WESTLAKE INSTITUTE FOR OPTOELECTRONICS 西湖大学光电研究院

西湖大學 WESTLAKE UNIVERSITY | 工学院 SCHOOL OF ENGINEERING

THE 2nd INTERNATIONAL CONFERENCE ON OPTOELECTRONIC INTEGRATION

第二届国际光电集成技术大会

PROGRAM

May 11-14, 2025

Fuyang · Hangzhou · China

Mycronic是半导体光刻技术的行业领导者

极高的精度和可靠性

Mycronic的半导体光刻机在这场技术革命中发挥了关键作用。我们的光刻机被全球大部分的光掩模生产商所使用。随着每一次技术腾飞，我们都在为每一代新产品的速度、质量和成本制定新的标准。

关于 MYCRONIC

Mycronic是一家瑞典高科技公司，致力于电子行业生产解决方案的开发、制造和营销。Mycronic总部位于斯德哥尔摩北部Täby，集团在中国、法国、德国、日本、新加坡、韩国、台湾、荷兰、英国和美国设有子公司。

中国
迈康尼电子设备（上海）有限公司
北岸长风31号E栋1002，1003单元
邮编：200062
电话: +86 21 3252 3785/86

www.mycronic.com

MYCRONIC
Bringing Tomorrow's electronics to life

ABOUT WIOE

Westlake Institute for Optoelectronics (WIOE) is a provincial new R&D institution, co-founded by Westlake University (Westlake) and Fuyang District Government, Hangzhou, China in December, 2022. As an innovative engine, WIOE lies in the Hangzhou Fuchun Bay New City, a verdant and vibrant land of water and mountains where industries thrive and revive pastoral Fuyang.

As the first independent research institute of Westlake, WIOE focuses on optoelectronic devices & integration, optoelectronic integrated circuit simulation & design, advanced micro/nano processing technology & equipment, and cutting-edge optoelectronic testing & package. The WIOE also explores the applications of optoelectronic integration in fields such as optical computing, optical sensing, optical display, and optical communication, etc. By leveraging Westlake's exceptional talent and academic strengths, along with the abundant industrial resources of Fuyang, WIOE aims to establish a comprehensive ecosystem for technological innovation, product validation, and industrial amplification in the global optoelectronic industry, fostering a prominent hub of industrial technology and talent with international influence.

ABOUT WESTLAKE

Westlake University (Westlake), located in the picturesque city of Hangzhou, is a new type of research university, a first in the history of modern China. It is both supported by public and private funding and a vanguard in the reform of the higher education system in China. With its predecessor Westlake Institute for Advanced Study established in 2016, Westlake is striving to cultivate top talent, to make breakthroughs in basic research and innovation in cutting-edge technologies, and to foster human development through science and technology.

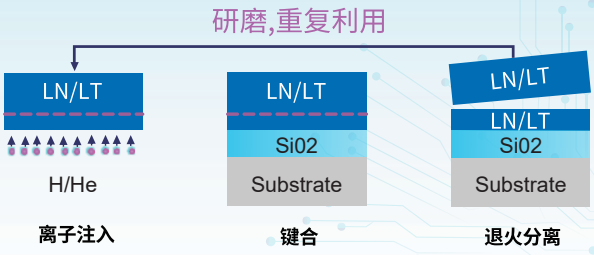
Westlake is driven by a vision of Excellence, Refinement and Research-oriented. At Westlake, we are building a truly international university based in Asia. This means embracing international best practices and global standards in teaching, research, intellectual property rights, student admissions, faculty promotion, and university governance. We guard the intellectual freedom of our students and faculty and provide them with state-of-the-art facilities and support so they can pursue their ideas. We welcome the best from all around the world to join us.

薄膜铌酸锂技术

-设备解决方案-

薄膜铌酸锂H cut技术

LN/LT H cut的工艺流程



Model: IH离子注入设备

Model:IH

特点

采用400keV氢(H)/氦(He)注入技术,实现LN、LT H cut工艺

配备LN、LT基板工艺专用的注入方法,有效解决 LN 和 LT基板特有的上升电压问题

同时适用于 SiC和Si的Hcut 工艺

铌酸锂刻蚀技术

LN刻蚀解决方案:NLD系列

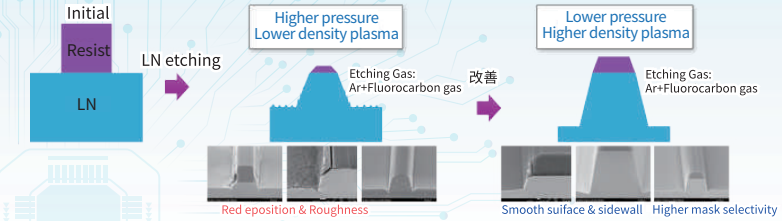
LN刻蚀的问题点:

LN材料刻蚀过程中氟化锂、氯化锂等难以挥发的副产物再沉积,导致 E/R 降低、粗糙度加大

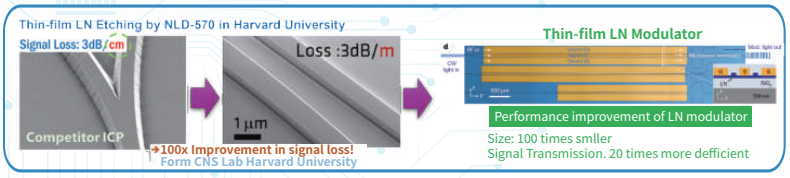
侧壁角低,掩膜后退问题

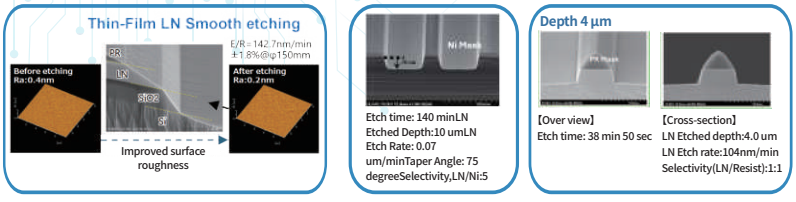
ULVAC NLD系列的解决方案:

通过低压和高密度等离子体的方式、促进蚀刻表面反应、表面解吸激活,有效改善LN刻蚀结果



NLD系列LN刻蚀案例





N+外延GaN溅射技术

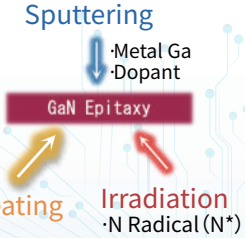
-设备解决方案-

N＋外延GaN溅射设备

Model：SEGul-200

特点

- 高性能加热源
- N自由基等离子体源
- 低温外延生长
- 共溅射掺杂

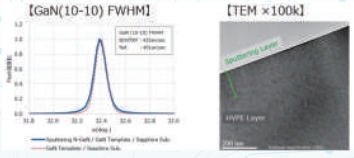


RaSE 沉积 n-GaN 薄膜的结晶质量

【溅射条件 】

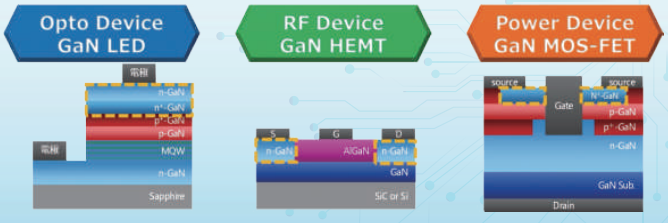
Substrate：GaN Template/Sapphire　　Substrate temp.：~700℃

Thickness：~200nm



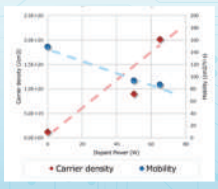
在 HVPE-GaN 上生长
高质量同质外延GaN薄膜

GaN器件制造课题:
Metal/GaN间的接触电阻



高性能GaN器件解决方案“高载流子密度 N+-GaN” 层沉积工艺

RaSE 沉积 n-GaN 薄膜的电学特性



【电特性 vs 掺杂条件】

可通过优化溅射条件
控制载流子浓度
N 型载流子密度：1×10cm

联系我们 CONTACT US ▸▸▸
182-2185-4021

ULVAC

CONTENTS

Notes 1

Organizing Committee 2

Floor Plan 5

General Schedule 7

Notes

1. The latest conference program has been updated onto the conference website: https://coint.wioe.edu.cn/
2. Please wear your representative card when entering the conference room. Please keep your voices down and set your mobile phone on mute during the conference.
3. Do not take photos or videos during the conference unless permitted by the Organizing Committee.
4. The Speakers are suggested to enter the conference room 15 mins before their scheduled sessions to check their report files.
5. The Poster Authors or Coauthors are required to stand by their posters for the duration of their allocated session (14:50-15:30 on May 12) to answer questions and further discuss their work with attendees.
6. Please show your meal ticket at the entrance of the dining room. Lunch session will be 11:30-13:30, and dinner session will be 17:30-19:30.
7. The registration desk will be reserved to 17:00 on May 14 for your consultation.
8. The invoice is expected to be emailed or mailed to the attendees before May 28.

