

# PROCEEDINGS OF SPIE

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## **Optoelectronic Measurement Technology and Systems**

**Xinyong Dong**  
**Xiaoyi Bao**  
**Perry Ping Shum**  
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*Editors*

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# Contents

|      |                             |
|------|-----------------------------|
| xi   | <i>Symposium Committee</i>  |
| xiii | <i>Conference Committee</i> |
| xv   | <i>Introduction</i>         |

---

## SESSION 1

---

- 8201 02 **Instrumentation and optimization of intra-cavity fiber laser gas absorption sensing system (Invited Paper)** [8201-43]  
K. Liu, T. Liu, J. Jiang, X. Liang, Y. Zhang, Tianjin Univ. (China)
- 8201 03 **The design of a refractive index sensor based on hollow-core microstructure fiber** [8201-96]  
X. Wang, C.-L. Zhao, C. Zhang, China Jiliang Univ. (China)
- 8201 04 **Towards a 1542nm laser stabilized to an optical cavity** [8201-60]  
R. Suo, F. Fang, T. Li, National Institute of Metrology (China)
- 8201 05 **Control network for monitoring deformation of slope by using optical measurements and FBG sensors** [8201-63]  
C. Li, Kunming Univ. of Science and Technology (China); H. Liu, Yunnan Aerospace Engineering Geophysics and Measurement Co., Ltd. (China); Z. Wang, Y. N. Li, Y. Chen, X. P. Xu, J. C. Xu, Kunming Univ. of Science and Technology (China)

---

## SESSION 2

---

- 8201 07 **UV-laser-inscribed fiber Bragg gratings in photonic crystal fibers and sensing applications (Invited Paper)** [8201-73]  
Y. Wang, Univ. of Southampton (United Kingdom) and Institute of Photonic Technology (Germany); H. Bartelt, W. Ecke, R. Willsch, J. Kobelke, Institute of Photonic Technology (Germany)
- 8201 09 **Relative humidity sensor based on long period grating with agarose gel coating** [8201-111]  
Y. Liu, X. Huang, B. Liu, Nankai Univ. (China); Y. Miao, Tianjin Univ. of Technology (China); H. Zhang, X. Chen, Nankai Univ. (China)
- 8201 0A **Numerical simulation on fiber Brillouin amplifier** [8201-114]  
X. Li, H. Gong, S. Li, J. Wang, China Jiliang Univ. (China)

---

## SESSION 3

---

- 8201 0B **Online optical verification system for sheet-metal processing (Invited Paper)** [8201-107]  
T. Suzuki, K. Sato, S. Muramatsu, Niigata Univ. (Japan); M. Murata, TechnoCare Corp. (Japan); T. Oitate, Totsuka Metal Industry Co., Ltd (Japan)

- 8201 0C **Two laser ranging instruments using chaotic light** [8201-36]  
T. Zhao, A.-B. Wang, Y.-C. Wang, Taiyuan Univ. of Technology (China)
- 8201 0D **Correlating aerosol optical thickness measurement with PM10 mass concentration in Wuhan area** [8201-31]  
C. Wang, Z. Zhang, S. Yue, Huazhong Institute of Electro-Optics (China)
- 8201 0E **Research on free curved surface reconstructing technology based on laser tracker** [8201-15]  
B. He, Changchun Univ. of Science and Technology (China) and Changchun Univ. (China);  
Z. An, Y. Gao, L. Li, Changchun Univ. of Science and Technology (China)

---

#### SESSION 4

---

- 8201 0F **Comprehensive multi-wavelength laser simulated-testing techniques and application** [8201-61]  
Z. Chen, M. Xue, Y. Liu, B. Liu, Institute of Ordnance Technology (China)
- 8201 0G **Laser two-dimensional angle dynamic measurement system** [8201-133]  
L. Qiu, H. Guo, Y. Wang, W. Zhao, Beijing Institute of Technology (China)
- 8201 0H **Research on reduction of long-term distortions and suppression of light intensity fluctuations in a TDLAS system** [8201-146]  
G. Tu, Y. Wang, F. Dong, H. Xia, T. Pang, Z. Zhang, B. Wu, Anhui Institute of Optics and Fine Mechanics (China)

