

PROCEEDINGS OF SPIE

Fifth Symposium on Novel Optoelectronic Detection Technology and Application

**Qifeng Yu
Wei Huang
You He**
Editors

**24–26 October 2018
Xi'an, China**

Sponsored by

Division of Information and Electronic Engineering of Chinese Academy of Engineering (China)
Chinese Society of Optical Engineering (China)
Science and Technology on Low-Light-Level Night Vision Laboratory (China)

Organized by

Chinese Society for Optical Engineering (China)
Photoelectronic Technology Committee, Chinese Society of Astronautics (China)
Xi'an Technological University (China)

Published by
SPIE

Volume 11023

Part One of Two Parts

Proceedings of SPIE 0277-786X, V. 11023

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

Fifth Symposium on Novel Optoelectronic Detection Technology and Application,
edited by Qifeng Yu, Wei Huang, You He, Proc. of SPIE Vol. 11023, 1102301
© 2019 SPIE · CCC code: 0277-786X/19/\$18 · doi: 10.1117/12.2531410

Proc. of SPIE Vol. 11023 1102301-1

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 SPIEDigitalLibrary.org.

The papers reflect the work and thoughts of the authors and are published herein as submitted. The publisher is not responsible for the validity of the information or for any outcomes resulting from reliance thereon.

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

Author(s), "Title of Paper," in *Fifth Symposium on Novel Optoelectronic Detection Technology and Application*, edited by Qifeng Yu, Wei Huang, You He, Proceedings of SPIE Vol. 11023 (SPIE, Bellingham, WA, 2019) Seven-digit Article CID Number.

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

ISBN: 9781510627123
ISBN: 9781510627130 (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

SPIE.org

Copyright © 2019, Society of Photo-Optical Instrumentation Engineers.

Copying of material in this book for internal or personal use, or for the internal or personal use of specific clients, beyond the fair use provisions granted by the U.S. Copyright Law is authorized by SPIE subject to payment of copying fees. The Transactional Reporting Service base fee for this volume is \$18.00 per article (or portion thereof), which should be paid directly to the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923. Payment may also be made electronically through CCC Online at copyright.com. Other copying for republication, resale, advertising or promotion, or any form of systematic or multiple reproduction of any material in this book is prohibited except with permission in writing from the publisher. The CCC fee code is 0277-786X/19/\$18.00.

Printed in China.

Publication of record for individual papers is online in the SPIE Digital Library.

**SPIE. DIGITAL
LIBRARY**

SPIEDigitalLibrary.org

Paper Numbering: *Proceedings of SPIE* follow an e-First publication model. A unique citation identifier (CID) number is assigned to each article at the time of publication. Utilization of CIDs allows articles to be fully citable as soon as they are published online, and connects the same identifier to all online and print versions of the publication. SPIE uses a seven-digit CID article numbering system structured as follows:

- The first five digits correspond to the SPIE volume number.
- The last two digits indicate publication order within the volume using a Base 36 numbering system employing both numerals and letters. These two-number sets start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B ... 0Z, followed by 10-1Z, 20-2Z, etc. The CID Number appears on each page of the manuscript.

Contents

xiii	<i>Authors</i>
xxi	<i>Conference Committee</i>
xxiii	<i>Introduction</i>

Part One

OPTOELECTRONIC DETECTION

11023 02	Laser underwater acoustic detection technology based on vaporization mechanism [11023-1]
11023 03	Research of image deblurring based on Tikhonov regularization [11023-2]
11023 04	Quadrant uniformity calibration method for four quadrant photodetectors [11023-5]
11023 05	Analysis and application of no-reference image quality assessment [11023-6]
11023 06	Measurement error of radiation gain of UV image intensifier [11023-7]
11023 07	Experiment and modelling study of the modulation performance in the graphene-Si heterojunction waveguide [11023-20]
11023 08	Study on solution for eliminating the discharge in low-light-level image intensifier [11023-29]
11023 09	High-precision temperature control scheme and verification for space-borne infrared detectors [11023-31]
11023 0A	Method on multi-dimensional modulation in inter-satellite quantum communication [11023-34]
11023 0C	A helium mass spectrometry pressed integral leak detection technique for ultra-high vacuum devices [11023-36]
11023 0D	Research of the electro-optical coupled equivalent circuit model for DFB laser based on ADS [11023-39]
11023 0E	Experimental study of cat's eye echoes detecting CCD damaged by 1064nm laser [11023-41]
11023 0F	Thermal function in silicon substrate of CCD induced by combined laser [11023-42]

- 11023 OG **Hartmann wavefront sensor based on spherical reference wave** [11023-44]
- 11023 OH **Study on the measurement system of laser beam quality for long distance propagation** [11023-55]
- 11023 OI **Application of wave front distortion compensation technique in single-photon detection system** [11023-56]
- 11023 OJ **An over-top tracking test system for electro-optical detection device** [11023-58]
- 11023 OK **Design of a portable infrared/visible composite target simulator** [11023-59]
- 11023 OL **MTF testing device for photoelectric imaging system based on slit tilting method** [11023-60]
- 11023 OM **Research of the image restoration algorithm based on boundary pre-processing in the space domain and fast computing in the frequency domain** [11023-63]
- 11023 ON **Dynamic infrared target camouflage effect evaluation** [11023-66]
- 11023 OO **Glass bottle cap gap width detection combined with transmission lighting system design based on machine vision** [11023-67]
- 11023 OP **Propagation of circularly symmetric partial coherent ultraviolet beams in atmospheric turbulence** [11023-68]
- 11023 OQ **Ameliorated method of intensity correlation imaging with coherent light illumination** [11023-72]
- 11023 OR **Errors analysis of laser relative navigation for fixed wing aircraft landing** [11023-81]
- 11023 OS **Field studies of polarized reflectance characteristics of natural and manmade objects** [11023-84]
- 11023 OT **High-density interpolation using in optimizing correlated color temperature calculation** [11023-85]
- 11023 OU **Phase noise of RF signal in photonic link** [11023-90]
- 11023 OV **Fusion positioning method of optical measuring equipment and GNSS** [11023-92]
- 11023 OW **Infrared and ICMOS image fusion camera** [11023-94]
- 11023 OX **A handheld high-resolution low-light camera** [11023-95]
- 11023 OY **Recognition of thermal infrared oil tank targets based on blotch detection and clustering and SVM classification** [11023-101]
- 11023 OZ **Comparison of chemometrics method on K detection in soil using laser induced breakdown spectroscopy** [11023-104]

