2026 OMATT

The 12th International Symposium on Advanced Optical Manufacturing and Testing Technologies

November 20-22, 2026 Chengdu, China

Hosts

Optical Society of Sichuan
Chinese Optical Society
Institute of Optics and Electronics, Chinese Academy of Sciences

Organizers

Tianfu Xinglong Lake Laboratory
The 29th Research Institute of China Electronics Technology Group Corporation (CETC)
University of Electronic Science and Technology of China
Sichuan Normal University
Chengguang OptiVerse Technologies (Sichuan) Co., Ltd.



Preface

As the ginkgo trees turn gold and the first winter chill settles over Chengdu, where millennia of tradition continue to inspire bold innovation, we are delighted to welcome you to the 12th International Symposium on Advanced Optical Manufacturing and Testing Technologies (AOMATT 2026), which is being held in Chengdu on November 20–22, 2026.. On behalf of the Organizing Committee, I extend our warmest welcome and heartfelt appreciation to all distinguished guests — leaders, scholars, industry experts, students, and colleagues from around the world — who have traveled near and far to join us at this important event.

Since its inception, AOMATT has grown over more than two decades, guided by the principles of openness, integration, innovation, and sharing. What began as a focused academic exchange has matured into a high-level international platform for multidisciplinary collaboration, playing an increasingly vital role in advancing the science and technology of optical manufacturing and testing worldwide.

AOMATT 2026 centers on the latest developments and future trends in advanced optical manufacturing and testing, with particular attention to adaptive optics, ultra-precision optical manufacturing, computational optics, optical field manipulation, meta-optics, laser spectroscopic detection, intelligent optoelectronics, optoelectronic integration, optical sensing, and physics education. Through academic presentations, invited talks, in-depth panel discussions, and industrial forums, the symposium will explore frontier topics, interdisciplinary research, and real-world applications — sharing insights, strengthening industry–academia synergies, and nurturing a thriving innovation ecosystem.

As we gather once again to exchange knowledge and spark new ideas, I would like to express our sincere gratitude to everyone who has supported the growth of AOMATT over the years — our academic colleagues, institutional partners, session and sub-forum organizers, sponsors, volunteers, and the entire organizing team. Your dedication and collaboration make this symposium possible, and they are deeply appreciated.

May AOMATT 2026 inspire new thinking, deepen friendships old and new, and open up fresh paths of discovery for all participants. We wish you a productive and enjoyable symposium in Chengdu.

Xiangang Luo
General Chair, AOMATT 2026
Institute of Optics and Electronics, Chinese Academy of Sciences, China

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COMMITTEE

Hosts

Optical Society of Sichuan
Chinese Optical Society
Institute of Optics and Electronics, Chinese Academy of Sciences

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Tianfu Xinglong Lake Laboratory
The 29th Research Institute of China Electronics Technology Group Corporation (CETC)
University of Electronic Science and Technology of China
Sichuan Normal University
Chengguang OptiVerse Technologies (Sichuan) Co., Ltd.

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China Jiliang University
Ewha Womans University
Institute of Applied Electronics, China Academy of Engineering Physics
IESL-FORTH
Laser Fusion Research Center, China Academy of Engineering Physics
Microwave Photonic Technology Key Laboratory of Sichuan Province
National Key Laboratory of Adaptive Optics, China
Peking University
RMIT University
Sichuan University
Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences
Southwest Institute of Technical Physics
Southwest Jiaotong University
Southwest University of Science and Technology
State Key Laboratory of Optical Field Manipulation Science and Technology, Institute of Optics and Electronics, Chinese Academy of Sciences
Tongji University
Zhejiang University

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L. Jay Guo, University of Michigan, USA
Wolfgang Kautek, University of Vienna, Austria

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Mingbo Pu, Institute of Optics and Electronics, Chinese Academy of Sciences, China
Changhui Rao, Institute of Optics and Electronics, Chinese Academy of Sciences, China
Dong Ha Kim, Ewha Womans University, Korea

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Minghui Hong, Xiamen University, China
Yuri Kivshar, The Australian National University, Australia
Min Gu, University of Shanghai for Science and Technology, China
Baohua Jia, RMIT University, Australia
Din-Ping Tsai, City University of Hong Kong, China
L. Jay Guo, University of Michigan, USA
Zhipei Sun, Aalto University, Finland
Juergen Czarske, Dresden University of Technology, Germany

Track Committees

Track 1: Electro-optical Telescope and Adaptive Optics

Leading Chairs:

Changhui Rao, Institute of Optics and Electronics, Chinese Academy of Sciences, China
Jean-Paul Kneib, Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland

Co-Chairs:

Jianli Wang, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
Xiangyan Yuan, Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories, Chinese

Academy of Sciences, China
Zheng Cai, Tsinghua University, China

Secretaries:
Lanqiang Zhang, Institute of Optics and Electronics, Chinese Academy of Sciences, China
Yuanjing Zheng, Institute of Optics and Electronics, Chinese Academy of Sciences, China

Track 2: Ultra-Precision and Atomic-level Optical Manufacturing
Leading Chairs:
Qiang Chen, Institute of Optics and Electronics, Chinese Academy of Sciences, China
David Walker, University of Leicester, UK

Co-Chairs:
Chaoyang Wei, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
Binghai Lü, Southwest Jiaotong University, China
Xi Hou, Institute of Optics and Electronics, Chinese Academy of Sciences, China

Secretary:
Shuai Zhang, Institute of Optics and Electronics, Chinese Academy of Sciences, China

Track 3: Micro/Nano Devices and Computational Optics
Leading Chairs:
Xinbin Cheng, Tongji University, China
L. Jay Guo, University of Michigan, USA

Co-Chairs:
Junsuk Rho, Pohang University of Science and Technology, Korea
Kyoung-Duck Park, Pohang University of Science and Technology, Korea
Jiamin Wu, Tsinghua University, China

Secretary:
Chao Feng, Tongji University, China

Track 4: Optical Field Manipulation: Materials, Devices, and Applications
Leading Chairs:
Mingbo Pu, Institute of Optics and Electronics, Chinese Academy of Sciences, China
Xiaodi Tan, Fujian Normal University, China
Ramón Jose Paniagua Dominguez, Institute of Structure of Matter, National Spanish Research Council (IEM-CSIC), Spain

Co-Chairs:
Guoxing Zheng, Wuhan University, China
Ting Xu, Nanjing University, China
Xinxing Zhou, Hunan Normal University, China

Secretaries:
Yijia Huang, Sichuan Normal University, China
Zhaozhong Chen, Institute of Optics and Electronics, Chinese Academy of Sciences, China

Track 5: Meta-optics and Metaphotonics
Leading Chairs:
Yan Zhang, Capital Normal University, China
Lingling Huang, Beijing Institute of Technology, China
Jinghua Teng, Institute of Materials Research and Engineering, A*STAR, Singapore

Co-Chairs:
Zao Yi, Southwest University of Science and Technology, China
Lin Chen, Huazhong University of Science and Technology, China
Xufeng Jing, China Jiliang University, China
Xianzhong Chen, Heriot-Watt University, UK

Secretary:
Fei Zhang, Institute of Optics and Electronics, Chinese Academy of Sciences, China

Track 6: Laser Spectroscopic Detection Technology

Leading Chairs:
Yufei Ma, Harbin Institute of Technology, China
Chao Zhang, Shandong Normal University, China
Vincenzo Spagnolo, Technical University of Bari, Italy

Co-Chairs:
Mingli Wang, Yanshan University, China
Weiguang Ma, Shanxi University, China
Yinzhou Yan, Beijing University of Technology, China

Secretaries:
Jing Yu, Shandong Normal University, China
Ke Chen, Jiangnan University, China
Zhenfeng Gong, Dalian University of Technology, China

Track 7: Intelligent Optoelectronic Sensing Technology and Applications

Leading Chairs:
Jinhong Guo, Shanghai Jiao Tong University, China
Shiyang Tang, University of New South Wales, Australia

Co-Chairs:
Xing Ma, Harbin Institute of Technology, China
Yi Li, Chongqing Medical University, China
Dingfu Zhou, Southwest Institute of Technical Physics, China

Secretaries:
Yuanyuan Zou, Shanghai Jiao Tong University, China
Jing Tong, Southwest Institute of Technical Physics, China

Track 8: Optoelectronic Fusion and Integration Technology

Leading Chair:
Weiwei Xiang, The 29th Research Institute of China Electronics Technology Group Corporation (CETC), China

Co-Chairs:
Pengfei Qu, The 44th Research Institute of China Electronics Technology Group Corporation (CETC), China
Wei Wang, Peking University, China
Xiaojun Xie, Southwest Jiaotong University, China

Secretary:
Hai Jiang, The 29th Research Institute of China Electronics Technology Group Corporation (CETC), China

Track 9: Optical Sensing

Leading Chairs:

Yong Liu, University of Electronic Science and Technology of China, China
Cheng-Wei Qiu, National University of Singapore, Singapore

Co-Chairs:

Jun Wang, University of Electronic Science and Technology of China, China
Wei Wei, Chongqing University, China
Li Gao, Nanjing University of Posts and Telecommunications, China

Secretary:

Jingxuan Wei, University of Electronic Science and Technology of China, China

Track 10: Physics Education and Science Popularization

Leading Chair:

Feng Song, Nankai University, China

Co-Chairs:

Conghua Yan, Sichuan Normal University, China
Junpeng Lv, Southeast University, China
Jianzhi Gao, Shaanxi Normal University, China
Shijie Tang, Sichuan Normal University, China
Bo Wu, Chengdu Jinjiang Jiaxiang Foreign Languages Senior High School, China

Organization Committee

Yining Chen, Center of Physics Olympiad of Macao, China
Xiaobin Ding, Northwest Normal University, China
Jie Feng, Yunnan Normal University, China
Li Guan, Hebei University, China
Daofu Han, Nanchang University, China
Yong Hu, Northeastern University, China
Haili Jiang, Harbin Engineering University, China
Yizheng Jin, Zhejiang University, China
Weijin Kong, Shandong Jiaotong University, China
Jianfeng Li, Wenzhou Institute, University of Chinese Academy of Sciences, China
Wei Liu, Beijing Institute of Technology, China
Xu Lu, Chongqing University, China
Xiaoyan Ren, Zhengzhou University, China
Dongsheng Tang, University of South China, China
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Fang Wang, Baotou Teacher's College, China
Jianpu Wang, Nantong University, China
Jizhou Wu, Shanxi University, China
Yin Yu, Tianjin University, China
Jinwei Zhang, Huazhong University of Science and Technology, China
Jun Zhang, Qingdao University, China
Fuli Zhao, Sun Yat-sen University, China

Secretary:

Lingmin Yuan, Sichuan Normal University, China

This track comprises a half-day oral session and a separate half-day off-site programme. In addition to invited and contributed presentations, the programme includes guided laboratory tours and hands-on demonstrations of in-house-developed optical teaching instruments. Centred on innovative optics teaching, the development of instructional instruments and science communication practice, the track provides a platform for exchange among educators and science communication professionals.

EXHIBITORS


zygo
AMETEK
ÅFiSy
埃福思科技 Technologies
Z&Z
多谱光学
DOSPECTRUM
迈微信光电
Micsense Photonics Instruments
DIRACON
狄量科技
动智精密
MOTIONSMART
成都菲奥姆光学
FOM Optics
海克斯康
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久信科技
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KathMatic
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康冠光电
CORETECH
科锐特光电
普奥亚光学
PUARA OPTICS
LANYUMIC
澜钰微科技
立鼎光电
联合光科
GRAND UNIFIED OPTICS
合肥流瞳光电科技有限公司
HEFEI LIUTONG OPTOELECTRONICS TECHNOLOGY CO., LTD.
南京施密特光学仪器有限公司
Nanjing Simite Optical Instruments Co., Ltd
奇翼光学仪器（成都）有限公司
QiYi Optical Instrument(Chengdu) Co.,Ltd.
Smartmens
四川国科光电
至臻光学
Perfect Optics Co.,Ltd
THORLABS
TW
拓微晶瑞科技
光刻电子
GUANGKE DIANZI
SIMAXAT
新嘉光科技
LightedgeTek
DG 中久大光
DG LASER
中科卓尔
智能科技集团有限公司
中清航科(江苏)科技有限公司
Sino Jiangsu Semiconductor Co., Ltd.
中图科信
KEXIN
TECHNOLOGY
茂竺
MOJUNE
恢卓光学
HUIZHUO OPTICAL
天府兴隆湖实验室
TIANFU XINGLONG LAKE LABORATORY
IBDTEC
博顿光电
ycgx
宇川光学
成都太科光电技术有限责任公司
Chengdu TYGGO Photoelectricity Co.,Ltd
光衡光电
Optical Metrology
BÜHLER
启元晟合(成都)仪器有限公司
Qiyuanshenghe (Chengdu) Instrument Co., Ltd.
SONGQI
上海松琪微电子科技有限公司
Q Tech
CEFOC
中电四公司
jiujon
LANGXIN 朗信光学
中信银行
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SMEE
KT
国泰真空
GUOTAIVACUUM
YAGCRYSTAL
成都新源汇博
XN
兴南真科

GENERAL INFORMATION

Conference Venue

Conference Venue: Chengdu Aerotropolis International Convention Center (成都空港国际会议中心)
Address: No. 1555, South Section of Chengshuang Avenue, Shuangliu District, Chengdu, Sichuan, China, 610200 (中国四川成都双流区成双大道南段 1555 号 邮编：610200)

Registration

Location: 3F
9:00-22:00 Friday, 20 November
8:30-18:30 Saturday, 21 November
8:30-17:00 Sunday, 22 November

Onsite Speaker Preparation

Oral presenters are required to be in the session room at least 30 minutes prior to their scheduled Talk to upload and check their presentation. No-shows of the oral presentation will be reported to conference management and these papers will not be published.

To ensure the orderly conduct of the symposium, the time allocated to each type of presentation is as follows:
Plenary Talk: 30 minutes per person.
Keynote Talk: 25 minutes per person, including a question-and-answer session.
Invited Talk: 20 minutes per person, including a question-and-answer session.
Oral Talk: 15 minutes per person, including a question-and-answer session.

Onsite Poster Preparation

Authors should put up their posters before the poster session starts. Authors must be present at their poster boards from 17:00 to 18:30 on 21 November to answer questions and further discuss their work with attendees. No-show posters will be reported to conference management and these papers will not be published.

Recommended Poster Size: 0.9 m (Length)*1.2 m (Height)
Note: Each poster board is labelled with a board number. Please ensure that you mount your poster on the board allocated to you.