---

#### SESSION 5

---

- 8201 0J **Beam scanning laser interferometer with high spatial resolution over a large field of view (Invited Paper)** [8201-147]  
O. Sasaki, T. Saito, S. Choi, T. Suzuki, Niigata Univ. (Japan)
- 8201 0K **Collimation testing of the wavefront of interferometer by scanning cube corner retro-reflector method** [8201-08]  
Z. Liu, L. Chen, Z. Han, W. Tuyu, Nanjing Univ. of Science and Technology (China)
- 8201 0L **Design of dispersed Rayleigh interferometer for grating mosaic in laser pulse compressors** [8201-19]  
Y. Hu, S. Wang, Beijing Institute of Technology (China)
- 8201 0M **Statistical analysis on the optical axis perturbation in nonplanar ring resonators** [8201-65]  
D. Li, D. Wen, J. Zhao, Northwestern Polytechnical Univ. (China)
- 8201 0N **Polarization errors suppression in distributed perturbation sensor based on Dual Mach-Zehnder interferometer** [8201-71]  
Z. Ding, T. Liu, K. Liu, J. Jiang, J. Liu, Q. Chen, Tianjin Univ. (China)

---

**SESSION 6**

---

- 8201 0O **Research on a multiplexed interferometry technique for absolute displacement measurement** [8201-91]  
S. Ma, F. Xie, Z. Li, Beijing Jiaotong Univ. (China)
- 8201 0P **Characterization of a flat fan air-blast atomizer spray by global rainbow refractometry** [8201-126]  
Q. Pan, Nanjing Univ. of Information Science & Technology (China)
- 8201 0Q **The influence of bonding process of optical pickup head's manufacture and the corresponding solution** [8201-150]  
B. Liao, Y. Zhang, Tianjin Univ. (China)

---

**SESSION 7**

---

- 8201 0S **Research on the field on-line automatic detection of infrared thermal imager MRTD based on infrared image's gray level difference** [8201-37]  
Z. Chen, Y. Liu, M. Xue, B. Liu, Z. Hou, Institute of Ordnance Technology (China)
- 8201 0T **Simulated testing of range accuracy of infrared phase range finder** [8201-38]  
Z. Chen, B. Liu, M. Xue, Y. Liu, Z. Hou, Institute of Ordnance Technology (China)

---

**SESSION 8**

---

- 8201 0V **A new environment mapping method using equirectangular panorama from unordered images** [8201-40]  
X. Yao, Y. Zhou, X. Hu, B. Yang, Beijing Institute of Technology (China)
- 8201 0W **Qualitative and quantitative study of quintozene by terahertz time-domain spectroscopy** [8201-104]  
X. Wang, Q. Wang, Y. Ma, H. Wang, China Jiliang Univ. (China)

---

**POSTER SESSION**

---

- 8201 0Y **The measurement and error analysis of instantaneous angular speed using optical incremental encoder** [8201-03]  
M. Zhao, J. Lin, Xi'an Jiaotong Univ. (China); J. Xu, Xi'an institute of Post and Telecommunications (China)
- 8201 0Z **Metrology on absolute fluorescence quantum efficiency for solid materials** [8201-05]  
G. Feng, Y. Wang, P. Li, National Institute of Metrology (China); T. Guo, China Agricultural Univ. (China)
- 8201 10 **Design of distributed FBG vibration measuring system based on Fabry-Perot tunable filter** [8201-14]  
C. Zhang, C. Miao, H. Li, H. Gao, J. Gan, Tianjin Polytechnic Univ. (China)