- 11023 10 **Simulation research on optical axis drift of Cassegrain system in micro-vibration environment** [11023-113]
- 11023 11 **A 320×256 readout circuit with wide dynamic range and high injection efficiency** [11023-115]
- 11023 12 **Multi-channel Interferometric SAR/GMTI method for solving the radial velocity ambiguity of moving target** [11023-118]
- 11023 13 **Optical fiber gas sensor based on organic polymer** [11023-122]
- 11023 14 **Spectrum reconstruction algorithm for multi-channel non-uniformly sampled SAR and error analysis** [11023-123]
- 11023 15 **A fast and accurate moving target detection method** [11023-124]
- 11023 16 **Polarization test of VISNIR remote sensors based on Fourier series fitting method** [11023-125]
- 11023 17 **Research on single event upset effect of CMOS image sensor for space application** [11023-126]
- 11023 18 **MCP gain and its influence on ultraviolet photon counting imaging detectors** [11023-129]
- 11023 19 **Approach for prediction of ship angular deformation based on distributed local inertial measurement units** [11023-130]
- 11023 1A **Linear avalanche photodetector based on CMOS process** [11023-133]
- 11023 1B **Intrusion location method of distributed fiber optic for oil and gas gathering pipelines** [11023-135]
- 11023 1C **Design and theory analysis of infrared detector** [11023-136]
- 11023 1D **Spatio-temporal super-resolution implementation based on camera array** [11023-149]
- 11023 1E **Beaconless acquisition tracking and pointing scheme of satellite optical communication in multi-layer satellite networks** [11023-152]
- 11023 1F **Research on the influence of local oscillator power on signal-to-noise ratio of system under balance detection mode in 1.55μm laser coherent detection system** [11023-154]
- 11023 1G **Image reconstruction algorithm analysis of spatially modulated full polarization imaging system** [11023-155]
- 11023 1H **Pulsed thermography for the NDT of honeycomb composite** [11023-156]
- 11023 1I **Design and test of long-wave infrared dynamic scene projector based on IR-CRT** [11023-157]

- 11023 1J **Towards meat quality determination on miniaturized spectral imaging and computer vision technology** [11023-161]
- 11023 1K **Gravity load effect analysis and modal analysis of 1.2meter terahertz antenna for near-field holographic measurement** [11023-162]
- 11023 1L **Fusion technology for polarization-maintaining photonic crystal fiber-optic gyroscope** [11023-168]
- 11023 1M **IR imaging pre-processing system design based on Zynq-7000** [11023-173]
- 11023 1N **Multi-spectral image level-by-level registration algorithm based on A-KAZE feature** [11023-181]
- 11023 1O **The application of industrial CO monitoring based on infrared imaging molecular filter technology** [11023-182]
- 11023 1P **Analysis of SNR in 4-transistor backside-illuminated CMOS image sensor** [11023-183]
- 11023 1S **Quick search and threat evaluation algorithm against sea-skimming IR small targets** [11023-201]
- 11023 1U **Application of SIFT feature vector matching algorithm in binocular stereo vision system** [11023-203]
- 11023 1V **A dual-band infrared fusion ship target extraction method based on Markov random field model** [11023-205]
- 11023 1W **A new method of evaluation of x-ray pulsar detector sensitivity** [11023-211]
- 11023 1X **Explorer of fusion resolution test for fusion night vision system** [11023-212]
- 11023 1Y **The illuminometer based on low-light-level image intensifier** [11023-218]
- 11023 1Z **Study on identification method of transfer function based on spatial frequency test** [11023-221]
- 11023 20 **Hot carrier reliability of radiation hardened T-gate PD SOI NMOSFET after TID radiation** [11023-224]
- 11023 21 **Off-axis digital holography system and paramecium identification method** [11023-227]
- 11023 22 **New design of light field camera based on optic fiber plates** [11023-232]
- 11023 23 **SWIR polarimetric system of spaceborne particulate observing scanning polarimeter** [11023-234]
- 11023 24 **Focal plane fasten alignment and testing for the off-axis space borne mapping camera** [11023-235]

- 11023 25 **The improved method of interpolation computational ghost imaging in computational ghost imaging** [11023-237]
- 11023 26 **System design of dynamic visible scene projector based on digital-micromirror device** [11023-238]
- 11023 27 **Research on noise testing and reduction of low illumination imaging module** [11023-239]
- 11023 28 **Effect of refractive index measurement error on immersion grating spectral lines** [11023-246]
- 11023 29 **Image information from a dual channel optical synthetic aperture imaging system** [11023-249]

HYPERSPECTRAL DETECTION

- 11023 2A **Egg quality traceability based on non-destructive testing technique of hyperspectral characteristics** [11023-4]
- 11023 2B **Hyperspectral intrinsic image decomposition based on local sparseness** [11023-9]
- 11023 2C **Athermalized polarimetric-spectral intensity modulation technology** [11023-13]
- 11023 2D **Dictionary learning based target detection for hyperspectral image** [11023-49]
- 11023 2E **Comparison of hyperspectral retrieval models for soil moisture content** [11023-52]
- 11023 2F **Study on extraction of foreign invasive species *Mikania micrantha* based on unmanned aerial vehicle (UAV) hyperspectral remote sensing** [11023-53]
- 11023 2G **Lens mount for a refractive optics cooled by pulse tube cryocooler** [11023-64]
- 11023 2H **Based on multi-scale hyperspectral near ground remote to sensing the quality of Southern Xinjiang jujube** [11023-93]
- 11023 2I **Relationship between land surface temperature and land use/land cover in Taiyuan, China** [11023-110]
- 11023 2J **Chlorophyll-a concentration quantitative inversion and temporal and spatial variation in Zhelin Bay** [11023-114]
- 11023 2K **Application and research of hyperspectral data in ground environment situation assessment** [11023-119]

Part Two

- 11023 2L **Compact miniature snapshot imaging spectrometry using continuous variable filter** [11023-127]

