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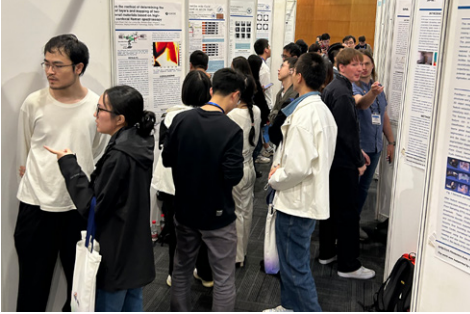
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On behalf of your 2024 SPIE/COS Photonics Asia General Chairs

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SPIE 2024 President,
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Contents

CONFERENCE PA101 PAGE 0 Advanced Lasers, High-Power Lasers, and Applications XV Chairs:Shibin Jiang; Zhaoyang Li; Ingmar Hartl	CONFERENCE PA111 PAGE 0 Optics in Health Care and Biomedical Optics XIV Chairs:Qingming Luo; Xingde Li; Ying Gu; Dan Zhu
CONFERENCE PA102 PAGE 0 Semiconductor Lasers and Applications XIV Chairs:Wei Li; Werner H. Hofmann; Ting Wang	CONFERENCE PA112 PAGE 0 Advanced Sensor Systems and Applications XIV Chairs:Minghong Yang; Chang-Seok Kim; Xinyu Fan; Jianzhong Zhang
CONFERENCE PA103 PAGE 0 Advanced Laser Processing and Manufacturing VIII Chairs:Minghui Hong; Ting Huang; Yuji Sano; Jianhua Yao	CONFERENCE PA113 PAGE 0 Real-time Photonic Measurements, Data Management, and Processing VIII Chairs:Ming Li; Kebin Shi; Hossein Asghari; Nuannuan Shi
CONFERENCE PA104 PAGE 0 Photonics for Energy IV Chairs:Haizheng Zhong; Rui Zhu; Samuel D. Stranks; Jianpu Wang	CONFERENCE PA114 PAGE 0 Nano-optoelectronics and Micro/Nano-photonics X Chairs:Zhiping Zhou; Kazumi Wada; Shaoliang Yu
CONFERENCE PA105 PAGE 0 Optoelectronic Devices and Integration XIII Chairs:Xuping Zhang; Baojun Li; Changyuan Yu; Xinliang Zhang	CONFERENCE PA115 PAGE 0 Plasmonics VIII Chairs:Zheyu Fang; Takuo Tanaka
CONFERENCE PA106 PAGE 0 Optical Design and Testing XIV Chairs:Yongtian Wang; Tina E. Kidger; Rengmao Wu	CONFERENCE PA116 PAGE 0 Quantum and Nonlinear Optics XI Chairs:Qiongyi He; Dai-Sik Kim; Chunhua Dong
CONFERENCE PA107 PAGE 0 Advanced Optical Imaging Technologies VII Chairs:Xiao-Cong Yuan; P. Scott Carney; Kebin Shi	CONFERENCE PA117 PAGE 0 Infrared, Millimeter-Wave, and Terahertz Technologies XI Chairs:Cunlin Zhang; Yiwen E; Masahiko Tani
CONFERENCE PA108 PAGE 0 Optoelectronic Imaging and Multimedia Technology XI Chairs:Jinli Suo; Zhenrong Zheng	General Information21 Submission of Abstracts 22
CONFERENCE PA109 PAGE 0 Holography, Diffractive Optics, and Applications XIV Chairs:Changhe Zhou; Ting-Chung Poon; Liangcai Cao; Hiroshi Yoshikawa	
CONFERENCE PA110 PAGE 0 Optical Metrology and Inspection for Industrial Applications XI Chairs:Sen Han; Gerd Ehret; Benyong Chen	

Advanced Lasers, High-Power Lasers, and Applications XV (PA101)

Conference Chairs: **Shibin Jiang**, AdValue Photonics, Inc. (United States); **Zhaoyang Li**, Zhangjiang Lab. (China); **Ingmar Hartl**, Deutsches Elektronen-Synchrotron (Germany)

Program Committee: **Willy L. Bohn**, BohnLaser Consult (Germany); **Guoqing Chang**, Institute of Physics, Chinese Academy of Sciences (China); **Minglie Hu**, Tianjin Univ. (China); **Hiromitsu Kiriya**, National Institutes for Quantum Science and Technology (Japan); **Ruxin Li**, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); **Chong Liu**, Zhejiang Univ. (China); **Jun Liu**, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); **Deyuan Shen**, Fudan Univ. (China); **Upendra N. Singh**, NASA Langley Research Ctr. (United States); **Shigeki Tokita**, Kyoto Univ. (Japan); **Fengqiu Wang**, Nanjing Univ. (China); **Guoqiang Xie**, Shanghai Jiao Tong Univ. (China); **Jianquan Yao**, Tianjin Univ. (China); **Heping Zeng**, East China Normal Univ. (China); **Pu Zhou**, National Univ. of Defense Technology (China); **Shou-huan Zhou**, Sichuan Univ. (China)

Papers on the following and related topics are solicited for this conference:

- design of innovative lasers
- demonstration of innovative lasers
- advanced solid-state free-space lasers
- advanced fiber lasers
- high-average-power lasers
- ultra-short and super-intense lasers
- high-power DPL and ceramic lasers
- high-power fiber lasers
- high-power gas, excimer, and chemical lasers
- laser system for ICF
- high-power laser beam propagation and beam quality
- spatiotemporal control of high-power lasers
- spatiotemporal diagnosis of high-power lasers
- high-power lasers in new spectral ranges
- design and simulation for high-power lasers
- lasers development and qualification for space applications
- new gain materials including crystals, glasses, semiconductors, and fibers
- new optics for high-power laser propagation, modulation, and control
- pump diodes and reliability
- applications of lasers for space-based sensing and detections
- applications of high-peak-power lasers
- applications of high-pulse-energy lasers
- applications of high-average-power lasers
- new applications of advanced lasers
- needs of lasers for specific new applications.

