



<https://b2b.csoe.org.cn/meeting/aopc2025.html>

由中国光学工程学会 (CSOE)、国际光学工程学会 (SPIE) 等单位共同主办的“2025 年第六届世界光子大会定于 2025 年 6 月 24-27 日在北京国家会议中心举办。此次会议是中国光学工程学会年会，大会包括“第 14 届国际应用光学与光子学技术交流大会 (AOPC 2025)”和“第十六届中国光电子产业博览会”，预计会议规模近 3000 人。大会设有 19 个专题分会，包括激光技术及应用、红外技术及应用、光电探测与成像技术及应用、光谱技术及应用、太赫兹技术及应用等。组委会力邀 300 余位国内外著名科学家、学术领军专家出席并做精彩报告。大会开幕式将举办中国光学工程学会颁奖盛典！

会议同期举办“第十六届中国光电子产业博览会”，参展商 1000 余家，博览会包括红外微光技术与应用、激光与智能制造、光通信&光传感及物联网、光学&精密光学制造、测控技术与仪器、创新科技及实验成果、微纳制造、北京半导体展览会等八大主题。

大会征文已开通，欢迎广大科研人员、研究生、博士生积极投稿参与会议交流！通过评审的稿件将在 SPIE 文集 (EI 检索) 正式发表，优秀稿件将推荐到 SCI 期刊和 EI 期刊发表。诚挚欢迎广大科研人员、教师和研究生踊跃投稿并参会！

主办单位：

中国光学工程学会 (CSOE)

国际光学工程学会 (SPIE)

美国工程院

德国工程院

俄罗斯工程院

瑞典皇家工程院

新加坡工程院

美国麻省理工学院

德国夫琅禾费研究所

韩国光学学会 (OSK)

日本应用物理学会 (JSAP)

新加坡光学学会 (OPSS)

承办单位：

中国光学工程学会 (CSOE)

联办单位：

清华大学

电子科技大学

国防科技大学

南京理工大学

中北大学

天津津航技术物理研究所

中国科学院上海技术物理研究所

试验物理与计算数学国家重点实验室

电磁空间安全全国重点实验室

散射辐射全国重点实验室

微光夜视技术重点实验室

红外探测器技术航空科技重点实验室

支持单位：

中航凯迈（上海）红外科技有限公司

北京中科盛视科技有限责任公司

大会主席：

张广军院士，中国工程院

吕跃广院士，中国工程院

Peter J. de Groot, Zygo Corporation, USA

大会执行主席：

曹良才，清华大学

征文方向：

Topic1: Laser Technology and Applications / 激光技术及应用

议题方向：

Advanced laser materials and laser technologies

Advanced laser processing and manufacturing

Laser transmission and communication

Laser field control and beam control

Topic2: Infrared Technology and Applications / 红外技术及应用

议题方向：

Novel infrared and photo-electronic materials and manufacturing

Advances in shortwave, mid-wave and long-wave infrared detectors and FPAs

Novel infrared detectors and technologies

Controlling and integration of refrigerator

Infrared devices and microsystem

Infrared optical materials and manufacturing

Advanced infrared optical system
Infrared detection and recognition
Novel combination of active and passive optical sensing
Space remote sensing and spectral imaging
Novel imaging reconnaissance and early warning
Low-light-level devices and applications
Information acquisition and signal processing technologies
Testing and evaluation of infrared imaging and detecting systems
Industrial, public security, mechanical and other applications
Machine vision and internet of things and other applications
Machine vision and automatic driving and other applications
Other related technologies

Topic3: Optical Sensing and Imaging Technology and Applications / 光电探测与成像技术及应用

议题方向:

Ultra-violet, visible and infrared sensing and imaging
Millimeter, sub-millimeter, and far-infrared detectors and instrumentation
Novel lidar technology
Environment characteristics of target and atmospheric transmission
Ocean optics and detection technology
Combination of active and passive optical sensing
Machine vision, automatic target detection, image processing & analysis
Other related technologies

Topic4: Optical Spectroscopy and Applications / 光谱技术及应用

议题方向:

Laser induced breakdown spectroscopy and related technologies
Atomic spectroscopy and mass spectrometry
Raman spectroscopy and fluorescence spectroscopy
Photoacoustic spectroscopy and TDLAS technology
Infrared and terahertz spectroscopy
Ultra-fast and transient spectroscopy
Environmental monitoring
Industrial measurement
Other related technology and applications

Topic5: THz Technology and Applications / 太赫兹技术及应用

议题方向:

Terahertz radiation technology

Terahertz detection and detection technology

Terahertz transmission technology

Terahertz regulation technology

Terahertz interaction with matter

Terahertz wireless communication

Terahertz imaging

Terahertz spectroscopy

Terahertz interdisciplinary research

Other related technologies

Topic6: Optical Design and Manufacturing / 光学设计与制造

议题方向:

Current developments in lens design

Novel optical systems, methods, and applications

Polymer optics and molded glass optics: design, fabrication, and materials

Optical Modeling and Performance Predictions

Reflection, scattering, and diffraction from surfaces

Laser Beam Shaping

Nonimaging optics: efficient design for illumination and solar concentration

Ultra-precision cutting technology

Abrasive machining process

Optical and laser machining technology

Assist ultra-precision machining approaches

Measurement and characterization of complex geometries

Measurement of surface integrity and defects

Inspection of subsurface damage and material property

Sensors and uncertainties

Ultra-precision system integration and equipment development

Frontiers in ultra-precision and green manufacturing technology

Other related technologies

Topic7: Optoelectronics Testing and Measurement / 光电测试与测量

议题方向:

Advanced optoelectronic manufacturing and testing

Absolute testing for metrology

Surface and dimensional metrology and applications

Machine/robot vision methods architectures, and applications

Detection of gravitational waves

Ar/Vr optical testing

Inspection technology in large-scale scientific facility
Special optical systems for inspection and measurements
System calibration and error analysis
Online and process control measurements

Topic8: Optoelectronic Devices and Integration / 光电子器件与集成

议题方向:

Semiconductor lasers
Light detection and devices
Silicon photonics
Photonic integrated circuit
Hybrid integration
Novel materials for photonics
Chip fabrication technology and platform
Optical package and test
Other related technologies

Topic9: Micro-Nano Photonics / 微纳光学

议题方向:

Nanostructures, nanomaterials, and their fundamental properties
Optoelectronic materials and devices
Micro/nano manufacturing and metrology
Plasmonics and meta-materials
Applications of nano photonics
Other related technologies

Topic10: Computing Imaging Technology / 计算成像

议题方向:

Basic theory of computational imaging
Scattering imaging and Non-Line-of-Sight imaging
3D imaging
Polarimetry and polarization imaging
Holography and phase imaging
Multi-spectrum imaging and computational spectral imaging
Single-pixel imaging and single-photon imaging
Micro/nano optics and computational imaging
Biomedical and Computational Imaging
Artificial Intelligence and Computational Imaging
Frontier problems in computational imaging

Topic11: Quantum Optics / 量子光学

议题方向:

- Practical and long-distance quantum key distribution
- Quantum memory and quantum repeaters
- Quantum experiments in space, quantum photonics
- Quantum computation with photons and atoms
- Quantum metrology, quantum state engineering
- Other related topics

Topic12: Electromagnetic Compatibility and Electromagnetic Environmental Effect / 电磁兼容与电磁环境效应

议题方向:

- Basic theory of EMC
- EMC management
- EMC measurements
- Electromagnetic environment
- Electromagnetic interference
- High power electromagnetics
- Spectrum engineering
- Low frequency EMC
- Computational electromagnetics
- Signal and power integrity
- Electromagnetic biological effects
- EMC applications
- EMC standards and rules
- Electromagnetic safety
- EMC+AI +Big data
- Other related technologies

Topic13: AI in Optics and Photonics / 人工智能在光学与光子学中的应用

议题方向:

- Artificial intelligence based optical imaging, sensing, measurement, and display
- Computational imaging with deep neural networks
- Deep learning enabled advanced bio-imaging and bio-photonics
- Deep learning enabled quantum optics
- Optical system design by machine learning
- Deep learning based optical computing and signal processing
- Photonic neuromorphic computing
- Optical neural networks
- Integrated photonics for artificial neural computing

Theories and technologies of artificial intelligence and deep learning
Computational efficiency aspects of training deep learning networks
Real-time operation of deep learning networks for optics and photonics
Real-time hardware implementation of deep learning processing on embedded processors

Topic14: Display Technology and Optical Storage / 先进显示技术与光存储

议题方向:

Laser display
TFT-LCD
OLED
Mini LED
Micro-LED
Electronic paper display
3D displays
Optical memories for big data storage
Holographic storage
Optical components
Image process
Imaging technologies and devices
Image quality and human vision
Emerging techniques
VR/AR/MR input devices
Touch and interactive display
Tracking and sensing
Near-eye displays
Vehicle display
VR/AR/MR computer graphics
Distributed VR/AR/MR