- 11023 2M **Camouflage target detection based on short-wave infrared hyperspectral images** [11023-132]
- 11023 2N **Review of retrieving soil heavy metal by laboratory-based hyper-spectroscopy** [11023-140]
- 11023 2O **Research on the remote sensing prospecting model for typical uranium mining area along the Sino-Russian economic corridor** [11023-141]
- 11023 2P **A high spectral remote sensing method for hyperspectral imaging** [11023-145]
- 11023 2Q **The extraction of altered mineral information based on WorldView-3 data** [11023-151]
- 11023 2R **Atmospheric correction system for airborne thermal infrared imaging spectrometer: general design** [11023-158]
- 11023 2T **Study on the spectral reconstruction of typical surface types based on spectral library and principal component analysis** [11023-170]
- 11023 2U **Theoretical error analysis of photoelastic modulator based spectropolarimetric imager** [11023-171]
- 11023 2V **Study on hyperspectral detection and identification of invisible damage on kiwifruit by deep learning** [11023-179]
- 11023 2W **Design of a visible-near-infrared hyperspectral microscopy optical systems** [11023-185]
- 11023 2X **Design of a very high resolution FTIR atmospheric monitoring pre-amplifier circuit** [11023-190]
- 11023 2Y **Progress and prospectives on engineering application of hyperspectral remote sensing for geology and mineral resources** [11023-192]
- 11023 2Z **A design for a full-spectrum imaging circuit** [11023-193]
- 11023 30 **Improved N-FINDR based on object retrieval initialization for finding endmembers** [11023-196]
- 11023 31 **Material classification technology based on convolutional neural networks** [11023-197]
- 11023 32 **Study on the growth and spectral response of rice with different nitrogen morphologies in water-saving irrigation model** [11023-206]
- 11023 33 **The impact of drift angle control and LTAN drift towards hyperspectral solar occultation and calibration** [11023-207]
- 11023 34 **Development of unmanned airborne array filter spectroscopic multispectral camera** [11023-213]
- 11023 35 **Acquisition method and calibration application on hyperion hyperspectral reflectance** [11023-214]

- 11023 36 **Research of wide swath image mosaic technology based on area-array detector adopting whiskbroom scanning mode** [11023-220]
- 11023 37 **Multispectral evaluation method of low characteristic signal propellant** [11023-223]
- 11023 38 **Temperature sensitivity of the focal plane of thermal infrared splitting window band** [11023-229]
- 11023 39 **The on-orbit calibration method of hyper-spectral fluorescence imaging spectrometer** [11023-230]
- 11023 3A **Study on the depolarization grating** [11023-240]

LASER DETECTION

- 11023 3B **Kilowatt-level, high brightness, narrow-linewidth PM fiber amplifiers based on laser gain competition** [11023-14]
- 11023 3C **Morphology study of ZnTe crystals grown from Te-rich solution** [11023-15]
- 11023 3D **4.115kW near diffraction-limited high quality fiber laser based on 25/400 μ m fiber** [11023-17]
- 11023 3E **Influence of space environments on the laser damage of space laser system** [11023-21]
- 11023 3F **The influence of core filling of the gradient multimode fiber** [11023-22]
- 11023 3G **Birefringence of PM laser fibers with different structure** [11023-23]
- 11023 3H **Synergistic effect of laser radiation and space natural radiation environments on spacecraft** [11023-24]
- 11023 3I **Design and realization of target tracking module of UAV laser charging system** [11023-25]
- 11023 3J **Fabrication of Yb/Ce-codoped aluminosilicate pedestal laser fiber** [11023-50]
- 11023 3K **Research on compatible green stealth photonic thin film against near infrared and 1.54 μ m laser** [11023-54]
- 11023 3L **Analysis on key technologies of laser defense against high speed moving stealth target** [11023-61]
- 11023 3N **Vortex beam amplification based on chemical oxygen iodine amplifiers** [11023-106]
- 11023 3O **Simulation study for the influence of laser-emitting system on beam quality** [11023-109]
- 11023 3P **A high power Q-switched Ho YAG laser pumped by two Tm-fiber lasers** [11023-112]

- 11023 3Q **Dynamic modeling and parameter updating of ϕ 150mm mirror** [11023-116]
- 11023 3R **Effects of F⁻ on the optical properties of Yb³⁺-doped large mode area silica fiber prepared by sol-gel method** [11023-166]
- 11023 3S **Numerical study of effects of incoming flow inhomogeneity on the flow characteristic at the gain region of COIL** [11023-199]
- 11023 3T **266nm pulsed laser damage on UV image intensifier** [11023-208]
- 11023 3U **Realization of Lambertian laser source based on light scattering in solution** [11023-209]
- 11023 3V **Stable Yb-doped all-fiber nanosecond pulse laser based on electrochemical delamination black phosphorus** [11023-217]
- 11023 3W **DF chemical laser's diluent gas influence on output power and absorption on zeolite** [11023-241]
- 11023 3X **The ZnGeP2 OPO pumped by the Ho:YAG laser** [11023-244]

MIRCO-NANO DETECTION

- 11023 3Y **Arbitrary-bent-waveguide optical diodes based on surface magnon polariton** [11023-19]
- 11023 3Z **1.3 μ m laterally coupled distributed feedback laser with a triangular prism etched facet** [11023-30]
- 11023 40 **Deep tissue focusing based on machine learning** [11023-33]
- 11023 41 **Theoretical analysis of multiple plasmon-induced absorption effects in plasmonic waveguides side-coupled with resonators structure and its applications** [11023-38]
- 11023 42 **A novel polysilicon light source and its on-chip optical interconnection structure design** [11023-70]
- 11023 43 **High-precision high-speed and noninvasive optic distance measurement** [11023-87]
- 11023 44 **Periodic bulk motion correction method in decorrelation-based optical coherence tomography angiography** [11023-88]
- 11023 45 **Fabrication of the drift-enhanced InGaAs p-i-n photodetectors** [11023-89]
- 11023 46 **Two-photon laser scanning microscopy integrated with light stimulus system** [11023-102]
- 11023 47 **Laser cleaning of the corrosion products on marine steels with spectroscopic control** [11023-103]

- 11023 48 **Mechanism analysis of laser removal of metal oxide on the marine steel based on LIBS**
[11023-107]
- 11023 49 **Usefulness of the in vivo large field of view confocal line scanning ophthalmoscope in murine**
[11023-108]
- 11023 4A **Influence and evaluation of vibrating screen methods on subjective speckle reduction**
[11023-131]
- 11023 4B **Resistive switching memory devices based on all-inorganic perovskite CsPbBr₃ quantum dot**
[11023-138]
- 11023 4C **Design of a real-time laser stimulus system based on MEMS-based confocal laser scanning microscope** [11023-147]
- 11023 4E **Miniature vibration sensor based on a compact microfiber probe** [11023-184]
- 11023 4F **A study on the photoresponse of three-dimensional reduced graphene oxide foams based field effect transistors** [11023-198]
- 11023 4G **Simulation of single mode optical waveguide and Mach-Zehnder interferometer in deep-ultraviolet band** [11023-210]
- 11023 4H **High brightness narrow-stripe broad-area diode lasers at 976 nm** [11023-216]
- 11023 4I **High-order transversal mode suppression by facet loss in 970nm broad area laser** [11023-222]
- 11023 4J **Enhancement of surface plasmon resonance in a coupled graphene waveguide-cavity system**
[11023-225]
- 11023 4K **Study on a photonic crystals stealth film for 1064nm laser and thermal infrared** [11023-233]
- 11023 4L **Periodical subwavelength light focusing by proximity projection grating structure** [11023-242]
- 11023 4M **Hybrid graphene/metal plasmonic fiber-optic sensing application** [11023-247]
- 11023 4N **Second harmonic and sum frequency generation from nanostructured semiconductor film**
[11023-248]