- 8201 12 **Design and improvement of long-focal-length space optical system** [8201-24]  
X.-X. Wei, F. Xu, Soochow Univ. (China); Y. Nie, Academy of Opto-Electronics (China); J. Yu, Soochow Univ. (China)
- 8201 13 **A new apparatus for continuous measuring the falling velocity of the wind-dispersal seeds** [8201-27]  
H. Ji, S. Wang, H. Chen, Z. Zhu, M. Zhu, China Jiliang Univ. (China)
- 8201 14 **Detection capability analysis of lunar retroreflector** [8201-28]  
X. Dong, Changchun Institute of Optics, Fine Mechanics and Physics (China), Graduate Univ. of Chinese Academy of Sciences (China), and National Astronomical Observatories (China); Y. Zhao, National Astronomical Observatories (China); Z. Fan, J. Yu, Y. Ma, Academy of Opto-Electronics (China)
- 8201 15 **Indoor dynamic positioning system based on strapdown inertial navigation technology** [8201-34]  
Y. Xing, H. Wu, Beijing Institute of Technology (China)
- 8201 16 **KHz SLR and daylight tracking at Changchun** [8201-41]  
C. Liu, X. Han, C. Fan, Z. Zhang, Changchun Observatory, National Astronomical Observatories (China); Q. Song, Changchun Observatory, National Astronomical Observatories (China) and Graduate Univ. of Chinese Academy of Sciences (China)
- 8201 17 **The USB-based portable data acquisition system for AR** [8201-42]  
L. Zhu, D. Yan, Beijing Institute of Technology (China); T. Dong, AVIC Shanghai Aviation (China); H. Zhang, G. Liu, C. Zheng, Beijing Institute of Technology (China)
- 8201 18 **Experimentation and analysis of soft x-ray grazing incidence optical scattering phenomena** [8201-44]  
S. Chen, L. Cheng, X. Xu, Harbin Engineering Univ. (China)
- 8201 19 **A new method for testing the radius of infrared cylindrical lens** [8201-46]  
R. Wang, J. Chang, D. Song, Q. Wang, Beijing Institute of Technology (China)
- 8201 1A **Validity of rainbow schlieren with quantitative density measurement in supersonic jet** [8201-47]  
G. Jiang, Company of Postgraduate Management (China); Y. Hong, J. Ye, M. Wen, The Academy of Equipment (China)
- 8201 1B **Orbit determination using single station SLR data assisted by telescope pointing data** [8201-48]  
M. Sun, C. Liu, Z. Li, Changchun Observatory, National Astronomical Observatories (China); Y. Liu, Changchun Observatory, National Astronomical Observatories (China) and Graduate Univ. of Chinese Academy of Sciences (China)
- 8201 1C **The research of data acquisition system for Raman spectrometer** [8201-51]  
X. Cui, P. Guo, Y. Zhang, S. Chen, H. Chen, W. Chen, Beijing Institute of Technology (China)
- 8201 1D **Spot image based aberration retrieval method using parametric model of point spread function** [8201-52]  
X. Chen, W. Shen, Soochow Univ. (China)