https://coint.wioe.edu.cn/

Westlake Institute for Optoelectronics

Organizing Committee

Organizer:

Westlake Institute for Optoelectronics

Co-organizer:

School of Engineering, Westlake University

Sponsors:

General Chairs:

David Brady, University of Arizona, USA

Stephen Y. Chou, Princeton University, USA

David Moss, Swinburne University of Technology, Australia

Min Qiu, Westlake University, China

Technical Program Committee Chair:

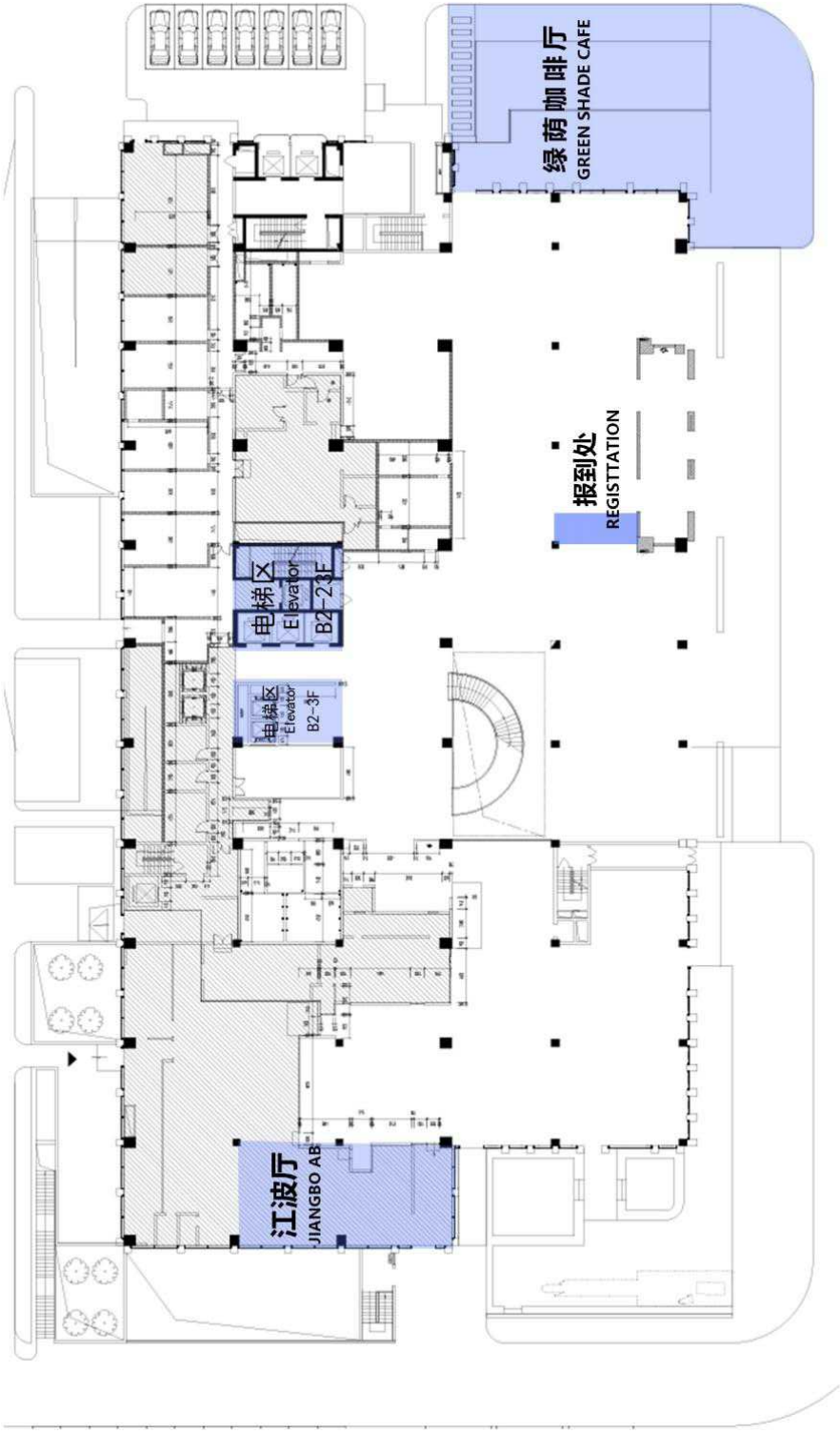
William Shieh, Westlake University, China

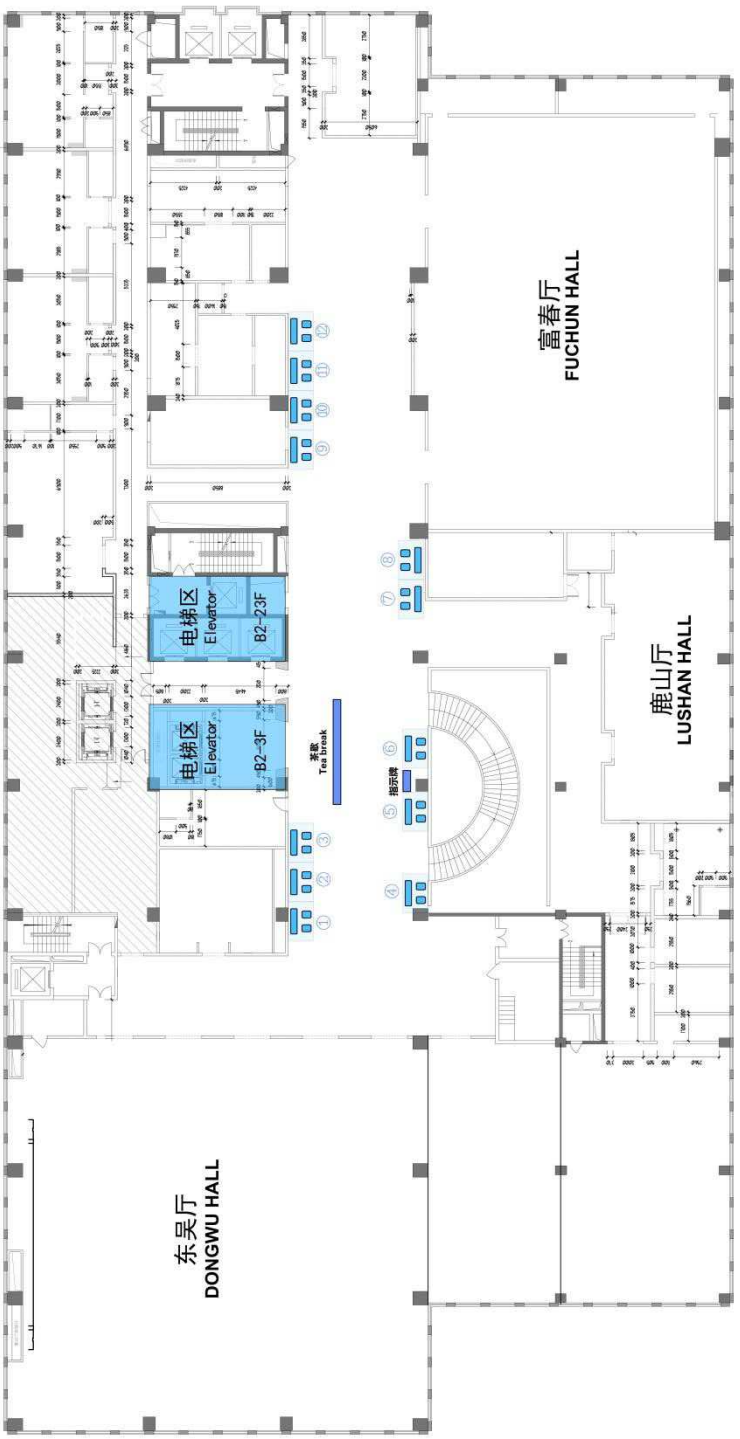
Technical Program Committee Members:

Menglu Chen, Beijing Institute of Technology, China
Nicholas X. Fang, The University of Hong Kong, China
Feng Gao, Linköping University, Sweden
Botao Ji, Westlake University, China
Baohua Jia, RMIT University, Australia
Xunya Jiang, Fudan University, China
Wei Kong, Westlake University, China
Lan Li, Westlake University, China
Wei Li, Shanghai Institute of Microsystem and Information Technology, CAS, China
Xun Li, McMaster University, Canada
Puxiang Lai, The Hong Kong Polytechnic University, China
Dongxu Lu, Westlake Institute for Optoelectronics, China
Lingmei Ma, Westlake Institute for Optoelectronics, China
Inkyu Park, Korea Advanced Institute of Science and Technology, Korea
Sergei Popov, KTH Royal Institute of Technology, Sweden
Liang Shen, Jilin University, China
Guohai Situ, Shanghai Institute of Laser Technology Co., Ltd, Shanghai Institute of Optics and Fine Mechanics, CAS, China
Liaoyong Wen, Westlake University, China
Chen Wen, The Hong Kong Polytechnic University, China
Jiayang Wu, Swinburne University of Technology, Australia
Shuiying Xiang, Xidian University, China
Changyuan Yu, The Hong Kong Polytechnic University, China
Shaoliang Yu, Zhejiang Lab, China
Xin Yuan, Westlake University, China
Qiwen Zhan, University of Shanghai for Science and Technology, China
Ding Zhao, Westlake Institute for Optoelectronics, China
NiKolay Zheludev, University of Southampton, UK
Xiaorui Zheng, Westlake University, China
Qiang Zhou, University of Electronic Science and Technology of China, China
Bowen Zhu, Westlake University, China

Floor Plan

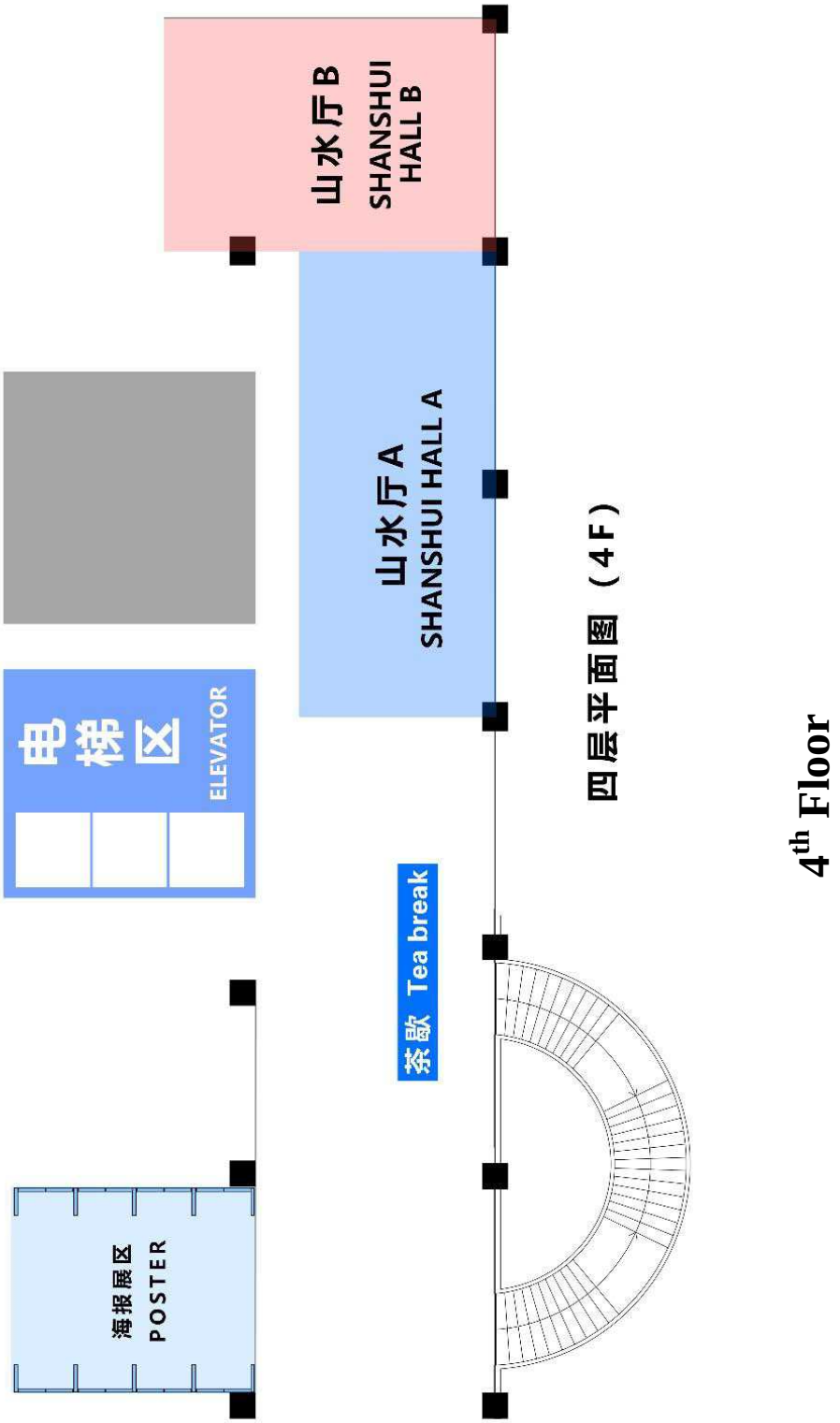
1st Floor





三层平面图（3F）

3rd Floor


山水厅B
SHANSHUI HALL B
山水厅A
SHANSHUI HALL A
电梯区
ELEVATOR
茶歇 Tea break
海报展区
POSTER
四层平面图（4F）
4th Floor

General Schedule

(All times in China Standard Time, UTC+8)

Date	Time	Activity	Venue
May 11	10:00-20:00	Registration	Lobby, 1F
	13:00-17:30	光电显示产业论坛-微显示与 AR 产业技术	Fuchun Hall, 3F
May 12	09:00-11:30	Opening Ceremony & Plenary Session	Dongwu Hall, 3F
	14:50-15:30	Poster Session	Lobby, 4F
	18:30-20:30	Banquet	Dongwu Hall, 3F
May 13	09:00-12:00	Plenary Session	Dongwu Hall, 3F
May 12 May 13 May 14	13:00-17:30 13:30-17:30 09:00-16:30	**Topic 1.** Advanced Optoelectronic Devices and Integration **Topic 2.** Integrated Optoelectronics Simulation and Design	Fuchun Hall, 3F
		Topic 3. Micro/Nano Fabrication Technology and Equipment **Topic 8.** Optical Communication and Networks	Shanshui A Hall, 4F
		Topic 4. Integrated Optoelectronics Packaging and Testing **Topic 6.** Optical Sensing and its Application	Shanshui B Hall, 4F
		Topic 5. Optical AI and Computational Photonics **Topic 7.** Novel Optical Display Technology	Lushan Hall, 3F
May 12-14	08:30-18:30	Exhibition	Lobby, 3F

光电显示产业论坛-微显示与 AR 产业技术

Fuchun Hall, 3F

May 11 PM	
13:00-13:20	**黄玮铮**，珠海莫界科技有限公司 极致轻量型 AI+AR 眼镜的创新探索
13:20-13:40	**张轶铭**，北方华创科技集团股份有限公司 北方华创面向光电领域的装备与工艺整体解决方案
13:40-14:00	**程忠辉**，宁波飞纳激光科技有限公司 水导激光精密加工技术和应用及未来展望
14:00-14:20	**来恒杰**，嘉兴致瑞新材料科技有限公司 树脂晶圆在 AR 智能眼镜中的应用
14:20-14:40	**陈洪建**，河北工业大学/河北同光半导体股份有限公司 AR 光学级碳化硅机遇和挑战
14:40-15:00	**茶　歇**
15:00-15:20	**黄少华**，三安光电股份有限公司 三安光电用于新型显示光源开发进展
15:20-15:40	**陈　杭**，浙江舜为科技有限公司 以消费者为中心的 XR 眼镜开发
15:40-16:00	**王　鹏**，中电海康集团有限公司 XR 光学架构：现在与未来展望
16:00-16:20	**李雨雪**，上海理湃光晶技术有限公司 近眼显示应用中，几何光波导技术的研究进展以及应用需求
16:30-17:30	**圆桌论坛**