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Semiconductor Lasers and Applications XIV (PA102)

Conference Chairs: **Wei Li**, Institute of Semiconductors, Chinese Academy of Sciences (China); **Werner H. Hofmann**, Deutsches Patent- und Markenamt (Germany); **Ting Wang**, Institute of Physics, Chinese Academy of Sciences (China)

Program Committee: **Minghua Chen**, Tsinghua Univ. (China); **Xiangfei Chen**, Nanjing Univ. (China); **Nan Chi**, Fudan Univ. (China); **Dawei Di**, Zhejiang Univ. (China); **Ming Li**, Institute of Semiconductors, Chinese Academy of Sciences (China); **Yong Liu**, Univ. of Electronic Science and Technology of China (China); **Edwin Y. Pun**, City Univ. of Hong Kong (Hong Kong, China); **Yikai Su**, Shanghai Jiao Tong Univ. (China); **Hong-Bo Sun**, Tsinghua Univ. (China); **Lijun Wang**, Changchun Univ. of Science and Technology (China); **Guang-Qiong Xia**, Southwest Univ. (China); **Kun Xu**, Beijing Univ. of Posts and Telecommunications (China); **Baoping Zhang**, Xiamen Univ. (China); **Shangjian Zhang**, Univ. of Electronic Science and Technology of China (China); **Xinliang Zhang**, Wuhan National Research Ctr. for Optoelectronics (China); **Zhiping Zhou**, Aijie Optoelectronic Technology (China); **Ning Hua Zhu**, Institute of Semiconductors, Chinese Academy of Sciences (China); **Sha Zhu**, Beijing Univ. of Technology (China); **Xihua Zou**, Southwest Jiaotong Univ. (China)

Recent advances in semiconductor lasers are resulting in improvements in power, spatial brightness, modulation bandwidth, linewidth, and wavelength ranges from the UV to the mid-IR. These advances led to better performance and opened the door for photonic integration, new laser applications including materials processing, metrology, printing, display, biomedical, imaging, Raman spectroscopy, and remote sensing. This conference intends to cover the following topics:

- integrated optoelectronic devices
- narrow linewidth lasers
- frequency-stabilized lasers
- high-speed lasers
- optical frequency combs
- fabrication and packaging technologies
- vertical-cavity surface-emitting laser (VCSEL) sources and their applications
- modeling and design
- characterization technologies for laser diodes
- high-brightness laser diodes
- quantum cascade lasers
- photonic integrated circuits
- blue-green laser technologies
- novel lasers and devices
- applications of laser diodes
- microwave photonics link.

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Advanced Laser Processing and Manufacturing VIII (PA103)

Conference Chairs: **Minghui Hong**, Xiamen Univ. (China); **Ting Huang**, Beijing Univ. of Technology (China); **Yuji Sano**, Institute for Molecular Science (Japan), Osaka Univ. (Japan); **Jianhua Yao**, Zhejiang Univ. of Technology (China)

Program Committee: **Liang Guo**, Southern Univ. of Science and Technology (China); **Anming Hu**, The Univ. of Tennessee Knoxville (United States); **Yongxiang Hu**, Shanghai Jiao Tong Univ. (China); **Sungho Jeong**, Gwangju Institute of Science and Technology (Republic of Korea); **Jian Liu**, PolarOnyx, Inc. (United States); **Tomokazu Sano**, Osaka Univ. (Japan); **Xiahui Tang**, Huazhong Univ. of Science and Technology (China); **Peng Wen**, Tsinghua Univ. (China); **Rongshi Xiao**, Beijing Univ. of Technology (China); **Haibin Zhang**, MKS Instruments, Inc. (United States); **Wenwu Zhang**, Ningbo Institute of Materials Technology and Engineering (China); **Jianzhong Zhou**, Jiangsu Univ. (China)

Laser processing and manufacturing has become one of the most convenient and enabling technologies for manufacturing with a reduced carbon footprint and are applicable to related industries such as automobile, railway, shipbuilding, aerospace, microelectronics, photonics, biomedical and energy. It offers unprecedented versatility and range in terms of feature size, material, phase, and processing option. During the last decade, there have been significant advances on laser processing and manufacturing research and development including laser additive manufacturing, laser welding, laser drilling, laser cutting, laser peening, laser cleaning, laser surface texturing, and laser nanofabrication. The primary goal of this conference is to provide a platform for professionals to share and discuss the latest advances in laser processing and manufacturing. The solicited exemplary topics include, but are not limited to:

- laser welding and joining
- laser cladding and remanufacturing
- laser additive manufacturing and 3D printing
- laser cutting and drilling
- laser peening, forming, polishing, cleaning, and texturing
- laser re-melting and alloying
- laser micro and nano fabrication
- pico- / femto-second laser processing
- laser-based hybrid/combined processing and manufacturing
- novel industry lasers and optical technologies
- upgrading and improvement of laser devices
- novel techniques for key elements in optical systems such as laser sources
- novel elements and components in laser processing and manufacturing systems such as diffractive optical elements and multi-axis scan heads
- industrial applications of laser processing and manufacturing technologies
- applications of machine learning, AI (artificial intelligence), and DX (digital transformation) in laser processing and manufacturing.

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Photonics for Energy IV (PA104)

Conference Chairs: **Haizheng Zhong**, Beijing Institute of Technology (China); **Rui Zhu**, Peking Univ. (China); **Samuel D. Stranks**, Univ. of Cambridge (United Kingdom); **Jianpu Wang**, Nanjing Univ. of Technology (China)

Program Committee: **Tae-Woo Lee**, Seoul National Univ. (Republic of Korea); **Qihua Xiong**, Tsinghua Univ. (China); **Yabing Qi**, Okinawa Institute of Science and Technology Graduate Univ. (Japan); **Anita Ho-Baillie**, The Univ. of Sydney (Australia); **Osman M. Bakr**, King Abdullah Univ. of Science and Technology (Saudi Arabia); **Sheng Xu**, Univ. of California, San Diego (United States); **Feng Gao**, Linköping Univ. (Sweden); **Jia Zhu**, Nanjing Univ. (China); **Michael Saliba**, Univ. Stuttgart (Germany), Forschungszentrum Jülich (Germany); **Wolfgang R. Tress**, Zurich Univ. of Applied Sciences (Switzerland); **Yuan Yang**, Columbia Univ. (United States); **Haizheng Zhong**, Beijing Institute of Technology (China); **Wei Zhang**, Univ. of Surrey (United Kingdom); **Feng Liu**, Shanghai Jiao Tong Univ. (China); **Hin-Lap Yip**, City Univ. of Hong Kong (Hong Kong, China); **Jingshan Luo**, Nankai Univ. (China); **Zhi-Kuang Tan**, National Univ. of Singapore (Singapore); **Guichuan Xing**, Univ. of Macau (Macao, China)

This conference on photonics for energy covers fundamental and applied research areas focused on the applications of photonics for renewable energy harvesting, conversion, storage, distribution, monitoring, consumption, and efficient usage, etc. Energy utilization and optoelectronic conversion play important roles in daily life and modern society, and have also become hot research topics. This conference will provide a remarkable opportunity for scientists to present their recent progresses on photonics for energy. The solicited exemplary topics include, but are not limited to:

- novel photonic materials for renewable energy
- innovative photonic concepts for renewable energy
- photovoltaic devices (including thin film and organic semiconductors)
- photonic devices for efficient harvesting and conversion of solar energy
- solar thermal and concentrator technology
- energy-efficient photonic devices (e.g., solid-state lighting, flat-panel displays)
- sensors to measure, control, and regulate energy
- photonic technologies for monitoring energy usage
- photonic technologies for monitoring exhaust gases and pollutants
- measurement techniques for energy technologies
- photonics in process control (e.g., for greater energy efficiency)
- photonics in production of renewable energy devices and applications
- photonic sensors in power plants and buildings
- photonics in buildings (e.g., sensing, integrated photovoltaics).