- 8201 1E **CEMS using hot wet extractive method based on DOAS** [8201-53]  
B. Sun, C. Zhang, C. Sun, Tianjin Univ. (China)
- 8201 1F **Fast online detection of body defect of glass containers** [8201-55]  
Z. Wen, J. Ge, L. Xia, Y. Luo, Z. Chen, Jinan Univ. (China)
- 8201 1G **Lidar data acquisition system for detecting atmospheric temperature and extinction coefficient** [8201-57]  
W. Chen, P. Guo, S. Chen, Y. Zhang, X. Ge, X. Cui, Z. Bu, Beijing Institute of Technology (China)
- 8201 1H **Experimental visibility of KHz laser beam at daylight** [8201-58]  
Q. Song, Changchun Observatory, National Astronomical Observatories (China) and Graduate Univ. of Chinese Academy of Sciences (China); Z. Zhang, X. Han, C. Fan, C. Liu, H. Zhang, Changchun Observatory, National Astronomical Observatories (China)
- 8201 1I **Research on pointing model of telescope based on SLR tracking data** [8201-59]  
Y. Liu, Changchun Observatory, National Astronomical Observatories (China) and Graduate Univ. of Chinese Academy of Sciences (China); C. Fan, X. Han, C. Liu, Z. Liang, M. Sun, X. Dong, Q. Song, H. Zhang, Changchun Observatory, National Astronomical Observatories (China)
- 8201 1J **Online image acquisition system for wheel set measurement based on asynchronous reset mode** [8201-62]  
K. Wu, Y. Guo, Y. Chen, Hangzhou Dianzi Univ. (China)
- 8201 1K **Research of brain activation regions of "yes" and "no" responses by auditory stimulations in human EEG** [8201-66]  
M. Hu, G. Liu, Beijing Information Science & Technology Univ. (China)
- 8201 1L **The SRI method based on the optical frequency comb on absolute distance measurement** [8201-67]  
Y. Xu, Huazhong Univ. of Science and Technology (China), Jiangxi Univ. of Science and Technology (China), and Academy of Opto-Electronics (China); W. Zhou, Academy of Opto-Electronics (China); D. Liu, Huazhong Univ. of Science and Technology (China); L. Ding, Academy of Opto-Electronics (China)
- 8201 1M **Traceability methods comparison of broadband UV radiometers** [8201-70]  
C. Dai, B. Huang, Z. Wu, H. OuYang, J. Yu, National Institute of Metrology (China)
- 8201 1N **A refractometer based on liquid prism** [8201-72]  
J. Wan, Z. Liang, Nanjing Univ. of Posts & Telecommunications (China)
- 8201 1O **The non-source temperature calibration method of multi-spectral pyrometer** [8201-88]  
K. Sun, X. Sun, J. Dai, L. Wang, Harbin Institute of Technology (China)
- 8201 1Q **Registration algorithm research for work-pieces based on affine invariant** [8201-90]  
M. Chen, B. Yan, Beijing Information Science & Technology Univ. (China)

- 8201 1R **Vibration-displacement measurement employing phase tracking technique with an optical fiber Michelson interferometer** [8201-92]  
S. Ma, Z. Li, F. Xie, Beijing Jiaotong Univ. (China)
- 8201 1S **Camera calibration using multiple sheets planar pattern** [8201-95]  
H. Xiong, J. Xu, J. Wang, P. Huang, Guangdong Univ. of Technology (China)
- 8201 1T **Accurate measuring temperature with infrared thermal imager in the unstable condition of ambient temperature** [8201-97]  
J. Wang, E. Qu, J. Cao, Xi'an Institute of Optics and Precision Mechanics (China)
- 8201 1U **Photonic crystal fiber strain sensor based on cascaded Mach-Zehnder interferometer** [8201-98]  
X. Dong, China Jiliang Univ. (China); L. Hu, China Jiliang Univ. (China) and Nanyang Technological Univ. (Singapore); C. C. Chan, Nanyang Technological Univ. (Singapore); Y. Wang, China Jiliang Univ. (China); W. C. Wong, Nanyang Technological Univ. (Singapore); W. Qian, T. Li, China Jiliang Univ. (China) and Nanyang Technological Univ. (Singapore); P. Zu, Nanyang Technological Univ. (Singapore)
- 8201 1V **Measurement of triglycerides concentration in human serum using near-infrared transmission spectroscopy and interval PLS** [8201-99]  
F. Huang, J. Yu, S. Li, Jinan Univ. (China)
- 8201 1W **Experimental research on radius of curvature measurement of spherical lenses based on laser differential confocal technique** [8201-100]  
X. Ding, National Institute of Metrology (China); R. Sun, Beijing Institute of Technology (China); F. Li, National Institute of Metrology (China); W. Zhao, Beijing Institute of Technology (China); W. Liu, National Institute of Metrology (China)
- 8201 1X **Simultaneous phase-shifting Fizeau interferometer based on birefringent thin film and Dammann grating** [8201-102]  
L. Zhu, A. Zeng, H. Huang, Shanghai Institute of Optics and Fine Mechanics (China) and Graduate Univ. of Chinese Academy of Sciences (China)
- 8201 1Y **Detection algorithm and implement of space objects in star background** [8201-103]  
Z. Li, C. Liu, M. Sun, C. Fan, X. Han, Changchun Observatory, National Astronomical Observatories (China)
- 8201 1Z **Measuring and traceable methods of spectral irradiance and ultraviolet irradiance** [8201-106]  
B. Huang, C. Dai, J. Yu, Z. Wu, H. Ouyang, National Institute of Metrology (China)
- 8201 20 **Spectral calibration for the hyperspectral imager based on the doped panel** [8201-108]  
J. Zhou, Y. Ji, Y. Chen, X. Chen, W. Shen, Soochow Univ. (China)
- 8201 22 **Effect of slit widths on wavelength calibration of a Czerny-Turner double monochromator** [8201-110]  
H. Ouyang, C. Dai, B. Huang, Z. Wu, National Institute of Metrology (China)



