

PROCEEDINGS OF SPIE

# ***Second International Conference on Photonics and Optical Engineering***

**Chunmin Zhang  
Anand Asundi**  
*Editors*

**14–17 October 2016  
Xi'an, China**

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Xi'an Jiaotong University (China) • Xi'an Institute of Optics and Precision Mechanics (China)  
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SPIE

Part One of Two Parts

**Volume 10256**

Proceedings of SPIE 0277-786X, V. 10256

SPIE is an international society advancing an interdisciplinary approach to the science and application of light.

Second International Conference on Photonics and Optical Engineering, edited by  
Chunmin Zhang, Anand Asundi, Proc. of SPIE Vol. 10256, 1025601 · © 2017 SPIE  
CCC code: 0277-786X/17/\$18 · doi: 10.1117/12.2276625

Proc. of SPIE Vol. 10256 1025601-1

The papers in this volume were part of the technical conference cited on the cover and title page. Papers were selected and subject to review by the editors and conference program committee. Some conference presentations may not be available for publication. Additional papers and presentation recordings may be available online in the SPIE Digital Library at [SPIDigitalLibrary.org](http://SPIDigitalLibrary.org).

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Please use the following format to cite material from these proceedings:

Author(s), "Title of Paper," in *Second International Conference on Photonics and Optical Engineering*, edited by Chunmin Zhang, Anand Asundi, Proceedings of SPIE Vol. 10256 (SPIE, Bellingham, WA, 2017) Seven-digit Article CID Number.

ISSN: 0277-786X  
ISSN: 1996-756X (electronic)

ISBN: 9781510610132  
ISBN: 9781510610149 (electronic)

Published by

**SPIE**

P.O. Box 10, Bellingham, Washington 98227-0010 USA  
Telephone +1 360 676 3290 (Pacific Time) · Fax +1 360 647 1445  
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# Contents

xiii	<i>Authors</i>
xix	<i>Conference Committees</i>
xxiii	<i>Introduction</i>

## Part One

---

10256 02	<b>Design of the optical structure of airfield in-pavement LED runway edge lights [10256-2]</b>
10256 03	<b>Predicting the 1s core level spectroscopy of BP using the first principles [10256-3]</b>
10256 04	<b>ADRC system of FSM for image motion compensation [10256-4]</b>
10256 05	<b>Influence of structural parameters on the laser precision tracking turntable [10256-5]</b>
10256 06	<b>Gap solitons in partially parity-time-symmetric optical lattices [10256-6]</b>
10256 07	<b>Development of IR imaging system simulator [10256-7]</b>
10256 08	<b>Hybrid cylinder-triangle plasmonic waveguide for low loss propagation and subwavelength confinement [10256-8]</b>
10256 09	<b>Numerical study of the Bessel beams carrying optical vortices propagating in turbulent atmosphere [10256-9]</b>
10256 0A	<b>Terahertz spectral detection of potassium sorbate in milk powder [10256-10]</b>
10256 0B	<b>A novel long-range hybrid insulator-metal-insulator plasmonic waveguide with tight light confinement [10256-12]</b>
10256 0C	<b>Modal analysis of collimation frame fabricated by titanium alloy [10256-13]</b>
10256 0D	<b>Least square support vector machine for citrus greening by use of near infrared spectroscopy [10256-14]</b>
10256 0E	<b>Fiber optic grating inscription over splice interface for strain and temperature measurement [10256-15]</b>
10256 0F	<b>Theoretical study on affecting factors on squeezing level in the generation and detection of squeezed light [10256-16]</b>
10256 0G	<b>Experimental study on auto-focusing and ranging based on light-field imaging technique [10256-17]</b>

- 10256 0H **Design of ocular for optical sight with long exit pupil distance** [10256-18]
- 10256 0I **Full Stokes spectralpolarimeter based on the polarization-difference interference imaging spectrometer** [10256-19]
- 10256 0J **Projection matrix acquisition for cone-beam computed tomography iterative reconstruction** [10256-20]
- 10256 0K **Fringe projection profilometry based on the best phase sensitivities** [10256-21]
- 10256 0L **Analysis of noise reduction performance with the rotated diffuser in Fizeau interferometer of a large aperture** [10256-22]
- 10256 0M **Optical butting of linear infrared detector array for pushbroom imager** [10256-23]
- 10256 0O **Uncertainty change in length conversion affected by change in environmental parameters** [10256-27]
- 10256 0P **Frequency stabilization of DFB laser via modulation transfer spectroscopy** [10256-28]
- 10256 0Q **Research of the metamaterial on the Chinese map** [10256-29]
- 10256 0R **Effects of substrate temperature on properties of vanadium oxide thin films on Si substrate** [10256-30]
- 10256 0S **Optical system design with common aperture for mid-infrared and laser composite guidance** [10256-31]
- 10256 0T **Imaging through strongly scattering media with subwavelength resolution and good anti-noise performance** [10256-32]
- 10256 0U **Efficient method of Shack-Hartmann wavefront sensor assembly** [10256-33]
- 10256 0W **Influence analysis of satellite drift angle on spectrum recovery precision of large aperture static interferometer spectrometer** [10256-35]
- 10256 0Z **Design of linearization double-linkage IR zoom lens** [10256-38]
- 10256 10 **Optical design of laser zoom projective lens with variable total track** [10256-39]
- 10256 13 **The design of common aperture and multi-band optical system based on day light telescope** [10256-42]
- 10256 14 **Parallel transformation of K-SVD solar image denoising algorithm** [10256-43]
- 10256 15 **The infrared bands Pechan prism axis parallel detection method** [10256-44]
- 10256 17 **Structural optimization of the path length control mirror for ring laser gyro** [10256-46]
- 10256 19 **Simulation design of light field imaging based on ZEMAX** [10256-48]