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Optoelectronic Devices and Integration XIII (PA105)

Conference Chairs: **Xuping Zhang**, Nanjing Univ. (China); **Baojun Li**, Jinan Univ. (China); **Changyuan Yu**, The Hong Kong Polytechnic Univ. (Hong Kong, China); **Xinliang Zhang**, Wuhan National Research Ctr. for Optoelectronics (China)

Program Committee: **Dayan Ban**, Univ. of Waterloo (Canada); **Zhongping Chen**, Beckman Laser Institute and Medical Clinic (United States); **Daoxin Dai**, Zhejiang Univ. (China); **Ho-Pui Ho**, The Chinese Univ. of Hong Kong (Hong Kong, China); **Zhongcheng Liang**, Nanjing Univ. of Posts and Telecommunications (China); **Ali Masoudi**, Univ. of Southampton (United Kingdom); **Hai Ming**, Univ. of Science and Technology of China (China); **Gang-Ding Peng**, The Univ. of New South Wales (Australia); **Yaocheng Shi**, Zhejiang Univ. (China); **Lixin Xu**, Univ. of Science and Technology of China (China); **Yang Yang**, Zhejiang Univ. of Technology (China); **Yu Yu**, Huazhong Univ. of Science and Technology (China); **Yuan Yu**, Wuhan National Lab. for Optoelectronics (China); **Xiaobei Zhang**, Shanghai Univ. (China); **Ningmu Zou**, Advanced Micro Devices, Inc. (United States)

Optoelectronic devices are being used in a wide array of applications in telecommunications, solar cells, scientific instrumentation, data storage, automotive, and military applications. Photonic design and simulation methods are a prerequisite for a fundamental understanding of advanced photonic structures as well as for the development of new photonic devices and applications. Research on new materials, processes and design are giving rise to optoelectronic devices with higher efficiencies, denser integration, and better reliabilities. With the new breakthroughs in organic photonic devices, vertical-cavity surface-emitting lasers, semiconductor photodetectors and optoelectronic integrated circuits, new package designs and reliability methodologies must be developed as these devices increase in functionality and integration.

This conference is intended to provide a forum for the interchange of ideas on optoelectronic device at different levels, including design, simulation, fabrication, integration, and applications. The topics of this conference are broad and will cover, but not limited to, the following topics:

- physics and simulation of optoelectronic devices
- devices for photonic applications
- fiber and guided-wave lasers and amplifiers
- organic photonic materials and devices
- terahertz and gigahertz electronics and photonics
- synthesis and photonics of nanoscale materials
- emerging optoelectronic applications
- vertical-cavity surface-emitting lasers
- polarization maintained/scrambled laser
- semiconductor photodetectors
- reliability of optical fiber components, devices, systems, and networks
- micro-optics and photonic interconnects
- multifunctional components, and arrayed devices
- optoelectronic hybrid and monolithic integration
- integrated optics and photonic integrated circuits
- photonics packaging and integration
- surface plasmon nanolithography, plasmonic waveguide and devices.

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Optical Design and Testing XIV (PA106)

Conference Chairs: **Yongtian Wang**, Beijing Institute of Technology (China); **Tina E. Kidger**, Kidger Optics Associates (United Kingdom); **Rengmao Wu**, Zhejiang Univ. (China)

Program Committee: **Yasuhiro Awatsuji**, Kyoto Institute of Technology (Japan); **Jian Bai**, Zhejiang Univ. (China); **Dewen Cheng**, Beijing Institute of Technology (China); **Stuart David**, Consultant (United States); **Chunlei Du**, Yangtze Normal Univ. (China); **Fabian Duerr**, Vrije Univ. Brussel (Belgium); **Zhishan Gao**, Nanjing Univ. of Science and Technology (China); **Sen Han**, Suzhou Graduate School of Nanjing Univ. (China); **Andrew R. Harvey**, Univ. of Glasgow (United Kingdom); **Chulmin Joo**, Yonsei Univ. (Republic of Korea); **Ki-Nam Joo**, Chosun Univ. (Republic of Korea); **Donglin Ma**, Huazhong Univ. of Science and Technology (China); **Youri Meuret**, KU Leuven (Belgium); **Julius A. Muschaweck**, JMO GmbH (Germany); **Yunfeng Nie**, Vrije Univ. Brussel (Belgium); **Takanori Nomura**, Wakayama Univ. (Japan); **Tomoyoshi Shimobaba**, Chiba Univ. (Japan); **Jan M. ten Thije Boonkkamp**, Technische Univ. Eindhoven (Netherlands); **Simon Thibault**, Univ. Laval (Canada); **Sandy To**, The Hong Kong Polytechnic Univ. (Hong Kong, China); **Peter Török**, Nanyang Technological Univ. (Singapore); **Tong Yang**, Beijing Institute of Technology (China); **Chunyu Zhao**, Arizona Optical Metrology LLC (United States)

We encourage you to submit abstracts and papers on the following and related topics:

- aberration theory and image analysis
- aspheric fabrication and metrology
- astronomical optics
- asymmetric optics
- biomedical optics
- computational optics
- conformal optics
- development in local and global optimization methods
- diffractive optics
- freeform optics: design, fabrication, and testing
- gradient index optics
- illumination optics
- information optics and photonics
- interferometry
- light-field display and imaging
- liquid optics
- lithographic optics
- metasurface optics
- micro- and nano-optics
- new fabrication developments
- novel devices based on subwavelength structures
- novel display systems
- novel lens designs
- optical instrument design
- optical systems for visualization, virtual and augmented reality
- plastic and molded optics
- polarization and coherence in optical design
- spaceborne optics
- stray light analysis
- testing and alignment of optical surfaces and elements
- tolerance generation and application
- UV optics
- varifocal/multifocal optics
- wavefront modulation
- waveguide optics
- zoom optics and multi-configuration optics.

