10pm: **The quick single-photon detector with many avalanche photodiodes working by time division**, Peng Jian, YiFei Fu, Yao Li, Bojun Yang, Yu Li, Beijing Univ. of Posts and Telecommunications (China) [6838-50]
- 2:30pm: **Reconfigurable optical add/drop multiplexer based on electro-optic effect in two directions**, Kejia Li, Jie Jin, Ruifeng Zhang, Yin hao Xu, Zhen Zhang, Tianjin Univ. (China) [6838-101]
- 2:50pm: **Characterization of carbon nanotube thin films formed using electronic-grade carbon nanotube aqueous solutions**, Xuliang Han, Daniel JanzenBrewer Science, Inc (China)... [6838-119]
- Coffee/Tea Time 3:10pm to 3:40pm
- 3:40pm: **Fabrication of square and hexagonal microlens arrays**, Sumei Zhou, Desen Liu, Xiaoping Jiang, Southwest Univ. (China) [6838-85]
- 4:00pm: **The design of a scene simulator in land-based aerospace lab with the man-made light source system based on quantum theory**, Xilin Zhu, Wan Yi, Jilin Univ.; Wenhui Fang, Changchun University of Science and Technology (China) [6838-55]
- 4:20pm: **Many body interactions and dynamic shift of the absorption resonance wavelength in all-optical polarization switching of InGaAs(P) MQWs**, Tao Wang, Huazhong Univ. of Science and Technology (China) [6838-27]
- 4:00pm: **A novel optical approach based on speckle effect produced by VCSEL for tracking on glass surface**, Wei Huang, Huaqiao Gui, Liang Lv, Jianping Xie, Hai Ming, Univ. of Science and Technology of China (China) [6838-16]
- 5:00pm **A partial coupling power of single mode fiber fusion**, Saktioto, university of Riau, Indonesia and University Teknologi Malaysia (Malaysia) [6838-17].

Monday/Tuesday Posters

Time: Monday 12:30pm to Tuesday 11:30am

- √ **Study on the transition between filamentary and pseudo-glow discharges in atmospheric air by photoelectronic method**, Yang Li, Lifang Dong, Hebei Univ. (China) [6838-61]
- √ **Investigation of feedback characteristics in single planar waveguide-coupled square microcavity by FDTD technique**, Guoping Lin, Le Ma, Zhiping Cai, Huiying Xu, Xiamen Univ. (China) [6838-2]
- √ **Research of surface acoustic wave acousto-optic effect**, Tao Liu, Kuanxin Yu, Wei An, Shengming Li, Shiya He, Beijing Univ. of Technology. (China) [6838-4]
- √ **An optical interconnection based on silicon pin construction**, Bin Zhang, Lu-hong Mao, Shan-guo Li, Shi-lin Zhang, Wei-Lian Guo, Tianjin Univ. (China) [6838-5]
- √ **The equivalent circuit model on the room-temperature electroluminescence from forward biased pin silicon diode**, Bin Zhang, Shan-Guo Li, Lu-Hong Mao, Wei-Lian Guo, Tianjin Univ. (China) [6838-6]
- √ **Application of the Pockels effect to high-voltage measurement**, Long Fei, Xiamen Univ. (China) [6838-7]
- √ **Negative refractive material slow-wave waveguide optical modulator**, Jiusheng Li, China Jiliang Univ. (China) [6838-13]
- √ **Study of clusters in Sm-doped polymer optical fibers**, Zhiqiang Zheng, Zhuohong Feng, Xiaoyan Li, Fujian Normal Univ. (China); Hai Ming, Univ. of Science and Technology of China. (China) [6838-15]
- √ **Dispersion property analysis of anti-resonant guiding microstructured optical fibers**, Zhihua Zhang, Baomin Bian, Jian Lu, Nanjing University of Science and Technology (China) [6838-22]
- √ **All-optical high-speed sampling based on nonlinear polarization rotation in a semiconductor optical amplifier**, Qianshu Zhang, Yong Liu, Yongzhi Liu, Lin Huang, Xiongguai Tang, Univ. of Electronic Sci. & Tech. of China. (China) [6838-23]
- √ **Study on a small-modulation and high-precision laser range finder using the self-mixing effect in a single-mode vertical-cavity surface-emitting laser**, Huanqin Wang, Tianpeng Zhao, Jun Xu, Deyong He, Univ. of Science & Technology of China. (China) [6838-29]
- √ **Single-mode condition of polymeric Y-junction rib waveguide**, Rongguo Lu, Yongzhi Liu, Jinkun Liao, Yong Liu, Qianshu Zhang, Univ. of Electronic Sci. & Tech. of China. (China) [6838-30]
- √ **Research of different structure integrated photodetectors in standard CMOS technology**, Xiang Cheng, Chao Chen, Xiamen Univ. (China), Jiantao Bian, Jiangsu Polytechnic Univ. (China) [6838-31]
- √ **Panoramic optical annular staring inspection system for evaluating the inner surface of a pipe**, Liefeng Zhao, Zhejiang Univ. (China) [6838-33]
- √ **Photoelectric measurement of the characteristic of square super-lattice pattern in DBD**, Haitao Zhao, Lifang Dong, Hebei Univ. (China) [6838-36]
- √ **Thermal stress effects on the mode field characteristics of arrayed waveguides**, Huamao Huang, Dexiu Huang, Wen Liu, Kan Yu, Wuhan National Laboratory for Optoelectronics (China) [6838-46]
- √ **Study on annealed Pt/n-AlxGa_{1-x}N MSM UV photodetectors**, Xiangfeng Zhang, Weiguo Sun, Zhengxiong Lu, Caijing Cheng, Hongyan Zhao, Luoyang photoelectric Institute. (China) [6838-48]
- √ **Analysis of the replicating characteristics of optical pulse active replicator**, Yi Yang, Zheng Zheng, Zheng Li, BUAA. (China) [6838-51]
- √ **The construction of high-resolution software correlator in photon correlation spectroscopy**, Guiqiang Liu, China Normal Univ. (China) [6838-54]
- √ **Multiple-channel tunable filters based on thermo-optic effect**, Dong Tian, Univ. of Science and Technology of China. (China) [6838-69]
- √ **Novel DFB gratings fabricated by ultraviolet photopolymerization for organic semiconductor lasers**, Xuanke Zhao, Xi'an Research Inst. of Hi-Tech Hongqing Town. (China) [6838-73]
- √ **A new theoretical analysis model about the design of acoustical waveguide in the guided acousto-optic devices**, Jiping Ning, Jing Liu, Weiyi Zhang, Qun Han, Lei Zhou, Tianjin Univ. (China) [6838-75]
- √ **Stable narrow-line-width dual-wavelength communication light source based on a DBR fiber laser**, Hui Zhu, Nankai Univ. (China) [6838-77]
- √ **Plate film waveguides fabrication with sol-gel coating technology**, Zhilin Zhang, Miao Ye, Weimin Sun, Harbin Engineering Univ. (China) [6838-96]
- √ **A novel variable optical attenuator based on fiber Sagnac interferometer**, Shuyang Hu, Beijing University of Technology. (China) [6838-107]
- √ **Study on optical modulator based on Teflon substrate**, Jiusheng Li, China Jiliang Univ. (China) [6838-113]
- √ **The study and simulation of same Si-based device used as both forward-biased LED and reverse-biased PD**, Wei Wang, Pingxian Niu, Weilian Guo, Guanghua Yang, Xin Yu, Xiaoguang Dai, Huan Li, Tianjin Polytechnic Univ. (China) [6838-116]
- √ **Waveform distortion and Doppler frequency broadening of self-mixing signal in polymer fiber optic VCSEL system**, Huaqiao Gui, Wei Huang, Liang Lv, Jianping Xie, Hai Ming, Univ. of Science and Technology of China. (China) [6838-121]
- √ **Superluminescent Diode Monolithically Integrated with Novel Y-Branch by Bundle Integrated Waveguide for Fiber Optic Gyroscope**, Lu Wang, Lingjuan Zhao, Jiaoqing Pan, Fan Zhou, Wei Wang, Institute of Semiconductors; Weixi Chen, Peking Univ. (China) [6838-126]
- √ **Effects of unstable torch flame for a fused single mode fiber**, Saktioto, university of Riau, Indonesia and Universiti Teknologi Malaysia (Malaysia) [6838-133]
- √ **Measurement of the Raman gain spectrums in optical fiber**, Yongxing Jin, China Jiliang Univ. (China) [6838-56]
- √ **Carrier accumulation effect in PCSS**, Yanling Sun, Shunxiang Shi, Jifang Liu, Xidian Univ. (China) [6838-87]
- √ **Gain properties of broadband Er³⁺-doped lead halotellurite-tungsten glass optical fiber amplifier**, Maohua Zhu, Tongzhao Gu, Dalian Maritime Univ. (China) [6838-88]
- √ **2x2 polymeric electro-optic MZI switch using multimode interference couplers**, He-Ping Li, JinKun Liao, Xiongguai Tang, Rongguo Lu, Univ. of Electronic Science and Technology of China. (China) [6838-93]
- √ **Silica on silicon waveguide material fabricated with porous silicon sacrificial membranes**, Jian Li, Hejun Yao, Zhixin Zhang, National Institute of Metrology. (China) [6838-117]

