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Smart Structures and Materials for Manufacturing and Testing

Xiangang Luo
Harald Giessen
Editors

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Contents

- v *Symposium Committee*
- vii *Introduction*
- ix *AOMATT 2014 Sponsors*

ORAL SESSION

- 9285 02 **Changes in speckle patterns induced by load application onto an optical fiber and its detection through image processing** [9285-1]
M. Hasegawa, Y. Shimizu, T. Nakamaru, Chitose Institute of Science and Technology (Japan)
- 9285 03 **Fabrication of a gas sensor array with micro-wells for VOCs gas sensing based on polymer/carbon nanotube thin films** [9285-24]
G. Xie, T. Xie, T. Zhu, Y. Jiang, H. Tai, Univ. of Electronic Science and Technology of China (China)

POSTER SESSION

- 9285 04 **Seal designing of theodolite used in seaside environment** [9285-17]
H. Jin, X. Yan, W. Hao, S. Zhou, Xi'an Institute of Optics and Precision Mechanics (China)
- 9285 05 **The tunable property of complementary frequency selective surface with rotationally symmetric element** [9285-2]
J. Jiao, Changchun Institute of Optics, Fine Mechanics and Physics (China) and Univ. of Chinese Academy of Sciences (China); J. Gao, N. Xu, X. Feng, Y. Wang, Changchun Institute of Optics, Fine Mechanics and Physics (China)
- 9285 06 **Experiment study of bio-tissue's temperature irradiated by laser based on optical fiber F-P sensor** [9285-7]
N. Shan, Chinese People's Armed Police Force (China); X. Liu, Xi'an Polytechnic Univ. (China)
- 9285 07 **Impact of the basal material on the deposition titanium nitride thin films** [9285-19]
S. Fu, H. Li, Hanshan Normal Univ. (China)
- 9285 08 **Numerical analysis of mode competition and selection in Yb-doped multicore fiber lasers** [9285-3]
D. Chen, H. Zhang, J. Hao, M. Gong, P. Yan, Tsinghua Univ. (China)

- 9285 09 **Nitrogen dioxide detection based on MWCNTs/SnO₂ composites at room temperature** [9285-12]
Y. Zhou, G. Xie, T. Xie, T. Kang, Y. Jiang, Univ. of Electronic Science and Technology of China (China)
- 9285 0A **Thin film transistors based on single-walled carbon nanotubes-polyethylenimine bilayer film for NO₂ gas detection** [9285-23]
T. Xie, G. Xie, Y. Zhou, J. Huang, H. Tai, Univ. of Electronic Science and Technology of China (China)
- 9285 0B **Polyvinylpyrrolidone/reduced graphene oxide nanocomposites thin films coated on quartz crystal microbalance for NO₂ detection at room temperature** [9285-22]
J. Huang, G. Z. Xie, Y. Zhou, T. Xie, H. L. Tai, G. Yang, Univ. of Electronic Science and Technology of China (China)
- 9285 0C **Technology of alignment mark in electron beam lithography** [9285-6]
M. Zhao, T. Xu, Zhanjiang Normal Univ. (China); B. Chen, J. Niu, Institute of Microelectronics (China)
- 9285 0D **Axle counter for high-speed railway based on fibre Bragg grating sensor and algorithm optimization for peak searching** [9285-5]
Y. Quan, D. He, Y. Wang, P. Wang, Beijing Jiaotong Univ. (China)
- 9285 0E **Fault tolerance control of phase current in permanent magnet synchronous motor control system** [9285-21]
K. Chen, Univ. of Chinese Academy of Sciences (China), Institute of Optics and Electronics (China), and Key Lab. of Beam Control (China); K. Chen, X. Chen, J. Li, Institute of Optics and Electronics (China) and Key Lab. of Beam Control (China)
- 9285 0F **Comparison of the sensitive property between soman and its simulant DMMP by hydrogen-bond acidic polymer coated SAW sensor** [9285-15]
Y. Wang, X. Du, Y. Long, Y. Jiang, Univ. of Electronic Science and Technology of China (China)
- 9285 0G **Breaking through the intensity restriction of the asymmetric fiber Bragg grating based Fabry-Perot sensitivity enhancement system** [9285-11]
W. Wang, Z. Hu, P. Jiang, G. Li, Y. Hu, National Univ. of Defense Technology (China)
- 9285 0H **Fast circle detection based on improved randomized Hough transform** [9285-14]
D. Shi, Xi'an Univ. of Technology (China); B. Zhang, East Univ. of HeiLongJiang (China); N. Wang, Xi'an Institute of Optics and Precision Mechanics (China)
- 9285 0I **Study of spiral-ring plasmonic structures for optical manipulation** [9285-28]
B. Yan, H. Ma, X. Liu, K. Zhong, C. Sui, Zhejiang Univ. of Technology (China); J. Wang, Y. Shi, Nanjing Univ. (China)

Author Index

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Session 3-2 **Rongzhu Zhang**
Session 4-2 **Qingliang Zhao**
Session 5-2 **Yige Qi**
Session 6-2 **Changtao Wang**

Introduction

The 7th International Symposium on Advanced Optical Manufacturing and Testing Technology (AOMATT) was held 26–29 April 2014 at the Harbin International Conference Center, China.