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Advanced Optical Imaging Technologies VII (PA107)

Conference Chairs: **Xiao-Cong Yuan**, Shenzhen Univ. (China); **P. Scott Carney**, The Institute of Optics, Univ. of Rochester (United States); **Kebin Shi**, Peking Univ. (China)

Program Committee: **Benfeng Bai**, Tsinghua Univ. (China); **Liangyi Chen**, Peking Univ. (China); **Xiang Hao**, Zhejiang Univ. (China); **Yoshio Hayasaki**, Utsunomiya Univ. Ctr. for Optical Research & Education (Japan); **Minghui Hong**, Xiamen Univ. (China); **Zhenli Huang**, Wuhan National Lab. for Optoelectronics (China); **Wei Ji**, Institute of Biophysics, Chinese Academy of Sciences (China); **Dayong Jin**, Univ. of Technology, Sydney (Australia); **Cuifang Kuang**, Zhejiang Univ. (China); **Puxiang Lai**, The Hong Kong Polytechnic Univ. (Hong Kong, China); **ByoungHo Lee**, Seoul National Univ. (Republic of Korea); **Xu Liu**, Zhejiang Univ. (China); **Changjun Min**, Shenzhen Univ. (China); **Wolfgang Osten**, Institut für Technische Optik (Germany); **Guohai Situ**, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); **Michael G. Somekh**, Shenzhen Univ. (China); **Wei Song**, Shenzhen Univ. (China); **Peter Török**, Nanyang Technological Univ. (Singapore); **Lidai Wang**, City Univ. of Hong Kong (Hong Kong, China); **Changfeng Wu**, Southern Univ. of Science and Technology (China); **Pingyong Xu**, Institute of Biophysics, Chinese Academy of Sciences (China); **Baoli Yao**, Xi'an Institute of Optics and Precision Mechanics of CAS (China); **Shian Zhang**, East China Normal Univ. (China); **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

Through non-invasive interaction between light and matter, optical imaging has become one of the most favorable and critical research tools for scientific community where a variety of topics ranging from fundamental biomedical/material science to advanced imaging applications are developed. Recent advances on more diverse imaging contrast mechanisms as well as higher spatio-temporal resolution has made advanced optical imaging technologies and their applications one of the most attractive scientific fields. This conference will provide a remarkable opportunity for scientists to present their recent progresses on exploring novel optical imaging techniques and their applications. The solicited exemplary topics include, but are not limited to:

- high-resolution fluorescence and label-free imaging technologies
- nonlinear optical imaging technologies
- holographic imaging, tomographic diffractive microscopy
- near-field and plasmonics-based imaging technologies
- photo-acoustic microscopy
- photothermal imaging techniques
- computational and compressive sensing imaging technologies
- time-resolved imaging technologies such as FLIM and transient-absorption microscopy
- imaging applications in biomedical and material sciences
- quantum imaging technologies
- novel techniques for key elements in optical imaging systems such as detection and laser sources
- novel imaging algorithms and protocols.

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Optoelectronic Imaging and Multimedia Technology XI (PA108)

Conference Chairs: **Junli Suo**, Tsinghua Univ. (China); **Zhenrong Zheng**, Zhejiang Univ. (China)

Program Committee: **Liangcai Cao**, Tsinghua Univ. (China); **Xun Cao**, Nanjing Univ. (China); **Qionghai Dai**, Tsinghua Univ. (China); **Gangyi Jiang**, Ningbo Univ. (China); **Jun Ke**, Beijing Institute of Technology (China); **Xiaoyan Luo**, Beihang Univ. (China); **Tsutomu Shimura**, The Univ. of Tokyo (Japan); **Baoqing Sun**, Shandong Univ. (China); **Mingjie Sun**, Beihang Univ. (China); **Qiong-Hua Wang**, Beihang Univ. (China); **Shigang Wang**, Jilin Univ. (China); **Xin Yuan**, Westlake Univ. (China); **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

The areas of optoelectronic systems for image/video acquisition and their applications have expanded rapidly in recent years, especially with the widespread development of new artificial intelligence techniques. Advanced optoelectronic sensors and novel programmable optical modulators, combined with elegant optical elements as well as smart computational algorithms, produce novel optoelectronics imaging systems that expand the dimension and resolution for image/video acquisition. Multimedia and data acquired by these new optoelectronic systems impose new challenges in analysis and processing. This conference will provide an international forum for the publishing of state-of-the-art optoelectronic systems and intelligent processing. Besides, leading scientists will present invited talks about the latest trends and innovations in the relevant fields. We are calling for papers in all relevant areas including, but not limited to, the following:

- advanced sensing systems and applications
- computational imaging
- deep optics
- physics model inspired image processing
- application of AI techniques in imaging systems
- high throughput imaging
- high-speed and high-resolution imaging
- multispectral and hyperspectral imaging
- high dynamic range imaging
- 3D image/video system
- augmented reality and visual reality technologies
- advancement in shape-from-x method
- ghost imaging /single-pixel imaging
- ultra-sonics, PET, MRI, X-ray imaging
- micro- and nano-optical imaging and its biomedical applications
- adaptive optics system
- optical computing
- novel display techniques and applications
- tomographic imaging
- time-of-flight imaging
- scattering robust imaging
- optical information processing
- image/video analysis, processing.

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Holography, Diffractive Optics, and Applications XIV (PA109)

Conference Chairs: **Changhe Zhou**, Jinan Univ. (China); **Ting-Chung Poon**, Virginia Polytechnic Institute and State Univ. (United States); **Liangcai Cao**, Tsinghua Univ. (China); **Hiroshi Yoshikawa**, Nihon Univ. (Japan)