- 8201 23 **The effect of optical corner cubes' asymmetry on angle measurement of optical wedge** [8201-112]  
C. He, G. Zou, J. Ren, J. Lin, Beijing Institute of Technology (China)
- 8201 24 **Theoretical studies on a temperature sensor based on an alcohol-filled photonic crystal fiber-long period grating** [8201-113]  
C. Ji, C. Zhao, J. Kang, Y. Jin, China Jiliang Univ. (China)
- 8201 25 **Research of pesticide residues on fruit by terahertz spectroscopy technology** [8201-115]  
Y. Ma, Q. Wang, X. Wang, H. Wang, China Jiliang Univ. (China)
- 8201 26 **Inverse Hartmann surface form measurement based on spherical coordinates** [8201-117]  
J. Ma, Q. Hao, Q. Zhu, Y. Hu, Beijing Institute of Technology (China)
- 8201 27 **Low-cost outdoor solar cells in-line measurement with Zigbee** [8201-118]  
W. Xu, Y. Yang, Donghua Univ. (China); J. Cui, Beihang Univ. (China); H. Liu, Hetai Hengye Technology Development Co., Ltd. (China)
- 8201 28 **A fiber strain and vibration sensor with high birefringence polarization maintaining fiber based on Sagnac interferometer** [8201-120]  
Y. Li, M. Sun, X. Dong, Z. Zhang, S. Jin, China Jiliang Univ. (China)
- 8201 29 **Fiber optical distributed temperature and strain sensing system based on Brillouin light scattering** [8201-121]  
Y. Li, X. Xue, X. Dong, Z. Zhang, S. Jin, China Jiliang Univ. (China)
- 8201 2A **Stereo vision based hand-held laser scanning system design** [8201-122]  
H. Xiong, J. Xu, J. Wang, Guangdong Univ. of Technology (China)
- 8201 2B **Realization of the 250nm-400nm spectral irradiance scale** [8201-125]  
Z. Wu, C. Dai, J.-L. Yu, B. Huang, H. Ou-Yang, National Institute of Metrology (China)
- 8201 2D **Discussion on spatial spectral characteristic of Fourier transform method for interference fringe analysis** [8201-130]  
X. Meng, Q. Hao, Q. Zhu, Y. Hu, Beijing Institute of Technology (China)
- 8201 2E **Detection of extremely small polarization rotation angles based on magneto-optic modulation** [8201-134]  
S. Han, Z. Huang, Q. Huang, J. Li, Q. Liu, J. Zhang, W. Sun, Harbin Engineering Univ. (China)
- 8201 2F **Coplanarity inspection of BGA solder balls based on laser interference structure light** [8201-136]  
Z. Wei, Z. Xiao, X. Zhang, H. Zhou, Guilin Univ. of Electronic Technology (China)
- 8201 2G **The applied research on a new type of photoelectricity automatic positioning system** [8201-138]  
C. Shang, J. Wang, Guilin Univ. of Electronic Technology (China); Y. Zhao, Institute of Information Technology of Guet (China); Z. Xiao, L. Cai, X. Zheng, Guilin Univ. of Electronic Technology (China)