Opening Ceremony & Plenary Session

Dongwu Hall, 3F

May 12 AM	
Presider: Qiwen Zhan, University of Shanghai for Science and Technology	
09:00-09:30	Opening Ceremony
09:30-10:10	**Ray T. Chen**, The University of Texas at Austin *Near- and Mid-IR Photonic Integrated Circuits (PICs) for Bio and Chemical Sensing, Interconnects and Computing with AI and ML Applications* ***Plenary***
10:10-10:50	**Baohua Jia**, RMIT University *Laser Nanoprinting of Atomaterials* ***Plenary***
10:50-11:30	**Jianping Yao**, University of Ottawa *Photonic Integrated Circuits: Pathway to Next-Generation Microwave Photonic Systems* ***Plenary***
May 13 AM	
Presider: Baohua Jia, RMIT University	
09:00-09:40	**Harald Giessen**, University of Stuttgart *3D Printed Complex Microoptics: Fundamentals and First Benchmark Applications* ***Plenary***
09:40-10:20	**Xiaogang Peng**, Zhejiang University *Strongly- and Weakly-confined Semiconductor Nanocrystals as a Platform for Photon Manipulation* ***Plenary***
10:20-10:40	**Tea Break**
10:40-11:20	**Hong-Bo Sun**, Tsinghua University *Femtosecond Laser Nano-Fabrication, an Enabling Technology for 3D Optoelectronic Integration* ***Plenary***
11:20-12:00	**Haoshuo Chen**, Nokia Bell Labs *Innovations and Challenges: The Next Frontier in Space-Division Multiplexing* ***Plenary***

Ray T. Chen Graduated from TsingHua University in Taiwan with a B.S. degree in Physics in 1980. He received his PhD degree in EE from the University of California in 1988. He is currently a senior Endowed Chair Professor at The University of Texas Austin. His research work has been awarded over 150 research grants and contracts from such sponsors as Army, Navy, Space-Force, Air-Force, DARPA, MDA, NSA, NSF, DOE, EPA, NIST, NIH, NASA, Texas State, and private industry. Chen served as the CTO, Founder, and Chairman of the Board of Radiant Research, Inc. from 2000 to 2001, where he raised 18 million dollars A-Round funding to commercialize polymer-based photonic devices involving over twenty patents, which were acquired by Finisar in 2002, a publicly traded company in the Silicon Valley (NASDAQ:FNSR). He also serves as the founder and Chairman of the Board of Omega Optics Inc. since its initiation in 2001. Omega Optics has received over twenty million dollars in research funding from private sectors and government agencies.

He received the honorary citizenship award in 2003 from the Austin city council for his contribution in community service. He was also the recipient of the 2008 IEEE Teaching Award, and the 2010 IEEE HKN Loudest Professor Award. 2013 NASA Certified Technical Achievement Award for contribution on moon surveillance conformable phased array antenna. During his undergraduate years at the National Tsing Hua University, he led the 1979 university debate team to the National Championship of the Taiwan College-Cup Debate Contest.

Chen's group at UT Austin has reported its research findings in more than 1,000 publications including over 100 invited papers and 82 patents. Chen is a Fellow of the National Academy of Inventors, IEEE, AIIA (International Artificial Intelligence Industry Alliance), Optica (OSA), and SPIE. Chen has supervised 41 postdocs and graduated 60 PhD students from his group. And many of them are professors in research universities in the USA and abroad.

Title: Near- and Mid-IR Photonic Integrated Circuits (PICs) for Bio and Chemical Sensing, Interconnects and Computing with AI and ML Applications

Abstract:

The advancement of sensing, interconnects and computing is mainly from the R&D works on electrons and photons, which carry drastically different characteristics defining different technology roadmaps. Due to the saturation of the Moore's law, the advantages of photon-based devices provide solutions with the unprecedented performance. In this talk, we will present the integrated photonic devices covering near and mid-IR wavelengths for biosensing, SERS and spectroscopy sensing for Methane, Nitrogen Dioxide, CO, Ethanol, Ammonia, and TEP. Mid-IR Lidar Chip centered at 4.6 micron will also presented.

Today's fabrication of planar photonic circuits is reaching the limits of integration density. The minimum feature sizes are fundamentally limited by the wavelength (~1 μm) of light and the refractive index contrast achievable in the optical materials. By utilizing the unique feature of photons, which are Bosons by definition, we can further enhance the interconnectivity physically stacking optical waveguide layers without interference to significantly enhance the number of interconnects on one optical layer.

Silicon photonics for both digital and analog computing will be introduced with low latency, high bandwidth and multi-wavelength operations for AI and ML applications. Multiple photonic circuits were demonstrated to ensure low latency, high bandwidth and low energy consumption without compromising the machine learning accuracy. A myriad of data sets has been explored.

Distinguished Professor Baohua Jia is a Fellow of Australian Academy of Technological Sciences and Technologies (FTSE), and Future Fellow at RMIT University, Australia. Before joining RMIT University in 2022, Baohua was a tenured professor at Swinburne University of Technology and Founding Director of Centre for Translational Atomaterials. Professor Jia is a Fellow of Optica (previously known as the Optical Society of America), and a Fellow of the Institute of Materials, Minerals and Mining (IMO3). Since 2019, Prof. Jia has served as a Colleague of Expert for the Australian Research Council. Professor Jia's research focuses on the design and optical characterization of novel nanostructures and nanomaterials, fabrication, and efficient conversion and storage of light energy. As a leading Chief Investigator, Professor Jia received a total of more than $50 million in research funding support. Professor Jia has published more than 350 journal papers with an h-index of 80 (Google Scholar) and developed more than 20 invention patents and patent applications. Based on Professor Jia's outstanding contributions in scientific research, she has won many awards, including the 2017 finalist of the Australian Prime Minister's Science Award, the Vice Chancellor's Industrial Achievement Award in 2011, 2016, and 2018, 2013, Young Science Leader Award, 2012 UNESCO L'Oréal Australia New Zealand Women in Science Award.

Title: Laser Nanoprinting of Atomaterials

Abstract:

This presentation mainly introduces the interaction between 3D nanoprinting and various materials at the atomic scale. Describe the precise and unparalleled manipulation of materials by nanoprinting at the spatial, temporal, and atomic scales. In particular, the application status and broad prospects of optical nanoprinting and two-dimensional photonic integrated devices are introduced in detail. The report will also share the future development directions of ultrafast optical nanoprinting and angstrom material devices, and the major challenges faced. The developed scalable graphene metamaterials show attractive optical and thermal properties. Through patterning with advanced laser nanoprinting technique, functional photonic devices with ultrathin, light weight and flexible nature have been demonstrated promising exciting opportunities for integrated photonics.

Jianping Yao is a Distinguished University Professor and University Research Chair in the School of Electrical Engineering and Computer Science, University of Ottawa, Canada. He has been working in Microwave Photonics and has published 400+ peer-reviewed journal papers and 300+ conference papers, with 30,000+ citations and an H-index of 91. He served as Editor-in-Chief of IEEE Photonics Technology Letters from 2017 to 2021 and was an elected member of the IEEE Photonics Society Board of Governors from 2018 to 2021. He was Chair of the IEEE MTT-S Microwave Photonics Technical Committee from 2016 to 2021 and was an IEEE Distinguished Microwave Lecturer from 2013 to 2015. He received the IEEE R.A. Fessenden Award in 2018 and the IEEE Microwave Theory and Techniques Society Microwave Applications Award in 2025. Dr. Yao is a Fellow of the Canadian Academy of Engineering (2012), the Royal Society of Canada (2018), IEEE (2012), and Optica (2010).

Title: Photonic Integrated Circuits: Pathway to Next-Generation Microwave Photonic Systems

Abstract:

Photonic integrated circuits (PICs) provide compelling advantages for microwave photonic systems, including low loss, compact footprint, and high integration density, making them well-suited for next-generation microwave subsystems and systems. This talk will highlight recent advances in integrated microwave photonic systems enabled by PICs, with applications including true time delay networks for wideband beamforming, optoelectronic oscillators for low-phase-noise, high-frequency microwave generation, programmable signal processors for versatile photonic signal processing, and high-sensitivity optical sensors.

Harald Giessen graduated with a MSc in Physics from University of Kaiserslautern, Germany, and obtained his MSc and PhD in Optical Sciences in 1994 and 1995 from Optical Sciences Center, University of Arizona, working with Nasser Peyghambarian and Pierre Meystre.