Location: 3F Foyer D&E
Poster Session: 17:00-18:30 Saturday, 21 November

Welcome Banquet

Conference Award will be presented at Welcome Banquet.
Location: 3F Convention Hall A&B&C&D&E&F
18:00-20:00 Friday, 20 November

Buffet Lunch

Location: 3F Grand Ballroom B&C
12:00-13:30 Saturday, 21 November
12:00-13:30 Sunday, 22 November

Buffet Dinner

Location: 3F Grand Ballroom B&C
18:30-20:30 Saturday, 21 November

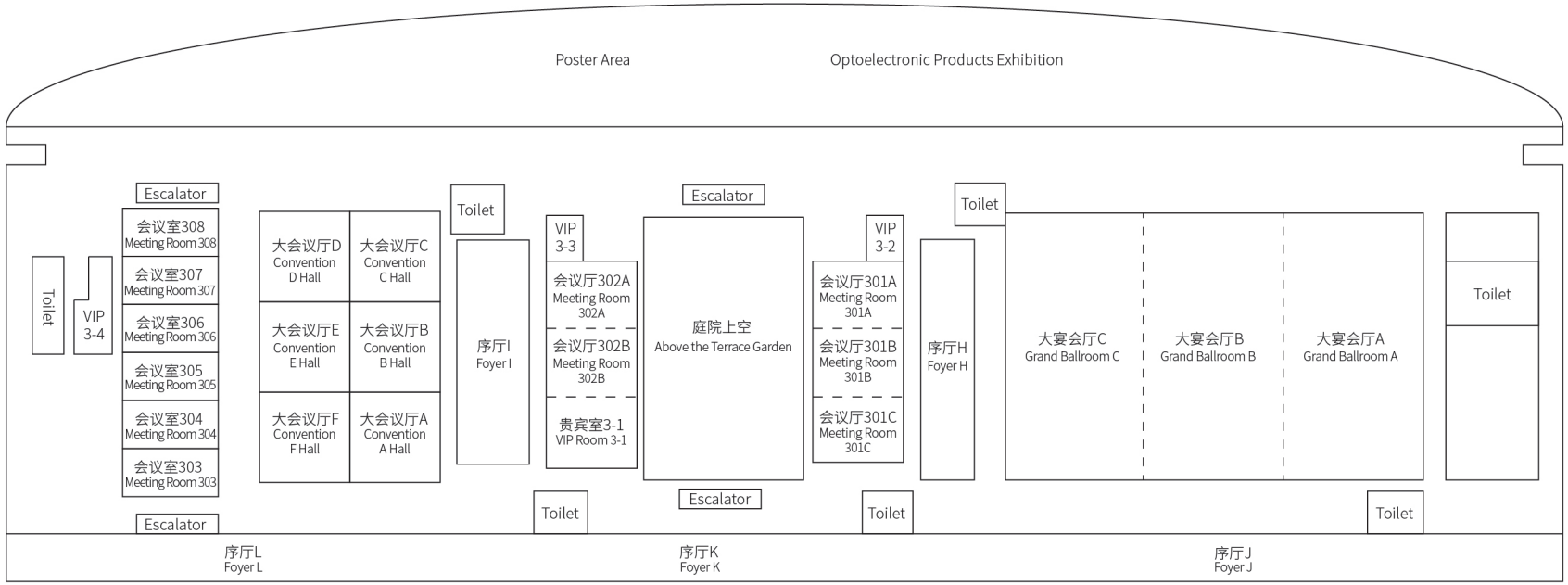
Exhibition

The Optoelectronic Products Exhibition is open to all attendees.
Location: 3F Foyer D&E&F
8:30-18:30 Saturday, 21 November
8:30-17:00 Sunday, 22 November

Conference Materials

The AOMATT 2026 Technical Digest comprises abstracts of the plenary, invited and oral presentations. It is available for download in PDF format from the AOMATT 2026 platform (https://www.aomatt.org/).

MAP



Guidelines

Opening Ceremony of AOMATT 2026	3F Convention Hall A&B&E&F
Plenary Talks	3F Convention Hall A&B&E&F
Science and Technology Innovation and Industry Development Integration Forum	3F Convention Hall D
Track 1: Electro-optical Telescope and Adaptive Optics	3F Meeting Room 301A
Track 2: Ultra-Precision and Atomic-level Optical Manufacturing	3F Meeting Room 308
Track 3: Micro/Nano Devices and Computational Optics	3F Meeting Room 301C
Track 4: Optical Field Manipulation: Materials, Devices, and Applications	3F Meeting Room 302B
Track 5: Meta-optics and Metaphotonics	3F VIP Room 3-1
Track 6: Laser Spectroscopic Detection Technology	3F Meeting Room 307
Track 7: Intelligent Optoelectronic Sensing Technology and Applications	3F Meeting Room 306
Track 8: Optoelectronic Fusion and Integration Technology	3F Meeting Room 304
Track 9: Optical Sensing	3F Meeting Room 305
Track 10: Physics Education and Science Popularization	Tianfu Xinglong Lake Laboratory
Young Scholars Forum	3F Meeting Room 304
Poster Session	3F Foyer D&E
Optoelectronic Products Exhibition	3F Foyer D&E&F
Editorial Board Meeting of Opto-Electronic Journals Group (closed-door)	3F Meeting Room 301B

PROGRAM AT A GLANCE

Date	Time	Agenda	Location
November 20th	9:00-22:00	On-site Registration & Check-in	3F
	18:00-20:00	Welcome Banquet	3F Convention Hall A&B&C&D&E&F
November 21st	8:30-8:50	Opening Ceremony	3F Convention Hall A&B&E&F
	8:50-12:05	Plenary Talks	3F Convention Hall A&B&E&F
	12:05-13:30	Buffet Lunch	3F Grand Ballroom B&C
	13:30-18:00	Track 1: Electro-optical Telescope and Adaptive Optics	3F Meeting Room 301A
		Track 2: Ultra-Precision and Atomic-level Optical Manufacturing	3F Meeting Room 308
		Track 3: Micro/Nano Devices and Computational Optics	3F Meeting Room 301C
		Track 4: Optical Field Manipulation: Materials, Devices, and Applications	3F Meeting Room 302B
		Track 5: Meta-optics and Metaphotonics	3F VIP Room 3-1
		Track 6: Laser Spectroscopic Detection Technology	3F Meeting Room 307
		Track 7: Intelligent Optoelectronic Sensing Technology and Applications	3F Meeting Room 306
		Track 8: Optoelectronic Fusion and Integration Technology	3F Meeting Room 304
		Track 9: Optical Sensing	3F Meeting Room 305
	13:30-18:00	Science and Technology Innovation and Industry Development Integration Forum	3F Convention Hall D
	17:00-18:30	Poster Session	3F Foyer D&E
	18:30-20:30	Buffet Dinner	3F Grand Ballroom B&C
	8:30-18:30	Optoelectronic Products Exhibition	3F Foyer D&E&F

November 22nd	9:00-17:00	Track 1: Electro-optical Telescope and Adaptive Optics	3F Meeting Room 301A
		Track 2: Ultra-Precision and Atomic-level Optical Manufacturing	3F Meeting Room 308
		Track 3: Micro/Nano Devices and Computational Optics	3F Meeting Room 301C
		Track 4: Optical Field Manipulation: Materials, Devices, and Applications	3F Meeting Room 302B
		Track 5: Meta-optics and Metaphotonics	3F VIP Room 3-1
		Track 6: Laser Spectroscopic Detection Technology	3F Meeting Room 307
		Track 7: Intelligent Optoelectronic Sensing Technology and Applications	3F Meeting Room 306
		Track 10: Physics Education and Science Popularization	Tianfu Xinglong Lake Laboratory
	9:00-12:00	Young Scholars Forum	3F Meeting Room 304
		Track 9: Optical Sensing	3F Meeting Room 305
	12:00-13:30	Buffet Lunch	3F Grand Ballroom B&C
	8:30-17:00	Optoelectronic Products Exhibition	3F Foyer D&E&F

CONFERENCE PROGRAMS

Opening Ceremony & Plenary Talks	
Nov.21 Saturday, Convention Hall, 3F	
Presider: Minghui Hong, Xiamen University, China	
08:30-8:50	**Opening Ceremony**
Presider: Min Gu, University of Shanghai for Science and Technology, China	
08:50-09:20	**Plenary Talk** **Merging of Physics and Deep Learning for Fiber Endoscopy Towards Biomedicine** Juergen Czarske, Dresden University of Technology, Germany
09:20-9:50	**Plenary Talk** **Brain Inspired Computing, Sensing and Intelligence** Luping Shi, Tsinghua University, China
09:50-10:20	**Plenary Talk** **Laser-Based Sub-Diffraction-Limit Multiscale Fabrication and Nano-Optical Characterization** Lin Li, The University of Manchester, UK
10:20-10:30	**Coffee Break**
Presider: L. Jay Guo, University of Michigan, USA	
10:30-11:00	**Plenary Talk** **Sustainable Manufacturing of Optical Metasurfaces with Engineered Optical Materials** Junsuk Rho, Pohang University of Science and Technology, Korea
11:00-11:30	**Plenary Talk** **Breakthrough Innovation in Integrated Circuit Device Manufacturing Processes** Tianchun Ye, Institute of Microelectronics of the Chinese Academy of Sciences, China
11:30-12:00	**Plenary Talk** **Advancements on High Resolution Optical Imaging with Adaptive Optics in NLAO, China** Changhui Rao, Institute of Optics and Electronics, Chinese Academy of Sciences, China
Presider: Minghui Hong, Xiamen University, China	
12:00-12:05	**Summary**
12:05-13:30	**Buffet Lunch**

Plenary Talks

Merging of Physics and Deep Learning for Fiber Endoscopy Towards Biomedicine

Juergen Czarske
Dresden University of Technology, Germany

Abstract: Light has the potential to detect and prevent the development of diseases, improve diagnostics, or cure them early and gently. Fiber optic endoscopes are urgently needed for biomedical purposes for instance to support biopsies. However, the instruments are often too bulky due to the use of lens systems. Lensless imaging with multicore and multimode fibers is discussed, combining holographic principles with deep learning. In 2024, Nobel Prizes in both physics and chemistry were awarded for deep learning. We address the transfer of deep learning into practice for both image acquisition and classifications for cancer diagnostics. Completely new principles of fiber-based endoscopy with diffusers and optical diffractive neural networks are highlighted. Fundamental insights are expected that will benefit both scientific progress and practical applications.



Biography: Juergen Czarske (Fellow OPTICA, SPIE, IET, IOP, EOS, COS, SAW, WLT) is director of the Institute for Circuits and Systems and BIOLAS center (Biomedical Computational Laser Systems), both based at TU Dresden. He is a member of the Fraunhofer Society, Excellence Cluster Physics of Life, Else Kröner-Fresenius Center for Digital Health and BrainLinks&BrainTools. He has served as a nominator for the Nobel Prize in Physics. His awards include the 2019 OPTICA Joseph-Fraunhofer-Award and Robert-M.-Burley-Prize in Optical Engineering, 2020 Laser Instrumentation Award of IEEE Photonics Society, 2022 SPIE Chandra S Vikram Award in Optical Metrology and 2024 SPIE Dennis Gabor Award in Diffractive Optics. He was IEEE Distinguished Lecturer and is Vice President of the International Commission for Optics (ICO) and served as General Chair of the ICO-25 world congress in September 2022, which featured three plenary talks by Nobel laureates and participants from 55 countries. He is editor of the journals *Light Science and Applications, PhotoniX Life, Advanced Photonics, Advanced Imaging, Light Advanced Manufacturing*, and *Intelligent Opto-Electronics*.

Plenary Talks

Brain Inspired Computing, Sensing and Intelligence

Luping Shi
Tsinghua University, China

Abstract: Brain inspired computing (BIC) and brain inspired perception (BIP) represent the most critical core technologies for embodied intelligence, and constitute two of the most important research fields in the intelligence-driven era. The key lies in developing the theories and technologies of BIC and BIP by drawing on fundamental principles of brain science, so as to advance brain inspired intelligence (BI). Research outcomes from brain inspired studies can be leveraged to decipher brain mechanisms and develop smart intelligent medicine. The dual-brain-driven paradigm further facilitates the coordinated advancement of information science, artificial intelligence and brain science. Centered on the questions of why, what and how, this report comprehensively discusses the latest progress, major challenges and potential solutions in BIC, BIP and BI, and provides an outlook on future applications and development pathways.



Biography: Luping Shi is a professor, director of the optical memory national engineering research center, founding director of Center for Brain Inspired Computing Research (CBICR), at Tsinghua University (THU), China. He received his Ph.D from Cologne university, Germany in 1992. He is an International institute of cognitive information and cognitive computing (I2CICC) fellow and a Society of Photo-Optical Instrumentation Engineers (SPIE) fellow. Chairman of the Brain-Inspired Intelligence Industry Innovation Alliance. His research interests include brain-inspired computing, perception and intelligence, brain-inspired smart medicine, information storage, and intelligent instrumentation. He proposed a hybrid architecture for brain-inspired computing and led the development of "Tianjic", the world's first hybrid, integrated storage-and-computing brain-inspired chip. Furthermore, he introduced a primitive-based paradigm for brain-inspired perception and led the creation of "Tianmouc" the world's first primitive-based complementary visual chip. The research results for "Tianjic" and "Tianmouc" were published as cover articles in Nature in 2019 and 2024, respectively, and were both selected by academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering as one of China's Top Ten S&T Advances for their respective years. The resulting products have been applied in key fields such as brain simulation, smart medicine, digital brains, and smart cities, pioneering the global deployment and practical application of brain-inspired computing technologies. He has been awarded honors including the National Innovation and Pioneer Award, the Zu Chongzhi Prize, and the First-class Beijing Natural Science Award.

Plenary Talks

Laser-Based Sub-Diffraction-Limit Multiscale Fabrication and Nano-Optical Characterization

Lin Li
The University of Manchester, UK

Abstract: In recent years, breaking the diffraction limit and achieving higher imaging resolution have become research hotspots in the field of microscopic imaging. This report provides an overview of the global microscope market background and competitive landscape, as well as the background and key technologies of laser-based super-diffraction-limit processing. It introduces the imaging principles of microsphere lens-based super-resolution optical microscopy and subsequently explores the applications of microsphere super-resolution optical imaging technology in biomedical research, semiconductor devices, and nanomaterial science.



Biography: Prof. Lin Li, Foreign Academician of the Chinese Academy of Engineering (CAE), Fellow of the Royal Academy of Engineering (FREng), the International Academy for Production Engineering, the Laser Institute of America, and the Institution of Engineering and Technology, is also a Lifetime Honorary Professor at the University of Manchester. He has been engaged in research on efficient laser processing of hard-to-machine materials for over 30 years. Throughout his career, he has led more than 60 national and collaborative research projects. Many of the innovative laser processing technologies and super-resolution optical imaging techniques he developed have been applied in the manufacturing of aircraft engine components, locomotive bodies, automobile engines, and semiconductor chips.

He has received numerous prestigious awards, including the Sir Frank Whittle Medal from the Royal Academy of Engineering, the Wolfson Research Merit Award from the Royal Society, the Donald Julius Groen Prize from the Institution of Mechanical Engineers, the Arthur Schawlow Award from the Laser Institute of America, and the Lifetime Achievement Award from the Association of Industrial Laser Users. He has also served as President of the Laser Institute of America, the International Academy for Photonics and Laser Engineering, and the British Industrial Laser Association.

