



第五届光电子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

第五届光电子集成芯片立强大会

2024 年 7 月 13-18 日 深圳

<https://b2b.csoe.org.cn/meeting/FPIC2024.html>

为进一步推动光电子与交叉领域的技术交流、产业链合作和人才培养，展示光电子集成芯片材料、器件、工艺平台、仿真设计、封测技术及其在光通信、数据中心、高性能计算、多维光存储和光成像、光显示与光传感等领域的应用，中国光学工程学会将联合业内优势单位，于**2024 年 7 月 13-18 日**在深圳举办“第五届光电子集成芯片立强大会”。本届盛会设有 15 个专题分会，力邀 200 余位学术界、工业界领军专家出席，开展广泛的交流探讨。同期将举办**产学研圆桌会议、专家讲堂、培训、光电产业化交流会、光电科技创新优秀成果展**等活动，为与会者提供新的技术思路和前沿信息，向企业、科研人员、老师学生提供专业级学习机会。



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Forum on Photonic Integrated Circuits 2024

总体日程

日期	时间	活动	地点
7.13	10:00-20:00	签到	一楼大堂
	14:00-18:00	产学研圆桌会议: AI 时代——信息光子技术的融合与创新	二楼深圳厅
7.14	08:30-12:00	开幕式与大会报告	二楼国际厅
	13:30-18:00	光电产业化交流会 & 光子集成芯片科技新星快报告	二楼国际厅 2
		专题 2. 光子与微电子集成工艺技术	二楼国际厅 1
		专题 14. 激光雷达	二楼深圳厅 1
		专题 12. 光显示与光传感	二楼深圳厅 2
		专题 9. 智能光计算	二楼贵宾厅 2
		专题 10. 光子器件与系统	
	19:00-20:00	海报交流与评选	二楼前厅
7.15	08:30-12:00	专题 3. 光子与微电子融合仿真与设计	二楼国际厅 1
		专题 13. 微波光子集成	二楼深圳厅 1
		专题 11. 多维光存储和光成像	二楼深圳厅 2
		讲座. 透明介质中激光诱导微区晶体生长	
		专题 15. AI 大模型光子芯片	二楼贵宾厅 1
		专题 1. 前沿光子器件及集成	二楼贵宾厅 2
	13:30-18:00	专题 4. 光子集成芯片封装与测试	二楼国际厅 1
		专题 6. 新型光通信芯片	二楼深圳厅 1
		专题 8. 纳米技术制造与装备	二楼深圳厅 2
		专题 5. 光通信与数据中心应用	二楼贵宾厅 1
		讲座. 数字孪生光网络关键技术与最新进展	
		专题 7. 光模块配套电芯片	二楼贵宾厅 2
	18:00-18:20	闭幕式	二楼国际厅 1
7.14-15	08:30-18:30	光电科技创新优秀成果展	二楼前厅
7.16	08:30-17:00	初阶班培训	二楼贵宾厅 1
7.16-18	08:30-17:00	基础班和实践班培训	南方科技大学

*日程可能会根据现场情况进行调整

*7月13日用餐地点: 二楼贵宾厅2; 用餐时间: 晚餐 17:30-19:30

7月14-15日用餐地点: 三楼喜路厅+中餐厅; 用餐时间: 午餐 11:30-13:30, 晚餐 17:30-19:30



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Conference Schedule-at-a-Glance

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

Date	Time	Activity	Venue
7.13	10:00-20:00	Registration	Lobby, 1F
	14:00-18:00	Roundtable: Era of Artificial Intelligence-Convergence and Innovation of Information Photonic Technology	Shenzhen Hall, 2F
7.14	08:30-12:00	Opening Ceremony & Plenary Session	International Hall, 2F
	13:30-18:00	Optoelectronic Industrial Forum & Rising Star Prize of FPIC2024	International Hall II, 2F
		T2. Optoelectronic and Microelectronic Integrated Processing	International Hall I, 2F
		T14. Lidar	Shenzhen Hall I, 2F
		T12. Optical Display and Sensing	Shenzhen Hall II, 2F
		T9. Smart Optical Computing T10. Optical Quantum Devices and Systems	Conference Room II, 2F
	19:00-20:00	Poster Session	Lobby, 2F
7.15	08:30-12:00	T3. Optoelectronic and Microelectronic Integrated Simulation and Design	International Hall I, 2F
		T13. Microwave Photonic Integration	Shenzhen Hall I, 2F
		T11. Multidimensional Optical Storage and Imaging Tutorial. Laser induced nanocrystal growth in a transparent medium	Shenzhen Hall II, 2F
		T15. AI Large Model Optoelectronic Chip	Conference Room I, 2F
		T1. Frontier Optoelectronic Devices and Integration	Conference Room II, 2F
	13:30-18:00	T4. Optoelectronic Integrated Chip Packaging and Testing	International Hall I, 2F
		T6. Novel Chips for Optical Communication	Shenzhen Hall I, 2F
		T8. Nano Manufacturing and Equipment	Shenzhen Hall II, 2F
		T5. Optical Transmission and Data Center Application Tutorial. Recent advances in digital twin for optical networks	Conference Room I, 2F
		T7. Electrical Chips for Optical Modules	Conference Room II, 2F
	18:00-18:20	Closing Ceremony	International Hall I, 2F
7.14-15	08:30-18:30	Exhibition	Lobby, 2F
7.16-18	08:30-17:00	Training	