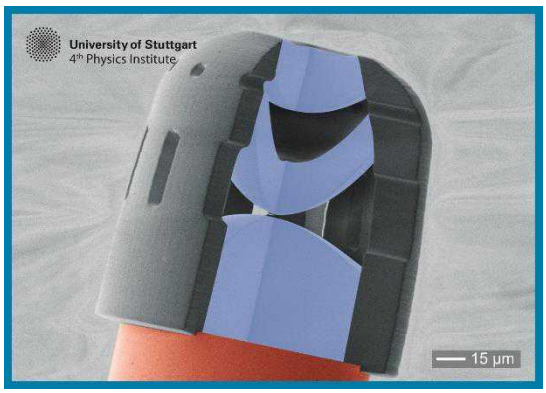
After a postdoc in 1996 at Max-Planck-Institute for Solid State Research in Stuttgart, Germany and an Assistant Professorship at University of Marburg, Germany, from 1997-2000, he became Associate Professor at University of Bonn, Germany. Since 2005 he is Full Professor and Director of the 4th Physics Institute and the Stuttgart Research Center of Photonics Engineering (SCoPE) at University of Stuttgart.

His research deals with Ultrafast Nanooptics, Plasmonics, Metasurfaces and 3D Printed Micro-Optics. He is Fellow of Optica and has won an ERC Advanced Grant for Complex Plasmonics. In 2024, he was awarded the Robert-Wichard-Pohl Prize of the German Physical Society for his pioneering work of 3D Printed Micro-Optics. From 2018-2021 he was Highly Cited Researcher (Top 1%).

Title: 3D Printed Complex Microoptics: Fundamentals and First Benchmark Applications

Abstract:

We introduce 3d printed complex microoptics, spanning a range between a few micrometers up to 5 mm. Our lens system consists of aspherical multiplet lens systems which can give high numerical apertures with simultaneously excellent imaginag properties over the entire field of view, even directly on an optical fiber tip. Combining several printed materials with different refractive indices and dispersions and the combination with diffractive elements allows for realization of micro-optical achromats or even apochromats which are aplanatic (no first- and third-order aberrations such as spherical aberration, astigmatism, coma, distortion etc.) and achromatic for 3 wavelengths (red, green, blue). We also demonstrate the direct printing of black resists, which results in aperture stops and blackened hulls.



Atomic layer deposition yields antireflection coatings on all optical elements. Confocal surface profiling and wavefront interferometry demonstrate accuracies far better than lambda/20. In combination with high-resolution nanostructuring, also 3D holograms and metasurfaces can be included.

We utilize these methods to demonstrate the smallest endoscope in the world, being able to pass through a root canal of a tooth, as well as ultracompact sensors with hologon or hypergon lenses or a set of Scheimpflug lenses with nearly 2pi steradian imaging solid angle. Illumination systems as well as holographic projectors and beam shapers directly on optical fiber tips are demonstrated. Coupling single quantum emitters or single photon detectors to single mode fibers is demonstrated. Furthermore, single-fiber optical trapping of polystyrene beads, live cells, or atomic systems becomes a possibility.

Recently, we also demonstrated the use of 3D printed optics inside of a laser cavity, connecting a DBR mirror in a fiber with a solid state laser crystal.

Xiaogang Peng is currently a Professor at Zhejiang University. Before moving back to China in 2009, he was on the faculty at the University of Arkansas as Assistant Professor (1999-2003), Associate Professor (2003-2005), and Professor with Chair (2005-2009). He received his B.S. (1987) and Ph.D. (1992) from Jilin University, China. His Postdoctoral experience followed by a position as Staff Scientist at UC Berkeley between 1994 and 1999 brought him into the field of colloidal nanocrystals. Shortly after starting his tenure at the University of Arkansas in 1999, he founded NN-Labs LLC in USA to explore industrial applications of quantum dots. In 2009, he founded Najing Tech Corporation in Hangzhou, currently focusing on quantum-dot display technologies.

Title: Strongly- and Weakly-confined Semiconductor Nanocrystals as a Platform for Photon Manipulation

Abstract:

Strongly-confined semiconductor nanocrystals are known as quantum dots, which have received great attention in the recent years as optical and optoelectronic materials. Here, we show that weakly-confined semiconductor nanocrystals offer a much greater platform than quantum dots do for photon manipulation with their unique dynamic excitons as the medium. Experimental results confirm that the photo- or electro-generated electron-hole pairs in weakly-confined semiconductor nanocrystals are neither free carriers nor Wannier excitons. Instead, with weak electrostatic interaction between an electron and hole, either carrier is spatially confined by the lattice-ligands boundary, which is better described as a dynamic exciton. Different from a Wannier exciton, behaviour of a dynamic exciton can be readily tuned by the size, shape, and composition of a nanocrystal, making monodisperse semiconductor nanocrystals—both strongly- and weakly-confined—as optimal materials for optoelectronics.

Hong-Bo Sun, received the B.S. and the Ph.D degrees in electronics from Jilin University, Changchun, China, in 1992 and 1996, respectively. He worked as a postdoctoral researcher in Satellite Venture Business Laboratory, the University of Tokushima, Japan, from 1996 to 2000, and then as an assistant professor in Department of Applied Physics, Osaka University, Japan. In 2004, he was promoted as a full professor (Changjiang Scholar) in Jilin University, and since 2017 he has been working in Tsinghua University, China. His research interests have been focused on laser precision manufacturing. He has published over 500 papers, which have been cited for over 40000 times, and H factor is 101, according to ISI search report. He is currently the executive editor-in-chief (EEIC) of Light: Science and Applications and editor-in-chief of PhotoniX (Both from Nature Publishing Group). He is IEEE, OSA and SPIE fellow.

Title: Femtosecond Laser Nano-Fabrication, an Enabling Technology for 3D Optoelectronic Integration

Abstract:

Femtosecond laser nanofabrication provides a new technical avenue towards micro-nanodevices. Comparing with the currently available nanofabrication approaches including photolithography, nanoimprinting, focus ion beam, it is unique in the three-dimensional (3D) processing capability and applicability to various materials. These make the new concept, stereo-integrated photonics circuits possible. The talk will introduce our recent research progress along these lines, from light-matter interaction physics to new concept optoelectronic devices working from the visible to infrared wave ranges.

Dr. Haoshuo Chen received his Ph.D. degree (Cum Laude) in Electrical Engineering from Eindhoven University of Technology (TU/E), The Netherlands, in 2014. Since December 2014, he has been a member of the technical staff at Nokia Bell Labs, Murray Hill, NJ, USA. Dr. Chen has (co-)authored over 300 journal and conference papers, including more than 30 post-deadline papers, and holds over 15 US patents. Dr. Chen has served as an Associate Editor of the IEEE Journal of Quantum Electronics, a strategy representative of the IEEE Photonics Society Globalization Committee, and Program Chair of the 28th Optoelectronics and Communications Conference (OECC). Additionally, he has served as a subcommittee chair/member and workshop organizer at major photonic conferences such as OFC, ECOC, OECC, ICOCN, IPC, ACP, APC, CLEO/PR, and SUM. His primary research interests include space-division multiplexing, dense photonic integration, power-efficient digital signal processing, fiber components, and wavelength/space switches.

Title: Innovations and Challenges: The Next Frontier in Space-Division Multiplexing

Abstract:

Space Division Multiplexing (SDM) research has significantly advanced the field of high-capacity transmission in optical communications. By leveraging multiple spatial channels within a single optical fiber, SDM has demonstrated the potential to exponentially increase data throughput, effectively addressing the growing demand for bandwidth in modern communication networks. Key achievements in SDM research have led to record-breaking transmission capacities, with experimental setups achieving petabit-per-second data rates over long distances. Additionally, advancements in digital signal processing (DSP) and spatial multiplexing techniques have enhanced the efficiency and reliability of SDM systems.

This talk will first focus on optical transceiver integration, introducing innovative designs for optical coherent receiver arrays. These arrays leverage surface-normal dual-polarization 90-degree optical hybrid arrays to support simultaneous space- and wavelength-division multiplexing. The coherent receiver array, capable of simultaneously detecting multiple spatial and wavelength channels, has been experimentally validated for space- and wavelength-division multiplexing reception in two-core fiber systems.

Next, the talk will cover spatial switching, which is essential for future large-scale SDM systems. We will discuss an artificial intelligence (AI)-powered mobile robot capable of performing multiple network operation tasks such as fiber manipulation and switching. By employing the robot and real-time coherent receiver-based polarization sensing, we demonstrate an automated fiber switch with network path verification.

Lastly, we will explore the potential application of large language models to further enhance SDM fiber designs, opening new avenues for innovation and optimization in this rapidly evolving field.