SPACE DETECTION

- 11023 4O **Flexible broadband optical frequency comb generation for dense wavelength-division multiplexing passive optical networks** [11023-228]
- 11023 4P **The influence of tracking divergence angle on far-field light correlation in optical communication** [11023-231]

11023 4Q **Space-division multiplexing technology based on multi-core fiber and few-mode fiber in passive optical networks** [11023-243]

APPLICATIONS

- 11023 4R **Infrared small target detection algorithm based on potential regions proposal** [11023-8]
- 11023 4T **Combat effectiveness evaluation of air-crystal C4ISR early warning detection system based on improved ADC** [11023-26]
- 11023 4U **Reliability analysis method of aerospace equipment system based on big data** [11023-40]
- 11023 4V **Research on trajectory optimization of powered flight for strong coupling and multi-constraints vehicle** [11023-47]
- 11023 4W **Design considerations of the FBAR on-board test** [11023-73]
- 11023 4X **A new guidance superiority model for cooperative air combat** [11023-75]
- 11023 4Y **Index-weight integration optimized by expert reliability** [11023-77]
- 11023 4Z **The application of intelligent modelling system in temperature compensation of SLD light source** [11023-80]
- 11023 50 **Design of strapdown laser guided seeker** [11023-91]
- 11023 51 **Vehicle recognition using multi-task cascaded network** [11023-100]
- 11023 52 **Improved electromagnetic wave propagation model on the South China Sea** [11023-111]
- 11023 53 **Radio spectrum analysis of Qiongzhou Strait-Beibu Gulf** [11023-128]
- 11023 54 **A method for determining the fusion trajectory parameters of optical measurement data** [11023-137]
- 11023 55 **Study on airborne opto-electronic image and three-dimensional spatial data fusion** [11023-194]
- 11023 56 **Cold-thermal wake characteristics of submarine in temperature-density stratified seawater** [11023-219]
- 11023 57 **Simulation analysis of signal-to-noise ratio of the underwater range gating imaging system** [11023-226]
- 11023 58 **Analysis of mode instability in DFB fiber laser hydrophone array** [11023-245]

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.

An, Xue-zhi, 55
Bai, Xiaofeng, 06, 0W, 1Y
Bao, Donghao, 2L
Bao, Fangdi, 4O, 4P, 4Q
Bi, Yong, 4A
Bian, Zhi-feng, 24
Cai, Meng, 3P, 3X
Cao, Mingxuan, 4B, 4F
Cao, Guixing, 1E
Chai, Juanfang, 4R
Chai, Min, 0V
Chai, Xueping, 2H
Chao, Tao, 4V
Che, Yongfei, 2O
Che, Yongli, 4B, 4F
Chen, Bao-dan, 52, 53
Chen, Chi, 0T
Chen, Chong, 2H
Chen, Danping, 3R
Chen, Dapeng, 1H
Chen, Fang, 3P, 3X
Chen, Guanghui, 32
Chen, Haixia, 1F
Chen, Houlei, 2G
Chen, Jiejing, 0L
Chen, Jixin, 0U
Chen, Liwu, 29
Chen, Ping, 22
Chen, Ren, 29
Chen, Shaoyong, 0U
Chen, Weiqi, 1E
Chen, Xian, 4Z
Chen, Xiaoming, 47, 48
Chen, Xiaoyong, 0Y
Chen, Xulang, 1Y
Chen, Yongping, 1A
Chen, Yu-dan, 0N, 3I
Chen, Yujin, 4T
Chen, Zhiliang, 3Y
Chen, Zhiliang, 4B, 4F
Cheng, Hong-chang, 0X, 1P, 27
Cheng, Huang, 2N
Cheng, Wei, 06
Cheng, Yao-Jin, 0C
Cheng, Zhengxi, 1A
Chi, Shengwei, 10
Chu, Xinbo, 57
Chung, W. See, 4L
Cui, Chengguang, 16
Cui, Ding, 3Q
Cui, Guangmang, 0O
Cui, Jiangwei, 20
Cui, ShuHua, 54
Dai, Caihong, 0T
Dai, Haitao, 4B
Dai, Jian, 4I
Dai, Jingjing, 2N
Dai, Wei, 3E, 3H
Dai, Zhiyong, 13
Deng, Zhaoxiang, 3Q
Ding, Rui, 1E
Ding, Yigang, 3H
Dong, Chunhong, 2K
Dong, Haijie, 38
Dong, Jing, 1U
Dong, Xinfeng, 2Y
Dou, Xianan, 3T
Dou, Yufei, 4U
Du, Baolin, 0H, 0I, 0J, 0K, 1I, 26, 3L
Du, Chunlei, 07
Du, Jiangpeng, 4R
Du, Weichuan, 4H, 4I
Duan, Ping, 2I
Duan, Xiangyang, 2A
Fan, Boyu, 0U
Fan, Guihua, 1D
Fan, Jinyu, 44, 49
Fan, Junxing, 3Y
Fan, Longfei, 16
Fang, Haihong, 4U
Fang, Junyong, 34
Fang, Xilin, 32
Fei, Chengbo, 1X
Feng, Suyu, 3R
Fu, Fangfang, 0D
Fu, Jie, 0H, 0I, 3L
Gan, Fuping, 2Y
Gan, Yong-Ying, 1G
Gao, Cong, 29
Gao, Feng, 44, 46, 49, 4C
Gao, Kun, 1V
Gao, Qiang, 55
Gao, Songxin, 4H, 4I
Gao, Weinan, 4A
Gao, Xin, 0Q
Gao, Yang, 4W
Gong, Cai-Lan, 36
Gong, Hua, 5I