- 10256 1A **Comparison of monomode KTiOPO<sub>4</sub> waveguide formed by C<sup>3+</sup> ion implantation and Rb<sup>+</sup> ion exchange** [10256-49]
- 10256 1B **Influence of photoelectric detector on the dynamic range of laser seeker** [10256-50]
- 10256 1C **An adaptive Gamma method for image under non-uniform illumination** [10256-51]
- 10256 1E **Principle component analysis based hyperspectral image fusion in imaging spectropolarimeter** [10256-53]
- 10256 1F **Ultra-short wavelength operation in Thulium-doped silica fiber laser with bidirectional pumping** [10256-54]
- 10256 1G **Spectrum analysis of radar life signal in the three kinds of theoretical models** [10256-56]
- 10256 1J **A new method named as Segment-Compound method of baffle design** [10256-59]
- 10256 1K **Dual-wavelengths photoacoustic temperature measurement** [10256-60]
- 10256 1L **The propagation characteristics of circular Airy beam with low-pass filtering modification** [10256-61]
- 10256 1N **Automatic phase aberration compensation and imaging of digital holographic microscopy** [10256-65]
- 10256 1O **Fast recovery method for fog image** [10256-67]
- 10256 1Q **Optical humidity detection based on tunable diode laser absorption spectroscopy** [10256-69]
- 10256 1R **Numerical simulation and experimental research of using spherical reference wavefront to test aspheric surface** [10256-70]
- 10256 1S **Numerical analysis of thermally tunable liquid-crystal-filled terahertz fiber** [10256-71]
- 10256 1U **Er<sup>3+</sup> doped Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>-0.25PbTiO<sub>3</sub> transparent ceramic: a multi-functional material for photonics switching and temperature measurement** [10256-74]
- 10256 1V **Research on electromechanical resonance of two-axis tracking system** [10256-75]
- 10256 1W **Inter-satellites x-ray communication system** [10256-76]
- 10256 1X **Optimal design of an earth observation optical system with dual spectral and high resolution** [10256-77]
- 10256 1Y **Study of fuzzy PID controller for velocity circuit of optical-electronic theodolite** [10256-80]
- 10256 1Z **A micro displacement measurement method based on PGC demodulation of space optics** [10256-81]
- 10256 22 **Calibration on the detection efficiency of the Si-APD and InGaAs-APD single-photon detectors by correlated photon pairs** [10256-84]

- 10256 23 **Design of the intelligent smoke alarm system based on photoelectric smoke** [10256-85]
- 10256 24 **Mechanism and experimental research on ultra-precision grinding of ferrite** [10256-86]
- 10256 25 **Movement decoupling control for two-axis fast steering mirror** [10256-87]
- 10256 26 **Analysis and compensation of disturbance for small inertial stabilized Line-of-Sight system** [10256-88]
- 10256 27 **Research of the wavefront detection method based on the scanning pentaprism** [10256-89]
- 10256 29 **Control of laser wavelength tuning and its application in coherent optical time domain reflectometer** [10256-91]
- 10256 2A **The analysis of bit error ratio for self-homodyning coherent detection system** [10256-92]
- 10256 2C **Influence study of parameters to holographic interference pattern by computer simulation** [10256-94]
- 10256 2D **Study of thin film thickness measurement based on white light interference** [10256-95]
- 10256 2E **Acceleration sensing based on graphene resonator** [10256-96]
- 10256 2F **FPGA implement method for two-dimensional integer wavelet transform in the space-based on-orbit image compression system** [10256-97]
- 10256 2H **The cooling control system for focal plane assembly of astronomical satellite camera based on TEC** [10256-99]
- 10256 2I **Design and analysis of micro stress flexible support structure of reflector in all day star tracker** [10256-100]
- 10256 2J **Improved image quality of digital lithography using modified particle swarm optimization algorithm** [10256-101]
- 10256 2K **A dual-direction fringe projection method for the 3D measurement of translucent object** [10256-102]
- 10256 2L **The 3D measurement techniques for ancient architecture and historical relics** [10256-103]
- 10256 2N **Investigation of grinding parameters and machine dynamic characteristics' effect towards brittle material subsurface damage** [10256-105]
- 10256 2O **High-accuracy measurement and compensation of grating line-density error in a tiled-grating compressor** [10256-106]
- 10256 2S **Dispersion characteristics of Tellurite glass photonic crystal fiber** [10256-110]
- 10256 2T **Accelerating hyper-spectral data processing on the multi-CPU and multi-GPU heterogeneous computing platform** [10256-111]

- 10256 2U **Research on spot of CCD subdivided locating methods in laser triangulation displacement measurement** [10256-112]
- 10256 2V **Analysis of a novel device-level SINS/ACFSS deeply integrated navigation method** [10256-113]
- 10256 2W **A compact LWIR imaging spectrometer with a variable gap Fabry-Perot interferometer** [10256-114]
- 10256 2X **A Fabry-Perot interferometric imaging spectrometer in LWIR** [10256-115]
- 10256 2Y **Application of linear CCD in tunnel crack detection** [10256-117]
- 10256 2Z **A reflection polarizations zoom metasurfaces** [10256-118]
- 10256 30 **Synchronous acquisition method based on feature recognition of sequence images in online vision inspection** [10256-119]
- 10256 32 **Optimized design method for trench-assisted grade-index ring-core fiber with low DMD and large  $A_{\text{eff}}$**  [10256-123]
- 10256 33 **Dual-band perfect absorbers based on the magnetic resonance and the cavity resonance** [10256-124]
- 10256 34 **Evolution of the Raman spectra of electron beam irradiated graphene exposed in air** [10256-125]
- 10256 35 **A novel design of subminiature star sensor's imaging system based on TMS320DM3730** [10256-126]

## Part Two

---

- 10256 36 **Automatic seamless image mosaic method based on SIFT features** [10256-127]
- 10256 37 **Intelligent large diameter aspherical reflector polishing technology** [10256-128]
- 10256 39 **Fourier transform profilometry based on mean envelope extraction** [10256-130]
- 10256 3A **Atmospheric transmittance of O<sub>2</sub> (0-1) airglow** [10256-131]
- 10256 3C **Improving the atmospheric wind speed measured accuracy by the ground-based airglow imaging interferometer** [10256-133]
- 10256 3E **Design of laser Michelson interferometer for the detection of nanolitre solution** [10256-136]
- 10256 3F **High voltage pulse gated power supply with adjustable pulse width** [10256-137]
- 10256 3H **Research on transmission high sensitivity GaAs cathode of low light level image devices** [10256-139]