Nonlinear Optics: Technologies and Applications

Conference Chairs: **Yiping Cui**, Southeast Univ. (China); **Qihuang Gong**, Peking Univ. (China); **Yuen-Ron Shen**, Univ. of California/Berkeley (USA)

Program Committee: **Francois Kajzar**, Univ. d'Angers (France); **Takayoshi Kobayashi**, The Univ. of Tokyo (Japan); **Song-hao Liu**, South China Normal Univ. (China); **Jingjun Xu**, Nankai Univ. (China); **Toyohiko Yatagai**, Univ. of Tsukuba (Japan); **Pochi Yeh**, Univ. of California/Santa Barbara (USA); **Victor Zadkov**, M.V. Lomonosov Moscow State Univ. (Russia); **Dai-sik Kim**, Seoul National Univ. of Technology (South Korea); **Ursula Keller**, ETH Zurich (Switzerland); **Hongbing Jiang**, Peking Univ. (China)

Monday 12 November

SESSION 1

16 District the second floor, 96 Room Mon. 1:40pm to 3:20pm

Multiphoton Process and Optical Power Limiting

Chair: **Qihuang Gong**, Peking University (China)

1:40pm: **Three-dimensional nanofabrication by multiphoton lithography** (*Invited paper*), Xuan-Ming Duan, Xian-Zi Dong, Wei-Qiang Chen Technical Institute of Physics and Chemistry, CAS (China) [6839-32]

2:10pm: **Three-photo absorption materials and applications** (*Invited paper*), Changgui Lu, Southeast Univ. (China) . . [6839-133]

2:40pm: **Optical limiting properties of heavy rare earth metallo phthalocyanine compounds**, Peng Zhao, Lihong Niu, Lei Huang, Fushi Zhang Tsinghua University (China)..... [6839-86]

3:00pm:**Optical limiting properties of two novel porphyrin dimmers**, Songhao Pei, Zhao Dapeng, Zhang Wei, Weixian Peng, Wang Xingqiao, Song Yinglin, Jilin University (China) . . . [6839-125]

Coffee/Tea Break 3:20pm to 3:40pm

SESSION 2

16 District the second floor, 96 Room Mon. 3:40pm to 4:40pm

Nonlinear Optics Effects in Photonic Crystal and Metamaterial

Chair: **Yiping Cui**; Southeast University (China)

3:40pm: **The effect of a thin film on bistable shift for a one-dimensional photonic crystal doped with a nonl....**, Peng Hou, Yuanyuan Chen, Jie Shi, Ming Shen, Xi Chen, Qi Wang, Shanghai University (China) [6839-34]

4:00pm: **Dark electromagnetic solitons in the anomalous group-velocity dispersion regime in metamaterials**, Wenhua Su, Xi Cheng, Wei Zhou, Shuangchun Wen, Hunan University (China) [6839-36]

4:20pm: **Study of metamaterial-based nonlinear optics** (*Invited paper*), Shuangchun Wen, Yuanjiang Xiang, Dianyuan Fan, Hunan University (China) [6839-45]

Tuesday 13 November

SESSION 3

16 District the second floor, 96 Room Tue. 8:30am to 10:10am

Nonlinear Optics (I)

Chair: **Xuanming Duan**,

Technical Institute of Physics and Chemistry (China)

8:30am: **Analysis of intrinsic perturbation by thermal stress birefringence**, Chandrakant Jadhao, GS College of Khamgaon (India);Deepak Dhote, B.B.Science College Amravati (India) [6839-4]

8:50am: **The relationship between the hybrid form of center metal-atom and the third-order nonlinear optical ...**, Tingbin Li, Taishan University (China) [6839-27]

9:10am: **The dynamics of self-pumped phase conjugate flat concave loop mirrors in the photorefractive nonline...**, Mehran Vahdani Moghaddam, Zeynab Chenari, Hamid Latifi, Beheshti University (Iran) [6839-39]

9:30am: **Ablative laser propulsion of micro-beads using the filament generated by focusing femtosecond laser ...**, Nan Zhang, Zhijun Xu, Weiwei Liu, Xiaonong Zhu, Nankai University (China) [6839-50]

9:50am: **Adiabatic femtosecond pulse compression and control by using quadratic cascading nonlinearity**, Xianglong Zeng, Shanghai University (China); Ashihara Satoshi, Tsutomu Shimura, Kazuo Kuroda, The University of Tokyo (Japan) [6839-79]

Coffee/Tea Break 10:10am to 10:40am

SESSION 4

16 District the second floor, 96 Room ... Tue. 10:40am to 12:30pm

Nonlinear Optics (II)

Chair: **Honglin An**; The University of Sydney (Australia)

10:40am: **Spectrally resolved femtosecond nonlinear spectroscopy for study optical properties of quantum struc...** (*Invited paper*), Dao Lap, Jeff Davis, Peter Hannaford, Swinburne Univ of Technology (Australia) [6839-76]

11:10am: **Careful measurement of first hyperpolarizability spectrum by hyper-Rayleigh scattering (HRS)**, Jing Zhu, Yiping Cui, Changgui Lu, Advanced Photonic Center (China) . . . [6839-87]

11:30am: **Quadratic nonlinear optical properties of N-Aryl stilbazolium dyes**, Chang Liu, Jing Zhu, Wei Huang, Jin Xu, Changgui Lu, Yiping Cui, Southeast University (China) . . . [6839-93]

11:50am: **Observation of optical bistability due to an interaction of two laser beams in ferroelectric and nonf...**, Mohammad Majles Ara, Teacher Training University(Iran); Mina Fazilati, Mohamad Abolhasani, TMU (Iran) [6839-113]

Tuesday/Wednesday Posters

Time: Tuesday 12:30pm to Wednesday 11:30am

12:10pm: **2.3-4.5- μ m continuously tunable optical parametric oscillator based on multigrating MgO-doped period...** Linzhong Xia, Hong Su, Shuangchen Ruan, Shenzhen University (China) [6839-84]
Lunch Break 12:30pm to 1:40pm

SESSION 5

16 District the second floor, 96 Room Tue. 1:40pm to 3:10pm

Materials and Applications

Chair: **Dao V. Lap,**

Swinburne University of Technology (Australia)

1:40pm: **Control of coherent magnetization precession in GaMnAs by ultrafast optical excitation** (*Invited paper*), Jingbo Qi, Ying Xu, Vanderbilt University (USA); Norman Tolk, Xinyu Liu, Jacek Furdyna, University of Notre Dame(USA); Ilias Perakis, University of Crete (Greece) [6839-30]

2:10pm: **Multiphoton excitation in ZnO material**, Zhiwei Dong, Shanghai (China) [6839-17]

2:30pm: **Nonlinear optical studies of an organo-metallic complex by Z-scan technique** (*Contributed*), Jing Sun, Quan Ren, Qiang Xin Wang, Feng Wen Guo, Bing Xiang Sun, Dong Xu, Shandong University (China) [6839-24]

2:50pm: **Large second-order nonlinearity induced in thermally poled pyrex borosilicate glass** (*Invited paper*), Honglin An, Simon Fleming, University of Sydney (Australia) [6839-75]

Coffee/Tea Break 3:20pm to 3:40pm

SESSION 6

16 District the second floor, 96 Room Tue. 3:40 pm to 5:00pm

Optical Nonlinearity in Fiber

Chair: **Shuangchun Wen;** Hunan University (China)

3:40pm: **Polarization characters of stimulated Raman spectra in the birefringence fiber**, Ling Zhang, ChangChun University of Science and Technology (China); Shili Liang, Northeast Normal University (China); Xiuping Sun, ChangChun University of Science and Technology (China) [6839-19]

4:00pm: **Study on resonance absorption Raman scattering in i2 liquid-core optical fiber**, Wan Yi, Xilin Zhu, Jilin University (China); Wenhui Fang, Hanwei Yi, Changchun Institute of Technology (China) [6839-38]

4:20pm: **Design of a highly nonlinear liquid-core photonic crystal fiber used for fiber optical parametric am...**, Chaoyang Li, BUPT(China) [6839-82]