Plenary Talks

Sustainable manufacturing of optical metasurfaces with engineered optical materials

Junsuk Rho

Pohang University of Science and Technology, Korea

Abstract: Metasurfaces offer unprecedented control of amplitude, phase, and polarization while maintaining an ultrathin form factor. Despite these advantages, their reliance on nanoscale building blocks requires high-resolution patterning. Conventional fabrication approaches such as electron beam lithography are based on direct writing, which suffers from low throughput and high cost, and is therefore not sustainable for large-scale deployment. To address these limitations, we develop engineered optical materials that are fully compatible with nanoimprint lithography, enabling single-step manufacturing of metasurfaces with scalable, low-cost, and high throughput production. The first engineered optical material is a nanoparticle embedded resin, PER, created by dispersing high-index nanoparticles into a resin to increase its effective refractive index while maintaining imprint compatibility. By choosing nanoparticles with appropriate optical properties, PERs can be tailored for different spectral ranges. TiO_2 PER provides high-index performance in the visible region, ZrO_2 PER offers a wide bandgap and transparency in the ultraviolet, and Si PER enables high-index operation in the near-infrared. Using these PERs, metasurfaces across a wide wavelength range can be produced in a single imprinting step. The second engineered optical material is a hybrid material in which a thin high-index coating is deposited on the imprinted resin structures. This approach significantly increases the effective refractive index of the entire nanostructure. Depending on the target wavelength range, ZrO_2 hybrid materials are used for ultraviolet operation and TiO_2 hybrid materials are used for visible wavelengths. The third engineered optical material is a sol-gel based material that forms TiO_2 structures through thermal sintering after imprinting. This method is well suited for fabricating high-index metasurfaces and allows control of the TiO_2 crystal phase, including anatase and rutile, by adjusting the curing temperature, thereby enabling high performance metasurface implementations. The fourth engineered optical material expands functionality by modifying either the matrix or the inclusions with functional species. Using polyvinyl alcohol as a humidity responsive matrix enables tunable metasurfaces, while hydroxypropyl cellulose allows fabrication of water-soluble and environmentally friendly labels. Replacing the inclusions with quantum dots enables directional control of photoluminescence for active optical functionalities. All of these engineered optical materials can be replicated through wafer-scale master molds fabricated by photolithography, enabling large area and high-volume production. Furthermore, nanoimprint lithography systems are being advanced from plate-to-plate configurations toward roll-to-plate and roll-to-roll systems, achieving higher yield, improved process automation, and increased throughput, bringing metasurface manufacturing closer to industrial scale. These mass producible metasurfaces are applicable to diverse technologies including VR/AR displays, 3D displays, 3D sensors, LiDAR, and compact imaging systems.



Biography: Prof. Rho is a Yeon-San (延山) Endowed Chair Professor and Mu-Eun-Jae (无垠斋) Endowed Chair Professor at Pohang University of Science and Technology (POSTECH), Korea, with a joint appointment in the Department of Chemical Engineering, Mechanical Engineering, and Electrical Engineering. He received his Ph.D. at the University of California, Berkeley (2013), M.S. at the University of Illinois, Urbana-Champaign (2008) and B.S. at Seoul National University, Korea (2007) all in Mechanical Engineering. Prior to joining POSTECH, he conducted postdoctoral research in Materials Sciences Division & Molecular Foundry at Lawrence Berkeley National Laboratory, and also worked as a principal investigator (Ugo Fano Fellow) in Nanoscience and Technology Division & the Center for Nanoscale Materials at Argonne National Laboratory. Prof. Rho has authored and co-authored more than 450 high-impact journal papers including Science and Nature. He is also the recipients of several notable honors and awards such as US Department of Energy Argonne Named Fellowship (2014), Korean Presidential Early Career Award for Scientists and Engineers (2019), Member of the Young Korean Academy of Science and Technology (Y-KAST) (2020), Associate Member of the National Academy of Engineering of Korea (NAEK) (2022), Fulbright Visiting Scholar Fellowship (2022), Northwestern Simpson Fellowship (2022), Clarivate Highly Cited Researcher (2023, 2024), Elsevier/Stanford World Top 2% Scientist (2021-2025), ACS Nano Lectureship (2024). He serves 13 editorial positions including Light: Science and Applications (Springer-Nature), Microsystems and Nanoengineering (Springer-Nature) among others.

Plenary Talks

Breakthrough Innovation in Integrated Circuit Device Manufacturing Processes

Tianchun Ye

Institute of Microelectronics of the Chinese Academy of Sciences, China

Abstract: Integrated circuit process evolution is the fundamental basis for the development of modern information and artificial intelligence technologies. Over the past few decades, China has been making continuous efforts in this field. Starting from the 90nm node, integrated circuit CMOS transistors have demanded the development of new processes, materials, and structures to overcome key bottlenecks in PPA scaling by generations. The Institute of Microelectronics of the Chinese Academy of Sciences (IMECAS) has long been engaged in the research and development of innovative transistor technologies. They have made a great breakthrough on technical challenges such as precise gate control, transistor performance modulation, and structural scaling in 22nm high-k/metal gate-last, 14nm FinFET, and up-to-date GAA transistor processes, established a technical system with comprehensive independent intellectual property rights, and successfully applied it to domestic and international cutting-edge integrated circuit products.



Biography: Prof. Tianchun Ye is a Professor at the Institute of Microelectronics, Chinese Academy of Sciences, IEEE Fellow, former Director of the Institute of Microelectronics, currently Deputy Director of the Circuits and Systems Branch of the Chinese Institute of Electronics, Deputy Director-General of the China Semiconductor Industry Association and Director of the Integrated Circuit Branch. He is a leading expert in metal-oxide-semiconductor (MOS) transistor micro-nano fabrication technology in China, with over 100 authorized invention patents. His related technologies have been widely applied by leading domestic and international enterprises in the mass production of cutting-edge products. Awarded 4 National Technology Invention Second Prizes and 7 provincial/ministerial-level science and technology awards, with over 300 academic papers published.

Plenary Talks

Advancements on high resolution optical imaging with adaptive optics in NLAO, China

Changhui Rao
Institute of Optics and Electronics, Chinese Academy of Sciences, China

Abstract: The National Key Laboratory of Adaptive Optics (NLAO), China, which originated from the adaptive optics (AO) research in Institute of Optics and Electronics (IOE), Chinese Academy of Sciences in 1980, had been established in Jan., 2024. We have built the whole foundation of the AO including the AO theories, devices manufacture, and system development. For night-time high resolution imaging, 1.8m telescope with the 241-element deformable secondary mirror and 1 Na LGS had been built at the Gaomeigu site. 4m telescope with 1000 element class AO system had been put into the regular operation. The AO/GLAO systems with the 858-element deformable secondary mirror and 4 Na LGS for 4.2m telescope and the Nasmyth AO system with the 127-element large stroke and 1253-element high density two cascade deformable mirrors and 1 Na LGS for 14.5m telescope are developing. For day-time solar observation, three generation AO systems including conventional AO, GLAO and MCAO had been developed for 1m New Vacuum Solar Telescope (NVST) at Fuxian Lake Solar Observatory. The 1.8-m solar telescope CLST with 451-element AO have been completed and will be installed at the Daocheng site in 2027. The AO/GLAO systems with the 931-element deformable mirror, one high-order correlating Hartmann-Shack wavefront sensor and four multi-direction wavefront sensors had finished the indoor integration test for 2.5m solar telescope of Nanjing University. A new solar AO system for prominence and the upgraded MCAO system is developing for NVST. Furthermore, we are developing a 60-cm compact solar adaptive telescope for high contrast solar imaging. The main advancements on high resolution optical imaging with AO are reported in this presentation.



Biography: Changhui Rao is Director of the National Key Laboratory of Adaptive Optics and Professor at the Institute of Optics and Electronics, Chinese Academy of Sciences. He is an SPIE Fellow and an Optica/IAU Member, and a Council Member of the Chinese Optical Society and the Chinese Society for Optical Engineering. He has more than 30 years of research experience in high-resolution optical imaging for large ground-based telescopes and adaptive optics. His honors include the First Prize of the National Technological Invention Award (2017), the Second Prize of the National Technological Invention Award (2008), multiple Provincial Science and Technology Progress Awards, and selection for the National High-level Talent Special Support Plan and the Sichuan Tianfu Distinguished Scientist Program.

SCIENCE AND TECHNOLOGY INNOVATION AND INDUSTRY DEVELOPMENT INTEGRATION FORUM

Nov. 21 Saturday, 13:30-18:00, Venue: 3F Convention Hall D			
Organizers: Q Technology · China CITIC Bank; Co-organizer: Z&Z Optoelectronics Tech. Co., Ltd.			
Time	Program	Remarks	Chair
13:30-13:40	Opening Address		Prof. Minghui Hong
Technical Report Session I · Light Source, Equipment & Display · 4 reports × 20 min			
13:40-14:00	Technical Report 1 Key Technologies and Major Applications of High-Energy Laser Sources	DG Laser Mr. Lei Zhao, General Manager	
14:00-14:20	Technical Report 2 Research on Isolated/Dense Linewidth Matching for Lithography Machines	SMEE (Shanghai Micro Electronics Equipment) Mr. Wei Zhao, Senior System Engineer	
14:20-14:40	Technical Report 3 Advances and Industrialization Trends in TFT-Based Micro-LED Display Technology	Chengdu ChenXian Optoelectronics Co., Ltd. Mr. Yi Zhang, Product Manager	
14:40-15:00	Technical Report 4 Applications of Micro/Nano Optics in Laser Displays	Hisense Mr. Guanxing Zang, Senior Optical Engineer	
15:00-15:20	Coffee Break		
Technical Report Session II · Precision Optics & Photoelectric Sensing · 3 reports × 20 min			Prof. Baohua Jia
15:20-15:40	Technical Report 5 High-Precision Inspection Technology for Large-Aperture Aspheric Digital Knife-Edge Gauges	Intane Optics Mr. Xinliang Yu, Deputy Chief Process Engineer	
15:40-16:00	Technical Report 6 Atomic-Scale Fabrication of Picometer-Level Ultra-Smooth CaF_2 Optical Elements: Technology and Application Explorations	Z&Z Optoelectronics Tech. Co., Ltd Mr. Xuchuan Zhang, Chairman	
16:00-16:20	Technical Report 7 Oxides Empower Photoelectric Sensing: A New Paradigm of Transparency, Flexibility and Intelligence	HKC Ms. Xiufeng Zhou, R&D Director	
16:20-16:50	China CITIC Bank Report CITIC Bank Financial Service Plan for the Optical Manufacturing Industry		
16:50-17:40	Panel Discussion High-Performance Periscope Telephoto Module: From Optical Breakthrough to Mass Production		Q Technology
17:40-17:50	Signing Ceremony		
17:50-18:00	Closing Summary		

Track 1: Electro-optical Telescope and Adaptive Optics

Afternoon, 21 November 2026, 3F Meeting Room 301A	
Presider: Xiangyan Yuan, Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories, Chinese Academy of Sciences, China	
13:30-13:55	**Keynote Talk** **Liquid Lens and its Application in Microscope with Continuous Optical Zoom** Chao Liu, Beihang University, China
13:55-14:20	**Keynote Talk** **The World's Largest Aperture Ground-Based Optical Telescope with a SiC Primary Mirror** Jianli Wang, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
14:20-14:40	**Invited Talk** **Progress of Cool Planets Imaging Coronagraph (CPI-C) on Chinese Space-station Survey Telescope (CSST) and a brief introduction of Extraterrestrial Life Signal Explorer (ELSE)** Jiangpei Dou, Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories, Chinese Academy of Sciences, China
14:40-15:00	**Invited Talk** **Precision Tracking Control of Ground-based Large-Aperture Telescopes** Yongting Deng, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
15:00-15:30	**Coffee Break**
Presider: Jianli Wang, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China	
15:30-15:55	**Keynote Talk** **Light Field Representation and Field Computation: A New Paradigm for Optoelectronic Telescopes and Adaptive Optics** Xiaopeng Shao, Xi'an Institute of Optics and Precision Mechanics of Chinese Academy of Sciences, China
15:55-16:20	**Keynote Talk** **Progress of the 14.5-meter Optical/Infrared telescope (FORT)** Xiangyan Yuan, Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories, Chinese Academy of Sciences, China
16:20-16:50	**Invited Talk** **Active Optics Primary Mirror Support System for the WFST** Jinlong Tang, Institute of Optics and Electronics, Chinese Academy of Sciences, China
16:50-17:10	**Invited Talk** **Active Support for the World's Largest SiC Primary Mirror** Xiaoxia Wu, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
17:10-17:25	**Oral Talk** **Research on Time-Domain Multiplexing of Wavefront Information Based on Image Quality Constraints** Kun Ma, Changchun University of Science and Technology, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 1: Electro-optical Telescope and Adaptive Optics

Morning, 22 November 2026, 3F Meeting Room 301A	
Presider: Xiaojun Jiang, The National Astronomical Observatories, Chinese Academy of Sciences, China	
9:00-9:25	**Keynote Talk** **Progress of MUltiplexed Survey Telescope (MUST)** Zheng Cai, Tsinghua University, China
9:25-9:45	**Invited Talk** **Technical Research on Scientific Large-Format Mosaic Camera for Large Ground-Based Telescopes** Jianlu Jia, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
9:45-10:05	**Invited Talk** **A monolithic Upgrade of the NVST Adaptive Optics System for Multi-Mode and Prominence Observations** Lanqiang Zhang, Institute of Optics and Electronics, Chinese Academy of Sciences, China
10:05-10:20	**Coffee Break**
Presider: Zheng Cai, Tsinghua University, China	
10:20-10:45	**Keynote Talk** **Inner Mongolia University 10-meter-class Optical and Infrared Astronomical Telescope** Xiaojun Jiang, The National Astronomical Observatories, Chinese Academy of Sciences, China
10:45-11:10	**Keynote Talk** **Jiao Tong University Spectroscopic Telescope (JUST)** Xianzhong Zheng, Shanghai Jiao Tong University, China
11:10-11:30	**Invited Talk** **Stability Control of Large-Aperture Keystone-Segmented Telescopes** Qichang An, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
11:30-11:45	**Oral Talk** **Precision Deployable Mechanism Technology for the Segmented Primary Mirror of a Space Deployable Optical Telescope** Dan Jia, Institute of Optics and Electronics, Chinese Academy of Sciences, China
11:45-12:00	**Oral Talk** **Progress Report on On-site Commissioning and Trial Observations of the Medium-Low Dispersion Spectrograph (SCUTUM) for the MOST Telescope** Haoran Yu, Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories, Chinese Academy of Sciences, China
12:00-13:30	**Buffet Lunch**

Track 1: Electro-optical Telescope and Adaptive Optics

Afternoon, 22 November 2026, 3F Meeting Room 301A	
Presider: Lanqiang Zhang , Institute of Optics and Electronics, Chinese Academy of Sciences, China	
13:30-13:55	**Keynote Talk** **Extreme Adaptive Optics for the Cool Planet Imaging Coronagraph on CSST** He Sun, Peking University, China
13:55-14:20	**Keynote Talk** **Progress on Adaptive Optics Subsystem for the 14.5-m Telescope** Youming Guo, Institute of Optics and Electronics, Chinese Academy of Sciences, China