- 10256 3I **Effect of the characteristics of beam polarization on performance of 90 degree optical hybrid** [10256-140]
- 10256 3J **Theoretical and experimental analysis of modern zoom lens design** [10256-141]
- 10256 3K **A novel approach of an absolute coding pattern based on Hamiltonian graph** [10256-143]
- 10256 3L **Method of improving photoelectric efficiency for laser power beaming based on photovoltaic cell layout optimization** [10256-144]
- 10256 3M **The design of fiber-based 4-LP mode multi/demultiplexer** [10256-145]
- 10256 3N **Precision glass molding technology for low Tg glasses** [10256-146]
- 10256 3O **Femtosecond laser ablated durable superhydrophobic PTFE sheet for oil/water separation** [10256-147]
- 10256 3P **Ray-tracing analysis of a snapshot imaging polarimeter using modified Savart polariscopes** [10256-148]
- 10256 3Q **Fabrication of the asymmetric double-sided concave microlens arrays by femtosecond laser** [10256-149]
- 10256 3S **Fabrication of 3D electro-thermal micro actuators in silica glass by femtosecond laser wet etch and microsolidics** [10256-151]
- 10256 3T **Micropatterning microlens arrays fabricated by a femtosecond laser wet etch process** [10256-153]
- 10256 3V **Study on the material quenching over ZnS:Cu and SrAl<sub>2</sub>O<sub>4</sub>: EU<sup>2+</sup>, DY<sup>3+</sup> by the infrared light** [10256-155]
- 10256 3W **Power build-up cavity enhanced Raman spectroscopy based on piezoelectric transducer for gas analysis** [10256-156]
- 10256 3X **Athermalization of infrared dual field optical system based on wavefront coding** [10256-157]
- 10256 3Y **Study on general design of dual-DMD based infrared two-band scene simulation system** [10256-159]
- 10256 3Z **Design of a common-aperture VIS/LWIR imaging optical system with multi-field of view** [10256-160]
- 10256 40 **Host-guest interaction between Acridine orange molecules and AFI or CHA zeolite crystals** [10256-161]
- 10256 41 **The development of 4-channel Fourier transform polarization spectrometer** [10256-162]
- 10256 42 **Fourier modal method for two-dimensional wavefront reconstruction** [10256-163]



- 10256 43 **Design to improve photoelectric efficiency for photovoltaic cell array for laser power beaming** [10256-165]
- 10256 44 **A vision-based fall detection algorithm of human in indoor environment** [10256-166]
- 10256 45 **Study on light scattering characterization for polishing surface of optical elements** [10256-168]
- 10256 48 **A division-of-wave-front photopolarimeter for the measurement of the polarization state of light** [10256-175]
- 10256 49 **A novel experimental mechanics method for measuring the light pressure acting on a solar sail membrane** [10256-176]
- 10256 4A **Research on key technology in the real-time and high-precision spot centroid detection** [10256-177]
- 10256 4B **Study on the optical properties of the off-axis parabolic collimator with eccentric pupil** [10256-178]
- 10256 4C **Polarization imaging of an edge object with partially coherent light** [10256-179]
- 10256 4D **Research on environment correction algorithm in the minimum deviation angle method for refractive index measuring** [10256-180]
- 10256 4F **Simulation of the fixed optical path difference of near infrared wind imaging interferometer** [10256-182]
- 10256 4G **Methods of degrading the polarization sensitivity of remote sensing cameras for ocean exploration** [10256-183]
- 10256 4H **An estimated method of visibility for a remote sensing system based on LabVIEW and Arduino** [10256-184]
- 10256 4K **Review of 1064nm single frequency fiber laser based on different saturable absorber** [10256-187]
- 10256 4L **Study on the key alignment technology of the catadioptric optical system** [10256-188]
- 10256 4M **Experimental research for relative radiometric calibration of imaging spectrometer based on Savart plates** [10256-189]
- 10256 4P **Design of VisSWIR continuous zoom optical system** [10256-192]
- 10256 4Q **Research on the influence of the vertical temperature profile on the retrieval of CO<sub>2</sub> concentration** [10256-193]
- 10256 4V **Comparison of temporal phase-stepping measurement methods used for wind imaging interferometer** [10256-198]
- 10256 4W **Low-power and precise temperature control for high-power CCD assembly** [10256-199]

- 10256 4X **Aspheric surface measurement using capacitive probes** [10256-202]
- 10256 4Z **Crystal structure and optical properties of a neodymium trifluoroacetate complex for liquid laser** [10256-205]
- 10256 50 **Discuss wave-particle duality of light** [10256-207]
- 10256 51 **Design of a handheld infrared imaging device based on uncooled infrared detector** [10256-208]
- 10256 52 **Research on the effect of aerosol on the retrieval of hyperspectral XCO<sub>2</sub>** [10256-209]
- 10256 53 **He-Ne laser employing radio frequency for pumping of gain medium** [10256-210]
- 10256 54 **Discussion on method of optical surface roughness measurement** [10256-211]
- 10256 55 **Method and verification for measuring surface roughness of components by angle resolved scattering method** [10256-212]
- 10256 56 **Terahertz range profile of the tilted-plate** [10256-213]
- 10256 57 **Global optimization method based on ray tracing to achieve optimum figure error compensation** [10256-215]
- 10256 58 **Numerical simulation of optical interference for double elliptically polarized beams** [10256-218]
- 10256 59 **Plasma etching of large-size silicon based microchannel plates** [10256-219]
- 10256 5A **Application of fluorescence spectroscopy and imaging in the detection of a photosensitizer in photodynamic therapy** [10256-221]
- 10256 5B **Optical properties of a paramagnetic metalloporphyrin hematoporphyrin monomethyl ether coordinated to divalent manganese metal ion** [10256-225]
- 10256 5C **Short-wave infrared imaging technology on space optical remote sensing system** [10256-226]
- 10256 5D **The influence of temperature and pressure on primary mirror surface figure and image quality of the 1.2m colorful Schlieren system** [10256-1001]
- 10256 5E **Numerical simulation of radiation intensity of a long-endurance UAV exhaust system with 2D nozzle** [10256-1002]
- 10256 5G **Photonic generation of frequency quadrupling signal for millimeter-wave communication utilizing three parallel Mach-Zehnder modulators** [10256-1004]
- 10256 5H **A polyatomic photonic crystal ring resonator and its application to the optical biochemical sensor** [10256-1005]
- 10256 5I **Simultaneous measurement of temperature and strain based on a fiber Bragg grating with cladding made of electro-optic crystal material** [10256-1006]