Topic 1. Advanced Optoelectronic Devices and Integration
&
Topic 2. Integrated Optoelectronics Simulation and Design

Fuchun Hall, 3F

May 12	
Topic 1: Advanced Optoelectronic Devices and Integration **Presider: Lan Li, Westlake University**	
13:00-13:30	**Huiyun Liu,** University College London *III-V Telecom Quantum-dot Lasers Monolithically Grown on Si Platform* ***Keynote***
13:30-13:55	**Beibei Li,** Institute of Physics, CAS *Nano-pascal-sensitivity Integrated Optomechanical Ultrasonic Sensors* ***Invited***
13:55-14:20	**Hongtao Cao,** Ningbo Institute of Materials Technology and Engineering, CAS *Balanced Oxide TFT Performance: Microstructural Ordering, Device Structure Design, and Physical Mechanism* ***Invited***
14:20-14:45	**Linfeng Sun,** Beijing Institute of Technology *Advanced 2D Optoelectronic Devices and Integration for Neuromorphic Computing* ***Invited***
14:50-15:30	**Tea Break & Poster Session**
Topic 2: Integrated Optoelectronics Simulation and Design **Presider: Alexander Dorodnyy, Pairobeit GmbH, Switzerland**	
15:30-16:00	**Alex Yasha Yi,** University of Michigan *Integrated Silicon Photonics Utilizing Artificial Intelligence Semiconductor Chip* ***Keynote***
16:00-16:25	**Chao Mei,** Ningbo University *Design of the Spectral Compression-assisted Optical Temporal Differentiator* ***Invited***
16:25-16:50	**Min Tan,** Huazhong University of Science and Technology *Compact Modeling and Simulation of Electronics-Photonics Convergence: Key Challenges, Latest Advancements, and Future Perspectives* ***Invited***
16:50-17:15	**Wei E. I. Sha,** Zhejiang University *Quantum-Inspired Optimization Breakthroughs: Engineering Applications from Far-Field Beamforming to Near-Field EM Control* ***Invited***
17:15-17:40	**Xunya Jiang,** Fudan University *TBD* ***Invited***

May 13	
Topic 2: Integrated Optoelectronics Simulation and Design **Presider: Xunya Jiang, Fudan University**	
13:30-14:00	**Jiang Xu,** The Hong Kong University of Science and Technology (Guangzhou) *Rejuvenate Post-Moore's Law Computing with Electronics-Photonics Integration* ***Keynote***
14:00-14:25	**Yinghao Ye,** Guizhou University *Behavioral Modeling and Circuit Simulation of Passive Photonic Integrated Circuits* ***Invited***
14:25-14:50	**Alexander Dorodnyy,** Pairobeit GmbH, Switzerland *Numerical Methods for Optoelectronics: An Overview* ***Invited***
14:50-15:10	**Tea Break**
Topic 1: Advanced Optoelectronic Devices and Integration **Presider: Bowen Zhu, Westlake University**	
15:10-15:40	**Jianxin Tang,** Soochow University *Synergetic Interface Engineering for Perovskite LEDs* ***Keynote***
15:40-16:05	**Wenchao Huang,** Wuhan University of Technology *Ultrathin Flexible Organic Optoelectronics* ***Invited***
16:05-16:30	**Weiwei Zhang,** Songshan Lake Materials Laboratory *Ultra-compact Silicon Photonics Modulators for High Speed Communication* ***Invited***
16:30-16:55	**Tomoyuki Yokota,** The University of Tokyo *Sheet-type Image Sensor for Biomedical Imaging and Sensing* ***Invited***
16:55-17:20	**Zihao Wang,** Institute of Physics, CAS *Empowering Silicon Photonics with Quantum Dots Lasers* ***Invited***
17:20-17:45	**Cuicui Lu,** Beijing Institute of Technology *On-chip Topological Nanophotonic Devices* ***Invited***
May 14	
Topic 2: Integrated Optoelectronics Simulation and Design **Presider: Zairui Li, Westlake Institute for Optoelectronics**	
09:00-09:25	**Yunsong Zhao,** Shanghai Max-Optics Information Technology Co., Ltd. *Photonic Integrated Circuit Simulation Technology* ***Invited***
09:25-09:50	**Yuntian Chen,** Huazhong University of Science and Technology *Multi-scale Modelling of Light: Theory and Algorithm* ***Invited***
09:50-10:15	**Haiyang Huang,** Shanghai Institute of Microsystem and Information Technology, CAS *TBD* ***Invited***
10:15-10:35	**Tea Break**

Topic 1: Advanced Optoelectronic Devices and Integration **Presider: Jiyong Wang, Hangzhou Dianzi University**	
10:35-11:00	**Cunzhu Tong,** Changchun Institute of Optics, Fine Mechanics and Physics, CAS *Triple-lattice Photonic Crystal Surface Emitting Lasers* ***Invited***
11:00-11:25	**Jierong Cheng,** Nankai University *Terahertz Multifunctional Metasurfaces and Applications* ***Invited***
11:25-11:40	**Boqu Chen,** Westlake University *4H-SiC Metalens: Mitigating Thermal Drift Effect in High-power Laser Irradiation* ***Oral***
	Lunch
Topic 1: Advanced Optoelectronic Devices and Integration **Presider: Xiaowei Guan, Jiaxing Research Institute, Zhejiang University**	
13:30-13:55	**Jiyong Wang,** Hangzhou Dianzi University *Linear and Nonlinear Plasmonic Metafiber Devices* ***Invited***
13:55-14:20	**Fei Ding,** University of Southern Denmark/Eastern Institute of Technology, Ningbo *Electrically Tunable Optical Metasurfaces Using MEMS Mirrors* ***Invited***
14:20-14:45	**Yaocheng Shi,** Zhejiang University *Silicon Optical Phased Array for Wide Angle Optical Beam-Steering* ***Invited***
14:45-15:05	**Tea Break**
Topic 1: Advanced Optoelectronic Devices and Integration **Presider: Fei Ding, University of Southern Denmark/Eastern Institute of Technology, Ningbo**	
15:05-15:30	**Bobo Tian,** East China Normal University *Retinomorphic Optoelectronic Devices Based on Ferroelectric* ***Invited***
15:30-15:55	**Keisuke Ide,** Institute of Science Tokyo *Amorphous Oxide Semiconductors for Optoelectronic Applications* ***Invited***
15:55-16:20	**Xiaowei Guan,** Jiaxing Research Institute, Zhejiang University *Electro-Optic and Passive Integrated Photonic Devices Based on Thin-Film Lithium Niobate* ***Invited***

Topic 3. Micro/Nano Fabrication Technology and Equipment & Topic 8. Optical Communication and Networks

Shanshui A Hall, 4F

May 12	
Topic 8. Optical Communication and Networks **Presider: William Shieh, Westlake University**	
13:00-13:30	**Jianjun Yu,** Fudan University *Photon-assisted Terahertz Communication* ***Keynote***
13:30-13:55	**Kangping Zhong,** The Hong Kong Polytechnic University *Application of Avalanche Photodiode (APD) in Next Generation Coherent PON* ***Invited***
13:55-14:25	**Ming Tang,** Huazhong University of Science and Technology *Power Efficient Inter-satellite Connection Powered by Homodyne Coherent Detection* ***Keynote***
14:25-14:50	**Jinlong Wei,** Pengcheng Laboratory *Advanced Training-aided Optical Coherent Frequency-domain MIMO for Mode-division-multiplexing Transmission Systems* ***Invited***
14:50-15:30	**Tea Break & Poster Session**
Topic 3. Micro/Nano Fabrication Technology and Equipment **Presider: Liaoyong Wen, Westlake University**	
15:30-15:55	**Qi Hao,** Southeast University *Surface-Enhanced Raman Scattering Using Plasmonic Nanoarrays* ***Invited***
15:55-16:20	**Leilei Gu,** Shanghai Jiao Tong University *Biomimetic Vision Based on Nanowire Arrays* ***Invited***
16:20-16:45	**Yaoguang Ma,** Zhejiang University *Optical Spectrum Modulation in Micro-nano Structures* ***Invited***
16:45-17:10	**Hao Wang,** Beihang University *Nanoscale 3D Printing for Color Manipulation* ***Invited***
17:10-17:35	**Dazhao Zhu,** YUZHIQUAN Instruments Co.,Ltd, *Advanced Two-photon Direct Laser Writing Technology and Applications* ***Invited***
May 13	
Topic 3. Micro/Nano Fabrication Technology and Equipment **Presider: Xiaorui Zheng, Westlake University**	
13:30-14:00	**Li Wang,** Institute of Physics, CAS *Growth and Applications of Two-dimensional Boron Nitride Single Crystal* ***Keynote***
14:00-14:30	**Yang Xu,** Zhejiang University *Graphene/Silicon Heterostructures for Integrated Nanotechnology* ***Keynote***
14:30-14:45	**Lang Wang,** Westlake University *Aluminum-based 3D Lithography for Flexible Sensing* ***Oral***
14:50-15:10	**Tea Break**