14:20-14:40	**Invited Talk** **Precision Profile Measurement Technology for Complex Surfaces of Ground-Based Large-Aperture Telescopes** Zhiyi Wang, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
14:40-15:00	**Invited Talk** **Optical System of the MUltiplexed Survey Telescope (MUST)** Yamin Zheng, Tsinghua University, China
15:00-15:15	**Oral Talk** **Real-Time Processing of Massive Data for Large-Aperture, Wide-Field Telescopes: A Direct-Connected, Tightly Coupled Cluster Architecture** Junchi Liu, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
15:15-15:30	**Oral Talk** **Astrophotonics for High-resolution Astronomical Observations** Ziming Hong, Nanjing Institute of Astronomical Optics & Technology, National Astronomical Observatories, Chinese Academy of Sciences, China
15:30-15:45	**Oral Talk** **Noise-Statistics-Driven Dead-Zone Control with Frequency-Selective Dual Disturbance Observers for Large Stabilized Platforms** Hongrui Liao , Institute of Optics and Electronics, Chinese Academy of Sciences, China
15:45-16:00	**Oral Talk** **Wavefront-Sensor-Derived Composite PSF Kernel for Image Deconvolution: On-Sky Validation with the Mephisto 1.6 m Telescope** Yiming Zhang, Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China
16:00-16:15	**Coffee Break**

Track 2: Ultra-Precision and Atomic-level Optical Manufacturing

Afternoon, 21 November 2026, 3F Meeting Room 308	
Presider: Chaoyang Wei, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China	
13:30-13:55	**Keynote Talk** **Atomic-Scale Manufacturing Technologies for Ultra-Precision Optical Systems** Xinquan Zhang, Shanghai Jiao Tong University, China
13:55-14:20	**Keynote Talk** **Full-Aperture Defect Detection and Damage Threshold Evaluation Technology for Large-Aperture Complex Curved Optics** Dong Liu, Zhejiang University, China
14:20-14:45	**Keynote Talk** **Coherence Scanning Interferometry for 3D Metrology of High-Aspect-Ratio Microstructures** Qun Yuan, Nanjing University of Science and Technology, China
14:45-15:05	**Invited Talk** **Precision Characterization of Four-Dimensional Field Data for Micro-Featured Devices** Zexiao Li, Tianjin University, China
15:05-15:25	**Coffee Break**
Presider: Dong Liu, Zhejiang University, China	
15:25-15:50	**Keynote Talk** **Atomic-Scale Precision Fabrication of Optical Surfaces** Xiaoqiang Peng, National University of Defense Technology, China
15:50-16:10	**Invited Talk** **Synchrotron Radiation Source Applications of High-end Silicon Carbide Mirrors Manufacturing Technology** Haixiang Hu, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
16:10-16:30	**Invited Talk** **Surface Metrology for Atomic-Level Optical Manufacturing** Rong Su, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
16:30-16:50	**Invited Talk** **Surface measurement for complex optical surfaces: from deflectometry to interferometry** Zhenqi Niu, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
16:50-17:05	**Oral Talk** **Study on Material Removal Uniformity and Surface Roughness in Lapping and Polishing of 7075-T651 Aluminum Alloy Mirrors** Yueyu Hou, Changchun University of Science and Technology, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 2: Ultra-Precision and Atomic-level Optical Manufacturing

Morning, 22 November 2026, 3F Meeting Room 308	
Presider: Binghai Lü, Southwest Jiaotong University, China	
9:00-9:25	**Keynote Talk** **Progress and Prospects of Femtosecond Laser-Induced Electrochemical Deposition for Micro-Additive Manufacturing** Jinkai Xu, Changchun University of Science and Technology, China

9:25-9:50	**Keynote Talk** **Ultra-Precision and High-Efficiency Machining of Microlens Arrays Using Combined Manufacturing Processes** Tianfeng Zhou, Beijing Institute of Technology, China
9:50-10:10	**Invited Talk** **Research Progress and Advances in Air-Jet Polishing** Yanjun Han, Southwest Jiaotong University, China
10:10-10:20	**Coffee Break**
Presider: Tianfeng Zhou, Beijing Institute of Technology, China	
10:20-10:45	**Keynote Talk** **Ultra-Precision Manufacturing Technology for Large-Aperture Complex Surface Optical Components** Chaoyang Wei, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
10:45-11:10	**Keynote Talk** **Liquid-Phase Plasma Machining with Floating Discharge Tool** Wule Zhu, Zhejiang University, China
11:10-11:30	**Invited Talk** **Study on Plasma and Enzymatic Hydrolysis for Full-Spatial Frequency Fabrication of X-Ray Reflector** Hui Deng, Southern University of Science and Technology, China
11:30-11:45	**Oral Talk** **Rapid Acquisition and Implementation of Spatial-Frequency-Shifting Super-Resolution Digital Holograms** Jie Hao, Xi'an Technological University, China
11:45-12:00	**Oral Talk** **Edge Roll-Up Suppression on Aspheric Surfaces Using a Local Variable-Density Dwell-Point Optimization Model** Chuanyu Cui, Institute of Optics and Electronics, Chinese Academy of Sciences, China
12:00-12:15	**Oral Talk** **High-Efficiency Dual-Rotation Wheel Polishing of Optical Components** Fulei Chen, National University of Defense Technology, China
12:00-13:30	**Buffet Lunch**

Track 2: Ultra-Precision and Atomic-level Optical Manufacturing

Afternoon, 22 November 2026, 3F Meeting Room 308	
Presider: Xiaoqiang Peng, National University of Defense Technology, China	
13:30-13:55	**Keynote Talk** **Advances in X-Ray Optics at HEPS** Ming Li, Institute of High Energy Physics, Chinese Academy of Sciences, China
13:55-14:20	**Keynote Talk** **Phase Super-Resolution Reconstruction for Digital Holographic Imaging** Bingcai Liu, Xi'an Technological University, China
14:20-14:40	**Invited Talk** **Research on Ultra-Precision Polishing Technology of Optical Surfaces for Novel Low-Expansion Ceramic Materials** Jiaoteng Ding, Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, China
14:40-15:00	**Invited Talk** **Surface Measurement Technology for Off Axis Convex Aspheric Mirrors Based on Aspheric Test Plate Lens** Zhaoming Wang, Beijing Institute of Space Mechanics & Electricity, China
15:00-15:20	**Invited Talk** **Laser-Assisted Slow Tool Servo Diamond Turning of Glass-Ceramic Optic**s Kaiyuan You, University of Electronic Science and Technology of China, China

15:20-15:40	**Coffee Break**
Presider: Yanjun Han, Southwest Jiaotong University, China	
15:40-16:05	**Keynote Talk** **Degradation of the I-Line Glasses under Electron and DUV Irradiation** Cunding Liu, Soochow University, China
16:05-16:20	**Oral Talk** **Misalignment-Robust Interferometric Surface Figure Reconstruction via Multi-Wavefront Sensing** Tao Xing, Zhejiang University, China
16:20-16:35	**Oral Talk** **Rotational Error Separation and Compensation Method Incorporating KAN-Based Harmonic Post-Processing** Wenhui Chen, National University of Defense Technology, China
16:35-16:50	**Oral Talk** **Laser Spot Energy Distribution and Power Selection for Preheating Single-Crystal Silicon under Water-Based Cooling** Xinyuan Xu, National University of Defense Technology, China

Track 3: Micro/Nano Devices and Computational Optics	
Afternoon, 21 November 2026, 3F Meeting Room 301C	
Presider: Xinbin Cheng, Tongji University, China	
13:30-13:55	**Keynote Talk** **Integrated Polymer Resonators and Si Photonic Platforms for Photoacoustic Imaging** L. Jay Guo, University of Michigan, USA
13:55-14:15	**Invited Talk** **High-Speed 3D Imaging and Sensing: From Classical Fringe Projection to Deep Learning Approaches** Chao Zuo, Nanjing University of Science and Technology, China
14:15-14:35	**Invited Talk** **Electro-Optic Frequency Comb-Empowered Precise Measurement of the Dynamic Frequency of a Laser** Yang Li, Sun Yat-sen University, China
14:35-14:55	**Invited Talk** **Infrared Polarization Detection Based on Optoelectronic Metadevices** Jing Zhou, Shanghai Institute of Technical Physics, Chinese Academy of Sciences, China
14:55-15:15	**Invited Talk** **AI & Optics-Empowered Novel Imaging** Zihan Geng, Tsinghua Shenzhen International Graduate School, China
15:15-15:35	**Coffee Break**
Presider: L. Jay Guo, University of Michigan, USA	
15:35-16:00	**Keynote Talk** **Large-Aperture Thermal Imaging Metalens Fabricated Using Spatially-Modulated Wafer-Scale Interference Lithography** Wen-Di Li, The University of Hong Kong, China
16:00-16:25	**Keynote Talk** **Tip-Induced Control of Quantum Light-Matter Interactions at the Nanoscale** Kyoung-Duck Park, Pohang University of Science and Technology, Korea
16:25-16:45	**Invited Talk** **Laser Nanoprinting: From 3D Printing to Single Emitter Integration** Linhan Lin, Tsinghua University, China
16:45-17:05	**Invited Talk** **Ablation-Free Pulsed Laser Nanotexturing for Photonics and Optoelectronics** Aleksandr A. Kuchmizhak, Far Eastern Federal University, Russia
17:05-17:25	**Invited Talk** **Maximum Circular Dichroism in Twisted Hyperbolic van der Waals Homostructures** Yang Chen, University of Science and Technology of China, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 3: Micro/Nano Devices and Computational Optics

Morning, 22 November 2026, 3F Meeting Room 301C	
Presider: Jiamin Wu, Tsinghua University, China	
09:00-09:25	**Keynote Talk** **Chiral Plasmonic Nanoparticles** Jianfang Wang, The Chinese University of Hong Kong, China
09:25-09:45	**Invited Talk** **Machine Learning-Assisted Computational Design and Scalable Manufacturing of Spectral Thermal Photonic Devices** Kehang Cui, Shanghai Jiao Tong University, China
09:45-10:05	**Invited Talk** **Computer-Generated Holography for Lensless Nanolithography** Kun Huang, University of Science and Technology of China, China
10:05-10:25	**Coffee Break**
Presider: Kun Huang, University of Science and Technology of China, China	
10:25-10:45	**Invited Talk** **Metalens for High Space-Bandwidth Product Imaging** Haowen Liang, Sun Yat-sen University, China
10:45-11:05	**Invited Talk** **The Magic of Moiré Physics** Andreij Gadelha, Brazilian Center for Research in Physics, Brazil
11:05-11:25	**Invited Talk** **Metasurface-Enabled Thermal Metrology via Engineered Dispersion** Mu Ku Chen, City University of Hong Kong, China
11:25-11:45	**Invited Talk** **Rapid High-Resolution Volumetric 3D Printing Based on Holographic Light Fields Projection** Xukang Wang, Tsinghua University, China
12:00-13:30	**Buffet Lunch**

Track 3: Micro/Nano Devices and Computational Optics

Afternoon, 22 November 2026, 3F Meeting Room 301C	
Presider: Peng Li, Northwestern Polytechnical University, China	
13:30-13:50	**Invited Talk** **Multi-functional Imaging and Displaying Empowered by Optical Metasurfaces** Cheng Zhang, Huazhong University of Science and Technology, China
13:50-14:10	**Invited Talk** **Millimeter-Scale, Atomically Controlled 2D Topological Insulators Revealed by Multimodal Spectroscopy** Woojoo Lee, Gachon University, Korea
14:10-14:30	**Invited Talk** **Key Technologies for Nanometrology of Quantized Optical-Lattice Constants** Dongbai Xue, Tongji University, China
14:30-14:50	**Coffee Break**

Presider: Kyoung-Duck Park, Pohang University of Science and Technology, Korea	
14:50-15:10	**Invited Talk** **Multidimensional Acquisition of Light-Field via Metasurfaces** Peng Li, Northwestern Polytechnical University, China
15:10-15:30	**Invited Talk** **Spectroscopic Ellipsometry for Optical Characterization of Nanomaterials** Junho Choi, Kyung Hee University, Korea
15:30-15:50	**Invited Talk** **Adaptive, Liquid-Crystal-on-Silicon (LCoS)-Based Diffractive Neural Network for Optical Field Manipulation** Shiyue Chen, Dresden University of Technology, Germany
15:50-16:10	**Invited Talk** **TBD** Kaixuan Wei, King Abdullah University of Science and Technology, Kingdom of Saudi Arabia

Track 4: Optical Field Manipulation: Materials, Devices, and Applications

Afternoon, 21 November 2026, 3F Meeting Room 302B	
Presider: Han Lin, RMIT University, Australia	
13:30-13:55	**Keynote Talk** **Frequency Up-Conversion of Infrared Radiation in AlGaAs-on-Insulator Nonlocal Metasurface** Giuseppe Leo, University Paris Cité, France
13:55-14:20	**Keynote Talk** **Nonlinear Imaging via Nonlinear Metasurfaces** Mohsen Rahmani, Nottingham Trent University, UK
14:20-14:45	**Keynote Talk** **Metaplasmonic Structured-Light Engineering for Enhanced Nanoscale Optical Detection** Donghyun Kim, Yonsei University, Korea
14:45-15:10	**Keynote Talk** **Nonlinear Light Generation in Plasmonic Nanocavities** Dangyuan Lei, City University of Hong Kong, China
15:10-15:25	**Coffee Break**
Presider: Jierong Cheng, Nankai University, China	
15:25-15:45	**Invited Talk** **Polymer Metasurface Radiative Cooling Film from Lab to Fab** Han Lin, RMIT University, Australia
15:45-16:05	**Invited Talk** **Manipulation of High-Dimensional Photonic Orbital Angular Momentum** Zhicheng Ren, Nanjing University, China
16:05-16:25	**Invited Talk** **Tailoring Complex Vectorial Optical Fields via High-Integration Metasurfaces** Shulin Sun, Fudan University, China
16:25-16:45	**Invited Talk** **Momentum-Space Light Manipulation with Nonlocal Metasurfaces** Wei Wang, Sichuan University, China
16:45-17:00	**Oral Talk** **Holographically Controlled Photonic Spin-Orbit Hall Effect for Single-Shot Detection of Vector Vortex Light** Ziyao Lyu, Shanghai Jiao Tong University, China
17:00-17:15	**Oral Talk** **Intensity-Based Identification of Vector Vortex Beams on Poincaré Spheres by Polarization Holography** Yi Yang, Fujian Normal University, China
17:15-17:30	**Oral Talk** **Terahertz Vectorial Optical Field Manipulation Metasurface Based on Magnetically Dynamic Polarization Reconfiguration** Hao Wang, Nankai University, China
17:30-17:45	**Oral Talk** **Research on Fourier Ptychographic Microscopy Reconstruction Based on Opto-Mechanical-Thermal Integrated Analysis** Jiao Jiao, University of Electronic Science and Technology of China, China
17:45-18:00	**Oral Talk** **Electrically Reconfigurable Liquid-Crystal Metasurfaces for Integrated and Free-Space Photonics** Chengkun Dong, Jiangnan University, China

18:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 4: Optical Field Manipulation: Materials, Devices, and Applications