- 10256 5J **Study of the fusion point between PM-PCF and panda fiber and its influence to interferometric fiber optical gyroscope** [10256-1007]
- 10256 5M **Numerical study of the light output intensity of the bilayer organic light-emitting diodes** [10256-1010]
- 10256 5N **A combination of JND curve property and intensity-pair distribution for image enhancement** [10256-1011]
- 10256 5O **ZnS:Co film grown by pulsed laser deposition and optical properties analysis** [10256-1012]
- 10256 5P **Operational data quality evaluation based on BP neural network and rough set theory** [10256-1013]
- 10256 5R **Programmable spectral engine design of hyperspectral image projectors based on digital micro-mirror device (DMD)** [10256-1015]
- 10256 5S **Study of femtosecond laser spectrally resolved interferometry distance measurement based on excess fraction method** [10256-1016]
- 10256 5T **Theoretical and experimental investigation on superconducting nanowire single-photon detectors** [10256-1017]
- 10256 5U **System design for adopting magnetofluid and LPFG to measure magnetic field and temperature** [10256-1018]
- 10256 5V **Design of edge filter demodulation system based on twin-core LPFG** [10256-1019]
- 10256 5W **Research on alignment between processing and testing coordinates in flat mirror manufactory** [10256-1020]
- 10256 5X **Study and analysis on slow light in photonic crystal waveguide** [10256-1021]
- 10256 5Y **Effect of polarizer parameters on measuring Verdet constant of magneto-optical glass** [10256-1022]
- 10256 5Z **Simulation and design of solar-blind Raman Lidar for water vapor measurement** [10256-1023]
- 10256 60 **Infrared scene projector optical system design with wide field-of-view** [10256-1024]
- 10256 61 **Polarization insensitive and low-loss coupling mode-size converter from super luminescent diode to silica-based planar lightwave circuit** [10256-1025]



## Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first five digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Aketagawa, Masato, 0O  
Bai, Jintao, 4K  
Bai, Lu, 56  
Ban, Xinxing, 24, 27  
Bi, Siwen, 50  
Bian, Hao, 3Q, 3S, 3T  
Cao, Erfang, 05  
Cao, Haishuai, 3I  
Cao, Hui, 42  
Cao, Kai, 1B  
Cao, Qizhi, 3P  
Cao, Wenwu, 1U, 5A  
Chang, Hemin, 2Y  
Chang, Shuai, 3I  
Chang, Wei-jun, 15  
Chen, An-feng, 0E  
Chen, Dingbo, 33  
Chen, Feng, 3O, 3Q, 3S, 3T  
Chen, Haidong, 22  
Chen, Haowei, 4K  
Chen, Huiqing, 3E  
Chen, Jiang, 0P  
Chen, Jiao, 13  
Chen, Kan, 6I  
Chen, Kunfeng, 22  
Chen, Lei, 5D  
Chen, Mingxian, 3P  
Chen, Shizhe, 1Q  
Chen, Su, 2I  
Chen, Xiaochuan, 4H  
Chen, Yanping, 40  
Cheng, Hao, 5U  
Cheng, Hongliang, 5R  
Cheng, Juan, 2T  
Cheng, Shaoyuan, 5C  
Cheng, Yaojin, 59  
Chu, Chunxiao, 2C, 2D  
Cui, Jin, 3A, 3C  
Cui, Xiao-Jun, 1A  
Cui, Yaoyao, 1K  
Dai, Yue, 5T  
Dang, Shuzhen, 5X  
Deng, Xiangquan, 1L  
Diao, Xiaochun, 2L  
Ding, Jianping, 42Dong, Fenglin, 1K  
Dong, Longchao, 24, 27  
Dong, Lu, 07, 08, 0B  
Dong, Ming, 1N  
Dong, Shen, 1R  
Dong, Weike, 07  
Dowell, Earl H., 49  
Du, Yunfei, 2H  
Duan, Jing, 1X, 3X, 3Z, 4B  
Fan, DongXin, 3P  
Fan, Hang, 5I  
Fan, Linlin, 59  
Fan, Xuebing, 3I  
Fan, Xuewu, 2H  
Fan, Zhenfang, 53  
Fang, Jingyue, 34  
Fang, Yao, 3O  
Feng, Fei, 0F, 0G  
Feng, Jingmei, 48  
Feng, Xiaoqiang, 4K  
Feng, Yanguang, 4W  
Feng, Yunsong, 5E  
Fu, Ling, 40  
Fu, Pan, 4K  
Fu, Xi-hong, 4L  
Fu, Xing, 4L  
Gan, Haiyong, 22  
Gao, Changchun, 4W  
Gao, Dongwen, 5O  
Gao, Fei, 5Z  
Gao, Haiyang, 3C  
Gao, Hongwen, 48  
Gao, Jiaobo, 2T, 2W, 2X, 5R  
Gao, Lingyan, 5C  
Gao, Meng, 52  
Gao, Nan, 39  
Gao, Peng, 0Q  
Gao, Ruiru, 0I, 4V  
Gao, Shan, 2W, 2X  
Gao, Shuyuan, 5S  
Gao, Wei, 2H  
Gao, Xin, 1J, 4B  
Gao, Zongzhao, 0J  
Ge, Hai-bo, 5U, 5V  
Ge, Hongyi, 0A  
Ge, Lijuan, 06  
Geng, Bo, 2I  
Gu, Yawen, 24  
Guo, Chenshan, 5B  
Guo, Fengxiang, 1R  
Guo, Haitao, 1F  
Guo, Hongwei, 0K  
Guo, Huinan, 1C  
Guo, Wen, 37