Topic15: Biomedical Optics / 生物医学光子学

议题方向:

Biomedical optics components, products, instrumentation, and applications
Molecular imaging
Therapeutic lasers
Nano/biophotonics
Biosensors
Spectroscopic/microscopic imaging
Other related technologies

Topic16: Atmospheric and Environmental Optics / 大气与环境光学

议题方向:

- Atmospheric optical characteristics
- Atmospheric optical remote sensing
- Target detection technology in the atmosphere
- High-resolution imaging technology in turbulent atmosphere
- Atmospheric transmission and correction technology of laser emission
- Laser beam quality control and coherent synthesis technology
- Other related technologies

Topic17: Marine and Polar Optical Detection Technology / 海洋与极地光学探测技术

议题方向:

- Study of optical properties of water bodies
- Marine optical remote sensing technology
- Underwater optical detection technology
- Marine optical communication technology
- Underwater navigation technology
- Polar optical detection technology
- Other related technologies

Topic18: Astronomical Technologies and Instrumentation / 天文技术和仪器

议题方向:

- Optical and Near IR telescopes and instrumentation
- UV, X-ray and Gamma ray telescopes and instrumentation
- Radio, Millimeter, submillimeter and far-infrared techniques, and instrumentation
- AO systems and techniques
- Multi-messenger instrumentation and techniques
- Observatory operations: software and data pipeline system

Topic19: Optical Communications and Networks / 光通信与网络

议题方向:

- Optical network architecture and protocol
- Ultrahigh-speed fiber optic communication
- Space optical communication
- Underwater optical communication
- Atmospheric/cross-media/underwater channel analysis and compensation
- Large-Scale optical switching
- Optical communication chips, devices, and modules
- Visible light Communication
- Near-infrared/ mid-infrared/far-infrared communication
- Optical quantum communication and network

发表须知:

会议稿件由SPIE正式出版, EI核心收录。作者请先登陆会议网站提交英文版稿件摘要, 要求300-500单词, 大会学术委员会审查后, 通过邮件给作者发送录用通知, 作者收到录用通知后再去SPIE网站提交英文版稿件全文。评审为优秀的稿件, 组委会可以协助推荐至指定SCI期刊、EI期刊、或核心期刊发表。

稿件摘要投稿网址: <https://b2b.csoe.org.cn/submission/aopc2025.html>

稿件摘要截稿日期: **2025年4月15日 (第二轮)**。

支持期刊:

Photonix (SCI)
Journal of Electronic Imaging (SCI)
Journal of Applied Remote Sensing (SCI)
Optical Engineering (SCI)
Journal of Micro/Nanolithography, MEMS, and MOEMS (SCI)
Photonic Sensors (SCI)
Journal of Infrared and Millimeter Waves (SCI)
Opto-Electronic Advances (SCI)
Spectroscopy and Spectral Analysis (SCI)
Journal of Innovative Optical Health Science (SCI)
Frontiers of Information Technology & Electronic Engineering (SCI)
Infrared and Laser Engineering (EI)
Acta Photonica Sinica (EI)
Journal of Semiconductors (EI)
International Journal of Extreme Manufacturing
Study on Optical Communications
Journal of Terahertz Science & Electronic Information Technology
SPIE Proceedings (EI)

会议日程:

6月24日, 会议注册、展会注册、科普讲座、产业交流会等;
6月25日上午, 大会开幕式和大会主旨报告;
6月25日下午-26日全天, 专题报告、口头报告、海报交流、产业交流会等;
6月25-27日, 第十六届中国光电子产业博览会。

会议地点:

北京国家会议中心, 地址: 北京市朝阳区天辰东路7号。

会议注册:

<https://b2b.csoe.org.cn/registration/aopc2025.html>

学生快报告交流：

本次会议将设置学生快报告交流专场，会上进行优秀报告评选，并颁发证书。请在会议投稿系统中提交300-500单词左右的英文论文摘要，议题方向请选择：“快报告”，审核通过后，需准备5分钟ppt报告，着重介绍自身成果与创新点。欢迎各位学生代表踊跃报名，参与交流评选！

快报告投稿网址：<https://b2b.csoe.org.cn/submission/aopc2025.html>

同期活动：

1. 产业应用交流会；
2. 科普讲座；
3. 学会会刊读者见面会；
4. 优秀研究生论坛等

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