Morning, 22 November 2026, 3F Meeting Room 302B

Presider: Xinrui Lei, University of Shanghai for Science and Technology, China

09:00-09:25	**Keynote Talk** **Dynamic Terahertz Beam Manipulation for Communication and Imaging Applications** Jierong Cheng, Nankai University, China
09:25-09:50	**Keynote Talk** **High-Dimensional OAM Tailoring and Processing** Shiyao Fu, Beijing Institute of Technology, China
09:50-10:10	**Invited Talk** **Partially Coherent structured light for Optical Encryption and Information Transmission** Chunhao Liang, Shandong Normal University, China
10:10-10:30	**Invited Talk** **Low Aliasing Meta-Holography Based on K-Space Constraint** Di Wang, Beihang University, China
10:30-10:40	**Coffee Break**

Presider: Zhicheng Ren, Nanjing University, China

10:40-11:00	**Invited Talk** **Manipulating Quantum Coherence of Excitons in TMDCs** Di Huang, Tongji University, China
11:00-11:20	**Invited Talk** **Spin-Orbit Coupling Mediated Topological Textures of Light** Xinrui Lei, University of Shanghai for Science and Technology, China
11:20-11:40	**Invited Talk** **Computational Ultrafast Imaging** Jingdan Liu, Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
11:40-12:00	**Invited Talk** **Dynamic Structural-Colors with Pixelated Metasurface** Maowen Song, Nanjing University, China
12:00-13:30	**Buffet Lunch**

Track 4: Optical Field Manipulation: Materials, Devices, and Applications

Afternoon, 22 November 2026, 3F Meeting Room 302B

Presider: Zhaozhong Chen, Institute of Optics and Electronics, Chinese Academy of Sciences, China

13:30-13:50	**Invited Talk** **Quantum Control of Chiral Topological States** Tian Chen, Beijing Institute of Technology, China
13:50-14:10	**Invited Talk** **Research on the Design of High-Q Metasurfaces and Their Multi-Dimensional Wavefront Manipulation** Haifeng Liang, Xi'an Technological University, China

14:10-14:30	**Invited Talk** **Dynamically Engineered Polaritons in α-MoO_3/Graphene Heterostructures** Tao Jiang, Tongji University, China
14:30-14:50	**Invited Talk** **Two-Photon Lithography via Metasurface** Hui Gao, Huazhong University of Science and Technology, China
14:50-15:10	**Invited Talk** **Complex-Amplitude Light Modulation Based on Liquid Crystal Element for Longitudinal Field Engineering** Dongliang Tang, Hunan University, China
15:10-15:30	**Invited Talk** **Metasurface-based Vectorial Light-Field Manipulation and its Applications in Imaging and Sensing** Mingze Liu, Nanjing University, China
15:30-15:45	**Coffee Break**
Presider: Hui Gao, Huazhong University of Science and Technology, China	
15:45-16:00	**Oral Talk** **Polarization and Frequency Manipulation of Terahertz and Millimeter-Wave Based on Waveguide Devices** Rongjie Wang , Southwest Petroleum University, China
16:00-16:15	**Oral Talk** **Multi-Parameter Decoupling and Large-Area Scalable Fabrication of Multifunctional Optical Metasurfaces** Liangui Deng, Wuhan University of Technology, China
16:15-16:30	**Oral Talk** **Astigmatic Metalens-Based Wide Field-of-View and High Spatiotemporal Resolution LiDAR** Shujian Gong, Institute of Optics and Electronics, Chinese Academy of Sciences, China
16:30-16:45	**Oral Talk** **Chirality-Induced Tunable Quasi-Brewster Angle and Anomalous Photonic Spin-Hall Effect** Qiang Zhou, Hunan Normal University, China
16:45-17:00	**Oral Talk** **All-Optical Nonlinear Activation Functions Based on Photonic Crystal Microcavity** Zitao Wei, Guangxi University, China

Track 5: Meta-optics and Metaphotonics

Afternoon, 21 November 2026, 3F VIP Room 3-1	
Presider: Yan Zhang, Capital Normal University, China	
13:30-13:55	**Keynote Talk** **Meta Devices from Photonics to Quantum** Din-Ping Tsai, City University of Hong Kong, China
13:55-14:20	**Keynote Talk** **Non-Local Metasurfaces for Spatiotemporal Control of Classical and Non-Classical Light** Ramón Jose Paniagua Dominguez, Institute of Structure of Matter, National Spanish Research Council (IEM-CSIC), Spain
14:20-14:40	**Invited Talk** **Second-Harmonic Wavefront Shaping with Lithium Niobate Metasurfaces** Fei Ding, Eastern Institute of Technology, Ningbo, China
14:40-15:00	**Invited Talk** **Image Processing Enabled by Tunable Nonlinear Metasurfaces and Nanostructures** Lei Xu, Nottingham Trent University, UK
15:00-15:20	**Invited Talk** **Singular Meta-Optics: Merging Metasurfaces with Multidimensional Optical Singularities** Jiafu Wang, Air Force Engineering University, China
15:20-15:35	**Coffee Break**
Presider: Lin Chen, Huazhong University of Science and Technology, China	
15:35-16:00	**Keynote Talk** **Optical Imaging Based on Metasurfaces** Shuming Wang, Nanjing University, China
16:00-16:20	**Invited Talk** **Minimalist Multidimensional Optical Imaging** Yuanmu Yang, Tsinghua University, China
16:20-16:40	**Invited Talk** **Nonlinear Frequency Conversion and Smart Imaging with Optical Metasurfaces** Tingting Liu, Nanchang University, China
16:40-17:00	**Invited Talk** **Research Progress of Metasurface Optical Tweezers** Tao He, Tongji University, China
17:00-17:15	**Oral Talk** **Deep-Ultraviolet Flat Optics: High Resolution, Scalable Nanofabrication, and Emerging Applications** Zeng Wang, Institute of Materials Research and Engineering, A*STAR, Singapore
17:15-17:30	**Oral Talk** **Metasurface-Based Spectropolarimetric Detection and Imaging** Chenyi Tian, Beijing Institute of Technology, China
17:30-17:45	**Oral Talk** **Multiphysics Coupling and Stress Optimization Control of MIM Broadband Solar Absorber** Wen Gao, Yangtze University, China
17:45-18:00	**Oral Talk** **Terahertz Optical-Field Manipulation Metachip and its Intelligent Applications** Huijun Zhao, Nankai University, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 5: Meta-optics and Metaphotonics

Morning, 22 November 2026, 3F VIP Room 3-1

Presider: Lingling Huang, Beijing Institute of Technology, China

09:00-09:25	**Keynote Talk** **Scaling Flat Optics: Higher Resolution, Dynamic Functionality, and Manufacturability** Jinghua Teng, Institute of Materials Research and Engineering, A*STAR, Singapore
09:25-09:45	**Invited Talk** **High Efficiency Active Terahertz Membrane Metasurfaces** Longqing Cong, Southern University of Science and Technology, China
09:45-10:05	**Invited Talk** **$LiNbO_3$/$LiTaO_3$ Resonant Metasurfaces for UV Harmonic Generation and Monolithic Optoelectronic Detection** Yuechen Jia, Shandong University, China
10:05-10:25	**Invited Talk** **Reconfigurable Terahertz Metasurface Devices for Sensing, Encrypted Communication and Photonic Logic Computing** Fei Fan, Nankai University, China
10:25-10:40	**Coffee Break**

Presider: Xufeng Jing, China Jiliang University, China

10:40-11:00	**Invited Talk** **Highly Stable Cs_4PbBr_6 Microcrystals for Optically Controlled Terahertz Metasurface** Bo Zhang, Capital Normal University, China
11:00-11:20	**Invited Talk** **Aptamer-functionalized Terahertz Metasensor for Sensitive and Specific Determination of Biomarkers** Yuping Yang, Minzu University of China, China
11:20-11:40	**Invited Talk** **Active Photonic Functional Terahertz Emitters Enabled by Spatial and Temporal Modulations** Xueqian Zhang, Tianjin University, China
11:40-11:55	**Oral Talk** **Research on Dynamic Infrared Radiation Regulation Based on Phase Change Materials** Xin Li, National University of Defense Technology, China
12:00-13:30	**Buffet Lunch**

Track 5: Meta-optics and Metaphotonics

Afternoon, 22 November 2026, 3F VIP Room 3-1

Presider: Fei Zhang, Institute of Optics and Electronics, Chinese Academy of Sciences, China

13:30-13:50	**Invited Talk** **Milliradian-Resolved Metasurface Angular Multiplexing Approaching the Laser Divergence Limit** Yanjun Bao, Jinan University, China
13:50-14:10	**Invited Talk** **Modulation Research of Terahertz Absorbers** Chunlan Wang, Xi'an Polytechnic University, China

14:10-14:30	**Invited Talk** **Focusing Through Scattering Media and Its Application in Optical Manipulation and Microscopic Imaging** Tong Peng, Xi'an Institute of Optics and Precision Mechanics of Chinese Academy of Sciences, China
14:30-14:45	**Oral Talk** **Metasurface-enabled Dual-Polarization Single-Pixel Imaging** Haoran Xiong, Beijing Institute of Technology, China
14:45-15:00	**Oral Talk** **Photonic Spin Hall Effect-Enabled Optical Differentiation for Real-Time Monitoring of Chiral Molecular Dynamics** Hanqing Wu, Hunan Normal University, China
15:00-15:15	**Coffee Break**
Presider: Taiming Zhang, Institute of Optics and Electronics, Chinese Academy of Sciences, China	
15:15-15:30	**Oral Talk** **High-Q full-polarization enhancement of the photonic spin Hall effect with high efficiency in a C4vq-BIC metasurface** Xuan Huang, University of Electronic Science and Technology of China, China
15:30-15:45	**Oral Talk** **High-Sensitivity Triple-Band Terahertz Dirac-Semimetal Metamaterial Biosensor for Tumor-Cell Detection** Hongyu Li, Yangtze University, China
15:45-16:00	**Oral Talk** **Terahertz Metasurface Design and Low-Pixel Terahertz Camera Achieving Phase Retrieval Methods** Zhikai Hu, China Jiliang University, China
16:00-16:15	**Oral Talk** **Multi-Path High-Q Terahertz Metasurface Resonator Enabled by Brillouin-Zone Folding** Zhixiong Liu, Southwest Petroleum University, China
16:15-16:30	**Oral Talk** **Ultra-Broadband Dual Truncated Cone Solar Absorber with Environmental Robustness and Rapid Transient Thermal Response** Yu Liu, Yangtze University, China
16:30-16:45	**Oral Talk** **Translationally Reconfigurable Metasurfaces Enable 80° Glasses-Free 3D Imaging with 1° Angular Sampling** Huan Liu, University of Electronic Science and Technology of China, China

Track 6: Laser Spectroscopic Detection Technology

Afternoon, 21 November 2026, 3F Meeting Room 307	
Presider: Yufei Ma, Harbin Institute of Technology, China	
13:30-13:55	**Keynote Talk** **All-Optically Induced Ultrafast Acoustic Pulses and Interface Detection** Chunxiang Xu, Southeast University, China
13:55-14:20	**Keynote Talk** **Metasurface for Multimodal Imaging** Guangwei Hu, Nanyang Technological University, Singapore
14:20-14:40	**Invited Talk** **Cavity Enhanced Absorption Spectroscopy for High Precision Measurement of Greenhouse Gases** Kun Liu, Hefei Institutes of Physical Science, Chinese Academy of Sciences, China
14:40-15:00	**Invited Talk** **Optical Sensors for Sustainable Development: Advances in Plasmonic and Microfiber Sensing Technologies** Sulaiman Wadi Harun, Universiti Malaya, Malaysia
15:00-15:15	**Oral Talk** **The Raman Study of Ionic Phase Transition Mechanism in Solid Ammonia at Ultrahigh Pressures** Yu Tao, Sichuan University, China
15:15-15:30	**Coffee Break**
Presider: Yinzhou Yan, Beijing University of Technology, China	
15:30-15:55	**Keynote Talk** **Quartz-Enhanced Laser Spectroscopy Gas Sensing Technology** Yufei Ma, Harbin Institute of Technology, China
15:55-16:20	**Keynote Talk** **Research on Laser Remote Sensing Technology and Experimental Observations of Temperature in Cloud and Haze Layers** Huige Di, Xi'an University of Technology, China
16:20-16:40	**Invited Talk** **Research Progress on Magnetic Detection Using Color Centers in Silicon Carbide** Junfeng Wang, Sichuan University, China
16:40-17:00	**Invited Talk** **External Field-Assisted Microfluidics-SERS Detection Technology** Jie Zhang, Chongqing University, China
17:00-17:20	**Invited Talk** **Enhanced Chiral Optical Responses and Quantitative Prediction of Circular Dichroism in TMDC Exciton-Photon Coupling System** Chen Zhao, Beijing University of Technology, China
17:20-17:35	**Oral Talk** **Dual-Resonance-Enhanced Photoacoustic Spectroscopy for Trace Gas Sensing with PiezoMEMS Acoustic Sensor Array** Weiwei Cui, Tianjin University, China
17:35-17:50	**Oral Talk** **Research on 3D Vehicle Adversarial Camouflage Generation under Low-Perceptibility Constraints** Mingyang Ma, Yanshan University, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 6: Laser Spectroscopic Detection Technology

Morning, 22 November 2026, 3F Meeting Room 307	
Presider: Mingli Wang, Yanshan University, China	
09:00-09:25	**Keynote Talk** **Acoustic Levitation–SERS Integrated System** Shikuan Yang, Zhejiang University, China
09:25-09:50	**Keynote Talk** **From Single-Molecule Probability to Deep-Learning-Assisted Quantitative SERS** Zhipeng Li, Capital Normal University, China
09:50-10:10	**Invited Talk** **Luminescence of Doped RE3+ by Plasmonic Nanocavity** Zhenglong Zhang, Shaanxi Normal University, China
10:10-10:30	**Coffee Break**
Presider: Weiguang Ma, Shanxi University, China	
10:30-10:50	**Invited Talk** **Spectral Manipulation of High Power Random Fiber Laser** Jiangming Xu, National University of Defense Technology, China
10:50-11:10	**Invited Talk** **Isothermal-Compression Raman Spectroscopy and RamanPro Spectral Analysis Software** Li Lei, Sichuan University, China
11:10-11:30	**Invited Talk** **SERS Detection of Micro-and Nanoplastics** Jing Yu, Shandong Normal University, China
11:30-11:50	**Invited Talk** **Rapid SERS Detection of Trace Pollutants Based on Microstructured Optical Fibers** Xiaohui Fang, Beijing University of Technology, China
12:00-13:30	**Buffet Lunch**

Track 6: Laser Spectroscopic Detection Technology

Afternoon, 22 November 2026, 3F Meeting Room 307	
Presider: Li Lei, Sichuan University, China	
13:30-13:50	**Invited Talk** **Multi-mechanism Synergistically Enhanced Fiber-optic Photoacoustic Gas Sensing** Ke Chen, Jiangnan University, China
13:50-14:10	**Invited Talk** **Self-Assembled Plasmonic Nanostructures for Surface-Enhanced Raman Scattering (SERS) Applications** Xiang Lin, Dalian Minzu University, China
14:10-14:30	**Invited Talk** **Bound States in the Continuum All-optical Photoacoustic Spectroscopy** Zhenfeng Gong, Dalian University of Technology, China
14:30-14:50	**Invited Talk** **Research on Spectral Demodulation Sensing Technology Based on Fiber-Optic Surface Plasmon Resonance** Jianshe Li, Yanshan University, China