Guo, Xuejia, 57  
 Guo, Yongcai, 44  
 Guo, Youguang, 1Z  
 Han, Junfeng, 26  
 Han, Kunye, 0S, 10, 3H  
 Han, Rubing, 0D  
 Han, Zonghu, 17  
 Hang, Nan, 3I  
 Hao, Fusheng, 3K  
 Hao, Juan, 1B  
 He, Guojing, 07  
 He, Junfeng, 5N  
 He, SaiXian, 1Y  
 He, Yulan, 0Z, 10, 15  
 He, Yuqing, 2H  
 Hou, Dianxin, 0R  
 Hou, Lei, 4K  
 Hou, Shanglin, 5G, 5H, 5I  
 Hou, Xun, 3S  
 Hu, Bo, 0S  
 Hu, Feng, 2E  
 Hu, Guixiang, 5B  
 Hu, Jialin, 3W  
 Hu, Kun, 5S  
 Hu, Shi Y., 0G  
 Hu, Xiaoying, 4C  
 Hu, Yu, 2T  
 Hua, Dengxin, 5Z  
 Huang, Jie, 33  
 Huang, Kuidong, 0J  
 Huang, Qiaolin, 5C  
 Huang, Shujun, 39  
 Huang, Yuhua, 42  
 Huang, Zhang-bin, 5E  
 Huang, Zhihao, 34  
 Hui, Lei, 2U  
 Huo, Jinglan, 3O  
 Ji, Ming, 15  
 Ji, Rongyi, 5S  
 Jia, Min, 3A, 3V  
 Jia, Xiaoyang, 2A  
 Jian, Dunliang, 40  
 Jian, Xiaohua, 1K  
 Jiang, Bo, 3X  
 Jiang, Guangwen, 2V  
 Jiang, Hongzhi, 2K, 2L  
 Jiang, Jiangang, 1E  
 Jiang, Kai, 1X, 3X, 3Z  
 Jiang, Li, 49  
 Jiang, Man, 4K  
 Jiang, Mingzhu, 2S  
 Jiang, Shubo, 3W  
 Jiang, Wei, 5C  
 Jiang, Xiaobai, 0Z  
 Jiang, Xin, 2Y, 30  
 Jiang, Yongliang, 5W  
 Jie, Wenbin, 2E  
 Kang, Jin, 4K  
 Kang, Wenli, 0Z  
 Kang, Xiao-peng, 4L  
 Lang, Jia-Wei, 5U  
 Lei, Jingli, 5G  
 Lei, Ning, 5Z  
 Li, B., 2N  
 Li, Baihong, 1S  
 Li, Baopeng, 2H  
 Li, Baoquan, 1W  
 Li, Bei, 6I  
 Li, Beibei, 3L, 43  
 Li, Binglin, 29  
 Li, Gang, 3Z, 4B  
 Li, Gengxin, 1Y  
 Li, Guorong, 1U  
 Li, Hong, 2K  
 Li, Hua, 2Y, 30  
 Li, Irene Ling, 40  
 Li, Jianjun, 5R  
 Li, Junwei, 5I, 5J  
 Li, Ke, 6I  
 Li, Lei, 02  
 Li, Liangfu, 5N  
 Li, Mei, 14, 48  
 Li, Pengpeng, 0A  
 Li, Qiang, 5W  
 Li, Qichao, 3S  
 Li, Qishen, 2J  
 Li, Qiwei, 0I, 4M  
 Li, Shaobo, 4X  
 Li, Shaohua, 3E  
 Li, Shufeng, 5O  
 Li, Siyuan, 0W  
 Li, Wentao, 3O  
 Li, Xiaojiang, 3L, 43  
 Li, Xiaoman, 4G  
 Li, Xiao-xia, 5E  
 Li, Xiaoyan, 2A  
 Li, Xuanqun, 1Q  
 Li, Xun, 0T  
 Li, Yanfen, 4F, 4Q  
 Li, Yanhui, 56  
 Li, Yao, 5S  
 Li, Yu, 2T  
 Li, Yuan, 10  
 Li, Yuyao, 0H  
 Li, Zhe, 04  
 Li, Zhiguo, 0C, 1V  
 Li, Zhilin, 2O  
 Lian, Xinhao, 4W  
 Liang, Peiying, 42  
 Liang, Xiaoyue, 2K  
 Liang, Youwen, 14  
 Liang, Zhang, 1U  
 Liao, Jiawen, 1C, 1O  
 Liao, Yu, 1K  
 Lin, Ling, 1B  
 Liu, Bingcai, 0L, 27  
 Liu, Changming, 22  
 Liu, Cheng, 6I  
 Liu, Dandan, 0P  
 Liu, Deli, 0D