**Events and times subject to change.*

**Dining Place: Xilu Hall, 3F; Lunch Time 11:30-13:30, Dinner Time 17:30-19:30*



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详细日程 | Daily Schedule

主会场		二楼国际厅
7月14日	Jul. 14	
08:30	开幕式 Opening Ceremony	
09:00	余少华院士（鹏城实验室）——光纤通信技术趋势研究 Shaohua Yu, Peng Cheng Laboratory——Research on the trend of optical fiber communication	
09:35	满江伟（海思光电子有限公司）——面向AI计算互联的光电子技术发展挑战和机遇 Jiangwei Man, Hisilicon Optoelectronics Co., Ltd —— Research on the trend of optical fiber communication	
10:10	施鹄（中兴通讯股份有限公司）——400G/800G与波段扩展技术发展与应用 Hu Shi (ZTE Corporation) —— Development and Application of 400G/800G and Spectrum Expansion Technologies	
10:45	刘会赟（伦敦大学学院）——量子点激光器：解决硅基激光器的核心技术 Huiyun Liu (University College London)——III-V quantum-dot lasers: The key for silicon-based laser for silicon photonics	
11:20	王骋（香港城市大学）——薄膜铌酸锂光芯片及其微波光子学应用 Cheng Wang (City University of Hong Kong) —— Integrated lithium niobate microwave photonics	
11:55	午餐 Lunch	



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

产学研圆桌会议

二楼深圳厅

7月13日

Jul. 13

主题：AI 时代——信息光子技术的融合与创新

主持人：李明

Topic: Era of Artificial Intelligence-Convergence and Innovation of Information Photonic Technology

Presider: Ming Li

简介：随着人工智能技术的不断深入，信息光子技术正迎来前所未有的发展机遇。本活动以“AI 时代：信息光子技术的融合与创新”为主题，汇聚了来自科研院所、高校和企业的业界专家。我们将深入探讨智能光互连、光计算、光存储、光感知、光显示等前沿技术在 AI 驱动下的最新发展、实际应用及未来趋势。通过多元视角的交流和碰撞，我们期望搭建一个产学研深度融合的交流平台，共同促进人工智能与信息光子技术的深度融合。

14:00	刘晓明（北京华大九天科技股份有限公司）——STCO 应用趋势及光电集成应用展望
14:10	卢意飞（上海集成电路研发中心有限公司）——连接设计与制造：集成电路中的 PDK 与 IP
14:20	马卫东（武汉光迅科技股份有限公司）——支撑 AI 算力的高速光模块技术分析和发展趋势
14:30	张华（青岛海信宽带多媒体技术有限公司）——人工智能计算时代的光电子芯片及模块的机遇与挑战
14:40	沈亦晨（上海曦智科技有限公司）——集成光计算领域的最新进展和挑战
14:50	任晏伯（中国科学院半导体研究所）——实用化光电伊辛机的现状与未来
15:00	白冰（光子算数（北京）科技有限公司）——面向千亿参数大模型的光互联训推集群系统
15:10	程增光（复旦大学）——存内光计算的前沿研究进展
15:20	王琦龙（东南大学）——超快响应智能光感知器件及其在临床医学中的应用
15:30	刘力源（中国科学院半导体研究所）——事件相机的关键技术及其未来应用趋势
15:40	李彦兵（北京交通大学）——多传感器融合技术及其在 AI 中的应用
15:50	张超（灵明光子）——单光子探测器 SPAD 技术的现状与发展
16:00	张启明（上海理工大学）——人工智能光存储技术的最新进展
16:10	陶建华（清华大学）——人工智能时代下的光显示与虚实融合技术研究