14:50-15:10	**Invited Talk** **Optical Fiber Gas Sensing Technology for Internal Gas Monitoring of Batteries** Yafei Li, Jinan University, China
15:10-15:30	**Coffee Break**
Presider: Yafei Li, Jinan University, China	
15:30-15:45	**Oral Talk** **Magnetically Reconfigurable SERS Platforms for Controlled Nanoparticle Assembly and Sensitive Molecular Detection** Liu Wang, Yanshan University, China
15:45-16:00	**Oral Talk** **A Method for 3D Spectral Point Cloud Acquisition Based on Scheimpflug Imaging and Grating Dispersion** Kaixia Rao, Dalian University of Technology, China
16:00-16:15	**Oral Talk** **Influence of Ambient Humidity on Sampling Ratio of High-Power Laser Systems** Junpu Zhao, China Academy of Engineering Physics, China

Track 7: Intelligent Optoelectronic Sensing Technology and Applications

Afternoon, 21 November 2026, 3F Meeting Room 306	
Presider: Shiyang Tang, University of New South Wales, Australia	
13:30-13:55	**Keynote Talk** **Research on the Mechanisms and Device Technologies of Micro/Nano Metabolic Biosensors** Jinhong Guo, Shanghai Jiao Tong University, China
13:55-14:20	**Keynote Talk** **Ultralight Two-Photon Fiberscopy for Label-Free Optical Histology, Metabolic Imaging, and Freely Behaving Neuroimaging** Xingde Li, Johns Hopkins University, USA
14:20-14:45	**Keynote Talk** **New Displays Based on Two-Photon Vision: An Optoelectronic Approach to Infrared Perception** Pablo Artal, Universidad de Murcia, Spain
14:45-15:10	**Keynote Talk** **Adaptive Optical Elements for Intelligent Vision, Imaging and Sensing** Guoqiang Li, Fudan University, China
15:10-15:30	**Coffee Break**
Presider: Xing Ma, Harbin Institute of Technology, China	
15:30-15:55	**Keynote Talk** **Design of Energy-Efficient Visual Localization Processors for Embodied Intelligence** Jun Zhou, University of Electronic Science and Technology of China, China
15:55-16:20	**Keynote Talk** **In Vivo Dynamic Hotspot-Enhanced Raman Spectroscopy via Reconfigurable Swarming Nanoprobes** Xing Ma, Harbin Institute of Technology (Shenzhen), China
16:20-16:40	**Invited Talk** **High-Spectral-Resolution Lidar Instrument and Applications for Atmosphere-Ocean Environments** Dong Liu, Zhejiang University, China
16:40-17:00	**Invited Talk** **Optical Chemical Sensors for Point-of-Care Diagnosis and Dynamic Monitoring** Nan Jiang, Sichuan University, China
17:00-17:20	**Invited Talk** **Development and Application of Hydrogel Flexible Sensing** Ye Tian, Northeastern University, China
17:20-17:35	**Oral Talk** **FODI Image-based Optics Damage Identification, Grading and Prediction** Xueyan Hu, China Academy of Engineering Physics, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 7: Intelligent Optoelectronic Sensing Technology and Applications

Morning, 22 November 2026
Presider: Jinhong Guo, Shanghai Jiao Tong University, China, 3F Meeting Room 306

9:00-9:20	**Invited Talk** **Physics-Informed Neural Networks for Accuracy Retrieval of Complex Wind Field with Single Lidar Observations** Jianbing Li, National University of Defense Technology, China
9:20-9:40	**Invited Talk** **Novel Intelligent Optoelectronic Materials and Device Integration** Jingkai Qin, Harbin Institute of Technology (Shenzhen), China
9:40-10:00	**Invited Talk** **The Application Progress of Optical Quantum Detection Technology** Haizhi Song, Southwest Institute of Technical Physics, China
10:00-10:15	**Oral Talk** **An AI-Assisted One-Pot CRISPR Biosensor for Intrapartum Group B Streptococcus Screening in Minutes** Honghua Hu, Chongqing Medical University, China
10:15-10:30	**Coffee Break**
10:30-10:50	**Invited Talk** **Overcoming Limited-View Artifacts in Photoacoustic Microscopy** Wei Liu, Harbin Institute of Technology (Shenzhen), China
10:50-11:10	**Invited Talk** **Ultrasensitive Detection of Molecules and Nucleic Acids via Whispering Gallery Mode Optical Resonances** Jiawei Wang, Harbin Institute of Technology (Shenzhen), China
11:10-11:30	**Invited Talk** **Intelligent Visual Reasoning: Generative Forgery Detection and Trustworthy Multimodal Cognition** Jie Xu, University of Electronic Science and Technology of China, China
11:30-11:50	**Invited Talk** **Cold-Chain-Free CRISPR-Cas12a Microfluidic Cartridges for Rapid Decentralized Genotyping of 14 High-Risk HPV Types in Cervical Cancer Screening** Shan Liu, University of Electronic Science and Technology of China, China
11:50-12:10	**Invited Talk** **Intelligent Perception and Recognition of Train-Forward Environments for Rail Transit Safety** Fei Teng, Southwest Jiaotong University, China
12:00-13:30	**Buffet Lunch**

Track 7: Intelligent Optoelectronic Sensing Technology and Applications

Afternoon, 22 November 2026, 3F Meeting Room 306	
Presider: Yi Li, Chongqing Medical University, China	
13:30-13:50	**Invited Talk** **Intelligent Optoelectronic Cell Detection Systems for Miniaturized Biomedical Applications** Xiwei Huang, Hangzhou Dianzi University, China
13:50-14:10	**Invited Talk** **Biosensing Applications of Micro/Nanorobots** Yong Wang, Chongqing Medical University, China
14:10-14:30	**Invited Talk** **Tissue-interfaced Closed-loop Sensing and Therapeutic Bioelectronics** Mingze Sun, Third Military Medical University, China
14:30-14:50	**Invited Talk** **Fabrication and in vitro Immunoassay Research of Magnetically Active Chemiluminescent Probes** Fuli Chen, Qilu Hospital of Shandong University, China

14:50-15:05	**Oral Talk** **Intelligent Hyperspectral Sensing for Nondestructive Detection of Pesticide Residues on Tomatoes** Yilei Zhang, Zhejiang A & F University, China
15:05-15:20	**Oral Talk** **A Multichannel Multiscale Spectral-Position Attention Deep Residual Shrinkage Network for Interpretable Raman Spectroscopic Cell Classification** Xue Li, Southwest Jiaotong University, China
15:20-15:35	**Oral Talk** **Thermodynamics-Informed Screening of Aptamer-based molecular Switches** Jiaqi Jin, Southwest Jiaotong University, China
15:35-16:00	**Coffee Break**
16:00-16:15	**Oral Talk** **DSENet: A Novel Dual-Stream Enhancement Network for Multi-Scale Non-Stationary Time Series Forecasting** Yuhan Wang, Shanghai Jiao Tong University, China
16:15-16:30	**Oral Talk** **Chemical-Free In-Situ Fabrication of Pneumatic Micro-Sensors inside Acrylic Intraocular Lenses via OCT-Assisted Femtosecond Laser Ablation** Chengran Wang, National University of Singapore, Singapore

Track 8: Optoelectronic Fusion and Integration Technology

Afternoon, 21 November 2026, 3F Meeting Room 304	
Presider: Weiwei Xiang, The 29th Research Institute of China Electronics Technology Group Corporation (CETC), China	
13:30-13:50	**Invited Talk** **Integrated External-Cavity Narrow-Linewidth Lasers and Their Applications** Minghua Chen, Tsinghua University, China
13:50-14:10	**Invited Talk** **Ferroelectric Heterogeneous Integrated Photonics: From Ultrafast Modulation to High-Performance Computing** Yong Zhang, Shanghai Jiao Tong University, China
14:10-14:30	**Invited Talk** **Fundamental Issues and Recent Advances in Compact Modeling for Electronic-Photonic Integration** Min Tan, Huazhong University of Science and Technology, China
14:30-14:50	**Invited Talk** **Frequency-Domain Analysis of High-Speed Optoelectronic Devices and Chips** Shangjian Zhang, University of Electronic Science and Technology of China, China
14:50-15:10	**Invited Talk** **Novel and Integrated Optoelectronic Oscillator** Tengfei Hao, Institute of Semiconductors, Chinese Academy of Sciences, China
15:10-15:30	**Coffee Break**
Presider: Weiwei Xiang, The 29th Research Institute of China Electronics Technology Group Corporation (CETC), China	
15:30-15:50	**Invited Talk** **Embedded Microfluidic Cooling for High-Computing-Power Chips** Chi Zhang, Peking University, China
15:50-16:10	**Invited Talk** **Recent Advances in Integrated Microwave Photonic Radars** Simin Li, Nanjing University of Aeronautics and Astronautics, China
16:10-16:30	**Invited Talk** **Research Progress on Multi-material Heterogeneous Integration for Silicon Photonics** Yuxin Liang, Chongqing United Microelectronics Center, China
16:30-16:50	**Invited Talk** **Exploring Optoelectronic Integration Technology and Building Platform Capabilities in the AI Era** Dong Wang, National Information Optoelectronics Innovation Center, China
16:50-17:10	**Invited Talk** **Meter-Long Large-Dispersion Chirped Spiral Bragg Gratings** Chao Xiang, The University of Hong Kong, China
17:10-17:25	**Oral Talk** **Frequency Response Measurement of Photodetectors Based on Subharmonic Upconversion** Chao Jing, University of Electronic Science and Technology of China, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 9: Optical Sensing

Afternoon, 21 November 2026, 3F Meeting Room 305	
Presider: Jun Wang, University of Electronic Science and Technology of China, China	
13:30-13:55	**Keynote Talk** **Intelligent Robotic Vision Systems with Reconfigurable Imagers** Young Min Song, Korea Advanced Institute of Science and Technology (KAIST), Korea
13:55-14:20	**Keynote Talk** **The Role of Photonic Sensing Technologies in Healthcare 5.0: Perspectives and Applications** Arnaldo G. Leal-junior, Federal University of Espírito Santo, Brazil
14:20-14:45	**Keynote Talk** **Dispersion-assisted Multidimensional Photodetection and Image Processing** Wei Li, Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
14:45-15:05	**Invited Talk** **From Stable Tin Halide Perovskite Electronics to Multispectral Optical Sensing and Neuromorphic Vision** Hui Joon Park, Hanyang University, Korea
15:05-15:20	**Oral Talk** **High-Performance Photonic Integrated Wavelength-Selective Devices for Optical Sensing and Signal Processing** Yu Wang, Dalian University of Technology, China
15:20-15:30	**Coffee Break**
Presider: Jun Wang, University of Electronic Science and Technology of China, China	
15:30-15:50	**Invited Talk** **Ferroelectrics Integrated with Photoconductive Effect Enabling Dual-Reservoir Spatiotemporal Perception** Jinshui Miao, Shanghai Institute of Technical Physics of the Chinese Academy of Sciences, China
15:50-16:10	**Invited Talk** **Computational Spectral Sensing with Meta-Optics** Yurui Qu, ShanghaiTech University, China
16:10-16:30	**Invited Talk** **Visualization of Invisible Near-Infrared Light Based on Upconversion Devices** Yanlian Lei, Southwest University, China
16:30-16:50	**Invited Talk** **Two-Dimensional Organic Molecular Crystals and Their Hybrid Heterostructures for Enhanced Optical and Optoelectronic Responses** Huijuan Zhao, Nanjing University of Posts and Telecommunications, China
16:50-17:10	**Invited Talk** **Research Progress of InGaAs Single-Photon Avalanche Photodiode Detectors** Tianhong Ao, CETC Acoustic-Optic-Electronic Technology, China
17:10-17:30	**Invited Talk** **Optoelectronic Detection Technology and Integrated Applications Based on 2D Materials** Rui Pan, Institute of Optics and Electronics, Chinese Academy of Sciences, China
17:30-17:45	**Oral Talk** **Timing Jitter Optimization of Dual-Charge-Layer Ge-on-Si Single-Photon Avalanche Diodes** Zhenrong Tang, Xidian University, China

17:45-18:00	**Oral Talk** **Molecular Beam Epitaxy-Grown Gallium Oxide Solar-Blind Ultraviolet Photodetectors for High-Temperature Operation** Ruqi Jiang, Xidian University, China
18:00-18:15	**Oral Talk** **Structure-Preserving Reconstruction for Microsphere-Assisted Microscopy and Composite Lens Design** Tongfei Wang, Xi'an University of Architecture and Technology, China
17:00-18:30	**Poster Session**
18:30-20:30	**Buffet Dinner**

Track 9: Optical Sensing

Morning, 22 November 2026, 3F Meeting Room 305	
Presider: Li Gao, Nanjing University of Posts and Telecommunications, China	
09:00-09:25	**Keynote Talk** **Interface Engineering of Two Dimensional Materials for High-Performance Photodetector** Zhenhua Ni, Southeast University, China
09:25-09:45	**Invited Talk** **Precision Laser Spectroscopy for Trace Gas Sensing** Liang Mei, Dalian University of Technology, China
09:45-10:00	**Oral Talk** **Single-Mode Sapphire Leakage Channel Fiber Applied to High-Temperature Sensing** Xiaojin Zhang, North University of China, China
10:00-10:30	**Coffee Break**
Presider: Li Gao, Nanjing University of Posts and Telecommunications, China	
10:30-10:50	**Invited Talk** **2D Material in Microcavity: Fundamental Optical Effects and Explorations at the Computing Frontier** Zehua Hu, Nanjing University, China
10:50-11:10	**Invited Talk** **Motion Tracking With in-Sensor Graded Encoding and Compression** Jiewei Chen, South China Normal University, China
11:10-11:30	**Invited Talk** **Fluorescence Localization and Tracking Imaging with a Spectral-Splitting Perovskite Single-Pixel Detector** Yujin Liu, Xidian University, China
11:30-11:45	**Oral Talk** **Plasmonic Field Engineering in BP/α-In_2Se_3 Heterojunctions for Broadband Polarization-Sensitive Photodetection and Optical Information Encoding** Yihan Hua, Chongqing University, China
11:45-12:00	**Oral Talk** **Illumination Polarization-Dependent Backscatter Modeling for Underwater Polarimetric Imaging** Jianyu Weng, National University of Defense Technology, China
12:00-13:30	**Buffet Lunch**