Liu, Dong, 5W  
 Liu, Dongdong, 4F, 4Q  
 Liu, Hao, 44  
 Liu, Hongxia, 08, 0B  
 Liu, Huan, 0W  
 Liu, Huan, 59  
 Liu, Jie, 2I, 2Y, 30  
 Liu, Jing, 58  
 Liu, Kai, 1X, 3X, 3Z, 4L  
 Liu, Kun, 3E  
 Liu, Li, 15  
 Liu, Lijun, 5P  
 Liu, Liqiang, 3K  
 Liu, Meiyang, 35, 36  
 Liu, Shixuan, 1Q  
 Liu, Shulin, 3F  
 Liu, Tong, 2F  
 Liu, Weiguo, 45  
 Liu, Weilin, 3J  
 Liu, Xiaolin, 57  
 Liu, Xishuang, 1J  
 Liu, Xuelian, 54  
 Liu, Yande, 0D  
 Liu, Yang, 2I  
 Liu, Yanjun, 5G, 5H, 5I  
 Liu, Zhaohui, 0C  
 Liu, Zun L., 0F, 0G  
 Long, Keping, 32, 3M  
 Long, Xingwu, 1Z  
 Lu, Baole, 4K  
 Lu, Feiping, 5M  
 Lu, Feng, 10  
 Lu, Guangfeng, 53  
 Lü, Hao, 58  
 Lu, Lidong, 29  
 Lu, Min, 1F  
 Lu, Yang, 5N  
 Lu, Yuan, 0R  
 Luan, Yadong, 0U, 19  
 Luo, Hui, 53  
 Luo, Xiaohe, 4A  
 Luo, Yangcheng, 3E  
 Lv, Dongmei, 54  
 Lv, Tao, 25  
 Ma, Congcong, 0B  
 Ma, Donglin, 09  
 Ma, HongWei, 1N, 1S  
 Ma, Jiangfei, 1G, 23  
 Ma, Jing T., 0F, 0G  
 Ma, Junwei, 1B  
 Ma, Tingting, 2A  
 Ma, Wenpo, 0M  
 Ma, Xiaodan, 02  
 Ma, Yanghua, 17  
 Mei, Chao, 4P  
 Mei, Yifeng, 3A, 3V  
 Meng, Hemin, 2X  
 Meng, Xiangsheng, 2F  
 Mou, Huan, 1W  
 Mu, Hang, 5G, 5H  
 Mu, Jie, 2O  
 Mu, Tingkui, 0I  
 Nie, Rongzhi, 4Z  
 Pan, Yue, 3Y, 60  
 Peng, Bo, 1F, 4Z  
 Peng, Jun, 02  
 Peng, Xiangyang, 34  
 Qi, Xinyuan, 4K  
 Qian, Jun, 5N  
 Qiang, Hua, 0Z, 10, 15  
 Qiao, Xihui, 32  
 Qiao, Yang, 3Y, 60  
 Qiao, Yongming, 25  
 Qin, Shiqiao, 2E, 2V  
 Qin, Xing, 1J  
 Qin, Zhixuan, 49  
 Qiu, Baowei, 37  
 Qiu, Minpu, 0M  
 Qu, Rui, 4P  
 Qu, Sheng, 08, 0B  
 Quan, Bingxin, 17  
 Quan, Naicheng, 0I  
 Ren, D. X., 2N  
 Ren, Dong, 5H  
 Ren, Wen-yi, 0E, 1E  
 Rong, Piao, 4F, 4Q  
 Ruan, Chi, 4H  
 Ruan, Jun, 0P  
 Ruan, Shuangchen, 40  
 Shan, Chao, 3S  
 Shan, Qiu-sha, 1X, 3X, 3Z  
 Shao, Xinzhen, 3N  
 Shao, Yajun, 4A  
 She, Jiangbo, 4Z  
 She, Wenji, 05  
 She, Xuan, 6I  
 Shi, Aiming, 49  
 Shi, Dongchen, 5Z  
 Shi, Hongwei, 54, 55  
 Shi, Junru, 0P  
 Shi, Wenlong, 0J  
 Shi, Xueshun, 22  
 Shi, Yaotao, 5W  
 Shi, Zhaojun, 2J  
 Shu, Jing, 5X  
 Shu, Xiaowu, 6I  
 Song, Chong, 4L  
 Song, Fuyin, 0R  
 Song, Xinyang, 4W  
 Su, Jingqin, 2O  
 Su, Xiuqin, 04  
 Sun, Chuan, 4D  
 Sun, Dandan, 2T  
 Sun, Kefeng, 2T  
 Sun, Tao, 1R  
 Sun, Ting, 0S  
 Sun, Xianzhong, 5I  
 Sun, Xiaoyan, 29  
 Sun, Xin, 4Z  
 Sun, Xudong, 0D