Program Committee: **Partha P. Banerjee**, Univ. of Dayton (United States); **Chau-Jern Cheng**, National Taiwan Normal Univ. (Taiwan, China); **Gaoliang Dai**, Physikalisch-Technische Bundesanstalt (Germany); **Wei Gao**, Tohoku Univ. (Japan); **Elena Goi**, Univ. of Shanghai for Science and Technology (China); **Min Gu**, Univ. of Shanghai for Science and Technology (China); **Yoshio Hayasaki**, Utsunomiya Univ. Ctr. for Optical Research & Education (Japan); **Hoonjong Kang**, Wonkwang Univ. (Republic of Korea); **Taegeun Kim**, Sejong Univ. (Republic of Korea); **Ai Qun Liu**, Nanyang Technological Univ. (Singapore); **Jung-Ping Liu**, Feng Chia Univ. (Taiwan, China); **Ignacio Moreno Soriano**, Univ. Miguel Hernández (Spain); **Pascal Picart**, Lab. d'Acoustique de l'Univ. du Maine (France); **Xinzhu Sang**, Beijing Univ. of Posts and Telecommunications (China); **Yunlong Sheng**, Univ. Laval (Canada); **Tatsuki Tahara**, National Institute of Information and Communications Technology (Japan); **Xiaodi Tan**, Fujian Normal Univ. (China); **Vladimir Y. Venediktov**, Saint Petersburg Electrotechnical Univ. "LETI" (Russian Federation), Saint Petersburg State Univ. (Russian Federation); **Baoli Yao**, Xi'an Institute of Optics and Precision Mechanics of CAS (China); **Qiwen Zhan**, Univ. of Shanghai for Science and Technology (China); **Fucaai Zhang**, Southern Univ. of Science and Technology (China); **Yan Zhang**, Capital Normal Univ. (China); **Yaping Zhang**, Kunming Univ. of Science and Technology (China); **Jianlin Zhao**, Northwestern Polytechnical Univ. (China); **Renjie Zhou**, The Chinese Univ. of Hong Kong (Hong Kong, China); **Wenjing Zhou**, Shanghai Univ. (China); **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

Papers are solicited on, but not limited to, the following topics.

- holography, diffractive, and micro-optics
- computer-generated holograms
- digital holography
- digital holographic microscopy, 3D holographic microscopy
- quantitative phase imaging
- subwavelength optics and plasmonics
- metasurface holography
- quantum holography
- dynamic holography, space light modulators
- digital holography in scattering media
- incoherent holography
- x-ray and terahertz wave digital holography
- polarization holography and polarization imaging
- artificial intelligence (AI) based imaging, display, and metrology
- machine-learning-based digital holography
- holographic imaging with deep-learning networks
- 3D imaging and 3D display
- 3D remote sensing
- full-field tomography
- compressive holography
- computational imaging
- super-resolution imaging
- adaptive imaging, feedback, or feedforward-controlled imaging
- documentation and product anti-counterfeiting
- optical metrology
- picometer-scale optics and metrology
- gratings technology
- holographic lithography
- 2D and 3D printing, lithography, fabrication, and machining
- high-dimensional optical recording, optical memory and storage
- volume holograms
- optical signal processing
- optical analog and digital computing
- optical neuron networks
- optics in quantum computers
- optics for life science applications
- optical holographic tweezers
- acousto-optics
- optics for metaverse.

Optical Metrology and Inspection for Industrial Applications XI (PA110)

Conference Chairs: **Sen Han**, Univ. of Shanghai for Science and Technology (China), Suzhou H&L Instruments LLC (China); **Gerd Ehret**, Physikalisch-Technische Bundesanstalt (Germany); **Benyong Chen**, Zhejiang Sci-Tech Univ. (China)

Program Committee: **Masato Aketagawa**, Nagaoka Univ. of Technology (Japan); **Yasuhiro Awatsuji**, Kyoto Institute of Technology (Japan); **Xiaohao Dong**, Shanghai Advanced Research Institute, Chinese Academy of Sciences (China); **Fabian Duerr**, Vrije Univ. Brussel (Belgium); **Claas Falldorf**, BIAS - Bremer Institut für angewandte Strahltechnik GmbH (Germany); **Yuegang Fu**, Changchun Univ. of Science and Technology (China); **Ming Jiang**, Suzhou Univ. of Science and Technology (China); **Lianhua Jin**, Univ. of Yamanashi (Japan); **Qian Kemao**, Nanyang Technological Univ. (Singapore); **Tina E. Kidger**, Kidger Optics Associates (United Kingdom); **Malgorzata Kujawinska**, Warsaw Univ. of Technology (Poland); **Jaejoong Kwon**, SAMSUNG Display Co., Ltd. (Republic of Korea); **Peter Lehmann**, Univ. Kassel (Germany); **Chao-Wen Liang**, National Central Univ. (Taiwan, China); **Xiao Luo**, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences (China); **Yukitoshi Otani**, Utsunomiya Univ. (Japan); **Giancarlo Pedrini**, Institut für Technische Optik (Germany); **Xiang Peng**, Shenzhen Univ. (China); **Christof Pruss**, Institut für Technische Optik (Germany); **Guohai Situ**, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); **H. Philip Stahl**, NASA Marshall Space Flight Ctr. (United States); **Wenjuan Sun**, National Physical Lab. (United Kingdom); **Takamasa Suzuki**, Niigata Univ. (Japan); **Toshitaka Wakayama**, Saitama Medical Univ. (Japan); **Haoyu Wang**, Univ. of Shanghai for Science and Technology (China); **Wei Wang**, Heriot-Watt Univ. (United Kingdom); **Xiangzhao Wang**, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences (China); **Yajun Wang**, Wuhan Univ. (China); **Quanying Wu**, Suzhou Univ. of Science and Technology (China); **Jiangtao Xi**, Univ. of Wollongong (Australia); **Jing Xu**, Tsinghua Univ. (China); **Lianxiang Yang**, Oakland Univ. (United States); **Dawei Zhang**, Univ. of Shanghai for Science and Technology (China); **Qican Zhang**, Sichuan Univ. (China); **Xiangchao Zhang**, Fudan Univ. (China); **Zonghua Zhang**, Hebei Univ. of Technology (China); **Ping Zhong**, Donghua Univ. (China); **Weihu Zhou**, Institute of Microelectronics, Chinese Academy of Sciences (China); **Chao Zuo**, Nanjing Univ. of Science and Technology (China)

Papers on the following and related topics are solicited for this conference:

- absolute testing for metrology
- application of interferometric techniques in optical mask and LED industry
- large optics testing
- machine/robot vision methods, architectures, and applications
- surface inspection methods and applications
- flatness metrology
- dynamic measurement
- special optical systems for inspection and measurements
- 2D and 3D machine vision methods and applications
- stitching techniques
- 3D data manipulation
- detection of gravitational waves
- AR/VR optical testing
- aspherical and freeform testing
- super-high accurate measurement for smooth surfaces
- micro- and nano-scale measurement methods
- structured light methods and applications
- phase shifting methods applied to industrial inspection
- optical methods for dimensional and surface metrology
- mechanic-optics and photonics for metrology and inspection
- system calibration and error analysis
- spherical and cylindrical measurements
- online and process control measurements
- deflectometry or fringe projection measurement
- high-resolution and high-speed inspection applications.