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

16:20	王琼华（北京航空航天大学）——光场 3D 显示技术及其内容的智能生成
16:30	宋维涛（北京理工大学）——AI 技术如何赋能光场近眼显示终端
16:40	嘉宾讨论、观众提问



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

光电产业化交流会 & 光子集成芯片科技新星快报告

二楼国际厅 2

7 月 14 日		Jul. 14
光电产业化交流会 主持人: 贺志学		
Optoelectronic Industrial Forum Presider: Zhixue He		
13:30	付思东 (腾讯) —— 数据中心硅光芯片的技术演进讨论 Sidong Fu (Tencent) —— The discussion on the roadmap of SiP chips in data centers Invited	
13:50	吴冰冰 (中国信息通信研究院) —— 高速光模块及芯片标准化进展与技术发展趋势 Bingbing Wu (China Academy of Information and Communications Technology) —— Standardization progress and technological development trend of high-speed optical modules and optoelectronic chips Invited	
14:10	张乐伟 (华为技术有限公司) —— 数据通信行业光互联需求和技术展望 Lewei Zhang (Huawei Technologies Co., Ltd) —— On Optical Interconnect in Datacom Invited	
14:30	肖潇 (宁波芯速联光电科技有限公司) —— 超 800G 简化相干传输关键技术及应用 Xiao Xiao (Ningbo Hyper Silicon Photonic Technology Co, Ltd) —— Towards Coherent lite beyond 800G Invited	
14:50	蔡艳 (中国科学院上海微系统与信息技术研究所) —— 硅光集成平台发展趋势 Yan Cai (Shanghai Institute of Microsystem and Information Technology) —— The development trend of silicon photonics integration platform Invited	
15:10	马俊龙 (橙科微电子) —— 高速 DSP/SERDES 技术赋能信息网络生态系统 Junlong Ma (Citrus Technology) —— High Speed DSP/SERDES Technology empower Information Network Ecosystem Invited	
15:30	张立永 (深圳市嘉敏利光电有限公司) —— 面向短距离光互联的 VCSEL 光芯片的制备及性能 Liyong Zhang (Shenzhen ComingLight Opto-electronics Co.,Ltd.) —— Fabrication and properties of VCSEL for short range optical links Invited	
15:50	茶歇 Tea break	
光子集成芯片科技新星快报告 主持人: 肖希		
Rising Star Prize of FPIC2024 Presider: Xi Xiao		
16:30	Jingyi Wang, ShanghaiTech University —— Ultra-Compact spectrometer with a AlGaAs/GaAs P-graded-N junction (FPIC2024-01-001) Oral	
16:35	Shujie Pan, Institute of Semiconductors, Chinese Academy of Sciences —— Quantum dot mode-locked optical frequency comb source for high-speed optical communication (FPIC2024-01-015) Oral	
16:40	Yujun Xie, Institute of Semiconductors, Chinese Academy of Sciences —— Electronic-photonically monolithically integrated transceiver in 45 nm CMOS (FPIC2024-01-025) Oral	



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

16:45	Changdong Tong, Xiamen University —— Luminous characteristics of RGBW mini-LED integrated matrix devices for healthy displays (FPIC2024-04-001) Oral
16:50	Jingchi Li, Shanghai Jiao Tong University——High-electrical spectral efficiency integrated silicon photonic direct direction receiver approaching coherent detection performance (FPIC2024-05-001) Oral
16:55	Lipeng Feng, China Telecom Research Institute——Research on fiber optic mode control and large capacity transmission system technology (FPIC2024-05-003) Oral
17:00	Tiancai Jiang, China Information Communication Technologies Group Corporation —— Two-dimensional SnSe films on paper substrates for flexible broadband photodetectors (FPIC2024-06-003) Oral
17:05	Rui Wang, Institute of Semiconductors, Chinese Academy of Sciences —— High-speed InGaAs InAlAs avalanche photodiode with bandwidth of 38GHz (FPIC2024-06-005) Oral
17:10	Han Liu, Institute of Semiconductors, Chinese Academy of Sciences——Design techniques of highly integrated optoelectrical transceiver chips (T-FPIC2024-07-004) Oral
17:15	Xiangyan Meng, Institute of Semiconductors, Chinese Academy of Sciences——Compact optical convolution processing unit based on multimode interference (FPIC2024-09-007) Oral
17:20	Yeyu Tong, The Hong Kong University of Science and Technology (Guangzhou) —— Integrated silicon photonics processors for high-dimensional chip-to-chip optical interconnects (FPIC2024-09-013) Oral
17:25	Le Gao, University of Shanghai for Science and Technology —— Four-dimensional high-capacity optical storage based on ultrafast laser induced carbon dots in solid-state materials (FPIC2024-11-002) Oral
17:30	Shanting Hu, Beijing Institute of Technology —— Solid-state VCSEL scanner with large field of view and high resolution (T-FPIC2024-14-001) Oral
17:35	晚餐 Dinner