4:40pm: **Raman mode locking in fiber lasers**, Richard Mildren, David Spence, Macquarie University (Australia) [6839-52]

✓ **Bistable chromatic switching in 648-nm laser-pumped Tm-doped crystal**, Li Li, Harbin Engineering University (China) [6839-5]

✓ **Tunable bistability and asymmetric line shape in ring cavity-coupled Michelson interferometer**, Li Li, Harbin Engineering University (China) [6839-6]

✓ **Propagation of a femtosecond laser pulse in a dense δ -type three-level atomic medium**, Ma Hui, Shandong Normal University; Jun Xi Fan, Shandong Normal University; Zhizhan Xu, Shanghai Institute of Optics and Fine Mechanics (China) . [6839-8]

✓ **Studying the nonlinear dynamic characteristics of an optically injection vertical-cavity surface-emitted laser**, Huijun Kong, Zhengmao Wu, Tao Deng, Li Fan, Qi Yang, Guangqiong Xia Southwest Univ. (China) [6839-10]

✓ **Influences of chromatic dispersion and nonlinearity in fiber on the chaos synchronization**, Linfu Li, Zhengmao Wu, Jun Li, Xiaofa Wang, Bingxing Yang, Guangqiong Xia, Southwest Univ. (China) [6839-11]

✓ **Study on highly nonlinear microstructured fibers**, Zhaolun Liu, Yanshan University (China) [6839-12]

✓ **Analysis of phase-matching parameter in difference frequency generation with AgGaS₂ and AgGaSe₂**, Yue Song, Li Wang, Beijing University of Technology (China) [6839-13]

✓ **Numerical analysis of femtosecond pulse propagation and supercontinuum generation in tapered fiber**, Bin Zhang, Kai Guo, Jinrong Tian, Yanrong Song, Beijing University of Technology (China) [6839-14]

✓ **Off-resonant third-order optical nonlinearities of squarylium and croconium dyes**, Zhongyu Li, Zihui Chen, Zhi Zhang, Lei Huang, Fushi Zhang, Tsinghua Univ. (China) [6839-15]

✓ **SHG properties of periodically poled RbTiOAsO₄ in group velocity matching**, Yan-Bin Men, Li Wang, Beijing University of Technology; Fang Wen, Hebei Normal University (China) [6839-18]

✓ **Linewidth analysis of KBe₂B₃O₁₂ crystal optical parametric oscillator**, Li Wang, Jianguang Dai, Beijing University of Technology (China) [6839-20]

✓ **A novel optical quantizing and coding method for all-optical A/D conversion using nonlinear optical ...**, Lixun Zhang, Univ. of Electronic Science and Technology of China (China) ... [6839-23]

✓ **Simple optical waveform monitoring based on SOA and low-bandwidth PIN**, Yi Yang, Zheng Zheng, Zheng Li, Beihang Univ.; Yuxiao Chen, China Academy of Engineering Physics (China) [6839-28]

✓ **Study of effect of Gause-Hasen displacement on dispersion**, Zhijun Ren, Yile Shi, Weidong Zhou, Zhejiang normal university (China) [6839-31]

✓ **The Stokes-vector analysis of polarization-dependent optical sampling in semiconductor optical amplifier**, Maotong Liu, Aiyang Yang, Yu-nan Sun, Beijing Institute of Technology (China) [6839-40]

✓ **Polarization-insensitive all-optical wavelength converter based on four-wave mixing in a highly nonlinear medium**, Huangping Yan, Yuanqing Huang, Zihua Weng, Zhaoxi Wu, Ruifang Ye, Yiju Wang, Jin Wan, Xiamen Univ. (China) [6839-41]

✓ **Analysis of the influence of the radius of incident laser beam on the radius of melting area of semi-conductor**, Weihuan Ding, Xiaowu Ni, Nanjing Univ. of Science & Technology (China) [6839-42]

✓ **Tunable characteristics of periodically poled RbTiOAsO₄**, Yan-Bin Men, Li Wang, Beijing Univ. of Technology; Fang Wen, Hebei Normal University (China) [6839-48]

- √ **Tunable wavelength conversion based on cascaded sum and difference frequency generation with double-...**, Yiju Wang, Yuanqing Huang, Zihua Weng, Huangping Yan, Jianguo Zhu, Zhaoxi Wu, Xiamen Univ. (China) [6839-49]
- √ **Influence of modulation instability on self-focusing of broad-band pulsed-beam with large chirp**, Lifu Zhang, Xiquan Fu, Zehu Feng, Huiwen Xu, Shuangchun Wen, Hunan Univ. (China) [6839-51]
- √ **Effect of lattice modulation on small-scale self-focusing of beam in optical lattice**, Jia Lu, Xiquan Fu, Zehu Feng, Lifu Zhang, Shuangchun Wen, Hunan Univ. (China) [6839-53]
- √ **Investigation of the surface acoustic waves**, Ling Yuan, Gang Yan, Nanjing University of Science & Technology (China) [6839-54]
- √ **Simulative analysis of periodically poled waveguide second-harmonic generation in Z-cut MgO: LiNbO₃**, Shuanggen Zhang, Nankai university (China) [6839-55]
- √ **A novel numerical algorithm for nth-order cascaded CW Raman fiber lasers based on shooting method an...**, Zujun Qin, UESTC (China) [6839-56]
- √ **Quantum beats in the dressed state nutation**, Xiaomin Feng, Lianshui Zhang, Jian Wang, Lijun Yang, Zhonghong Zhuang, Hebei University (China) [6839-57]
- √ **Nonlinear dynamics of laser-induced bubble near elastic boundaries**, Xiumei Liu, Jie He, Jian Lu, Wu Ni, Nanjing university of Science & Technology (China) [6839-58]
- √ **SMM analysis of reflection and transmission of microwave from nonuniform unmagnetized laser-induced ...**, Ying Wu, Xiaowu Ni, Jianping Chen, Nanjing University of Science and Technology (China) [6839-59]
- √ **Controlling frequency tuning range of electromagnetically induced transparency by radio-frequency fie...**, Lianshui Zhang, Zhonghong Zhuang, Jian Wang, Xiaomin Feng, Lijun Yang, Hebei University (China) [6839-60]
- √ **The chirped ultrabroadband pulse amplification in inhomogeneously broadening medium**, Hua Zhang, Xiquan Fu, Lifu Zhang, Zehu Feng, Huiwen Xu, Shuangchun Wen Hunan Univ. (China) [6839-64]
- √ **Impact of the order of soliton on fiber optical parametric amplification in ultrashort signal wave**, Lin Gui, Yufeng Shao, Hunan Univ. (China) [6839-66]
- √ **Theoretical and experimental study on passively synchronized Ti: sapphire lasers with a thin Kerr me...**, Jinrong Tian, Beijing University of Technology (China) [6839-68]
- √ **Modeling of mode lock fiber laser by combination of rate equation and NLS equation**, Yu Zhao, Deshuang Zhao, Yongzhi Liu, School of Optoelectronic Information (China) [6839-69]
- √ **The art for broad-bandwidth direct third-harmonic generation focusing beams in a single crystal of B...**, Keyu Li, Research Center of Laser Fusion, CAEP; Kun Li, Sichuan University (China) [6839-72]
- √ **The DC electric field induced second-order nonlinear optical processes**, Xiuhuan Liu, Zhanguo Chen, Bao Shi, Gang Jia, Yuhong Zhang, Ce Ren, Jianxun Zhao, Kun Cao, Shuang Wang, Jilin University (China) [6839-80]
- √ **An optical pulse compression method based on high-erbium-doped fiber amplifier and ordinary single-m...**, Jing Ren, Yang Liu, Yabin Li, Dongfang Jia, Zhaoying Wang, Yiping Guo, Shicheng Li, Tianjin University (China) [6839-85]
- √ **Green upconversion fluorescence of symmetrical 1,3,4-oxadiazole derivative by femtosecond three-phot...**, Wei Huang, Chang Liu, Feng Chu, Jin Xu, Changgui Lu, Yiping Cui, Ying Qian, Southeast Univ. (China) [6839-90]
- √ **Optical nonlinearities of perylene derivatives**, Yoshihiko Sasaki, Kazuo Kasatani, Hiroyuki Takamo, Yamaguchi Univ. (Japan) [6839-94]
- √ **Theoretical study of intramolecular interactions on H-shape azobenzenes' first-order hyperpolarizabi...**, Feng Chu, Jing Zhu, Changgui Lu, Yiping Cui, Southeast University ; Chaozhi Zhang, Guoyuan Lu, Nanjing University (China) [6839-95]
- √ **Research on slow Bragg solitons in apodized gratings**, Binbin Yan, Fei Ai, Kuiru Wang, Chongxiu Yu, Xinzhu Sang, Daxiong Xu, Beijing Univ of Posts and Telecommunications (China) . [6839-96]
- √ **Nonlinear optical responses of cyanine dyes in solution measured by resonant femtosecond degenerate ...**, Yoshinari Matsuda, Kazuo Kasatani, Yamaguchi Univ. (Japan) . . . [6839-98]
- √ **Molecular structure and two-photon absorption property relations in phenylenevinylene chromophores**, Jin Xu, Feng Chu, Wei Huang, Chang Liu, Changgui Lu, Yiping Cui, Southeast University; Junxiang Zhang, Xiaokou Liu, Long Lu, Shanghai Institute of Organic Chemistry (China) [6839-100]
- √ **Optical nonlinear properties of water-soluble CdSeS quantum dot**, Feng Wu, Xiaowu Ni, Nankai University; Xihe Zhang, Changchun University of Science and Technology (China) [6839-101]
- √ **Numerical simulation of thermal damage process between different energy laser and a photodiode**, Juan Bi, Xiaowu Ni, Xihe Zhang, Nanjing University of Science & Technology (China) [6839-104]
- √ **Controlling hyperchaos in nonlinear three-wave coupling**, XiuQin Feng, Changchun Univ. of Science (China) [6839-105]
- √ **Using local environmental effects in dye-doped polymeric thin films**, Ezeddin Mohajerani, Mohamad Rezvani, Shahid Beheshti University (Iran) [6839-106]
- √ **Parameter identification of chaotic optical systems based on optimization techniques**, Meiyong Ye, Xiaodong Wang, Zhejiang Normal University (China) [6839-108]
- √ **Study of photorefractive phase conjugation property with pulse laser**, Lin Ma, Shunxiang Shi, Jifang Liu, Yanlin Sun, Xidian Univ. (China) [6839-109]
- √ **Implementing the wavelength conversion using FWM in ROF systems**, Junying Zeng, Chongxiu Yu, Jianxin Ma, Beijing Univ. Of Posts and Telecommunications (China) [6839-110]
- √ **Resonance-enhanced multiphoton ionization mechanism of NO in 495~575-nm wavelength region**, Guiyin Zhang, Yidong Jin, 4#-4-201, NO.161, Qingnian Road (China) [6839-118]
- √ **Stable solitons at an interface separated by different-order Bessel optical potential**, Liangwei Dong, Xiaoyu Yang, Zhejiang Normal Univ. (China) [6839-122]
- √ **Influence of medium parameters on power limiting characteristic in stimulated Brillouin scattering p...**, Huaping Gong, China Jiliang University; Zhiwei Lu, Dianyong Lin, Harbin Institute of Technology (China) [6839-131]
- √ **A novel optical quantizing and coding method for all-optical A/D conversion using nonlinear optical...**, Lixun Zhang, Univ. of Electronic Science and Technology of China (China) [6839-23]
- √ **The art for broad-bandwidth direct third-harmonic generation focusing beams in a single crystal of B...**, Keyu Li, Research Center of Laser Fusion, CAEP [6839-72]
- √ **Temperature character of stimulated Raman scattering spectrum of silica fiber**, Xiuping Sun, Changchun University of Science and Technology (China) [6839-9]
- √ **Research on the photomixer technology and its THz generation via the experiment setup**, Lei Zhang, Shanghai Institute of Technical Physics, Chinese A (China) [6839-26]