Submit abstracts by **29 May 2024**

Optics in Health Care and Biomedical Optics XIV (PA111)

Conference Chairs: **Qingming Luo**, Hainan Univ. (China); **Xingde Li**, Johns Hopkins Univ. (United States); **Ying Gu**, Chinese PLA General Hospital (China); **Dan Zhu**, Huazhong Univ. of Science and Technology (China)

Program Committee: **Defu Chen**, Beijing Institute of Technology (China); **Shih-Chi Chen**, The Chinese Univ. of Hong Kong (Hong Kong, China); **Wei R. Chen**, The Univ. of Oklahoma (United States); **Yu Chen**, Fujian Normal Univ. (China); **Zhihua Ding**, Zhejiang Univ. (China); **Minbiao Ji**, Fudan Univ. (China); **Puxiang Lai**, The Hong Kong Polytechnic Univ. (Hong Kong, China); **Buhong Li**, Hainan Univ. (China); **Hui Li**, Fujian Normal Univ. (China); **Wenxuan Liang**, Suzhou Institute for Advanced Research (China); **Hongen Liao**, Shanghai Jiao Tong Univ. (China); **Huafeng Liu**, State Key Lab. of Modern Optical Instrumentation (China); **Hui Ma**, Tsinghua Univ. Shenzhen International Graduate School (China); **Jun Qian**, Zhejiang Univ. (China); **Haixia Qiu**, Chinese PLA General Hospital (China); **Junle Qu**, Shenzhen Univ. (China); **Kebin Shi**, Peking Univ. (China); **Ke Si**, Zhejiang Univ. (China); **Yi-Zhou Tan**, Chinese PLA General Hospital (China); **Valery V. Tuchin**, Saratov State Univ. (Russian Federation); **Ruikang K. Wang**, Univ. of Washington (United States); **Xueding Wang**, Univ. of Michigan (United States); **Xunbin Wei**, Peking Univ. Health Science Ctr. (China); **Changfeng Wu**, Southern Univ. of Science and Technology (China); **Shihua Yang**, South China Normal Univ. (China); **Zhenxi Zhang**, Xi'an Jiaotong Univ. (China); **Wei Zheng**, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences (China); **Feifan Zhou**, Hainan Univ. (China)

During the last 1.5 decades there have been significant scientific advances and technology developments in diagnosis, treatment and health care using light. Optical methods are generally noninvasive and sensitive to unique tissue contrast (absorption, scattering, birefringence, fluorescence, and nonlinear signal generation etc.) that complements other biomedical diagnostic technologies. Optical-based instruments/devices can be extremely compact and cost effective, suitable for home, clinic and global health care. The field of biomedical photonics is highly multi-disciplinary and has been attracting more and more researchers from physics, chemistry, electrical engineering, biomedical engineering, computer science, nanotechnology and many other disciplines. The past few years have also witnessed the integration of biomedical photonics with other technologies, such as photo-acoustics, optics-molecular and nano-techniques, optics and MRI, optics and PET, and more recently with artificial intelligence. Clinical applications of emerging biomedical photonics technologies span many areas including ophthalmology, dermatology, cardiology, gastroenterology, dentistry, urology, and neurology, etc. The objective of this conference is to provide a technical forum for engineers, scientists, clinicians, and health care industry and government agencies to report, share and learn the latest fundamental, translational, and clinical research and developments in the field of biomedical optics, and promote cross-disciplinary, institutional, and international collaborations. The topics of this conference are broad and will include but not limited to the following:

- light-tissue/cell interactions: fundamental theories and new methodologies for diagnosis and therapy
- photon therapeutics: photo dynamic therapy, photobiomodulation therapy, laser surgery, other photo therapy and applications
- spectroscopy: refluorescence, Raman, hyperspectral imaging and biomedical applications
- novel microscopy: nonlinear, super-resolution, light-sheet, endoscopy microscopy, LSCI imaging and biomedical applications
- translational optical techniques for basic research and clinical medicine: neurophotonics, diagnosis devices, implantable devices, point-of-care devices
- multimodal biomedical imaging: photo-acoustic imaging, optical-CT, optical-MRI, optical-PET
- nano/biophotonics: nanoparticles and molecular probes for theranostics
- AI in biomedical imaging and diagnostics.

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Advanced Sensor Systems and Applications XIV (PA112)

Conference Chairs: **Minghong Yang**, Wuhan Univ. of Technology (China); **Chang-Seok Kim**, Pusan National Univ. (Republic of Korea); **Xinyu Fan**, Shanghai Jiao Tong Univ. (China); **Jianzhong Zhang**, Harbin Engineering Univ. (China)

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The areas of photonic sensors and their applications have expanded rapidly in recent years. Photonic sensors, especially fiber-optic sensors, are widely used for measurement of various physical and chemical parameters in many fields. Recent developments in fiber gratings, micro-structured optical fibers, specialty optical fibers and devices, planar waveguides and devices, etc, provide great potential and solutions for a variety of sensing applications that conventional sensors cannot handle. This topical conference will provide an international forum for the most recent and interesting technical issues concerning photonic sensors and their applications, including novel sensor devices, advanced sensing methods and sensor systems, innovative sensor integration and multiplexing techniques, and new applications and field tests. There will be a number of invited talks presented by leading scientists in the field of photonic sensors. Papers focused on the following and related topics are welcome:

- optical sensors based on fiber gratings, photonic crystal fibers, planar/integrated waveguides, etc.
- optical sensors for chemical, environmental, biological, medical, and other applications
- discrete and distributed optical sensors, as well as optical sensor systems and networks
- new fibers, smart structures, and materials for optical sensing
- passive and active devices for optical sensing
- new physics, principles, and modeling related to optical sensing
- applications, field tests, and standardizations of optical sensing technologies.