Sun, Zuoming, 5J  
 Tam, Wing Yim, 58  
 Tan, Wenfeng, 2V  
 Tang, Tianjin, 57  
 Tang, Yuanhe, 3A, 3C, 3F, 3V  
 Tao, Xin, 4X  
 Teng, Guoqi, 13  
 Tian, Ailing, 0H, 0L, 27, 45, 4C  
 Tian, Chengjun, 55  
 Tian, Mingqiang, 3N  
 Tian, Yan, 2F  
 Tian, Yanan, 27  
 Tian, Yu, 14  
 Ting, Deng, 3P  
 Tong, Shoufeng, 2A, 3I  
 Tu, Jiajing, 32, 3M  
 Wang, Chunhui, 45  
 Wang, Chunyang, 54, 55  
 Wang, D., 1G  
 Wang, Daobin, 5G, 5H, 5I  
 Wang, Dasen, 45  
 Wang, Doudou, 1N, 1S  
 Wang, Haotian, 1N  
 Wang, Hongjun, 0L, 2U  
 Wang, Hongqing, 33  
 Wang, Hu, 2I, 35  
 Wang, Huawei, 3K  
 Wang, Hushan, 1F  
 Wang, Jian, 0E  
 Wang, Jie, 2F  
 Wang, Jiliang, 17  
 Wang, Jing, 5D  
 Wang, Jingyi, 4G  
 Wang, Kaidi, 04  
 Wang, Li, 5O  
 Wang, Li, 5Z  
 Wang, Liang-Ling, 1A  
 Wang, Lili, 1S  
 Wang, Ling, 13, 15  
 Wang, Lingguang, 2I  
 Wang, Meng, 13  
 Wang, Nan, 2W, 2X  
 Wang, Nanxi, 0Z, 10, 15  
 Wang, Peipei, 23  
 Wang, Peng, 37  
 Wang, Peng, 5D  
 Wang, Qiwei, 1R  
 Wang, Rongli, 1B  
 Wang, Rui, 25  
 Wang, Shanshan, 4A, 4D, 59  
 Wang, Shuhua, 5J  
 Wang, Shulong, 08, 0B  
 Wang, Wei, 41, 4C  
 Wang, Wen, 1R  
 Wang, Wenyan, 1Q  
 Wang, Xia, 2C, 2D, 58  
 Wang, Xiangyang, 3J  
 Wang, Xiao, 2O  
 Wang, Xiaoyan, 2Z  
 Wang, Xicheng, 5R  
 Wang, Xing, 1N  
 Wang, Xingshu, 2E, 2V  
 Wang, Xinliang, 0P  
 Wang, Ya'nan, 3K  
 Wang, Yinghui, 2T  
 Wang, Yishan, 1F  
 Wang, Yu, 48  
 Wang, Yulei, 5W  
 Wang, Zefeng, 1C, 1O  
 Wang, Zhibin, 3N  
 Wei, Dong, 0O  
 Wei, Peiwen, 5V  
 Wei, Yang, 3T  
 Wen, Desheng, 35, 36  
 Wen, Kaile, 3F  
 Wu, Dan, 1E  
 Wu, Jianghui, 2X, 5R  
 Wu, JunFang, 03  
 Wu, Lei, 08, 0B  
 Wu, Qi, 0E  
 Wu, Qingyang, 1L  
 Wu, Shaobo, 04  
 Wu, Wei, 2V  
 Wu, Wenjun, 33  
 Wu, Y. Y., 2N  
 Wu, Yushang, 1Q  
 Wu, Zhensen, 56  
 Xi, J. P., 2N  
 Xia, Jianpei, 42  
 Xiang, Xinglang, 07, 08  
 Xiao, Gongli, 33  
 Xiao, Huaichun, 0D  
 Xiao, Xiangguo, 10, 19  
 Xiao, Xusheng, 1F  
 Xie, Yong-jun, 5D  
 Xin, Ruihao, 54, 55  
 Xiong, Baoxing, 2S, 5Y  
 Xiong, Zhenyu, 1Z  
 Xu, Jiang M., 0F, 0G  
 Xu, Jiangtao, 3H  
 Xu, Ke, 3H  
 Xu, Shixiang, 1L  
 Xu, Songbo, 5D  
 Xu, Weicai, 5W  
 Xu, Xintong, 40  
 Xu, Xinyang, 60  
 Xu, Xi-ping, 3Y, 60  
 Xu, Yanhua, 3P  
 Xu, Yantao, 1F  
 Xue, Yingjie, 1V  
 Yan, Baojun, 3F  
 Yan, Haozheng, 5N  
 Yan, Lisong, 5W  
 Yan, Peipei, 1X, 3X, 3Z  
 Yan, Peng, 33  
 Yan, Tingyu, 0I, 4F, 4M, 4V  
 Yan, Zhijun, 1F  
 Yang, Fulong, 2Z  
 Yang, Fuqiang, 0J  
 Yang, Guoan, 1E



Yang, Hong, 3N  
 Yang, Hongtao, 1O, 4P  
 Yang, Huamei, 0S  
 Yang, Jianhong, 02  
 Yang, Jing, 1S  
 Yang, Junbo, 33  
 Yang, Ming, 4W  
 Yang, Mingyang, 4P  
 Yang, Qing, 3O, 3Q, 3S, 3T  
 Yang, Rui, 3C  
 Yang, Shaodong, 35  
 Yang, Wengang, 2H  
 Yang, XiaoJun, 1Y  
 Yang, Xiaoxu, 1J  
 Yang, Xiufang, 1G, 23  
 Yang, Yizhou, 5N  
 Yang, Yong, 5V  
 Yang, Yongying, 5W  
 Yang, Yuzhen, 3F  
 Yang, Zijian, 0S  
 Ye, Lingyu, 0D  
 Yong, Jiale, 3O  
 You, Kai, 58  
 Yu, Fengxiang, 0P  
 Yu, Xudong, 1Z  
 Yu, Yang, 3A, 3C, 3F  
 Yuan, Daocheng, 27, 4X  
 Yuan, Lihua, 5H  
 Yuan, Xiao, 2S, 5Y  
 Yuan, Xiuhua, 09  
 Zang, Lixin, 5A, 5B  
 Zeng, Shuqin, 1V  
 Zeng, Xiaoming, 2O  
 Zhai, Fengtao, 3A, 3C  
 Zhai, Jianpang, 40  
 Zhang, Bo, 13  
 Zhang, Caixin, 0J  
 Zhang, Chunmin, 0I, 1E, 48, 4F, 4M, 4Q, 4V, 52  
 Zhang, Chupeng, 24  
 Zhang, Dinghua, 0J  
 Zhang, Fan, 3Q  
 Zhang, Fang, 2W, 2X  
 Zhang, Feng, 3N  
 Zhang, Fengli, 1R  
 Zhang, Geng, 0W  
 Zhang, Guiju, 2S, 5Y  
 Zhang, Haifeng, 1C, 1O  
 Zhang, Hao, 2V  
 Zhang, Henjin, 4B  
 Zhang, Huan, 3M  
 Zhang, Hui, 0P  
 Zhang, Hui, 1O  
 Zhang, Jiaying, 0L, 2U  
 Zhang, Jie, 5U  
 Zhang, Jing, 3P  
 Zhang, Jingjing, 33  
 Zhang, Keke, 1Q  
 Zhang, Lei, 2T, 2W, 2X  
 Zhang, Liang, 2J  
 Zhang, Lijuan, 1Q  
 Zhang, Meng, 26  
 Zhang, Peng, 3I  
 Zhang, Qi, 1B  
 Zhang, Rui, 1B  
 Zhang, Ruihua, 0K  
 Zhang, Shougang, 0P  
 Zhang, Shuanmin, 0E  
 Zhang, Xiaoxuan, 39  
 Zhang, Xin, 53  
 Zhang, Xiumei, 3W  
 Zhang, Xuanzhi, 0S  
 Zhang, Xuao, 34  
 Zhang, Xunzhi, 0U  
 Zhang, Yalin, 09  
 Zhang, Yazhou, 51  
 Zhang, Yingge, 45  
 Zhang, Yishu, 1N  
 Zhang, Yongqiang, 0C  
 Zhang, Yuan, 0A  
 Zhang, Yunlong, 3N  
 Zhang, Yupeng, 5Y  
 Zhang, Zhi, 1C, 1O  
 Zhang, Zhiguo, 1U, 5A  
 Zhang, Zhoufeng, 0W  
 Zhang, Zonghua, 39  
 Zhao, Dan, 2O  
 Zhao, Huijie, 2K, 2L  
 Zhao, Huimin, 5A, 5B  
 Zhao, Huiying, 24, 27  
 Zhao, Juan, 41  
 Zhao, Kun, 22  
 Zhao, Liang, 55  
 Zhao, Qiang, 0W  
 Zhao, Qiang, 1Q  
 Zhao, Qiuling, 58  
 Zhao, Yujie, 2W  
 Zhao, Z. X., 2N  
 Zhao, Zhanping, 5C  
 Zhao, Zhiming, 1V  
 Zhao, Zhiyong, 2L  
 Zhao, Zongzhe, 1B  
 Zheng, Guoliang, 1L  
 Zheng, Hairong, 4H  
 Zheng, Xiaoming, 34  
 Zheng, Ye-liang, 5E  
 Zheng, Yuanbo, 2C, 2D  
 Zhou, Feng, 4G  
 Zhou, Guoliang, 5N  
 Zhou, Kainan, 2O  
 Zhou, Ke, 0U, 19  
 Zhou, Liang, 05  
 Zhou, Siyu, 4A, 4D  
 Zhou, Song, 2O  
 Zhou, Weihu, 5S  
 Zhou, Xiaobin, 0U, 19  
 Zhou, Yueming, 52  
 Zhou, Yulan, 0T  
 Zhou, Zeyu, 09  
 Zhou, Zhonghai, 1R  
 Zhou, Zuofeng, 4P