Gong, Wei, 40
 Gong, Xiaoli, 00
 Gong, Zhi-peng, 2X, 2Z
 Gu, Haidong, 3U
 Gu, Jie, 0U
 Gu, X. W., 45
 Guan, Zhao, 1N
 Guo, Liang, 56
 Guo, Qi, 20
 Guo, Xinsheng, 10
 Guo, Yongxiang, 16
 Guo, Yue, 1Z
 H., Chaoshuai, 4Y
 Han, Feng, 2L
 Han, Kuiguo, 47, 48
 Han, Y. J., 3Z
 Han, Yu, 1F
 Hao, Mingli, 2E
 Hao, Z. B., 3Z
 He, Lin, 1V
 He, Qi-Yi, 02
 He, Tao, 39
 He, Yao-ji, 3F, 3G
 He, Ying, 55
 He, Ying-Ping, 06, 0C
 He, Zhenxin, 30
 Hong, Jin, 09, 23
 Hou, Qingyu, 1M
 Hou, Weizhen, 2T
 Hu, BingLiang, 2D, 2W
 Hu, Dongxia, 0M
 Hu, Feng, 4L
 Hu, Hu-jun, 1W
 Hu, Leili, 0H, 0I, 0K, 1I, 26, 3L
 Hu, Lejia, 40
 Hu, Lili, 3R
 Hu, Richa, 56
 Hu, Wenyong, 2E
 Hu, Yao, 4H, 4I
 Hu, Yimin, 03
 Hu, Yong, 36
 Hu, Zheng, 52, 53
 Huai, Ying, 3N, 3S
 Huang, Fu-yu, 0N
 Huang, Jin, 39
 Huang, Jing, 2Z
 Huang, Linhai, 0G
 Huang, Qiang, 50
 Huang, Shiqi, 2A
 Huang, Shuangshuang, 3A
 Huang, Wujun, 06
 Huang, Xujie, 2C
 Ji, Chunhen, 57
 Ji, Lanting, 4G
 Ji, Ming, 10, 55
 Ji, Wei, 3G
 Jia, Shuqin, 3S
 Jia, Xiaodong, 1J
 Jia, Xin, 1Z
 Jiang, Changlu, 0L
 Jiang, Guang-wei, 33
 Jiang, Jiali, 3J
 Jiang, Lai, 3O
 Jiang, Lu, 4Z
 Jiang, Xunpeng, 0Z
 Jiang, Yi, 12, 14
 Jiao, Gang-cheng, 0W, 1P, 27
 Jin, Chuan, 1P
 Jin, Dongdong, 57
 Jin, Libing, 38
 Jin, Lufan, 4B, 4F
 Jin, Xiaoxi, 3V
 Jin, Xingjie, 46, 49, 4C
 Jin, Yuncheng, 40
 Jin, Yuqi, 3N, 3S
 Jing, Feng, 3D, 3J
 Jing, Gang, 03
 Ju, Guohao, 1A
 Ju, Xiaoyan, 4U
 Juan, Song, 1W
 Kang, Dengkui, 0L
 Kang, Junjie, 4H, 4I
 Kong, Wen, 44, 49, 4C
 Kong, Xue, 4V
 Kong, Y. C., 45
 Kong, Ze-bin, 17
 L., Faming, 4Y
 Lang, Bo, 50
 Li, Qingyan, 4B
 Li, Baosheng, 21
 Li, Bing, 3P, 3X
 Li, Ce, 1F
 Li, Cheng-yu, 3D
 Li, Chong, 0Q
 Li, Chong-yang, 24
 Li, Chunlai, 2R
 Li, Dailin, 31
 Li, Debiao, 4U
 Li, Dingquan, 2F
 Li, Donghui, 2T
 Li, Faquan, 1O
 Li, G. Y., 45
 Li, Guanghan, 25
 Li, Guilei, 31
 Li, H. T., 3Z
 Li, Haiwei, 2M
 Li, Hanbo, 2Q
 Li, Hongcai, 30
 Li, Hongyu, 1N
 Li, Jianhui, 2F, 32
 Li, Jun-Wei, 0S
 Li, Li, 0H, 0I, 1I, 3L
 Li, Liang-fu, 55
 Li, Lijing, 04
 Li, Long-Ting, 0S
 Li, Min, 08, 0C
 Li, Na, 2Y
 Li, Pan, 58
 Li, Sai, 36
 Li, Shuang, 2U

Li, Shuang, 4J, 4M
 Li, Shuting, 2I
 Li, Tengfeng, 4B
 Li, Wanyue, 49
 Li, Wencai, 1J
 Li, Xiang-yang, 1I
 Li, Xin, 2X, 2Z
 Li, Xin, 35
 Li, Xiu-qiang, 1C
 Li, Xi-yu, 0Q
 Li, Yan, 38
 Li, Yanpeng, 4E
 Li, Yi, 4H, 4I
 Li, Yifan, 4B, 4F
 Li, Yingchun, 1D
 Li, Yongfang, 1N
 Li, Yong-ping, 2Z
 Li, Yongqiang, 16
 Li, Yu-dong, 17
 Li, Yun-duan, 33
 Li, Yuwei, 3J
 Li, Zhen, 58
 Li, Zhengqiang, 2T
 Liang, Jingtao, 2G
 Liang, Xiaowen, 20
 Li-e, OuYang, 3D
 Lin, Aoxiang, 3J
 Lin, HaiChen, 54
 Lin, Han, 2U
 Lin, Juan, 1V
 Ling, Ming-chun, 09
 Liu, Bei-Bei, 0C
 Liu, Bin, 22
 Liu, Chengyu, 2R
 Liu, Chunlong, 56
 Liu, Chuntong, 30
 Liu, Dan, 4J, 4M
 Liu, Deming, 4E
 Liu, Fang, 51
 Liu, Feng, 08, 0C
 Liu, Fu-hao, 11
 Liu, Guipeng, 0X
 Liu, Hu, 10
 Liu, Jianhui, 1J
 Liu, Jie, 3I
 Liu, Jing, 0S
 Liu, Jingxian, 0U
 Liu, Jingxuan, 44
 Liu, Jin-sheng, 1W
 Liu, Linmei, 1O
 Liu, Min, 0D
 Liu, Qinxiao, 0M
 Liu, Quan, 3A
 Liu, Ruihuang, 3K, 4K
 Liu, Shuang, 3J
 Liu, Shuyang, 1J
 Liu, Tao, 4E
 Liu, Ting-ting, 4W
 Liu, Wei, 1S, 1U
 Liu, Wei-xin, 17
 Liu, Wende, 0T
 Liu, Xiaodong, 1X
 Liu, Xiaolong, 0D
 Liu, Xudong, 0P
 Liu, Xue, 34
 Liu, Yan, 03
 Liu, Yiji, 4R
 Liu, Yimin, 4J, 4M
 Liu, Yingjun, 0D
 Liu, Yong-an, 18
 Liu, Yujian, 25
 Liu, Yuming, 3E
 Liu, Zhe, 18
 Liu, Zhen-hai, 09
 Liu, Zhenhai, 23
 Liu, Zhigen, 2J
 Liu, Zhijian, 2I
 Lou, Fengguang, 3R
 Lu, Chang-ming, 0Q
 Lü, Chengxu, 0Z
 Lu, Qinhui, 48
 Luo, Huaping, 2H
 Luo, Qiang, 3D
 Luo, Wangjun, 2F
 Luo, Y., 3Z
 Luo, Zhongjie, 1O
 Lv, Chong, 24
 Lv, Hong, 0P
 Lv, Lintao, 2A
 M., Gang, 4Y
 Ma, Ding, 1I
 Ma, Hong-xing, 1S
 Ma, Jing, 4O, 4P, 4Q
 Ma, Lan, 0Y
 Ma, Pengfei, 3B
 Ma, Shixin, 30
 Ma, Si-ye, 3G
 Ma, Wen, 2K
 Ma, Yan, 2T
 Ma, Yanxing, 3B
 Ma, Zhe, 3O
 Ma, Zhongtian, 4O, 4P, 4Q
 Mao, Yankai, 0K
 Mao, Yilan, 2T, 39
 Mei, Jiexiang, 05
 Meng, Daren, 3B
 Meng, Qing-long, 2V
 Meng, Qingyun, 06, 1Y
 Miao, Zhuang, 0C, 1Y
 Min, Zhi-fang, 1S
 Mu, Tingkui, 2L
 Ni, Hao, 3I
 Ni, Li, 3J
 Ni, Suhan, 0W
 Nie, Changbin, 07
 Nie, Jinsong, 0E, 0F
 Nie, Tiening, 0V
 Ning, Guodong, 4V
 Niu, B., 45
 Niu, Kang, 0Z