Submit abstracts by **29 May 2024**

Real-time Photonic Measurements, Data Management, and Processing VIII (PA113)

Conference Chairs: **Ming Li**, Institute of Semiconductors, Chinese Academy of Sciences (China); **Kebin Shi**, Peking Univ. (China); **Hossein Asghari**, Loyola Marymount Univ. (United States); **Nuannuan Shi**, Institute of Semiconductors, Chinese Academy of Sciences (China)

Program Committee: **Hongwei Chen**, Tsinghua Univ. (China); **Xiangfei Chen**, Nanjing Univ. (China); **Jianji Dong**, Huazhong Univ. of Science and Technology (China); **Ruifang Dong**, National Time Service Ctr., Chinese Academy of Sciences (China); **Yongkang Dong**, Harbin Institute of Technology (China); **Xinyu Fan**, Shanghai Jiao Tong Univ. (China); **Mable P. Fok**, The Univ. of Georgia (United States); **Shiming Gao**, Zhejiang Univ. (China); **Minglie Hu**, Tianjin Univ. (China); **Jungwon Kim**, KAIST (Republic of Korea); **Hongpu Li**, Shizuoka Univ. (Japan); **Xueming Liu**, Zhejiang Univ. (China); **Yong Liu**, Univ. of Electronic Science and Technology of China (China); **Chengbo Mou**, Shanghai Univ. (China); **Fufei Pang**, Shanghai Univ. (China); **Liyang Shao**, Southern Univ. of Science and Technology of China (China); **Yikai Su**, Shanghai Jiao Tong Univ. (China); **Chao Wang**, Univ. of Kent (United Kingdom); **Jian Wang**, Huazhong Univ. of Science and Technology (China); **Xu Wang**, Heriot-Watt Univ. (United Kingdom); **Fei Xu**, Nanjing Univ. (China); **Kun Xu**, Beijing Univ. of Posts and Telecommunications (China); **Haitao Yan**, Henan Univ. of Science and Technology (China); **Lilin Yi**, Shanghai Jiao Tong Univ. (China); **Lixing You**, Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences (China); **Shangjian Zhang**, Univ. of Electronic Science and Technology of China (China); **Xinliang Zhang**, Wuhan National Research Ctr. for Optoelectronics (China); **Hua Zhao**, Nanjing Normal Univ. (China); **Tao Zhu**, Chongqing Univ. (China); **Xihua Zou**, Southwest Jiaotong Univ. (China)

Real-time photonic measurement of fast non-repetitive events is arguably the most challenging problem in the fields of instrumentation and measurement. The challenge is performing fast continuous single-shot measurements for applications ranging from sensing, spectroscopy, and imaging. Some of the example applications include the study of optical rogue waves, detection of rare cancer cells in blood, industrial inspection and machine vision. Notwithstanding the sensitivity and speed limitations of single-shot real-time measurements, such instruments also create a big data problem. Owing to their high measurement rate, they produce a firehose of data that overwhelms even the most advanced computers. This necessitates innovations in data management and in-inline processing techniques.

The aim of this conference is to create a forum for presentation of the latest developments in real-time photonic instruments, data management and real-time processing, and to create a forum for exchange of ideas in this new and exciting field of photonic instrumentation. This conference intends to cover the following, and related topics:

- real-time optical imaging and spectroscopy
- real-time process photonic monitoring
- ultrafast optical signal characterization
- real-time photonic data processing systems
- computationally efficient algorithms
- photonic data compression
- photonic techniques for big data visualization and analytics
- single-photon detection and imaging from vis to NIR.

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Nano-optoelectronics and Micro/Nano-photonics X (PA114)

Conference Chairs: **Zhiping Zhou**, Aijie Optoelectronic Technology (China); **Kazumi Wada**, Massachusetts Institute of Technology (United States); **Shaoliang Yu**, Zhejiang Lab. (China)

Program Committee: **Tao Chu**, Zhejiang Univ. (China); **David S. Citrin**, Georgia Institute of Technology (United States); **Min Gu**, Univ. of Shanghai for Science and Technology (China); **Xiaoyong Hu**, Peking Univ. (China); **Gong-Ru Lin**, National Taiwan Univ. (Taiwan, China); **Jianjun Liu**, Hunan Univ. (China); **Jurgen Michel**, Massachusetts Institute of Technology (United States); **Haisheng Rong**, Intel Corp. (United States); **Takasumi Tanabe**, Keio Univ. (Japan); **Limin Tong**, Zhejiang Univ. (China); **Koji Yamada**, National Institute of Advanced Industrial Science and Technology (Japan); **Qing Yang**, Zhejiang Univ. (China); **Nan Zhang**, Beijing Institute of Technology (China)

The focus of this conference is on the design, fabrication, and application of micro/nanostructures that facilitate the generation, propagation, manipulation, and detection of light from the infrared to the ultraviolet. Papers are solicited on the following and related topics:

- tunable, multifunctional, and/or active nanomaterials and metamaterials
- nonlinear nanophotonics including metamaterials and plasmonics
- molecular self-assembly, and other nanofabrication techniques
- nanoparticles and nanoparticulate composite materials
- quantum dots and other low-dimensional nanostructures
- quantum optics and spintronics
- nanowaveguides and nanoantennas
- sculptured thin films and nanostructured photonic crystals
- nanobiophotonics
- near-field optics
- light-harvesting materials and devices
- nanophotonic detectors
- nanoscale optoelectronics
- silicon-based optoelectronics
- optical manipulation techniques, spectroscopies, and scattering techniques
- surface plasmons and nanoplasmonics
- ultrashort pulse propagation.

Submit abstracts by **29 May 2024**

Plasmonics VIII (PA115)

Conference Chairs: **Zheyu Fang**, Peking Univ. (China), Rice Univ. (United States); **Takuo Tanaka**, RIKEN (Japan)

Program Committee: **David J. Bergman**, Tel Aviv Univ. (Israel); **Hongsheng Chen**, Zhejiang Univ. (China); **F. Javier García de Abajo**, ICFO - Institut de Ciències Fotòniques (Spain); **Min Gu**, Univ. of Shanghai for Science and Technology (China); **Xin Guo**, Zhejiang Univ. (China); **Minghui Hong**, Xiamen Univ. (Singapore); **Satoshi Kawata**, Osaka Univ. (Japan); **Ai Qun Liu**, Nanyang Technological Univ. (Singapore); **Peter Nordlander**, Rice Univ. (United States); **Ru-Wen Peng**, Nanjing Univ. (China); **Min Qiu**, Westlake Univ. (China); **Atsushi Taguchi**, Hokkaido Univ. (Japan); **Din Ping Tsai**, City Univ. of Hong Kong (Hong Kong, China); **Hong Wei**, Institute of Physics, Chinese Academy of Sciences (China); **Hongxing Xu**, Wuhan Univ. (China); **Lei Zhou**, Fudan Univ. (China); **Shining N. Zhu**, Nanjing Univ. (China)

This SPIE/COS Photonics Asia conference on plasmonics will bring together plasmonics experts from across the globe, both junior and senior, from academia and industry, to share their latest results and set the agenda for future developments in the field. Papers are solicited on the following and related topics:

- active plasmonics
- plasmonic metamaterials and metasurfaces
- plasmonic antennas
- graphene plasmonics
- quantum plasmonics
- thermal plasmonics
- plasmon-enhanced spectroscopy
- plasmon-enhanced light harvesting
- near-field optics and related applications
- plasmonics in medicine and biology
- plasmonic devices
- plasmon-assisted chemical reactions and hot electron generations
- chiral plasmonics
- topological plasmonics
- spoof plasmons
- plasmonic structure fabrication
- machine learning and inverse design for plasmonics
- nonlinear and coherent plasmonics
- plasmonics in 2D materials
- plasmonics for medical and health applications
- plasmonic photovoltaic and light harvesting applications.