Track 10: Physics Education and Science Popularization

Nov.22 Sunday, Room 507, Building 3, No. 999 Kezhi Road	
Presider: Feng Song, Nankai University, China	
09:00-09:20	**Keynote Talk** **GRIN Lens, Mirage, and Heat Conduction – Studies of Refractive Index Variation** Xiaojun Wang, Department of Physics, Georgia Southern University, USA
09:20-09:40	**Keynote Talk** **Seeing the World in a Grain of Sand: The Development of Semiconductors and Integrated Circuits from the Perspective of the Nobel Prize** Junpeng Lv, Southeast University, China
09:40-10:00	**Invited Talk** **Pedagogy-led Development and Integrated Innovation: Experience Sharing on Level Ⅲ Normal Certification for Physics Major** Jianzhi Gao, Shaanxi Normal University, China
10:00-10:20	**Invited Talk** **Practice and Reflection on the Construction of School Science Curricula** Bo Wu, Chengdu Jinjiang Jiaxiang Foreign Languages Senior High School, China
10:20-10:30	**Coffee Break**
Presider: Jianzhi Gao, Shaanxi Normal University, China	
10:30-10:45	**Invited Talk** **Empowering Science Popularization through a Blended Virtual-Real Teaching Model** Yin Yu, Tianjin University, China
10:45-11:00	**Invited Talk** **From the Soil of Science Popularization to the Light of Innovation: Early Identification and Nurturing of Innovative Physics Talent at No.7 High School** Shijie Tang, Chengdu No. 7 High School, China
11:00-11:15	**Invited Talk** **Small Experiments, Great Wisdom — Physics Experiment Teaching Cases in the Intelligent Era** Wei Zhuang, Nanjing Normal University, China
11:15-11:30	**Invited Talk** **Four-in-One Model of Guidance, Independence, Openness and Practice: Stimulating the Endogenous Driving Force of Science and Technology Education in County-level Junior High Schools** Xianghua Liu, Xingguo County Sixth Middle School, China
11:30-11:45	**Oral Talk** **Computational Visualization and AI Diagnosis in Electromagnetics Education at Applied Universities** Ruohan Zhang, Shangluo University, China
11:45-12:00	**Invited Talk** **Integration of Science and Technology Education for Primary, Secondary and College Students Based on Artificial Intelligence and Self-developed Instruments** Conghua Yan, Sichuan Normal University, China
12:00-13:30	**Lunch**

Track 10: Physics Education and Science Popularization	
Nov.22 Sunday, Building 3A,No. 999 Kezhi Road	
Presider: Conghua Yan, Sichuan Normal University, China	
14:00-16:00	**Science Popularization Base Tours and Science Education Achievement Showcase**

Young Scholars Forum

Morning, 22 November 2026, 3F Meeting Room 304	
Presider: Xihua Zou, Southwest Jiaotong University, China	
09:00-09:05	**Chair Talk** Xihua Zou, Southwest Jiaotong University, China
09:05-09:15	**Oral Talk** **Petabit-per-second Random Number Generation** Jihui Sun, Southwest Jiaotong University, China
09:15-09:25	**Oral Talk** **From Micro-cracks to Nano-cracks: High-Quality and Low-Kerf-Loss Laser Slicing of SiC Wafers** Xiangfu Liu, Hubei University of Automotive Technology, China
09:25-09:35	**Oral Talk** **Diffractive Signal-Processing Nonlocal Metasurface** Dongyu Hu, Wuhan University, China
09:35-09:45	**Oral Talk** **Dispersion-Enhanced Time-Focused Line-Scanning Two-Photon 3D Printing** Fayu Chen, Huazhong University of Science and Technology, China
09:45-09:55	**Oral Talk** **Photonic Reservoir Computing for Predicting Spatiotemporal Dynamics** Tong Yang, Southwest Jiaotong University, China
09:55-10:05	**Oral Talk** **Linearization Research of IM/DD Systems Based on Chaotic Digital Filter Encryption** Wei Huang, Chongqing University of Posts and Telecommunications, China
10:05-10:15	**Coffee Break**
Presider: Hui Gao, Huazhong University of Science and Technology, China	
10:15-10:25	**Oral Talk** **Rolled-up Monolayer MoS_2 Moiré Superlattices for Enhanced Hydrogen Evolution Reaction** Ai Wang, Sichuan Normal University, China
10:25-10:35	**Oral Talk** **Arbitrary-Orientation High-Performance AWGs on X-Cut Thin-Film Lithium Niobate Enabled by Phase-Accurate Compensation** Changjian Xie, Xidian University, China
10:35-10:45	**Oral Talk** **High-repetition-rate Femtosecond Laser Micro/Nano-Processing Via Multiple Pulses Incubation** Jingbo Yin, Harbin Institute of Technology, China
10:45-10:55	**Oral Talk** **High Precision 3D Measurement of Complex Spectral-reflectance Objects Based on Color Fringes** Haisen Yuan, University of Electronic Science and Technology of China, China
10:55-11:05	**Oral Talk** **Efficient and Broadband Kerr Microcombs Based on a Low-Loss Silicon Nitride Platform** Hongyi Zhang , Southwest Jiaotong University, China
11:05-11:15	**Oral Talk** **Single Metasurface Enables Two-Photon Lithography and Imaging** Anze Li, Huazhong University of Science and Technology , China
11:15-11:45	**Round-table Discussion**

11:45-11:50	**Announcement of the Best Poster Award Winners**
Presider: Liyue Zhang, Southwest Jiaotong University, China	
11:50-12:00	**Announcement of Outstanding Young Scholars**
12:00-13:30	**Buffet Lunch**

POSTER LIST

Track 1: Electro-optical Telescope and Adaptive Optics	
AOMATT2026-1023-27	**Encoding and Detection of Large Piston Errors for Coarse Phasing Using Spectrally Dispersed Pyramid Interferograms** Yuandong Cheng Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0917-2	**Parallel Recursive Filter based Feedforward for Rejecting Band-Limited Disturbances in Low Altitude Free-Space Optical Communication Terminals** Rongqi Ma Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0926-1	**Analysis of the Effects of Solar Extended-Object Image Characteristics on Wavefront Sensing Accuracy in Ground-Layer Adaptive Optics** Yuhe Liu Luoyang Normal University, China
AOMATT2026-0927-1	**Key Technologies for High-Availability Satellite-to-Ground Laser Communication: Progress and Prospects** Xiong Xiao Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0929-13	**Digital Twin Updating and Short-Horizon Prediction for Optoelectronic Servo Actuators Using Hybrid Physics-Data Modeling** Jing Ma Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0929-3	**Strapdown Line-of-Sight Stabilization of Risley Prisms with Delay Compensation and Compound-Axis Control** Ran Liu Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0930-9	**CoRePI: Coherence-preserving Reduced-order Phase Inversion for Fast Three-aperture Co-phasing** Weilin Zhai Sichuan University, China
AOMATT2026-1021-1	**Layered Safety Design of Telescope Tracking Mounts Based on Hazard Analysis** Xiaopeng Liang University of Electronic Science and Technology of China, China
AOMATT2026-1023-19	**Trade-Offs between Spatial Sampling and Noise in a Pyramid Wavefront Sensor with Hardware Pixel Binning under Low-Photon-Flux Conditions** Xuesheng Liu Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1024-21	**Intensity Correction in Adaptive Optics Using Stochastic Parallel Gradient Descent Driven by Deep Reinforcement Learning** Zhen Zhang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1024-31	**Pupil-Intensity-Constrained U-Net for Wavefront Reconstruction in Shack-Hartmann Sensing under Strong Turbulence** Yilin Zhao Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1025-18	**Research on Optical Axis and Pupil Alignment Technology Based on a Hartmann Wavefront Sensor** Jiahui Ma Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1025-19	**Multiphysics Modeling and Ground-Test Validation of a Spaceborne Gravitational-Wave Telescope** Yi Zeng Institute of Optics and Electronics, Chinese Academy of Sciences, China

AOMATT2026-1024-28	**Neural-Network-Based Focal-Plane Wavefront Sensing with a Photonic Lantern** Lanqiang Zhang Institute of Optics and Electronics, Chinese Academy of Sciences, China
	Track 2: Ultra-Precision and Atomic-level Optical Manufacturing
AOMATT2026-0912-1	**A Computationally Generated Multi-Wavelength Interferometry Method Based on Polarization Channel Multiplexing** Yan Zhao Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0922-5	**Evolution of Surface Defects and Si-O Network Reconstruction Mechanisms in Fused Silica under CO_2 Laser Irradiation** Chang Li Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
AOMATT2026-0922-8	**Finite Element Analysis of Backside Surface Figure Effects on Vacuum Clamping Deformation and Polishing Index Control for Optical Substrates** Haoran Fu Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0929-18	**Wavelet-Based Pre-Assessment of Surface Correctability Using a Measured Tool Influence Function** Baohui He Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
AOMATT2026-0930-11	**Prediction of Time-Varying Tool Influence Function in Bonnet Polishing Using a Curvature-Driven Neural Network** Jinxiang Qiao Xi'an Technological University, China
AOMATT2026-0930-6	**Prediction Method of Material Removal Amount for Ion Beam Polishing Based on Time-Varying Dwell Time** Yuanhang Liu Xi'an Technological University, China
AOMATT2026-1004-2	**Material-Removal Behavior of Silicon Carbide Ceramics in Low-Stress Grinding** Zhao Heng Chengdu Fine Optical Engineering Research Center, China
AOMATT2026-1013-4	**Hybrid Burst-Mode Femtosecond Laser Drilling Strategy for High-Quality and High-Aspect-Ratio Through-Hole Formation of SiC** Yiquan Qi Xiamen University, China
AOMATT2026-1015-2	**Laser-Induced Plasma-Assisted Ablation with Substrate Heating for Microfabrication on Diamond** Danmin Chen Xiamen University, China
AOMATT2026-1016-2	**Classifying Defects and Contaminants on Optical Surfaces Based on Bright-Field and Dark-Field Imaging Features** Wei Li Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1016-4	**Optimization of Annular Light Source for Optical Surface Defect Detection Based on Non-Sequential Ray Tracing** Shimao Jia Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1023-12	**Research on High Performance Control System in Wafer Stage of Lithographic Equipment** Fei Ban Tianfu Xinglong Lake Laboratory, China
AOMATT2026-1024-16	**A Correction Method for the Quadruple Integrating Bucket Response Model for Dynamic Displacement Measurement** Jiawang Fang Institute of Optics and Electronics, Chinese Academy of Sciences, China

AOMATT2026-1024-22	**Interferometric Surface Figure Measurement of Cylindrical Lenses Using a Computer-Generated Hologram** Shuocong Zhang University of Shanghai for Science and Technology, China
AOMATT2026-1024-3	**Subaperture Stitching with Different Interferometers for Testing of Convex Spherical Surfaces** Xiaochuan Hu Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1025-14	**Simulation Study on Laser Thermal Evaporation of Optical Materials** Yiping Li Soochow University, China
AOMATT2026-1025-9	**Rapid Reduction of Surface Roughness for Large-Aperture SiC Reflectors During Rough Polishing** Yiren Wang Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences, China
AOMATT2026-1023-3	**Research on design and optical polishing Technology of Nickel-Plated Aluminum Alloy Mirrors** Yongjie Wang Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, China
AOMATT2026-1022-9	**Aluminum Alloy Mirror with Lightweight Lattice Structure Fabricated by Additive Manufacturing** Yongjie Wang Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, China
AOMATT2026-1109-3	**High-Efficiency Dual-Rotation Wheel Polishing of Optical Components** Fulei Chen National University of Defense Technology, China
	Track 3: Micro/Nano Devices and Computational Optics
AOMATT2026-0928-7	**Phase-Reversible Floquet Transport and Active Direction Selection in a Dual-Ring Microlaser** Jian Lei Shangluo University, China
AOMATT2026-1014-5	**Immunoassay Based on the Locomotion Behavior Response of Magnetically Actuated Micro/Nano Robot Swarms** Yinuo Song Harbin Institute of Technology, Shenzhen, China
AOMATT2026-1014-6	**Extending Near-Field Lithography Working Distance with All-Dielectric Structures** Wenpeng Zhang Tianfu Jiangxi Laboratory, China
AOMATT2026-1018-6	**Research on Photoinduced Chemiluminescence Probes Based on Magnetically Controlled Micro/Nanorobot Swarms** Wenting Xiang Harbin Institute of Technology, Shenzhen, China
AOMATT2026-1019-4	**Orbital Angular Momentum Classification with a Programmable Free-Space Optoelectronic Network** Jiahao Ye Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1019-5	**Effect of Conductive Layer Strategies for Charge Dissipation in Electron Beam Lithography on Insulating Substrates** Jiawei Wu Tongji University, China
AOMATT2026-1020-2	**Characterization and Correction of Measurement Variations in Wafer-Embedded Multilayer Pitch Standards** Xuehan Li Tongji University, China
AOMATT2026-1020-3	**Characteristic Selectivity and Noise Sensitivity of Spatial Differentiation in Optical Computing** Fei Nie Anhui Normal University, China

AOMATT2026-1020-4	**Basal Plane Activation of Monolayer MoS_2 by Combined Ar/O_2 Etching and Se Doping for Enhanced HER Performance** Yangzhen Jiang Sichuan Normal University, China
AOMATT2026-1021-6	**A Metalens-Based Long-Wave Infrared Imaging System Using Rotational Scanning and Image Stitching** Xu He University of Electronic Science and Technology of China, China
AOMATT2026-1022-2	**Enhancement of Working Distance via Hyper-hemispheric Shell Design in Optical Microsphere Nano-Imaging** Lie Li Xiamen University, China
AOMATT2026-1023-16	**Marine Protection against Corrosion and Biofouling via Interfacial Engineering between Ceramic and Metal** Zhiwen Chen Xiamen University, China
AOMATT2026-1023-21	**Reconstruction Performance and Error Mechanisms in Fourier Ptychography with Central Obscuration** Xinhui Kang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1023-9	**Thermal Effect and Separation-Angle Optimization in Beam-Splitter Parallel Femtosecond Laser Drilling of Titanium Microholes** Yang Liu Tianfu Xinglong Lake Laboratory, China
AOMATT2026-1024-17	**In-Plane Beam Steering for On-Chip Communication-Channel Switching Enabled by Cascaded Metasurfaces** Yanbo Wen University of Electronic Science and Technology of China, China
AOMATT2026-1024-20	**A Broadband Silicon-to-Si_3N_4 Vertical Interlayer Coupler with Sub-0.1-dB TE_0 Insertion Loss Across 1260–1660 nm** Wangzhe Zhou National University of Defense Technology, China
AOMATT2026-1024-32	**Computational Spectral Imaging in the Long-Wave Infrared Based on Metasurface-Designed Point Spread Functions** Yangnan Hao Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1028-2	**Revealing Gate-Tunable Nonlinear Optical Response in Monolayer TMDs** Zitao Wu Tongji University, China
AOMATT2026-1028-5	**Metal-Free High-Contrast Wafer-Level Step Height Standards with Large Height-Range Based on All-Dielectric Multilayers** Jinming Gou Tongji University, China
AOMATT2026-1013-5	**Repulsive Magnetic Field Enhanced Laser Induced Plasma Assisted Ablation of Sapphire Microfabrication** Yilan Wu Xiamen University, China
AOMATT2026-1103-7	**Particle Removal Mechanisms and Numerical Modeling of Wet Cleaning for Patterned Wafers** Yun Du Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0925-1	**Impact of Active-Region Thermal Conductivity Anisotropy on the Electro-Thermo-Mechanical Response of a 9-μm InP-Based Quantum Cascade Laser** Zhaoxuan Zheng, Hainan Normal University