AOMATT 2014 was kicked off with a formal opening ceremony. The ceremony started with the introduction of VIP guests, symposium chairs, conference chairs, and plenary speakers, followed by opening speeches by Prof. Liwei Zhou, AOMATT 2014 Symposium Chairman, Prof. Bin Xu, Vice President of IOE, a sponsor of AOMATT 2014, and Prof. Yingchun Liang, Assistant President of Harbin Institute of Technology, a local co-sponsor of AOMATT 2014. Dr. H. Philip Stahl, 2014 President of SPIE, technical cosponsor of AOMATT 2014, could not attend the symposium this year due to a schedule conflict, but sent his congratulation letter. In his letter, Dr. Stahl gave high marks for AOMATT and stated:

AOMATT is a very successful collaboration between SPIE, the Institute of Optics and Electronics of the Chinese Academy of Sciences, and the Chinese Optical Society. It has become a well-known international symposium on advanced optical manufacturing and testing technologies. The vision of AOMATT is closely aligned with SPIE's mission to promote optics and photonics around the world.

All of the conference sponsors and attendees greatly appreciate SPIE and Dr. Stahl's long-standing support of AOMATT since its inception in 2002.

The plenary sessions started immediately after the conclusion of the opening ceremony. There were a total of nine plenary presentations: Dr. Larry Stepp, Telescope Department Head for the Thirty Meter Telescope (TMT) Project, USA, presented "Manufacturing the Optics for the Thirty Meter Telescope"; Dr. Bernard Delabre, Optical Design Engineer of European Southern Observatory (ESO), Germany, presented "The Progress of the European Extremely Large Telescope"; Dr. Tao Sun, Director of the Centre for Precision Engineering(CPE) of Harbin Institute of Technology, presented "Method and procedure for the high-efficiency and ultra-precision diamond turning of large optical mirrors"; Dr. Wei Gao, Professor and Director of Research Center for Precision Nanosystems, Dept. of Nanomechanics of Tohoku University, Japan, presented "Precision nanometrology for fabrication of micro optics"; Dr. Xuejun Zhang, Vice President of Changchun Institute of Optics, Fine Mechanics and Physics (CIOMP), CAS, presented "Advanced manufacturing and testing technologies for multiple mirror space telescopes"; Dr. A.G. Poleshchuk, Head of the Laboratory of Diffractive Optics, and Dr. Victor P. Korolkov, senior scientist of Institute of Automation and Electrometry, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia, presented "Diffractive optical elements: fabrication and application"; Dr.

Axel Schindler, Science and Technology Consultant of Leibniz Institute of Surface Modification (IOM), Germany, presented "Advanced ion beam finishing and atmospheric plasma technology for high end optics"; Dr. Harald Giessen, Chair for Ultrafast Nano-Optics in the Department of Physics at the University of Stuttgart, Germany, presented "Complex hybrid plasmonics: new materials and new functionalities"; Dr. Xiangang Luo, Director of State Key Laboratory of Optical Technologies on Nano-Fabrication and Micro-Engineering of Institute of Optics and Electronics, CAS, presented "Manipulating the polarization states of electromagnetic waves using subwavelength structures". More than 600 people attended the opening ceremony and the full-day plenary sessions.

More than 400 oral and poster papers were selected for AOMATT 2014. About 102 oral papers were presented in six parallel conference sessions on 27 April. A special Technical Workshop was held in the morning of 28 April. An all-symposium poster session was held in the afternoon of 28 April. Authors and attendees had active discussions and exchange of ideas throughout the symposium. Many papers presented cutting-edge research and development work in optical design, manufacturing, and testing. The success of AOMATT 2014 continued the tradition of focus and excellence of this biannual international topical symposium in China.

We would like to express our sincere appreciation to COS—The Chinese Optical Society, IOE—Institute of Optics and Electronics, Chinese Academy of Sciences, and to SPIE for sponsoring and supporting AOMATT 2014. We would like to thank all chairs, committee members, authors, and attendee for their contributions to the symposium and sharing their research with colleagues around the world.

The 8th AOMATT is planned for 2016, and we look forward to seeing everyone at AOMATT 2016. Please watch for the Call for Papers and symposium announcements on the SPIE, IOE and COS web sites.

Li Yang
Secretary General, AOMATT 2014

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