Pan, Cuihong, 2J
 Pan, Daowei, 43
 Pan, Ying, 17
 Pan, Zhibin, 2D
 Pei, Chonglei, 57
 Peng, Bo, 57
 Peng, Juncui, 0Y
 Peng, Kun, 3J
 Peng, Weishi, 4X
 Peng, Yihuan, 2J
 Qi, Hong-Xing, 36
 Qi, Jun-Cheng, 22
 Qi, Yannan, 0Z
 Qian, Jinchao, 42
 Qian, Yuan, 1K
 Qian, Yunsheng, 0W, 0X
 Qiao, Kai, 0X, 1P, 27
 Qin, Shi-qiao, 19
 Qiu, Hongjin, 27
 Qiu, Jia-xin, 3G
 Qiu, Weigen, 1X
 Qiu, Xipeng, 0T
 Qiu, Yin, 36
 Qiu, Zhen-wei, 09
 Rao, Xuejun, 0G
 Ren, Bin, 08
 Ren, Fang, 39
 Ren, Junjiang, 3F
 Ren, Zhiwei, 2B
 Rong, Liang, 3F, 3G
 Rong, Peng, 2Z
 Sai, Xiao-feng, 18
 Sang, Fengting, 3S
 Shang, Jing, 2V
 Shao, Honglan, 2R
 Shao, Si-pei, 1W
 Shen, Jiawei, 0W
 Shen, Jun, 07
 Shen, Weimin, 2C
 Shen, Yufei, 1E
 Shen, Zicai, 3E, 3H
 Sheng, Li-zhi, 18
 Shi, Feng, 0P, 18
 Shi, Guohua, 43, 44, 46, 49, 4C
 Shi, Hong-li, 08
 Shi, Lei, 0A
 Shi, Yi, 3D
 Si, Ke, 40
 Song, Mao-xin, 09, 23
 Song, Ran, 4G
 Song, Shuai, 35
 Song, WeiHong, 54
 Su, Jian, 2X
 Su, Jingting, 0R
 Su, Juan, 4G
 Su, Rongtao, 3B
 Sui, Ying, 37
 Sun, C. Z., 3Z
 Sun, Feiying, 07
 Sun, Hongliang, 42
 Sun, Huayan, 1D
 Sun, Ke, 0E, 0F
 Sun, Lei, 57
 Sun, Minyuan, 4A
 Sun, Qizhen, 4E
 Sun, Shihao, 3J
 Sun, Xiao-Bing, 1G
 Sun, Xiaoquan, 3T
 Sun, Yun-zhu, 33
 Sun, Yuzhe, 25
 Sun, Zuoming, 1H, 1L
 Tan, Hao, 4H, 4I
 Tan, Liying, 4O, 4P, 4Q
 Tan, Shijie, 4E
 Tang, Chengshi, 4R
 Tang, Chun, 4H, 4I
 Tang, Donglin, 13
 Tang, Ning, 43
 Tang, Qian, 28
 Tang, Shaofan, 2P
 Tang, Xiaodong, 0X
 Tao, Jinyou, 1N
 Tao, Ying, 1E
 Tian, Hanyou, 1J
 Tian, Jin-shou, 18
 Tian, Qinghua, 1E
 Tong, Yanqun, 47, 48
 Tuo, Wenbo, 1M
 W., Di, 4Y
 W., Longtao, 4Y
 Wang, Bo, 17
 Wang, Chao, 47
 Wang, Dongdong, 4A
 Wang, Dongzhou, 4A
 Wang, Fang, 0M
 Wang, Fang, 2J
 Wang, Fang-Yuan, 1G
 Wang, Guangping, 1V
 Wang, Hairen, 1K
 Wang, Hang, 3K, 4K
 Wang, Hao, 30
 Wang, Hao, 38
 Wang, J., 3Z
 Wang, Jian-jun, 3D, 3J
 Wang, Jianyu, 2R
 Wang, Jie-Jun, 1G
 Wang, Jing, 1V
 Wang, Jingyi, 16
 Wang, Juan, 2G
 Wang, Jundi, 4X
 Wang, Junjie, 4E
 Wang, Junxiang, 43
 Wang, Kun-shu, 17
 Wang, L., 3Z
 Wang, Lei, 0L
 Wang, Lian, 52, 53
 Wang, Lin, 3D
 Wang, Meng, 3R
 Wang, Ning, 31
 Wang, Ningming, 15