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Quantum and Nonlinear Optics X (PA116)

Conference Chairs: **Qiongyi He**, Peking Univ. (China); **Dai-Sik Kim**, Ulsan National Institute of Science and Technology (Republic of Korea); **Chuan-Feng Li**, Univ. of Science and Technology of China (China)

Program Committee: **Fang Bo**, Nankai Univ. (China); **Chunhua Dong**, Univ. of Science and Technology of China (China); **Osamu Hirota**, Tamagawa Univ. (Japan); **Kebin Shi**, Peking Univ. (China); **Xiaolong Su**, Shanxi Univ. (China); **Jianwei Wang**, Peking Univ. (China)

Information security concerns and explosive data transmission and storage have led to exciting new developments and advances in quantum cryptography, quantum communication, nonlinear optics, optical data storage, optical communication etc. We encourage you to submit abstracts and papers on the following and related topics:

- quantum cryptography and quantum communication
- entanglement photon resource
- long-distance quantum network
- quantum measurement and quantum computations
- high-intensity and relativistic nonlinear optics
- novel nonlinear materials and structures
- nonlinear optics in waveguides
- optical coherent transient phenomena
- nonlinear frequency conversion and nonlinear spectroscopy
- optical data storage and associative memories
- nonlinear fiber optics
- phase-controlled nonlinear optical processes
- ultrafast nonlinear optics
- nonlinear plasmonics and nano-photonics
- quantum sensing and metrology
- quantum electrodynamics
- matter-light entanglement
- optical field engineering in quantum and nonlinear optics
- integrated quantum information and computation.

Submit abstracts by **29 May 2024**

Infrared, Millimeter-Wave, and Terahertz Technologies X (PA117)

Conference Chairs: **Cunlin Zhang**, Capital Normal Univ. (China); **Xi-Cheng Zhang**, The Institute of Optics, Univ. of Rochester (United States); **Masahiko Tani**, Univ. of Fukui (Japan)

Program Committee: **Derek Abbott**, The Univ. of Adelaide (Australia); **M. Hassan Arbab**, Stony Brook Univ. (United States); **Juncheng Cao**, Shanghai Institute of Microsystem and Information Technology (China); **Jian Chen**, Nanjing Univ. (China); **Yiwen E.**, The Institute of Optics, Univ. of Rochester (United States); **Vladimir Yu Fedorov**, Texas A&M Univ. at Qatar (Qatar); **Jiaguang Han**, Ctr. for Terahertz Waves of Tianjin Univ. (China); **Zhi Hong**, China Jiliang Univ. (China); **Yen-Chieh Huang**, National Tsing Hua Univ. (Taiwan); **Biaobing Jin**, Nanjing Univ. (China); **Weiqi Jin**, Beijing Institute of Technology (China); **Rajib Kumar Mitra**, S.N. Bose National Ctr. for Basic Sciences (India); **Fengqi Liu**, Institute of Semiconductors, Chinese Academy of Sciences (China); **Weiwei Liu**, Nankai Univ. (China); **Chih Wei Luo**, National Yang Ming Chiao Tung Univ. (Taiwan); **Yungui Ma**, Zhejiang Univ. (China); **Hiroaki Minamide**, RIKEN (Japan); **Makoto Nakajima**, Osaka Univ. (Japan); **Hua Qin**, Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences (China); **Shengcai Shi**, Purple Mountain Observatory, Chinese Academy of Sciences (China); **Alexander P. Shkurinov**, M.V. Lomonosov Moscow State Univ. (Russian Federation); **Xianghong Tang**, Hangzhou Dianzi Univ. (China); **Joo-Hiuk Son**, The Univ. of Seoul (Republic of Korea); **Anton N. Tsyppkin**, ITMO Univ. (Russian Federation); **Masayoshi Tonouchi**, Osaka Univ. (Japan); **Xiaojun Wu**, Beihang Univ. (China); **Xinlong Xu**, Northwest Univ. (China); **Yuping Yang**, Minzu Univ. of China (China); **Chao Zhang**, Univ. of Wollongong (Australia); **Dongwen Zhang**, National Univ. of Defense Technology (China); **LiangLiang Zhang**, Capital Normal Univ. (China); **Weili Zhang**, Oklahoma State Univ. (United States); **Yan Zhang**, Capital Normal Univ. (China); **Yaxin Zhang**, Univ. of Electronic Science and Technology of China (China); **Zhuoyong Zhang**, Capital Normal Univ. (China); **Kun Zhao**, China Univ. of Petroleum (China); **Zengxiu Zhao**, National Univ. of Defense Technology (China); **Zhenyu Zhao**, Shanghai Normal Univ. (China); **Li-Guo Zhu**, China Academy of Engineering Physics (China); **Yiming Zhu**, Univ. of Shanghai for Science and Technology (China); **Olga G. Kosareva**, M. V. Lomonosov Moscow State Univ. (Russian Federation); **Tae-In Jeon**, Korea Maritime and Ocean Univ. (Republic of Korea)

Papers on the following and related topics are solicited for this conference:

- infrared detectors and focal plane arrays
- testing and calibration
- communication and radar
- waveguides, metamaterials, components, and devices
- spectroscopy and imaging
- high field phenomena and nonlinear physics
- novel THz generation and detection
- interaction of THz radiation with matter
- THz for biomedical applications
- nondestructive sensing
- bright THz source
- remote THz sensing
- light field imaging
- spintronics.

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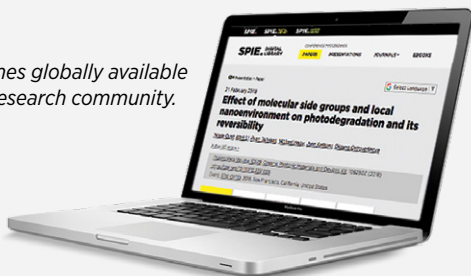
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