- √ **Third-order nonlinear optical properties of Co(dmit)2 complexes using Z-scan technique**, Quan Ren, Xi Zhang, BingXiang Sun, QiangXin Wang, FengWen Guo, LiangHong Yang, JunFu Zhang, Dong Xu, Shandong university (China) [6839-44]
- √ **Interferometric measurement of laser induced plasma on the surface of an Al target in air**, Hongchao Zhang, Jian Lu, Xiaowu Ni, Nanjing University of Science & Technology (China) . . [6839-73]
- √ **Observation of plasma shielding by measuring transmitted laser pulse temporal and spatial profiles**, Hongchao Zhang, Jian Lu, Xiaowu Ni, Nanjing University of Science & Technology (China) [6839-74]
- √ **Visible and near infrared spectra of conical bubble sonoluminescence in water**, Shoujie He, He bei university (China) [6839-77]
- √ **Preparation and optical propagation characteristics of the composite polymer EtNi/PMMA films**, Fujun Zhang, Quan Ren, Hongliang Yang, Xudong Yang, Xinqiang Wang, Xi Zhang, Guanghui Zhang, Dong Xu Shandong University (China) [6839-88]
- √ **Retarded response of the PVA polarization disc with polarization quick-changing laser passing**, Yu Sa, Wei Zhao, Tianjin Univ. (China) [6839-89]
- √ **Polarization-mode dispersion effect in 60-GHz fiber optic millimeter-wave link based on harmonics ge...**, Meiwei Zhu, Rujian Lin, Minglei Xiu, Jiajun Ye, Shanghai University (China) [6839-92]
- √ **Resonance characteristics in Brillouin fiber ring laser and frequency stabilization**, Yuelan Lu, Harbin Engineering Univ. (China) [6839-117]
- √ **Sol-gel-processed TiO₂/SiO₂ films for electro-optic effect**, Alin Hou, ChangChun Univ of Technology; Hongfei Liu, Jie Sun, Weinan Gao, Daming Zhang, Maobin Yi, Jilin University (China) [6839-120]
- √ **Total transmission condition for photon quantum in photonic crystal nanocavities**, Kaifa Deng, Univ. of Shanghai for Science and Technology (China) [6839-124]

Terahertz Photonics

Conference Chairs: **Cunlin Zhang**, Capital Normal Univ. (China); **Xi-Cheng Zhang**, Rensselaer Polytechnic Institute (USA)

Program Committee: **Jun-Cheng Cao**, Shanghai Institute of Microsystem and Information Technology (China); **Haewook Han**, Pohang Univ. of Science and Technology (South Korea); **Kazuhiko Hirakawa**, Univ. of Tokyo (Japan); **Chi Hsiang Lee**, Univ. of Maryland/College Park (USA); **Ci-Ling Pan**, National Chiao Tung Univ. (Taiwan, China); **Shengcai Shi**, Purple Mountain Observatory (China); **Wei Shi**, Xi'an Univ. of Technology (China); **Masahiko Tani**, Osaka Univ. (Japan); **Li Wang**, Institute of Physics, CAS (China); **Chao Zhang**, Univ. of Wollongong (Australia); **Yan Zhang**, Capital Normal Univ. (China); **Dongxiao Yang**, Zhejiang Univ. (China); **Wei Zhao**, Xi'an Institute of Optics and Precision Mechanics (China)

Monday 12 November

SESSION 1

16 District The second floor, 91Room Mon.1:40pm to 3:20pm

THz generation and detection

Chair: **Xicheng Zhang** and **Cunlin Zhang**

1:40pm: **THz quantum-cascade lasers and video-rate THz imaging** (*Invited paper*), Qing Hu, Massachusetts Institute of Technology (USA) [6840-66]

2:10pm: **THz photon detectors with superconducting tunnel junctions** (*Invited paper*), Sheng-Cai Shi, Purple Mountain Observatory (China) [6840-61]

2:40 pm: **The study of optimal gas pressure in optically pumped D₂O gas terahertz laser**, Zhihong He, Sun Yat-Sen University (China) [6840-3]

3:00 pm: **Theoretical analysis of terahertz wave parametric source based on intersecting cavity**, Xiangting Zhao, Hui Zhang, Shengjiang Chang, Nankai University (China) [6840-4]

Coffee/Tea Break 3:20pm to 3:50pm

SESSION 2

16 District The second floor, 91Room Mon.3:50pm to 5:00pm

THz generation and detection

Chair: **Xicheng Zhang** and **Cunlin Zhang**

3:50pm: **Terahertz properties of carbon-nanotube antenna arrays** (*Invited paper*), Wei Shi, Xi'an University of Technology, Yue Wang, Qun Wu, Harbin Univ of Science and Technology (China) . . [6840-1]

4:20pm: **Dependence of noise temperature of quasi-optical superconducting hot-electron bolometer mixers on bath temperature and optical-axis displacement**, Wen Zhang, Ning Li, Ling Jiang, Yuan Ren, Qi-Jun Yao, Zhen-Hui Lin, Sheng-Cai Shi, Purple Mountain Observatory (China); Boris Voronov, Grigoriy Goltsman, Moscow State Pedagogical University (Russia) . [6840-5]

4:40pm: **A compound cavity for high-sensitivity THz signal detection**, Zhengbiao Ouyang, Xianda Luo, Shenzhen Univ. (China); Jong Wang, Chung-Ping Liu, Chih Jung Wu, Yuan Ze University (Taiwan China) [6840-17]