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

专题 2. 光子与微电子集成工艺技术 & 专题 3. 光子与微电子融合仿真与设计 & 专题 4. 光子集成芯片封装与测试

二楼国际厅 1

7 月 14 日	Jul. 13
S1A: 光子与微电子集成工艺技术 I 主持人: 余明斌 Optoelectronic and Microelectronic Integrated Processing I Presider: Mingbin Yu	
13:30	郑学哲 (旭创研究院) ——VCSEL CPO 重来 Xuezhe Zheng (Innolight Technology Research Institute)——VCSEL CPO once more Keynote
14:00	Adam Lewis (CUMEC)——Silicon photonics and its future in large scale integration Invited
14:25	孙军强 (华中科技大学) ——薄膜铌酸锂光子芯片制备工艺研究 Junqiang Sun (Huazhong University of Science and Technology)——Research into fabrication processing of optoelectronic chips based on thin-film lithium niobate Invited
14:50	常林 (北京大学) ——集成高相干并行技术 Lin Chang (Peking University)——High coherence parallelization in integrated photonics Invited
15:15	陈昇祐 (逍遥科技) ——用于 CPO 交换机和人工智能 GPU 连接的硅基光子设计与自动化 Terence Chen (Latitude Design Automation)——Silicon photonics design and automation for CPO switches and AI GPU interconnects Invited
15:40	茶歇 Tea break
S2A: 光子与微电子集成工艺技术 II 主持人: 冯俊波 Optoelectronic and Microelectronic Integrated Processing II Presider: Junbo Feng	
15:50	林宏焘 (浙江大学) ——近零改变硅光后道异质光子集成技术进展及展望 Hongtao Lin (Zhejiang University)——Progress and prospects of near-zero change silicon photonics heterogeneous integration technology Invited
16:15	黄永光 / 尹小杰 (仕佳光子) ——用于调频连续波激光雷达应用的 III-V 族激光器芯片探索 / PLC 光子集成芯片平台及 PDK Yongguang Huang (SHIJIA Photons) ——Exploration of III-V laser chips for frequency modulated continuous wave lidar applications Invited
16:40	杨华 (中国科学院半导体研究所) ——基于微转印的硅基光子异质集成 Hua Yang (Institute of Semiconductors, Chinese Academy of Sciences)——Heterogeneous integration on silicon through micro transfer printing Invited
17:05	张宏亮 (Soitec) ——硅光子学终于找到了它的杀手级应用了吗? 硅光材料公司眼中的人工智能 James Zhang (Soitec)——Has silicon photonics finally found its killer application? AI from the perspective of silicon photonics materials company Invited
17:30	姚灿 (LIGENTEC) ——低损耗氮化硅光集成芯片平台与应用 Can Yao (LIGENTEC)——The low loss SiN photonic integrated circuit platform and its applications Invited