Wang, Q. C., 3Z
 Wang, Qi-hua, 3D
 Wang, Qiushi, 3U
 Wang, Quan, 44
 Wang, Rui, 4X
 Wang, Shaofei, 0J, 0K, 1I
 Wang, Sheng-kai, 1P, 27
 Wang, Shengyun, 0L
 Wang, Shikai, 3R
 Wang, Shuaihao, 4R
 Wang, Shuang, 2M
 Wang, Siyuan, 04
 Wang, Songsong, 2J
 Wang, Songyan, 4V
 Wang, Tao, 3V
 Wang, Tian-long, 52, 53
 Wang, Wen-cong, 1W
 Wang, Xi, 3T
 Wang, Xiao, 34
 Wang, Xiaohao, 03
 Wang, Xiaoheng, 1H
 Wang, Xiaolin, 3B
 Wang, Xiaolin, 4T
 Wang, Xiaolong, 3J
 Wang, Xin-Qiang, 1G
 Wang, Y. Q., 3Z
 Wang, Y., 45
 Wang, Yan-xiang, 2V
 Wang, Yanyan, 13
 Wang, Yi-Kun, 36
 Wang, Yuancheng, 0M
 Wang, Yuanxiang, 1M
 Wang, Yue, 32
 Wang, Ze-yu, 3F, 3G
 Wang, Zhao, 4I
 Wang, Zhaoli, 2G
 Wang, Zhijie, 3W
 Wei, Baojun, 3I
 Wei, Jia-hua, 0A
 Wei, Ju-hong, 3D
 Wei, Lingjiao, 2G
 Wei, Peng, 1B
 Wei, Wei, 35
 Wei, Wenju, 0G
 Wen, Jing, 3D
 Wen, Yuan, 33
 Wu, Caixia, 3U
 Wu, Changyi, 3Y
 Wu, Chi, 4G
 Wu, Chunfeng, 1M
 Wu, Deyong, 4H, 4I
 Wu, Dong-sheng, 0N, 3I
 Wu, Feng, 4O, 4Q
 Wu, Hanshuo, 3V
 Wu, Jian, 3V
 Wu, Jianhong, 3A
 Wu, Kenan, 3N
 Wu, Kujun, 1O
 Wu, Lingda, 2B
 Wu, Lingxi, 4N
 Wu, Peng, 07
 Wu, Wei, 19
 Wu, Wei, 2A
 Wu, Xin-jian, 1S
 Wu, Yinhua, 2M
 Wu, Zhi-jun, 55
 Wu, Zinan, 13
 Xia, Liangping, 07
 Xia, Lihua, 2J
 Xia, Yule, 44
 Xian, Yuqiang, 3Q
 Xiao, Bingsong, 4X
 Xiao, Chun, 3G
 Xiao, Kaiqi, 0U
 Xiao, Yingyi, 4J, 4M
 Xiao, Zhifang, 32
 Xie, Fei, 0J, 1I, 26
 Xie, Feng, 2R
 Xie, Huan, 55
 Xie, Jialin, 42
 Xie, Yang, 0R
 Xie, Yuntao, 3T
 Xin, Xiangjun, 1E
 Xiong, B., 3Z
 Xiong, Yuanhui, 1O
 Xu, Cheng-lin, 3G
 Xu, Chi, 2T
 Xu, Haizhou, 2F
 Xu, Hua, 2T
 Xu, Jihui, 4T
 Xu, Kaikai, 42
 Xu, Ke, 5I
 Xu, Kun, 4I
 Xu, Li, 17
 Xu, Neng, 18
 Xu, Wen-Bin, 0S
 Xu, Xia-xi, 4W
 Xu, Xin, 46, 4C
 Xu, Xingkui, 1M
 Xu, Yang, 4X
 Xu, Yingying, 0T
 Xuan, Ming, 17
 Xue, Bin, 1N
 Xue, Lu, 5O
 Xue, Qing, 05
 Xue, Yang, 04
 Yan, Bo, 1Y
 Yan, Bokun, 2Y
 Yan, Hao-Fang, 1G
 Yan, Junkai, 0D
 Yan, Lei, 1P
 Yan, Mao, 2X
 Yan, Qiangqiang, 2M
 Yan, Xuefei, 03
 Yan, Zhang, 2V
 Yan, Zhijun, 4E
 Yang, Miao, 1Z
 Yang, Benyong, 23
 Yang, Biao, 1D
 Yang, Chao-zhi, 3D