- 8201 2H **Retrieval of particle size distribution in multispectral region** [8201-139]  
L. Wang, Harbin Institute of Technology (China) and Heilongjiang Institute of Science & Technology (China); X. Sun, K. Sun, F. Li, Harbin Institute of Technology (China)
- 8201 2I **Investigation on emission spectra of reheating and pre-ablation dual-pulse laser-induced breakdown spectroscopy** [8201-142]  
Q. Wang, J. Wang, Y. Liang, X. Chen, B. Wu, Z. Ni, F. Dong, Anhui Institute of Optics and Fine Mechanics (China)
- 8201 2J **Manipulation of Rydberg atoms by terahertz pulses** [8201-144]  
G. R. Jia, Y. F. Liu, Beijing Institute of Technology (China) and Henan Normal Univ. (China); K. Yu, Y. J. Zhao, Beijing Institute of Technology (China)
- 8201 2K **The optical matching between the housing and the camera of video security system** [8201-151]  
B. Liao, Tianjin Univ. (China)
- 8201 2L **Research on integrated system for solar simulator performance calibration according to IEC 60904-9** [8201-152]  
H. Meng, L. Xiong, Y.-W. He, D.-P. Liu, National Institute of Metrology (China)

*Author Index*

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## Introduction

These proceedings are from the 2011 International Conference on Optical Instrument and Technology (OIT2011), held in Beijing, China, 7–9 November 2011. The conference was the third event following the success of OIT'08 and OIT'09 and was sponsored and supported by SPIE, China Instrument and Control Society (CIS), and the Chinese Optical Society (COS).

OIT2011 was a professional conference which was combined and focused on instrument science and related technology, and involved in many technical aspects such as detection; observation; information collection, transfer and storage; communication; economization on energy; environmental protection; inspection and prevention of food security, traffic safety and mine safety; measure and control for aviation and space engineering, etc.

These proceedings, a collection of six volumes, contain the accepted oral and poster papers presented at OIT2011. It is truly a great pleasure for me that the most recent progress in optical instrumentation technology is reported in the OIT2011 proceedings. I firmly believe that the papers included in these volumes will provide reference information in the most up-to-date techniques of optical instrumentation technology.

The OIT2011 conference collected over 330 papers from different countries or regions of the world. Over 300 authors came from more than 12 countries. This conference consists of eight oral sessions (and a one-day poster session): Optical Systems and Modern Optoelectronic Instruments; Optical Device & Integration; Optical Sensor and Applications; Opto-electronic Imaging and Processing Technology; Optoelectronic Measurement Technology and System; Solid State Lighting and Display Technologies; Holography, Speckle Pattern Interferometry and Application; Micro/Nano Manufacturing and Metrology. Published in these six volumes of the Proceedings of SPIE are close to 330 papers. The technical fields of the presented papers at the conference cover a lot of current advanced technologies. The cutting-edge technologies and applications of optical instruments are discussed. Quite a few invited papers describe exciting achievements in the fields of optical instrument technology. It is evident that the OIT2011 conference has provided an excellent platform for participants and colleagues in research and development to share the technical progress and to develop new partnerships or broaden new markets.

SPIE has given great support to organize this international conference by collaborating with us in the whole organizing process from abstract collection to the proceedings publication. COS has provided great support and assistance.

Finally, on behalf of CIS and conference general chairs, I would like to heartily thank our supporters and committee members for all they have done for this conference. Thanks also go to all authors for their contributions, to all of the participants and friends for their interest, especially those who have traveled great distances and taken time from their busy schedules to attend the conference. Thanks also go to the staff of CIS for their support. I am also grateful to the SPIE staff for their support and collaboration in publishing these six volumes.

**Songlin Zhuang**

*Chairman, China Instrument and Control Society (CIS)*