Tuesday 13 November

SESSION 3

16 District The second floor, 91 Room Tue.8:30am to 10:10am

THz spectroscopy and imaging

Chair: **Haewook Han**

8:30am: **Laser THz emission microscope** (*Invited paper*), Masayoshi Tonocuchi, Osaka University (Japan) [6840-67]

9:00am: **Optical-Pump-THz-Probe studies of femtosecond-laser annealed amorphous silicon** (*Invited paper*), Ci-Ling Pan, National Chiao Tung University, (Taiwan China) [6840-68]

9:30am: **THz spectra of Na₅ [B₂P₃O₁₃] crystal**, Yali Wang, College of Applied Sciences, Beijing University of Chaoyang; Bihui Hou, Beijing University of Technology; Chen Hua, Institute of Physics, Chinese Academy of Science; Yichen Wu, Technical Institute of Physics and Chemistry, Chi; Wang Li, Pengzhen Fu, Technical Institute of Physics and Chemistry, Chi; Fengyan Liu, Beijing University of Technology (China) [6840-14]

9:50am: **Qualitative and quantitative study of isomeric compounds of aminophenol by THZ- TDS**, Guifeng Liu, Shihua Ma, Xiaojing Ma, Min Ge, Wenfeng Wang, Zhiyong Zhu, Shanghai Institute of Applied Physics CAS (China) [6840-19]

Coffee/Tea Break 10:10am to 10:40am

SESSION 4

16 District The second floor, 91 Room Tue.10:40am to 12:30pm

THz spectroscopy and imaging

Chair: **Masayoshi Tonocuchi**

10:40am: **Terahertz apertureless near-field microscopy** (*Invited paper*), Hongkyu Park, Jeonghoi Kim, Minsu Cho, Younho Han, Euna Jung, Kiwon Moon, Mihyouon Lim, Haewook Han, Pohang Univ. of Science and Technology (South Korea) [6840-60]

11:10am: **Reflection terahertz en-face tomography**, Xin-Ke Wang, Harbin Institute of Technology (China), Ye Cui, Wenfeng Sun, Yan Zhang, Capital Normal Univ. (China) [6840-57]

11:30am: **A transmitted terahertz emission microscopy**, Yu-Ping Yang, Central Univ for Nationalities, Wei Yan, Li Wang, Institute of Physics, CAS (China) [6840-36]

11:50am: **Application of terahertz time-domain spectroscopy technology on cosmetic testing**, Xinfeng Jia, Bing Yu, Guozhong Zhao, Capital Normal University (China) [6840-49]

12:10pm: **Vibrational spectrum of PETN investigated in terahertz range**, Kaijun Mu, Jun He, Xue Jiang, Weiwei Li, Ruishu Feng, Liangliang Zhang, Qingli Zhou, Cunlin Zhang, Capital Normal University (China) [6840-55]

SESSION 5**16 District The second floor, 91 Room Tue.1:40pm to 3:20pm****Interaction of THz radiation with matters***Chair: Qing Hu*

1:40pm: **Quantum transport in spintronic systems in terahertz regime** (*Invited paper*), Chao Zhang, Univ of Wollongong (Australia) [6840-13]

2:10pm: **THz transmission properties of subwavelength fractal structures on the copper foils** (*Invited paper*), Guozhong Zhao, Yang Wang, Cunlin Zhang, Capital Normal University (China), Guo-Zhen Yang, Chinese Academy of Sciences (China) [6840-10]

2:40pm: **Detection of modulated terahertz radiation using electromechanical and plasma resonances in two-dime...**, Maxim Ryzhii, Victor Ryzhii, Maxim Ryzhii, University of Aizu, Yabo Hu, Ichiro Hagiwara, Tokyo Institute of Technology (Japan), Michael Shur, Rensselaer Polytechnic Institute (USA) [6840-23]

3:00pm: **Propagation characteristics of terahertz wave through a single slit**, Weihua Liang, Kun Yang, Guozhong Zhao, Cunlin Zhang, Capital Normal University (China) [6840-53]

Coffee/Tea Break 3:20pm to 3:50pm

SESSION 6**16 District The second floor, 91 Room 3:50pm to 5:50pm****Interaction of THz radiation with matters***Chair: Cao Zhang*

3:50pm: **Study on Terahertz Wave Generation by Nonlinear Optical Method** (*Invited paper*), Jianquan Yao, Tianjin University (China) [6840-69]

4:20pm: **Terahertz spectra of naphthoquinone derivatives**, Hongqi Li, Frostburg State University (USA), Xiang Luo, Xiao ni Zeng, Nan Zhu, Wei ning Wang, Capital Normal University (China) [6840-51]

4:40pm: **Study on THz spectra of the active ingredient in the TCM**, Shihua Ma, Wenfeng Wang, Guifeng Liu, Min Ge, Zhiyong Zhu, Shanghai Institute of Applied Physics, CAS (China) [6840-18]

5:00pm: **Resonantly enhanced transmission of terahertz radiation through a periodic array of subwavelength ap...**, Wang Yang, Meng Wei, Guozhong Zhao, Zhang Cunlin, Capital Normal University (China) [6840-54]

5:20pm: **Application of terahertz spectroscopy to the study of semiconductor nanostructures** (*Invited paper*), Joo-Hiuk Son, University of Seoul (South Korea) [6840-52]

Wednesday 14 November**SESSION 7****16 District The second floor, 91 Room Wed.8:30am to 10:10am****Non-destructive sensing and imaging***Chair: Huichun Liu*

8:30am: **Identification of explosives and drug inspection of material defect with THz radiation** (*Invited paper*), Cunlin Zhang, Capital Normal University (China) [6840-56]

9:00am: **Time-domain terahertz spectroscopy and its application on drugs and explosives**, (*Invited paper*), Wenhui Fan, Xican Institute of Optics and Precision Mechanics (China) [6840-70]

9:30am: **Quantitative analysis of the mixtures of illicit drugs using terahertz time-domain spectroscopy**, Dejun Jiang, Shusen Zhao, Jingling Shen, Capital Normal University (China) [6840-12]

9:50am: **Applications of terahertz spectroscopy in the plastics industry**, Steffen Wietzke, Technische Universitaet Braunschweig; Frank Rutz, Fraunhofer Inst. f.r Angewandte Festkor- perphysik; Christian Joerdens, Technische Universitaet Braunschweig; Norman Krumbholz, Nico Vieweg, Christian Jansen, Martin Koch, Technische Universitaet Braunschweig (Germany) [6840-24]

Coffee/Tea Break 10:10pm to 10:40pm

SESSION 8**16 District The second floor, 91 Room . . . Wed.10:40am to 12:30pm***Chair: Jianquan Yao*

10:40am: **Terahertz spectroscopic investigations of caffeine and 3-acetylmorphine** (*Invited paper*), Guangqin Wang, Jingling Shen, Capital Normal University (China) [6840-6]

11:10am: **Gas recognition with terahertz time-domain spectroscopy and spectral catalog: a preliminary study**, H. Lin, W. Withayachumnankul, B. M. Fischer, S. P. Micken, and D. Abbott, The University of Adelaide (Australia) [6840-65]

11:30am: **Terahertz real-time imaging for nondestructive detection**, Liangliang Zhang, CunLin Zhang, Capital Normal University; YueJin Zhao, XiaoHua Liu, Beijing Institute of Technology (China) [6840-48]

11:50am: **Studies on the detection and identification of the explosives in the terahertz range**, Qing-li Zhou, Cun-lin Zhang, Wei-Wei Li, Kai-jun Mu, Capital Normal University (China) [6840-58]

12:10pm: **Terahertz continuous-wave transmission imaging system and its application in security inspections**, Yandong Zhang, Yan Zhang, Chao Deng, Wenfeng Sun, Cunlin Zhang, Capital Normal University (China) [6840-41]

SESSION 9**16 District The second floor, 91 Room Wed.1:40pm to 3:20pm****THz photonic devices***Chair: Shengcai Shi*

1:40pm: **Quantum dots for terahertz devices** (*Invited paper*), Hui Chun Liu, National Research Council Canada; Bulent Aslan, James Gupta, Zbigniew Wasilewski, Geof Aers, Tony Springthorpe, Margaret Buchanan, National Research Council (Canada) [6840-50]

2:10pm: **Subwavelength structure device for bandgap generation in the THz range** (*Invited paper*), Yan Zhang, Kuo Meng, Yanhua Wang, Capital Normal University (China) [6840-62]