Yang, Cheng-ya, 2V
 Yang, Dan, 31
 Yang, Fu, 3W
 Yang, Fugui, 3U
 Yang, Hongchun, 23
 Yang, Hongru, 0L
 Yang, Ji, 1K
 Yang, Jianhua, 4Z
 Yang, Jingqi, 3O
 Yang, Junbo, 4B
 Yang, Lijia, 3B
 Yang, Mengfang, 4Z
 Yang, Min, 0S
 Yang, Ming, 4V
 Yang, Ning, 47
 Yang, Ru, 0A
 Yang, Rui, 3C
 Yang, Sa, 4J, 4M
 Yang, Shuning, 06
 Yang, Wei-Feng, 1G
 Yang, Xian-heng, 3D
 Yang, Xiaojun, 08, 0C
 Yang, Yong, 33
 Yang, Zhaohua, 25
 Yang, Zhen, 1M
 Yao, Jianquan, 4B, 4F
 Yao, Ze, 06
 Ye, Changchun, 3Q
 Ye, Fawang, 2O
 Ye, Song, 1G
 Yi, Qin, 2N
 Yi, Yi-fen, 55
 Yin, QingYe, 2W
 Yin, Shaoyun, 07
 Ying, Jia-ju, 0N, 3I
 Yu, Bing, 0L
 Yu, Chunlei, 3R
 Yu, Guangbao, 1O
 Yu, Qi, 42
 Yu, Shuai, 41
 Yu, Siyuan, 4O, 4P, 4Q
 Yu, Tao, 2W
 Yu, Xiaotao, 21
 Yu, Xuefeng, 20
 Yu, Youliang, 2F
 Yu, Yu, 4B, 4F
 Yu, Zhangfa, 2Q
 Yu, Zheng-yang, 2X, 2Z
 Yuan, Heng, 25
 Yuan, Jun, 42
 Yuan, Yanwei, 0Z
 Yuanyuan, 27
 Yuan, Yuan, 4A
 Yun, Luo, 3D
 Zeng, Rongliang, 2F, 32
 Zeng, Xuan, 2J
 Zhai, Yue, 3W
 Zhan, Huan, 3J
 Zhan, Jie, 4N
 Zhang, Chun-rui, 24
 Zhang, Ang, 48
 Zhang, Chao, 03
 Zhang, Chen, 1J
 Zhang, Chun Min, 28
 Zhang, Chunlin, 4Z
 Zhang, Fan, 12, 14
 Zhang, Fang, 10
 Zhang, Ge, 3G
 Zhang, Gui, 2F
 Zhang, Haiyan, 58
 Zhang, Hongjie, 4U
 Zhang, Jianlong, 1M
 Zhang, Junning, 0Z
 Zhang, Lei, 3R
 Zhang, Liang, 4H, 4I
 Zhang, Meng, 35
 Zhang, Mengyu, 16
 Zhang, Min, 22
 Zhang, Mingxin, 0E, 0F
 Zhang, Mingzhu, 1K
 Zhang, Qi, 1E
 Zhang, Qiang, 2M
 Zhang, Shiming, 1X
 Zhang, Shuo, 4A
 Zhang, Tai-Min, 0C
 Zhang, Tian, 41
 Zhang, Tian, 4U
 Zhang, Tinghua, 1D
 Zhang, Tong, 2K
 Zhang, Wei, 0V, 54
 Zhang, Wei, 1B
 Zhang, Wen-juan, 55
 Zhang, Wen-Tao, 1G
 Zhang, Xiaohong, 34
 Zhang, Xiaorong, 2D, 2M
 Zhang, Xuanyi, 05
 Zhang, Xusheng, 56
 Zhang, Yan, 11
 Zhang, Yating, 4B, 4F
 Zhang, Yexin, 21
 Zhang, Yichen, 4N
 Zhang, Yifan, 1E
 Zhang, Yiye, 40
 Zhang, Yizhuo, 3U
 Zhang, Yong, 51
 Zhang, Yuansheng, 3P, 3X
 Zhang, Yuantao, 2Q
 Zhang, Yugui, 2X
 Zhang, Yunhao, 1J
 Zhang, ZhaoHui, 2W
 Zhang, Zhaotong, 42
 Zhang, Zhi-fei, 24
 Zhang, Zhijia, 05
 Zhang, ZhouFeng, 2W
 Zhao, Anna, 1J
 Zhao, Bao Chang, 28
 Zhao, Bao-sheng, 18
 Zhao, Boacheng, 29
 Zhao, Chunyan, 35
 Zhao, Gu-hao, 0A

Zhao, Jianming, 42
Zhao, Jinghao, 20
Zhao, Jufeng, 0O
Zhao, Jun, 37
Zhao, Kai-xuan, 09
Zhao, Miguang, 2G
Zhao, Peng-fei, 3D
Zhao, Tianliang, 3N
Zhao, Tianze, 1V
Zhao, Yanhua, 38
Zhao, Yiming, 1B
Zhao, Yongming, 4J
Zheng, Baichao, 58
Zheng, Qiwen, 20
Zheng, Tianran, 0M
Zheng, Ting-fing, 37
Zheng, Xi, 2D
Zheng, Xiaobing, 35
Zhong, Libo, 0G
Zhong, Xin, 0U
Zhou, Bing, 0N
Zhou, Dezhao, 0H, 0I, 0J, 0K, 3L
Zhou, Hang, 20
Zhou, Jian, 1H
Zhou, Jie, 3O
Zhou, Jinzan, 41
Zhou, Kun, 4H, 4I
Zhou, Lin, 03
Zhou, Pu, 3B, 3V
Zhou, Qi, 0R
Zhou, Renlong, 4J, 4M, 4N
Zhou, Shaopan, 1N
Zhou, Weijie, 05
Zhou, Yi-ming, 19
Zhou, Yue, 41
Zhou, Zhipeng, 3W
Zhu, Chen-guang, 37
Zhu, Huafeng, 31
Zhu, Jiali, 1X
Zhu, Lei, 10
Zhu, Liyao, 0O
Zhu, Qiu-li, 0A
Zhu, Rihong, 3J
Zhu, Shuang-shuang, 09
Zhu, Tianyi, 34
Zhu, Wei-ming, 17
Zhu, Yu, 0A
Zhu, Yun, 1S, 1U
Zhuang, Qinghe, 0D
Zong, Si-Guang, 02
Zou, Dong-yang, 3D
Zou, Peng, 09, 23
Zuo, Shengjia, 1F
Zuo, Yingxi, 1K

Conference Committee

Conference Chairs

Qifeng Yu, National University of Defense Technology (China)

Wei Huang, Northwestern Polytechnical University (China)

You He, Naval Aeronautical University (China)

Organizing Committee Chairs

Weiguo Liu, Xi'an Technological University (China)

Feng Shi, Science and Technology on Low-light-level Night Vision
Laboratory (China)

Nanjian Wu, Institute of Semiconductors, Chinese Academy of Sciences
(China)

Quan Pan, Northwestern Polytechnical University (China)

Program Committee Chairs

Weiqi Jin, Beijing Institute of Technology (China)

Jin Lu, Tianjin Jinhang Institute of Technical Physics (China)

Introduction

We had the great honor of organizing The Fifth Symposium on Novel Optoelectronic Detection Technology and Application. It was truly a great pleasure for us to greet more than 300 participants from many different countries attending this symposium. We firmly believe this symposium will become an important international event in the field of optoelectronic detection technology.

The Fifth Symposium on Novel Optoelectronic Detection Technology and Application was sponsored by the Division of Information and Electronic Engineering of the Chinese Academy of Engineering (China), and the Science and Technology on Low-Light-Level Night Vision Laboratory (China). The symposium was organized by the Chinese Society for Optical Engineering and the Photoelectronic Technology Committee of the Chinese Society of Astronautics, and Xi'an Technological University (China).

The purpose of this symposium was to provide a forum for the participants to report and review the innovative ideas and up-to-date progress and developments, and discuss the novel approaches to application in the optoelectronic detection field. It was sincerely hoped that the research and development in the optoelectronic detection field were promoted, and the international cooperation in sharing common interests enhanced.

On behalf of the other co-chairmen, and the organizing committee of this symposium, we would like to heartily thank our sponsors and cooperating organizers for all they have done for the symposium. Thanks also to all the authors for their contributions to the Proceedings; to all of the participants and friends for their interest and efforts in helping us to make the symposium possible; to the program committee for their effective work and valuable advice, especially the secretariat; and to the staff of SPIE for their tireless effort and outstanding services in preparing the symposium and publishing the Proceedings.

Qifeng Yu
Wei Huang
You He