Topic 8. Optical Communication and Networks **Presider: Dongxu Lu, Westlake Institute for Optoelectronics**	
15:10-15:40	**Yikai Su,** Shanghai Jiao Tong University *Single-channel 450-Gb/s Integrated Direct Detection for Optical Interconnects* ***Keynote***
15:40-16:05	**Zixian Wei,** The Hong Kong Polytechnic University/McGill University *O-band Heterogeneous Integration for High-speed Data Center Interconnect and Optical Access Network* ***Invited***
16:05-16:30	**Lu Zhang,** Zhejiang University *Beyond-200Gb/s Optical Interconnects with IM/DD Schemes* ***Invited***
16:30-16:45	**Haojie Zhu,** Westlake University *Ultra-Narrow-Bandwidth Silicon Photonic Tunable Second-Order CROW Filter with Low Insertion Loss for Carrier-Extracted Self-Coherent (CESC) Detection* ***Oral***
16:45-17:10	**Feng Qiu,** Hangzhou Institute for Advanced Study, UCAS *Novel Thin Film Wafer-electro-optic Coefficient Is 6 Times that of Lithium Niobate* ***Invited***
May 14	
Topic 8. Optical Communication and Networks **Presider: Yixiao Zhu, Shanghai Jiao Tong University**	
09:00-09:25	**Zhaopeng Xu,** Pengcheng Laboratory *High-speed Low-cost IM/DD Optical Interconnects Enabled by Advanced DSP* ***Invited***
09:25-09:50	**Yaxi Yan,** The Hong Kong Polytechnic University *Integrated Optical Sensing and Communication and Its Application in Urban Areas* ***Invited***
09:50-10:15	**Honglin Ji,** Pengcheng Laboratory *High-capacity and Long-distance Transmission Based on Weakly-coupled Few-mode Multi-core Fibers* ***Invited***
10:15-10:35	**Tea Break**
Topic 3. Micro/Nano Fabrication Technology and Equipment **Presider: Jie Tian, Zhejiang Fuxi Opto-electronic Manufacturing Co., Ltd.**	
10:35-11:00	**Fei Han,** Harbin Institute of Technology *3D Nanofabrication via the Kinetics in Nano-chemistry* ***Invited***
11:00-11:25	**Fei Hui,** Zhengzhou University *In-situ Observation of Reliable Nanosynpatic Response in Low-dimensional Materials Using CAFM* ***Invited***
11:25-11:50	**Yang Gao,** Zhejiang University *Probing and Modulating the Interlayer Elastic Coupling in 2D Materials* ***Invited***
11:50-12:15	**Jinfeng Zhu,** Xiamen University *12-Inch-Wafer Titanium Nitride Metasurfaces for Biosensing and Prostate Cancer Detection* ***Invited***
	Lunch

Topic 3. Micro/Nano Fabrication Technology and Equipment **Presider: Fei Han, Harbin Institute of Technology**	
13:30-13:55	**Liping Shi,** Hangzhou Institute of Technology, Xidian University *MHz Femtosecond Burst-driven Heat Accumulation for Improved Large-scale Periodic Nanolithography* ***Invited***
13:55-14:20	**Xue-Qing Liu,** Jilin University *Femtosecond Laser Fabrication of Antireflection Surfaces and Applications* ***Invited***
14:20-14:45	**Binbin Jin,** Hangzhou City University *Ice-assisted van der Waals Metal-Semiconductor Contact* ***Invited***
14:45-15:05	**Tea Break**
Topic 8. Optical Communication and Networks **Presider: Zhaopeng Xu, Pengcheng Laboratory**	
15:05-15:30	**Yuyang Gao,** University of Science and Technology Beijing *Application of Few-mode Fiber Couplers in Mode-division Multiplexing Transmission Systems and Networks* ***Invited***
15:30-15:55	**Shenmao Zhang,** Huazhong University of Science and Technology *TBD* ***Invited***
15:55-16:20	**Yixiao Zhu,** Shanghai Jiao Tong University *Equalization-enhanced Phase Noise Compensation in Coherent Optical Communications: A Revisit* ***Invited***

Topic 4. Integrated Optoelectronics Packaging and Testing
&
Topic 6. Optical Sensing and its Application

Shanshui B Hall, 4F

May 12	
Topic 6. Optical Sensing and its Application **Presider: Bo Liu, Zhejiang Lab**	
13:00-13:25	**Chenyuan Hu,** Huazhong University of Science and Technology *The Design of MOEMS Geophone for Mineral Resource Exploration* ***Invited***
13:25-13:50	**Fei Liu,** University of Science and Technology Beijing *Researches and Applications of High-performance Quasi-distributed and Distributed Optical Fiber Vibration Sensors for Oil and Gas Industry* ***Invited***
13:50-14:20	**Tuan Guo,** Jinan University *Operando Battery Monitoring Using Lab-on-fiber Optical Sensing Technologies* ***Keynote***
14:20-14:45	**Hongkun Zheng,** Northeastern University *Interferometric Array-based OPD-OTDR for Large Amplitude Acoustic Signal Sensing* ***Invited***
14:50-15:30	**Tea Break & Poster Session**
Topic 4. Integrated Optoelectronics Packaging and Testing **Presider: Qiu-Gui Zhou, Suzhou Dawning Semi Technology Co., Ltd.**	
15:30-16:00	**Xueyan Zheng,** Westlake Institute of Optoelectronics *Key Enabling Factors for Co-Packaged Optics (CPO)* ***Keynote***
16:00-16:25	**Kebin Shi,** Peking University *Scattering Based Optical Imaging for Integrated Photonics* ***Invited***
16:25-16:50	**Jiangbing Du,** Shanghai Jiao Tong University *High Density Optical Interconnection, from Photonic Integration to Advanced Packaging* ***Invited***
16:50-17:20	**Lijun Wang,** Hangzhou Institute of Technology, Xidian University *Electronic Chip Package and Co-Packaged Optics (CPO) Technology for Modern AI Era: A Review* ***Keynote***
17:20-17:45	**Yudan Su,** Zhangjiang Laboratory *Application of Surface Sensitive and Selective Spectroscopy in Surface Inspection* ***Invited***
17:45-18:10	**Liangjun Lu,** Shanghai Jiao Tong University/SJTU-Pinghu Institute of Intelligent Optoelectronics *TFLN/Si_3N_4 Heterogeneous Integrated Devices Based on Micro-transfer Printing* ***Invited***

May 13	
Topic 4. Integrated Optoelectronics Packaging and Testing **Presider: Xueyan Zheng, Westlake Institute of Optoelectronics**	
13:30-13:55	**Shu Chen,** University of Shanghai for Science and Technology *THz s-SNOM Technique and Its Applications in Nanophotonics* ***Invited***
13:55-14:20	**Jiamin Liu,** Huazhong University of Science and Technology *EUV Lithography Modeling with High Efficiency and Accuracy* ***Invited***
14:20-14:50	**Qiu-Gui Zhou,** Suzhou Dawning Semi Technology Co., Ltd. *Co-Packaged Optics (CPO) for Next Generation Datacenters: Integration and Testing Challenges* ***Keynote***
14:50-15:10	**Tea Break**
Topic 6. Optical Sensing and its Application **Presider: Lingmei Ma, Westlake Institute for Optoelectronics**	
15:10-15:35	**Qiang Zhou,** University of Electronic Science and Technology of China *Research Progress on Quantum Enhanced Optical Sensing* ***Invited***
15:35-16:00	**Bo Liu,** Zhejiang Lab *Distributed Ultra-high Temperature Sensing Technique in Single Crystal Fiber* ***Invited***
16:00-16:25	**Baicheng Yao,** University of Electronic Science and Technology of China *Frequency Comb Based Fiber Sensing: From Point to Distributed* ***Invited***
16:25-16:55	**Fei Xu,** Nanjing University *All-fiber Multifunction-Integrated Devices for Sensing* ***Keynote***
16:55-17:20	**Xiaohang Zhang,** Zhejiang Lab *Superconducting Detectors for Astronomical Observations Invited*
May 14	
Topic 6. Optical Sensing and its Application **Presider: Meng Pang, Shanghai Institute of Optics and Fine Mechanics, CAS**	
09:00-09:25	**Ning Wang,** Hangzhou Institute for Advanced Study, UCAS *Nanostructure-empowered Fiber Waveguides: Design, Fabrication, and Sensing Applications* ***Invited***
09:25-09:50	**Dongmei Li,** Zhejiang University of Technology *Optical Biosensing Technology Based on Quantum Weak Measurement and Its Applications* ***Invited***
09:50-10:05	**Xiaoqian Shu,** Zhejiang Lab *On-chip Interrogator for OTDR-based Distributed Acoustic Sensing* ***Oral***
10:05-10:20	**Yitong Gu,** Hangzhou Institute for Advanced Study, UCAS *Improving Wide-angle Light-coupling Efficiency by Air-cladding Fibers under Near-plane Wave Excitation* ***Oral***
10:20-10:40	**Tea Break**