2:40pm: **0.5-THz waveguide SIS mixers with NbN/AlN/NbN technology**, Jing Li, Sheng-Cai Shi, Purple Mountain Observatory (China); Masanori Takeda, Zhen Wang, Kobe Advanced ICT Research Center (Japan) [6840-7]

3:00pm: **Analyzing on the frequency band of ultrawideband electromagnetic radiation from GaAs photoconductive...**, Wei Shi, Linqing Zhang, Zheng Liu, Xi'an University of Technology (China) [6840-16]

Coffee/Tea Break 3:20pm to 3:50pm

SESSION 10

16 District The second floor, 91 Room Wed.3:50pm to 5:10pm

Chair: Wei Shi

3:50pm: **Enhanced terahertz radiation from ZnSe surface nanogratings**, Xiaoshu Chen, Wu Xiaojun, Zhao Yu, He Shan, Wang Gang, Sun Yat-Sen (Zhongshan) University (China) [6840-35]

4:10pm: **The generation of terahertz using semiconductor laser diode with double working modes**, Jian He, Donghua Univ. (China) [6840-32]

4:30pm: **Enhanced terahertz radiation from ZnSe surface nanoparticles**, Xiaojun, Gang Wang, Sun Yat-Sen University (China) [6840-34]

4:50 pm: **A Berek's compensator in terahertz ranges**, Dongwen Zhang, Jianmin Yuan, National University of Defense Technology (China) [6840-59]

Monday/Tuesday Posters

Time: Monday 12:30 pm to Tuesday 11:30 am

✓ **Novel terahertz wave switch**, Jiusheng Li, Centre for THz Research, China Jiliang University (China) [6840-2]

✓ **Realization of a communication experiment at 500-GHz band**, Wei-Ming Chen, Jing Li, Xiao-Fang Shen, Zhen-Hui Lin, Xue-Song Cao, Yuan Ren, Sheng-Cai Shi, Purple Mountain Observatory (China) [6840-8]

✓ **High-energy terahertz pulse emission from GaAs illuminated by a femtosecond**, Jinhai Sun, Communication University of China; Jordan Gallacher, Department of Physics, University of Strathclyde (United Kingdom); Nuno Limos, J. Dias, Instituto Superior T ecnico(Portugal); Riju Issac, University of Strathclyde(United Kingdom); Zhixun Huang, Communication University of China; Dino Jaroszynski, University of Strathclyde (United Kingdom) [6840-9]

✓ **Several key technologies in particle-in-cell (PIC) simulation software**, Dagang Liu, Jun Zhou, Shenggang Liu, School of Physical Electronics (China) [6840-11]

✓ **Terahertz wave switch using high-resistivity silicon**, Jiusheng Li, Centre for THz Research, China Jiliang University(China) [6840-15]

✓ **Terahertz generation in an aperiodically poled lithium-niobate parametric**, Hong Su, Xia Lin Zhong, Min Zhang, Shuang Ruang, Shenzhen Universit (China) [6840-26]

✓ **THz time-domain spectroscopy of cesium dodide**, Feng Gao, Rajind Mendis, University of Wollongong (Australia) [6840-27]

✓ **The terahertz spectroscopy in LaCa0.3Mn0.7O3/MgO thin film**, Feng Gao, Rajind Mendis, University of Wollongong (Australia) [6840-28]

✓ **Terahertz magnetic response for metamaterial**, Xue Jiang, Bin Jin, Yu Wang, Ziyu Yan, Cunlin Zhang, Capital Normal University (China) [6840-46]

✓ **Optical properties of MWNT/HDPE composite in THz region**, Xiliang Chen, Zhiyong Zhu, Shanghai Institute of Applied Physics(China) [6840-21]

✓ **GaAs extrinsic photoconductors for the terahertz astronomy**, Kentaroh Watanabe, JAXA; Hiroshi Murakami, Hiroshi Murakami; Moriaki Wakaki, Kyouhei Yamashita, Hidekazu Kitagawa, Tokai University; Osamu Abe, Jasco Opt Co. Ltd (Japan) [6840-25]

✓ **THz spectroscopic investigation of xanthine and the derivatives**, Xiaojing Ma, Hongwei Zhao, Bin Dai, Guifeng Liu, Shanghai Institute of Applied Physics (China) [6840-45]

✓ **Spin pumping in a ring conductor with high-frequency oscillating Rashba effects**, Binhe Wu, Juncheng Cao, Shanghai Inst. of Microsys. and Info. Tech. (China) [6840-47]

Room: 16 district, third floor, room 109

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Solid State Lighting

Conference Chairs: **Jinmin Li**, Institute of Semiconductors, CAS (China); **Yubo Fan**, **Ling Wu**, **Yong-Hang Zhang**; **Michael Coltrin**, Sandia National Laboratories USA

Program Committee: **Richard Corkish**, Univ. of New South Wales (Australia); **Qi Wang**, National Renewable Energy Lab. (USA); **Jiang-Tsair Lin**, Industrial Technology Research Institute (Taiwan, China); **Honghua Xu**, Institute of Electrical Engineering, CAS (China); **Shaozhen Xiong**, Nankai Univ. (China); **Deren Yang**, Zhejiang Univ. (China); **Songyuan Dai**, Institute of Plasma Physics, CAS (China); **Junfeng Li**, (China); **Zuming Liu**, (China); **Guanghua Chen**, Beijing Univ. of Technology (China); **Lianghuan Feng**, Sichuan Univ. (China); **Hui Shen**, Sun Yat-Sen Univ. (China); **Meifang Zhu**, Graduate School of the Chinese Academy of Sciences (China); **Rongqiang Cui**, Shanghai Jiao Tong Univ. (China)

Monday 12 November

SESSION 1

16 district 3 floor, 109 room Mon.1:40pm to 3:10pm

Solid State Lighting

Chair: **Jinmin Li**, Institute of Semiconductors, CAS (China); **Yubo Fan**, Xiamen Hualian (China)

1:40pm: **Limits on the maximum attainable efficiency for solid-state lighting** (*Invited paper*), Michael Coltrin, Sandia National Laboratories (USA); Jeffrey Tsao, Sandia National Labs (USA) [6841A-17]

2:10pm: **High-efficiency GaN-based blue LEDs grown on nano-patterned sapphire substrates for solid-state lighting**, Fawang Yan, Haiyong Gao, Yang Zhang, Jinmin Li, Yiping Zeng, Guohong Wang, Fuhua Yang, the Institute of Semiconductors, CAS (China) [6841A-11]

2:30pm: **Accelerated life test for high-power white LED based on spectroradiometric measurement**, Haiping Shen, Zhejiang University, Optical Engineering; Jianguan Pan, EVERFINE PHOTO-E-INFO CO., LTD; Huajun Feng, Zhejiang University, Optical Engineering (China) [6841A-6]

2:50pm: **The influence of substrate nucleation on HVPE-grown GaN films**, Tongbo Wei, Ruifei Duan, the Institute of Semiconductors, CAS (China) [6841A-31]

Coffee/Tea Break 3:10pm to 3:40pm

SESSION 2

16 district 3 floor, 109 room Mon.3:40pm to 5:10pm

Solid State Lighting

Chair: **Yong-Hang Zhang**, Arizona State University (USA)

3:40pm: **Phosphor Coating Technique with Slurry Method in Application of White LED** (*Invited paper*), Bin Hou, NO.4 section 2 North Jianshe Road, Chengdu (China) [6841A-13]

4:10pm: **Improvement of GaN-based light emitting diodes performance grown on sapphire substrates patterned by wet etching**, Haiyong Gao, Fawang Yan, Yang Zhang, Jinmin Li, Yiping Zeng, Guohong Wang, Fuhua Yang, Institute of Semiconductors, CAS, Semiconductor Lighting Technology Research and Dev (China) [6841A-30]

4:30pm: **Optimized design on High-power GaN-based Micro-LEDs**, Jingmei Fan, Jinxia Guo, Hua Yang, Liangchen Wang, Guohong Wang, Yiping Zeng, Jinmin Li, Institute of Semiconductors, CAS, R&D Center for Semiconductor Lighting (China) ... [6841A-21]

4:50pm: **Apparent Brightness of LEDs under Different dimming Methods**, Yin-xin Zhang, Zhen Zhang, Zhanhua Huang, Xia Lin, Huaiyu Cai, Zheng Liu, Tianjin Univ., Precision Instrument & Opto-electronic Engineering (China) [6841A-7]

Tuesday 13 November

SESSION 3

16 district 3 floor, 109 room Tue. 8:30am to 9:20am

Solid State Lighting

Chair: **Ling Wu**, China Solid State Lighting Alliance (China)

8:30am: **Theoretical limits of light extraction and its impact on LED wall-plug efficiency** (*Invited paper*), Shane Johnson, Ding Ding, Shui-Qing Yu, Yong-Hang Zhang, Arizona State University, Fulton School of Engineering (USA) [6841A-24]