	Track 4: Optical Field Manipulation: Materials, Devices, and Applications
AOMATT2026-0929-8	**Compact Multitask Optical Classification Diffractive Neural Networks through Spatial Parameter Sharing** Yuxin Tan Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0728-2	**An Origami-Based Device for Dual-Dynamic Modulation of Infrared and Microwave** Yuetang Wang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0914-1	**Two-Dimensional Third-Order Spatial Differentiation and Edge Detection Using a Generalized Geometric-Phase Metasurface** Yuhao Song Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0922-4	**Long-Working-Distance Laser Direct Writing Based on Kerr-Induced Nonlinear Beam Compression** Hongen Li Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0922-9	**Diffractive Neural Network-Enabled 16-Mode Cylindrical Vector Beam Keying for Free-Space Optical Communication** Tianle Yu Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0928-2	**Impulse Response of Polyimide Films under 1064 nm Multiple-Pulse Laser Irradiation** Shuyu Yao Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0928-3	**Momentum Coupling Characteristics of Aluminum Ablation by Vortex and Flat-Top Beams** Boqun Hao Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0928-6	**Lateral Characteristics of Transmission Enhancement in Femtosecond Laser Filament Assisted Fog Clearing** Lin Shu Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0929-2	**End to End Design of a Non-Mode-Selective Multi-Plane Light Conversion Coupler for Mode Diversity Receiver** Jiahao Qian Tianfu Xinglong Lake Laboratory, China
AOMATT2026-1008-2	**Subpixel Carrier-Frequency Estimation for Quadriwave Lateral Shearing Interferometry** Jinfeng Jiang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1008-4	**Numerical Investigation of Optical Turbulence Generation and Control Through Localized Laser Heat Deposition** Shuhao Gou Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1016-18	**MXene Materials for Terahertz Electromagnetic Response and Modulation Devices: A Review** Jianzhe Du Tianjin University, China
AOMATT2026-1019-10	**Graphene Terahertz Emission Spectroscopy and Device Engineering** Wenzhen Zhen Tianjin University, China
AOMATT2026-1019-12	**Engineering Multipole Fano Resonance Leveraging Synergistic-Effect of Out-of-Plane Plasmon Mode and Fabry-Pérot Cavity Modes** Yuxue Li Sichuan Normal University, China

AOMATT2026-1019-7	**Research on Diffractive Optical Element with Tunable Point-to-Annular Energy Ratio for Laser Processing** Guoquan Fu Tianfu Xinglong Lake Laboratory, China
AOMATT2026-1021-5	**Optical Reservoir Computing Based on Time-Frequency Optical Field Control** Xueting Zhang Southwest Jiaotong University, China
AOMATT2026-1021-8	**Laser Velocimeter with Adjustable Sensitivity Based on SLM** Gaojie Ye National University of Defense Technology, China
AOMATT2026-1022-1	**Reconfigurable Control of Chaotic Optical Fields in Semiconductor Laser Networks for Shared-Key Distribution** Chenshiyu Hu Southwest Jiaotong University, China
AOMATT2026-1022-3	**Inverse Design of Broadband Infrared Doped-Silicon Metasurface Absorber via Deep Learning** Ao Li Sichuan Normal University, China
AOMATT2026-1022-5	**Application of Off-Axis Dual-Reflector Optical Antenna in Laser Communication Systems** Lei Liu Tianfu Xinglong Lake Laboratory, China
AOMATT2026-1022-6	**Dual Closed-Loop Method for Beam Shaping and Polarization Based on Common-Mode and Differential-Mode Phase Control** Hongsi Li Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1022-7	**Vector Concurrence Keying for Free Space Optical Communication through Atmospheric Turbulence** Shuangcheng Chen Tianfu Xinglong Lake Laboratory, China
AOMATT2026-1023-11	**Hybrid Inverse Design of Optical Multilayers via Variable-Layer-Count Search and Differentiable Thickness Optimization** Jingdong Wang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1023-17	**3D Plasmonic Chirality Inscribed in Optical Crystal via Femtosecond Laser** Qingchuan Ye Shandong University, China
AOMATT2026-1023-28	**Inverse Fiber Design for Hollow Beams via a Physics-Informed Neural Network** Hao Lin Xi'an Technological University, China
AOMATT2026-1023-29	**Inverse Design of Optical Fibers for Flat-Top Beam Generation Using a Conditional Variational Autoencoder** Fangyun Wang Xi'an Technological University, China
AOMATT2026-1023-7	**Square Flat-Top Beam Shaping of Highly Coherent Laser Beams Using a Phase-Coded Microlens Array** Cao Hao Wuhan University, China
AOMATT2026-1024-12	**Deep-Learning-Assisted Differentiable Inverse Design of Wide-FOV Metalens** Zihan Lin Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1024-26	**Ultra-Doped Ge:P Films via Sub-Second Annealing for Tunable Mid-Infrared Plasmonic Metasurfaces Enabling Molecular Sensing** Wei Ding Sichuan Normal University, China

AOMATT2026-1024-38	**Fabrication and Characterization of MoS_2/Te-Hyperdoped Silicon Heterostructures toward Infrared Photodetection** Fangfang Tu Sichuan Normal University, China
AOMATT2026-1024-4	**Numerical Design of Cascaded Diffractive Optical Elements for Rectangular Flat-Top Beam Shaping in Laser Wireless Power Transmission** Suheng Jiang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1024-7	**Precision Alignment of Multilayer Cascaded Optical Transformation Systems Using Arrays of Localized Phase Discontinuities** Jingting Xu Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1025-20	**Spatiotemporal Flat Optics for Single-Channel Terabaud Optical Symbol Generation** Wenjing Liu University of Science and Technology of China, China
AOMATT2026-1026-1	**Monolithic Generation of Vector Spatiotemporal Optical Vortices via Time-Delay Focusing with a Geometric-Phase Metasurface** Hengyi Wang University of Science and Technology of China, China
AOMATT2026-1027-2	**Mechanism Investigation of Near-Infrared Multiband Narrowband Absorption in Al/Si_3N_4/Si Metasurfaces** Ruitong Li Sichuan Normal University, China
AOMATT2026-1021-11	**Vortex Interferometer Based on Speckle Feedback and Zernike Fitting for Surrounding-Rock Micro-Deformation Detection** Qi Li Sichuan University, China
AOMATT2026-1024-8	**Computational Sub-diffraction Optical Imaging with Physical Model Driving Deep Learning** Beiling Lu University of Electronic Science and Technology of China, China
AOMATT2026-1010-3	**Design and Manufacturing of Freeform-Prism AR-HMD** Yue Liu Future Optics Research Institute Co., Ltd., China
AOMATT2026-0911-3	**Study on the Generation of First-Order Vector Vortex Array Light Fields on the Higher-Order Poincaré Sphere via Spiral-Pinhole Screens** Yutian Guo Shandong Jianzhu University, China
AOMATT2026-1102-3	**Breakdown of the Effective Medium Theory: A Perspective From Goos-Hänchen Shift** Yujie Zhou Hunan Normal University, China
AOMATT2026-1102-4	**Wide-Range Breakdown of Effective Medium Theory in Graphene-*h*-BN Heterostructure** Kexin Wang Hunan Normal University, China
AOMATT2026-1027-3	**Modulation Mechanism of the Aluminum Layer on Dielectric-Dominated Quasi-Bic in Metal-Dielectric Metasurfaces** Yanxi Wu Sichuan Normal University, China
	Track 5: Meta-optics and Metaphotonics
AOMATT2026-0922-3	**Fabrication-Aware Inverse Design of 3D-Printed Terahertz Holographic Metasurfaces from Meta-Atoms to Cascaded Systems** Manxu Lv China Jiliang University, China

AOMATT2026-0929-1	**Inverse Design of Terahertz Metasurfaces and OAM-Multiplexed Optical Secret Sharing** Zhichuan Xie China Jiliang University, China
AOMATT2026-0929-10	**Design and Experimental Demonstration of Broadband Geometric-Phase Elements Based on Double-Layer Twisted Liquid Crystals** Zhiqing Liang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-0929-19	**Polarization-Controlled Continuously Tunable Multimode Imaging via a Laplacian Spatial-Frequency Filtering Metasurface** Yaqi Jin Nanjing University, China
AOMATT2026-1018-1	**Polarization-Multiplexed Diffractive Neural Network Based on Geometric-Phase Metasurfaces for Dual-Task Classification** Yang Wang University of Shanghai for Science and Technology, China
AOMATT2026-1020-6	**Radiation Suppression through Symmetry Breaking in High-Q Resonant Metasurfaces** Junyang Ge Ningbo University, China
AOMATT2026-1023-2	**Wavelength-Switched Circular Dichroism Metasurfaces with Twisted Bilayer Multiple Rotational Symmetry Meta-Atoms** Jixiang Cai Inner Mongolia University of Technology, China
AOMATT2026-1023-25	**Cooperative Control of Static Arrays and Movable Traps via a Polarization-Multiplexed Metasurface** Haoge Zhang Institute of Optics and Electronics, Chinese Academy of Sciences, China
AOMATT2026-1024-36	**Spin-Channel Symmetry Breaking and Restoration in Topology-Optimized Mid-Infrared Metagratings** Zehui Yang Xiangtan University, China
AOMATT2026-1024-40	**Design of a Monolithic Polarization Analyzer for Six-State Quantum Key Distribution** Chenhao Qiu Air Force Engineering University, China
AOMATT2026-1025-17	**Analyzer-Controlled Self-Referenced Phase Edge Imaging with a Spiral Metalens** Tianyou Zhang National University of Defense Technology, China
AOMATT2026-1025-21	**Propagation-Spin Correspondence in Geometric Metasurfaces for Spin-dependent Multifunctional Holography** Syed Yasir Azeem University of Science and Technology of China, China
AOMATT2026-1016-12	**Multifunctional VO_2 Metasurface Thermal Emitter with Switchable Direction and Radiation Bandwidth** Jie Wu East China Jiaotong University, China
AOMATT2026-1016-16	**Polarization- Dependent Dual-Focus Metasurface Lens** Guo Wen Zhou Southwest University of Science and Technology, China
AOMATT2026-1016-9	**Ultra-Broadband Solar Absorption and Thermal Emission in Ti/InAs Multilayer Metasurfaces** Xi Huang Southwest University of Science and Technology, China
AOMATT2026-1103-5	**Minimalist Control Network Design for Reconfigurable Metasurfaces** Yanxun Wang Tianfu Xinglong Lake Laboratory, China

Track 6: Laser Spectroscopic Detection Technology	
AOMATT2026-0918-1	**Fiber-Optic Dual-Resonance Enhanced Dual-Comb Photoacoustic Spectroscopy** Tianli Gao Dalian University of Technology, China
AOMATT2026-0918-2	**A Fiber-Optic Photoacoustic Sensor for Trace Methane Gas Detection with Temperature and Pressure Compensation** Jiawei Xing Dalian University of Technology, China
AOMATT2026-0918-3	**Tuning-Fork Cantilever Coupled Dual-Resonance Fiber-Optic Photoacoustic Sensor for Simultaneous Dual-Gas Detection** Yuchen Guan Dalian University of Technology, China
AOMATT2026-0921-2	**Target Capture and Hotspot Engineering in SERS Nanostructures for Sensitive Detection of Exhaled Aldehyde Lung Cancer Biomarkers and Aquatic PFOA** Maosen Yang Heze University, China
AOMATT2026-0922-2	**Miniaturized Integration and Multi-Mechanism Enhancement of Single-Fiber Photoacoustic Spectroscopy for Gas Sensing** Guojie Wu Dalian University of Technology, China
AOMATT2026-0922-6	**3D Reconstruction Using Line-Structured Light Scanning with an Improved Rotary-Platform Center Calibration Method** Yubin Zheng Xiamen University of Technology, China
AOMATT2026-0929-11	**Unified Quantitative Assessment of Sensitization Across Multiple Alloys Using Laser-Induced Breakdown Spectroscopy** Wenbin Chen Huazhong University of Science and Technology, China
AOMATT2026-0929-12	**Plasmon-Assisted and Electrostatic-Driven Photocatalysis at the Sharp Tips of Au Nano-Bipyramids in Aqueous Phase** Ruiyuan Zhang Shandong Technology and Business University, China
AOMATT2026-0929-25	**Simultaneous Detection of Two Gases Using a Photoacoustic Cell with Two Resonances** Ming Zhang Dalian University of Technology, China
AOMATT2026-0929-4	**Influence of Analytical Standard Preparation Route on SERS Detection of Carbendazim and Pendimethalin in Tobacco Leaves** Junaid Younus University of Electronic Science and Technology of China, China
AOMATT2026-1008-3	**Ag/ZIF-8-Functionalized Microporous Single-Crystalline Silicon Pyramid Arrays for Highly Sensitive SERS Detection** Chundong Liu Qilu Normal University, China
AOMATT2026-1014-11	**Plasmonic Nanostructure-Mediated Molecular Self-Packaging Strategy for Enhanced SERS Detection** Lingwei Li Shaanxi University of Technology, China
AOMATT2026-1015-6	**Research on High-Sensitivity Detection and Cancer Diagnosis of Exosomes Based on SERS Enrichment Strategy and Machine Learning** Yu Guo Shandong Management University, China

AOMATT2026-1018-4	**Terahertz Spectroscopy in Metal Halide Perovskites: From Low-Energy Excitations to Ultrafast Carrier Dynamics and THz Generation** Chaoxin Ye Tianjin University, China
AOMATT2026-1022-10	**Multi-Directional Raman Scattering Light Collection for Enhanced Signal Stability and Sensitivity** Xiaohan Xing Xiamen University, China
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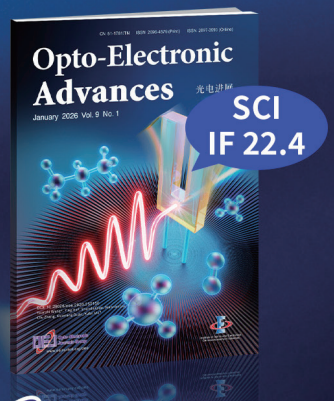

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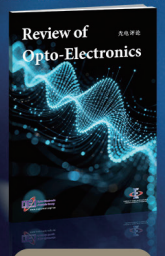

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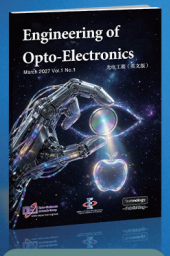

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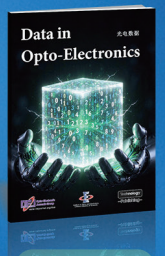

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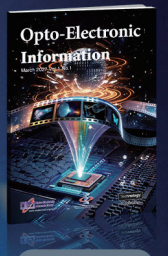

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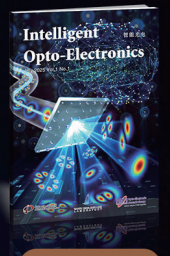

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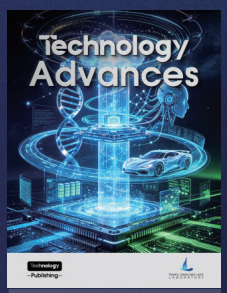

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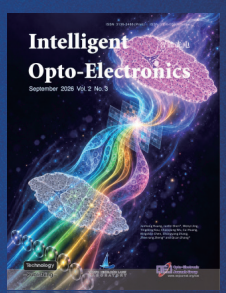

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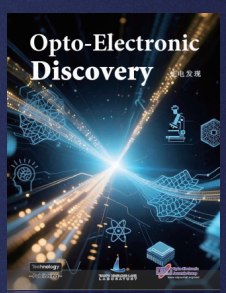

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