Zhu, Changyong, 3E  
Zhu, Qihua, 2O  
Zhu, Qiudong, 4A, 4D  
Zhu, Xueliang, 0L, 24, 27  
Zhu, Zhongyao, 0H  
Zou, Bin, 5N  
Zou, Kuisheng, 2S, 5Y  
Zuo, Yanlei, 2O

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## Introduction

Following the success of icPOE2014, the Second International Conference on Photonics and Optical Engineering (icPOE2016) was successfully hosted 14–17 October 2016, in Xi'an China.

The field of photonics and optical engineering is developing rapidly worldwide. Related technologies have been applied in both Space and Mars exploration, micro-nano devices and new materials development, biomedicine, quantum computers, and quantum communication. The "National Guideline on Medium and Long Term Program for Science and Technology Development (2006-2020)" of China, has multiple priority areas and great demands that mention photonics and optical engineering involving remote sensing, environmental monitoring, biomedical diagnosis, space exploration, astronomy, and other scientific areas.

At present, the world's largest radio telescope, FAST (Five-hundred-meter Aperture Spherical radio Telescope), will be put into use; the Chang'e IV lunar probe will also launch for exploration of the back of the moon; and a Mars exploration program has been formally established and its exploration satellite will be launched around 2020. These are a concrete embodiment of the rapid development of China's photonics and optical engineering achievements.

Indeed, there have been significant advances as well over the past years. There are an increasing number of photonics and optical engineering companies setting up or ramping up their manufacturing facilities here, and at the same time, some home grown companies are show-casing innovations and technologies. In order to cater to these developments, many universities and scientific research institutions in Xi'an, Shanghai, Tianjin, and other famous cities have established 'Photonics Research Centres'. These institutions have organized many national academic conferences for deeper academic exchanges and scientific interactions, as well as to strengthen the cultivation of excellent talent, and to reach out to the younger generation to highlight career and research options in photonics and optical engineering.

The International Conference on Photonics and Optical Engineering (icPOE) is one of the advanced academic forums in the world. The purpose of this conference is to build an international communication platform for optical research to aim at the opportunity of emerging markets and technology and to strengthen the advanced technology of optical application and measurement for innovation and development through a series of academic exchanges. This conference is significant in promoting communication of the latest achievements, enhancing mutual understanding of the status and trend of developments, and strengthening international cooperation in the optical field.

Leading scientists and researchers from all over the world submitted 170 papers, which were organized under seven topics:

1. Space optics
2. Spectroscopy and applications
3. Ultrafast optics
4. Photonic functional materials and integrated photonic device
5. Optical design and manufacturing technology
6. Optical measurement and inspection
7. Micro-nano manufacturing and testing.

We would like to express our heartfelt thanks to Shaanxi Optical Society, Shaanxi Provincial Physical Society, Optics and Photonics Society of Singapore (OPSS), Chinese Optical Society, SPIE, Xi'an Jiaotong University, Xi'an Institute of Optics and Precision Mechanics of Chinese Academy of Sciences, Xi'an Technological University, Xi'an Institute of Applied Optics, Centre for Optical and Laser Engineering of Nanyang Technological University (Singapore), Ministry of Education of China, Chinese Academy of Sciences, National Natural Science Foundation of China, Shaanxi Association for Science and Technology, other supporting organizations, and the organizing committee members, for their full support of this conference.

Our appreciation also goes to all the authors who spent a lot of time and effort in the preparation of their papers. Our deep thanks are directed to the students Rong Piao, Li Qiwei, Yan Tingyu, Liu Dongdong, Zhang Jirui, Li Yanfen, Gao Meng, Quan Naicheng, Chen Zeyu, Zhang Guoqing, Jiao Zuzu, and Wu Miao, and the volunteers Zhang Biyun, Zhang Fan, Wei Yang, Li Wentao, Zhang Hong, Zhao Siwei, and Yang Chen. The continuous help given especially by Yang Xiaoxu, Du Guangqing, Zhu Xueliang and She Jiangbo was the basis for making icPOE2016 successful.

Finally, our special thanks and appreciation goes to all of our friends and colleagues for sharing with us the positive results of photonics and optical engineering.

**Chunmin Zhang**  
**Anand Asundi**