Topic 4. Integrated Optoelectronics Packaging and Testing **Presider: Guang Yang, Westlake Institute for Optoelectronics**	
10:40-11:05	**Chenhui Li,** Zhejiang Lab/Zhejiang University *Micro-machined Silicon for Opto-electronic Integration with Direct RF Interfaces* ***Invited***
11:05-11:30	**Jin Li,** Beihang University *Micro-/nano- holographic Carriers and High Space-bandwidth Product Systems* ***Invited***
11:30-11:45	**Yuanyuan Liu,** University of Shanghai for Science and Technology *Research on Optical Field Recovery Technology and Its Application Based on Coherent Diffraction Imaging* ***Oral***
	Lunch
Topic 6. Optical Sensing and its Application **Presider: Lingmei Ma, Westlake Institute for Optoelectronics**	
13:30-14:00	**Yiping Wang,** Shenzhen University *Extreme Environment Fiber Optic Sensing Technology and Applications* ***Keynote***
14:00-14:25	**Kaidi Cai,** Hangzhou GClight Semiconductor Technology Co., Ltd. *Fabrication of Single Crystal Fibers via Laser Heated Pedestal Growth: System Development and Experimental Results* ***Invited***
14:25-14:50	**Meng Pang,** Shanghai Institute of Optics and Fine Mechanics, CAS *Gas-filled Hollow-core Fiber for Nonlinear Optics: Ultrafast Pulse Compression and Ultraviolet Light Generation* ***Invited***
14:50-15:10	**Tea Break**
Topic 6. Optical Sensing and its Application **Presider: Kaidi Cai, Hangzhou GClight Semiconductor Technology Co., Ltd.**	
15:10-15:35	**Jia Kong,** Hangzhou Dianzi University *Quantum Noise Suppression in Atomic Sensors* ***Invited***
15:35-16:00	**Yi Li,** China Jiliang University *Optical Fiber Sensors Based on Random Speckles* ***Invited***

Topic 5. Optical AI and Computational Photonics
&
Topic 7. Novel Optical Display Technology

Lushan Hall, 3F

May 12	
Topic 5. Optical AI and Computational Photonics **Presider: Chao Zuo, Nanjing University of Science and Technology**	
13:00-13:30	**Guoan Zheng,** University of Connecticut *Ptychography for Computational Imaging in Microscopy and Endoscopy* ***Keynote***
13:30-13:55	**Xing Lin,** Tsinghua University *Super-resolution Optical Field Sensing Using Diffractive Neural Networks* ***Invited***
13:55-14:20	**Ningmu Zou,** Nanjing University *Time-wavelength Multiplexed Photonic Neural Network Accelerator for Distributed Acoustic Sensing Systems* ***Invited***
14:20-14:45	**Guangwei Hu,** Nanyang Technological University *Computational Flat-Optics System for Bioimaging and Biosensing* ***Invited***
14:50-15:30	**Tea Break & Poster Session**
Topic 7. Novel Optical Display Technology **Presider: Wei Kong, Westlake University**	
15:30-15:55	**Xinxing Xia,** Shanghai University *Holographic AR Displays with HOE-empowered and Camera-calibrated Propagation* ***Invited***
15:55-16:25	**Jianpu Wang,** Changzhou University/Nanjing Tech University *Perovskite LEDs for Lighting and Displays* ***Keynote***
16:25-16:55	**Yizheng Jin,** Zhejiang University *Managing the Charge Dynamics in Quantum-dot Light-Emitting Diodes* ***Keynote***
May 13	
Topic 7. Novel Optical Display Technology **Presider: Botao Ji, Westlake University**	
13:30-13:55	**Haizheng Zhong,** Beijing Institute of Technology *The Device Analysis of QLED toward Industrialization* ***Invited***
13:55-14:25	**Qiong-Hua Wang,** Beihang University *Integral Imaging Light Field 3D Display with High Performance* ***Keynote***
14:25-14:50	**Jiajia Ning,** Jilin University *ZnTe QDs Based Nanostructures for Potential Heavy-metal Free Emitters* ***Invited***
14:50-15:10	**Tea Break**

Topic 5. Optical AI and Computational Photonics **Presider: Guoan Zheng, University of Connecticut**	
15:10-15:40	**Chao Zuo,** Nanjing University of Science and Technology *High-speed Structured Light 3D Imaging Empowered by Deep Learning* ***Keynote***
15:40-16:05	**Ryoichi Horisaki,** The University of Tokyo *Computational Imaging with Randomness* ***Invited***
16:05-16:30	**Hao Zhang,** Xidian University *Development of Snapshot Compressive Imaging: From Reconstruction to Interpretation* ***Invited***
16:30-17:00	**Enrique Tajahuerce,** Universitat Jaume I *Computational Microscopy with Single-pixel Detection* ***Keynote***
17:00-17:25	**Esteban Vera Rojas,** Pontificia Universidad Católica de Valparaíso *Design of High-performance Deep Learning Wavefront Sensors* ***Invited***
17:25-17:40	**Mengjie Qin,** Westlake University *Mamba-inspired Joint Unfolding Network for Snapshot Spectral Compressive Imaging* ***Oral***
May 14	
Topic 5. Optical AI and Computational Photonics **Presider: Yurui Qu, ShanghaiTech University**	
09:00-09:25	**Weiqiang Ding,** Harbin Institute of Technology *Efficient Optical Field Manipulation and Optical Computation Using DONN* ***Invited***
09:25-09:50	**Min Guo,** Zhejiang University *Computational Fluorescence Microscopy: Advancing Data Processing Efficiency and Imaging Performance* ***Invited***
09:50-10:15	**Wei Li,** Changchun Institute of Optics, Fine Mechanics and Physics, CAS *Dispersion-assisted High-dimensional Photodetection* ***Invited***
10:15-10:35	**Tea Break**
Topic 7. Novel Optical Display Technology **Presider: Rengmao Wu, Zhejiang University**	
10:35-11:00	**Chaoyu Xiang,** Ningbo Institute of Materials Technology and Engineering, CAS *Direct Photolithography of Quantum Dots for High-resolution Quantum Dot Light-Emitting Diodes* ***Invited***
11:00-11:25	**Fushan Li,** Fuzhou University *High Resolution Quantum Dot Light-Emitting Devices* ***Invited***
	Lunch

Topic 7. Novel Optical Display Technology **Presider: Chaoyu Xiang, Ningbo Institute of Materials Technology and Engineering, CAS**	
13:30-13:55	**Tongbo Wei,** Institute of Semiconductors, CAS *On-chip Integration of Nitride Optoelectronic Devices for Optical Communication* ***Invited***
13:55-14:20	**Yunyan Zhang,** Zhejiang University *TBD* ***Invited***
14:20-14:45	**Rengmao Wu,** Zhejiang University *Freeform Liquid-crystal HOEs and Their Applications in AR Near-eye Display* ***Invited***
14:45-15:05	**Tea Break**
Topic 5. Optical AI and Computational Photonics **Presider: Min Guo, Zhejiang University**	
15:05-15:30	**Yurui Qu,** ShanghaiTech University *Photonic Crystals with Random Spectra for Material Identification and Physically Unclonable Functions* ***Invited***
15:30-15:55	**Yulun Zhang,** Shanghai Jiao Tong University *Lightweight Diffusion Models for Image Restoration* ***Invited***

Mycronic是显示光掩模刻写技术的行业领导者

极高的精度和可靠性

Mycronic的光掩膜刻写设备在这场技术革命中发挥了关键作用。我们的设备被世界上所有的平板显示器制造商及其分包商所使用，帮助制造出地球上最薄、分辨率最高的屏幕。随着每一次技术飞跃，我们都在为每一代新设备的尺寸、质量和成本设定新的标准。

关于 MYCRONIC

Mycronic是一家瑞典高科技公司，致力于电子行业生产解决方案的开发、制造和营销。Mycronic总部位于斯德哥尔摩北部Täby，集团在中国、法国、德国、日本、新加坡、韩国、台湾、荷兰、英国和美国设有子公司。

CHINA
Mycronic Co., Ltd.
Unit 106, E Block
Lane 168, Da Duhe Road
Putuo District, 200062
Shanghai, P.R. China
Tel: +86 21 3252 3785/86

www.mycronic.com

MYCRONIC

When passion meets innovation