9:00am: **Research and Fabrication of High Power LEDs with Transparent Electrodes**, Xiaoyan Yi, Libin Wang, Jingmei Fan, Xiaodong Wang, Hua Yang, Yan Li, Liangchen Wang, Guohong Wang, Fuhua Yang, Institute of Semiconductors, R&D Ctr for Semiconductor Ligh (China) [6841A-37]

Coffee/Tea Break 9:20am to 10:00am

SESSION 4

16 district 3 floor, 109 room Tue.10:10am to 11:30am

Solid State Lighting

Chair: **Michael Coltrin**, Sandia National Laboratories (USA)

10:00am: **A fundamental technique for the measurement of quantum efficiency in direct bandgap semiconductors** (*Invited paper*), Shane Johnson, Ding Ding, Jiang-Bo Wang, Shui-Qing Yu, Yong-Hang Zhang, Arizona State University, Fulton School of Engineering (USA) [6841A-25]

10:30am: **Design and Optimization of Dielectric Optical Coatings for GaN Based High Bright LEDs**, Xiaodong Wang, Institute of Semiconductors; Yan Li Institute of Semiconductors, Engineering Research Ctr of In; Hua Yang, Xiaoyan Yi, Institute of Semiconductors, R&D Ctr for Semiconductor Ligh; Liangchen Wang, Institute of Semiconductors, SKL on Integrated OE/CAS; Guohong Wang, Institute of Semiconductors, R&D Ctr for Semiconductor Ligh; Fuhua Yang, Jinmin Li, Institute of Semiconductors, Semiconductor Lighting Technol (China) [6841A-26]

10:50am: **Investigation of native defects and property of bulk ZnO single crystal grown by a closed chemical vapor transport method**, Xuecheng Wei, Institute of semiconductors, Chinese Academy of Science (China) [6841A-22]

11:10am: **Color Filter-Less Technology of LED Back light for LCD-TV**, Manning Fan, Institute of semiconductors (China) [6841A-32]

Lunch break 11:30am to 1:40pm

SESSION 5

16 district 3 floor, 109 room Tue.1:40pm to 3:10pm

Solid State Lighting

Chair: Yong-hang Zhang, Arizona State University (USA)

1:40pm: **Understanding GaN nucleation layer evolution on sapphire and its impact on GaN dislocation density** (*Invited paper*), Michael Coltrin, Daniel Koleske, Stephen Lee, Gerald Thaler, Karen Cross, Michael Russell, Sandia National Laboratories (USA) [6841A-16]

2:10pm: **Native defects in ZnO single crystal grown by CVT method**, Youwen Zhao, institute of Semiconductors, material science centre, China (China) [6841A-33]

2:30pm: **Novel photonic crystal structure GaN-based light-emitting diode**, HaiYang Hu, Institute of Semiconductors, CAS, Optoelectronic R&D Center (China) [6841A-18]

2:50pm: **Determination of the accurate Al content and the stress in AlGaIn layer grown by MOCVD**, Jianchang Yan, Junxi Wang, Zhe Liu, Ping Ma, Jinmin Li, Fawang Yan, Haiyong Gao, Institute of Semiconductors, CAS (China) [6841A-5]

Coffee/Tea Break 3:10pm to 3:40pm

SESSION 6

16 district 3 floor, 109 room Tue.3:40pm to 5:10pm

Solid State Lighting

Chair: Michael Coltrin, Sandia National Laboratories (USA)

3:40pm: **Current Spreading Analysis in Vertical Electrode GaN-based Blue LEDs** (*Invited paper*), Joosun Yun, Jongin Shim, Sungmin Hwang, Hanyang University (South Korea) [6841A-9]

4:10pm: **The Effects of Sapphire Substrates Processes to the LED Efficiency**, Hua Yang, Yu Chen, Libin Wang, Xiaoyan Yi, Jingmei Fan, Fuhua Yang, Liangchen Wang, Guohong Wang, Yiping Zeng, Jinmin Li, Institute of Semiconductors, R&D Ctr for Semiconductor Lighting (China) [6841A-20]

4:30pm: **Effect of indium tin oxide (ITO) current spreading layer on the current uniformity of vertical structure GaN-based light-emitting diodes**, Zhiqiang Liu, Debo Guo Xiaoyan Yi, Yu Chen, Liangchen Wang, Guohong Wang, Jimin, Linstitute of Semiconductors, Chinese Academy of Sc (China) [6841A-34]

4:50pm: **Lighting system optimization: optical design of LED and integration**, Quanxin Ding, Hua Liu, Institute of Electro-optical Equipment of AVIC, Institute of Electro-optical Equipment of AVIC, Luoyang (China) [6841A-3]

Monday/Tuesday Posters

Time: Monday 12:30pm to Tuesday 11:30am

- √ **Investigation on optical parameter of fused and tapered all-fiber coupler**, Jiangbo Chen, Beijing University of Technology (China), Li Wang, Beijing University of Technology (China)..... [6841A-2]
- √ **New approach for 1w high-output LED: package using 3D lead frame**, Zi Hua Liu, Golden Valley Optoelectronics Co., Ltd (China) [6841A-8]
- √ **AlGaIn layers grown on AlGaIn buffer layer and GaN buffer layer using strain-relief interlayers**, Naixin Liu, Institute of Semiconductors (China) [6841A-10]
- √ **High-brightness GaN-based blue LEDs grown on a wet-patterned sapphire substrate**, Yang Zhang, Fawang Yan, Institute of Semiconductors, CAS(China); Haiyong Gao, Semiconductor Lighting centre (China); Jinmin Li, Yiping Zeng, Guohong Wang, Fuhua Yang, China Academy of Science (China) [6841A-11]
- √ **The design of microscope field illumination-system based on LED**, Jian Xu, Guilin University of Electronic Technology (China) [6841A-14]
- √ **Plasma-induced damage in GaN-based light-emitting diodes**, Yan Li, Xiaoyan Yi, Xiaodong Wang, Jinxia Guo, Liangchen Wang, Guohong Wang, Fuhua Yang, Yiping Zeng, Jinmin Li, Institute of Semiconductors (China) [6841A-27]
- √ **Research on color matching of LED backlighting for large gamut LCD application**, Meng Liang, Institute of Semiconductors, CAS (China) [6841A-28]
- √ **Thermal analysis of high-power GaN-based light-emitting diode**, Debo Guo, Zhiqiang Liu, Meng Liang, Manning Fan, Guohong Wang, Liangchen Wang, Jinmin Li, Institute of Semiconductors (China) [6841A-29]
- √ **Degradation characteristic and mechanisms of high brightness GaN-based LEDs after accelerated aging**, Chen Yu, Institute of Semiconductors (China) [6841A-26]
- √ **Study of iterative learning control algorithm based on neural network**, Xisheng Zhan Department of Control Science and engineering (China) [6841A-1]
- √ **Show window lighting with LED**, Zhanbiao Niu, China Jiliang University (China) [6841A-15]

Room: 16 district, third floor, room 111

Monday-Thursday 12-15 November 2007 • Proceedings of SPIE Vol.6841B

Solar Energy Technology and Application

Conference Chairs: **Yuwen Zhao**, Beijing Solar Energy Research Institute (China); **Nuofu Chen**, Institute of Semiconductors, CAS (China); **Vladimir M. Andreev**, A.F. Ioffe Physico-Technical Institute (Russia); **Jai Singh**, Charles Darwin Univ. (Australia)

Program Committee: **Richard Corkish**, Univ. of New South Wales (Australia); **Qi Wang**, National Renewable Energy Lab. (USA); **Jiang-Tsair Lin**, Industrial Technology Research Institute (Taiwan, China); **Honghua Xu**, Institute of Electrical Engineering, CAS (China); **Shaozhen Xiong**, Nankai Univ. (China); **Deren Yang**, Zhejiang Univ. (China); **Songyuan Dai**, Institute of Plasma Physics, CAS (China); **Junfeng Li**, (China); **Zuming Liu**, (China); **Guanghua Chen**, Beijing Univ. of Technology (China); **Lianghuan Feng**, Sichuan Univ. (China); **Hui Shen**, Sun Yat-Sen Univ. (China); **Meifang Zhu**, Graduate School of the Chinese Academy of Sciences (China); **Rongqiang Cui**, Shanghai Jiao Tong Univ. (China)

Tuesday 13 November

SESSION 1

16 district 3 floor, 111 room Tue.8:30am to 10:30am

Solar Energy Technology and Application

Chair: **Yuwen Zhao**,

Beijing Solar Energy Research Institute (China)

8:30am: **New Education Opportunities and Research Activities at UNSW** (*Invited paper*), Richard Corkish, University of New South Wales (Australia) [6841B-39]

9:00am: **Photovoltaic System** (*Invited paper*), Xu Honghua, Institute of electrical engineering (China) [6841B-69]

9:30am: **One-power IC with MPPT design**, Xu, Shengzhi, Nankai Univ. (China) [6841B-40]

9:50am: **Rapid solid-phase crystallized amorphous Si films for solar cell applications**, Qi Wang, Paul Stradins, David Young, Falah Hasoon, Howard Branz, National Renewable Energy Lab (USA) [6841B-42]

10:10am:

Theoretical calculations for InGaN-based PV structures, Xiaoming Shen, Yiming Wei, Shuiku Zhong, Liangyu Huang, Fubin Li, Shuo Lin, Guangxi University (China) [6841B-43]

Coffee/Tea Break 10:30am to 10:45am

SESSION 2

16 district 3 floor, 111 room Tue.10:45am to 12:15pm

Solar Energy Technology and Application

Chairs: **Jai Singh**, Charles Darwin Univ. (Australia)

10:45am: **The Solar Photovoltaics in China** (*Invited paper*), Cui Rongqiang, Solar Energy Institute, SjtU (China) [6841B-68]

11:15am: **Thermal test and analysis of concentration solar cells**, Min Cui, Nuofu Chen, Jinliang Wu, Lei Liu, Peng Wang, Yanshuo Wang, Yiming Bai, Institute of Semiconductors, CAS (China) [6841B-45]

11:35am: **Ultrafast photo-induced electron injection from functionalized carbazole dye to nanocrystalline TiO₂ film**, Akihiro Furube, National Institute of Advanced Industrial (Japan); Nagatoshi Koumura, Kohjiro Hara, Ryuzi Katoh, Masanori Tachiya, AIST (Japan) [6841B-49]

11:55am: **Optimization procedure for design of heliostat field layout of a 1MWe solar-tower thermal power plant**, Xiudong Wei, Zhenwu Lu, Changchun Institute of Optics, Mechanics & Physics; Zi Lin, Jilin University; Hongxin Zhang, Changchun Institute of Optics, Mechanics & Physics (China) [6841B-44]

Lunch Break 12:15pm to 1:40pm

SESSION 3

16 district 3 floor, 111 room Tue.1:40pm to 3:40pm

Solar Energy Technology and Application

Chairs: **Richard Corkish**, Univ. of New South Wales (Australia)

1:40pm: **The R and D activities of thin film solar cells in China**, Zhao Yuwen, Institute of electrical engineering, Chinese academy of sciences, (China) [6841B-70]

2:10pm: **The key factors on silicon-based Tandem Thin Film solar cells** (*Invited paper*), Xiong Shaozhen, Nankai University (China) [6841B-71]

2:40pm: **Design and Implementation for Solar Light-collecting Controller**, Mei-hua Xu, Qing Zhang, Feng Ran, Shanghai University (China) [6841B-51]

3:00pm: **Study of stability for a-Si:H thin film solar cells on polyimide substrates**, Liying Han, Hebei Univ. of Technology (China) [6841B-50]

3:20pm: **Fabrication of GaSb and GaInAsSb thermophotovoltaic cells by liquid phase epitaxy**, Lei Liu, Nuofu Chen, Zhigang Yin, Min Cui, Yiming Bai, Xingwang Zhang, Institute of Semiconductors, CAS (China) [6841B-47]

Coffee/Tea Break 3:40pm to 4:00pm

SESSION 4

16 district 3 floor, 111 room Tue.4:00pm to 5:50pm

Solar Energy Technology and Application

Chairs: **Songyuan Dai** (China)

4:00pm: **Metal Impurity in multicrystalline silicon** (*Invited paper*), Yang Deren, Zhejiang University (China) [6841B-??]

4:30pm: **Improvement of power efficiency of polymer solar cell based on P3HT:PCBM blend**, Weimin Li, Jinchuan Guo, Xiuquan Sun, Bin Zhou, Shenzhen University (China) [6841B-52]

4:50pm: **The effect of electrical properties for InGaN and InN by high-energy particle irradiation**, Shaoguang Dong, South China Normal University (China) [6841B-53]

5:10pm: **Organic photovoltaic devices from discotic materials**, Junjie Wang, Beijing Jiaotong University (China) [6841B-55]

5:30pm: **Seawater desalination and air-condition device based on solar thermal utilization technology**, Wenjing Xiao, Hangzhou Dianzi University (China) [6841B-57]

Wednesday 14 November

SESSION 5

16 district 3 floor, 111 room Wed.8:30am to 10:30am

Solar Energy Technology and Application

Chairs: Shaozhen Xiong (China)

- 8:30am: **Outdoor Application of Dye-sensitized Solar Cells in IPP** (*Invited paper*), Dai Songyuan, Institute of Plasma Physics, Chinese academy of sciences (China) [6841B-41]
- 9:00am: **Photoluminescence of triplet excitations mediated by spin-photon interaction in amorphous semiconductors** (*Invited paper*), Jai Singh, Lawrence Berkeley National Laboratory (Australia) [6841B-56]
- 9:30am: **Investigation on time-resolved photoluminescence of InGaN single quantum well structure grown by metalorganic chemical-vapor deposition**, Jinshe Yuan, Chongqing Normal University (China) [6841B-60]
- 9:50am: **Application of Photovoltaic Technology in Automatic Irrigation**, Ye Ting, Kaihua Wu, Hangzhou Dianzi University [(China) [6841B-58]
- 10:10am: **The study of kinetic roughening on microcrystalline silicon surface in CVD process with high deposition rate**, Fengzhen Liu, Wei Zi, Zhenzhong Sun, Yuqin Zhou, Meifang Zhu, Jinlong Liu, university of chinese academy of sciences (China) [6841B-61]
- Coffee/Tea Break 10:30am to 10:45am

SESSION 6

16 district 3 floor, 111 room Wed.10:45am to 12:35pm

Solar Energy Technology and Application

Chairs: Rongqiang Cui (China)

- 10:45am: **Organic-Inorganic Nanocomposite Solid-State Electrolytes for Dye- Sensitized Solar Cells** (*Invited paper*), Qingbo Meng, Yanhong Luo, Dongmei Li Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, CAS (China) [6841B-72]
- 11:15am: **Structure design of nano-TiO2 electrode in dye-sensitized solar cells**, Ning Cai, Ying Zhao, Yuan Zhang, Jianjun Zhang, Jian Sun, Xinhua Geng, Nankai University (China) [6841B-63]
- 11:35pm: **Development of single and micromorph tandem solar cells in n-i-p configuration with high-pressure RF-PECVD deposited doped and active layers**, Guofu Hou, Nankai University (China) [6841B-67]
- 11:55am: **Al/Mo ohmic contact to e-beam evaporated indium tin oxide (ITO) thin film**, Akram Amoali, Shahid Beheshti University (Iran) [6841B-62]
- 12:15am: **Optimization of the lateral loss of the non-flat solar cell**, Edris Faizabadi, Shahid Kavian Alley (Iran) [6841B-64]
- Lunch Break 12:35pm to 1:30pm

Tuesday/Wednesday Posters

Time: Tuesday 12:30pm to Wednesday 11:30am

- √ **The properties of InN films grown on different substrates by metalorganic chemical-vapor deposition**, Shuangxiang Zhang, State Key Laboratory on Integrated Optoelectronics (China) [6841B-46]
- √ **Reduction of sunlight reflection on surfaces of solar cells by fabricating hexagonal lattices in mul...**, Xiaoyun Chen, Shou Liu, Xiangsu Zhang, Xuechang Ren, Xiamen Univ. (China) . [6841B-48]
- √ **Study of photovoltaic characteristics of diffuse-processed porous silicon and ion-implanted porous s...**, Mei Xiang, Zhenhong Jia, Xinjiang Univ. (China) [6841B-54]
- √ **Defect states of hydrogenated nanocrystalline silicon studied by surface photovoltage spectroscopy**, Guangsheng Fu, Chunsheng Wang, Yachao Li, Jinchuan Zhang, Lihua Yang, Wei Yu, hebei university (China) [6841B-59]
- √ **Improvement of high rate growth °c-SiH solar cell by insertion of buffer layer to p/i interface**, Xiaoyan Han, Institute of photoelectronics , Nankai University (China) [6841B-65]
- √ **S Microstructures of microcrystalline silicon photovoltaic layers and their influence on the photovolt...**, Yujie Yuan, Guofu Hou, Junming Xue, Jianjun Zhang, Xiaoyan Han, Institute of Photoelectronics, Nankai University (China) [6841B-66]

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