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

17:55	Yu Du, Harbin Institute of Technology——Proton exchange-enhanced lithium niobate and silicon low-temperature direct bonding with ultrathin heterogeneous interface for LNOS optical platform (FPIC2024-02-005) Oral
18:05	晚餐 Dinner
7月15日	
Jul. 15	
S3A: 光子与微电子融合仿真与设计 I 主持人: 赵佳	
Optoelectronic and Microelectronic Integrated Simulation and Design I Presider: Jia Zhao	
08:30	刘晓明 (北京华大九天科技股份有限公司) ——EDA 助力光电融合设计 Xiaoming Liu (Empyrean)——Using EDA tools in the electronic-photonic heterogeneously-converging IC design Keynote
09:00	陈智宇 (中国电子科技集团第二十九研究所) ——微波光子系统多专业协同仿真技术研究 Zhiyu Chen (The 29th Research Institute of China Electronics Technology Group Corporation) ——Research on multi-disciplinary collaborative simulation technology for microwave photon systems Invited
09:25	王惠玲 (上海曼光信息科技有限公司) ——III-V 族光电芯片仿真建模技术及设计软件 Huiling Wang (Shanghai Max-Optics Information Technology Co., Ltd.) —— Modeling & simulation of III-V optoelectronic devices and software design Invited
09:50	张志刚 (上海索辰信息科技股份有限公司) ——复杂环境下光学系统多学科仿真分析与评价 Zhigang Zhang (Shanghai Suochen Information Technology Co., Ltd.) —— Multidisciplinary simulation analysis and evaluation of optical systems in complex environments Invited
10:15	茶歇 Tea break
S4A: 光子与微电子融合仿真与设计 II 主持人: 张文富	
Optoelectronic and Microelectronic Integrated Simulation and Design II Presider: Wenfu Zhang	
10:25	谭旻 (华中科技大学) ——面向光电融合的紧凑建模与仿真技术最新进展 Min Tan (Huazhong University of Science and Technology) ——Latest advances in compact modeling and simulation technologies for electronic-photonic convergence Invited
10:50	叶英豪 (贵州大学) ——光子集成线路行为级建模与光电联合仿真方法 Yinghao Ye (Guizhou University) ——Behavioral modeling of photonic integrated circuits and electro-optical simulation methods Invited
11:15	李清江 (国防科技大学) ——大模型赋能的新型半导体光电材料智能设计与定向优化 Qingjiang Li (National University of Defense Technology) ——Intelligent design and directional optimization of advanced semiconductor optoelectronic materials empowered by AI large models Invited
11:40	赵复生 (罗迅科技) ——高互通性光学仿真软件——VirtualLab Unity Fusheng Zhao (Luoxun Tech.) ——High interoperability optical software-- VirtualLab Unity Invited
12:05	午餐 Lunch



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Forum on Photonic Integrated Circuits 2024

S5A: 光子集成芯片封装与测试 I 主持人: 肖希

Optoelectronic Integrated Chip Packaging and Testing I Presider: Xi Xiao

13:30	谢亮 (中国科学院半导体研究所) —— 激光器封测中的微波去嵌和精细光谱测量 Liang Xie (Institute of Semiconductors, Chinese Academy of Sciences) —— Microwave deembedding and fine spectral measurement in laser packaging and testing Invited
13:50	王颖 (中国科学院计算技术研究所) —— 大模型并行计算与通信瓶颈分析 Ying Wang (Institute of Computing Technology, Chinese Academy of Sciences) —— Analysis of LLM parallelization strategy and its hints on inter-node communication Invited
14:10	杨妍 (中国科学院微电子研究所) —— 三维硅基光电集成量子芯片 Yan Yang (Institute of Microelectronics, Chinese Academy of Sciences) —— 3D integrated silicon electronic-photonic quantum chip Invited
14:30	戴风伟 (华进半导体封装先导技术研发中心有限公司) —— 2.5D/3D 集成技术在光电合封领域的应用 Fengwei Dai (National Center For Advanced Packaging (NCAP CHINA)) —— The application of 2.5D/3D integration technology in the field of Co-Packaged Optics Invited
14:50	虞绍良 (之江实验室) —— 双光子聚合赋能光子集成芯片的高效封测 Shaoliang Yu (Zhejiang Lab) —— Two photon lithography for integrated photonics packaging Invited
15:10	陆梁军 (上海交大-平湖智能光电研究院) —— 硅基光子异质异构集成与封装技术进展 Liangjun Lu (SJTU-Pinghu Institute of Intelligent Optoelectronics) —— Progress in heterogeneous/heterostructure integration and packaging technology for silicon photonics Invited
15:30	茶歇 Tea break

S6A: 光子集成芯片封装与测试 II 主持人: 张尚剑

Optoelectronic Integrated Chip Packaging and Testing II Presider: Shangjian Zhang

15:40	冯俊波 (联合微电子中心) —— 晶圆级硅光集成工艺及测试技术 Junbo Feng (CUMEC) —— Wafer-level silicon photonics integration processing and testing technology Invited
16:00	裴丽 (北京交通大学) —— 基于定量相位显微法的光电子器件测试研究 Li Pei (Beijing Jiaotong University) —— Optoelectronic device testing based on quantitative phase microscopy Invited
16:20	傅剑斌 (苏州六幺四信息科技有限公司) —— 微波光子技术在光电测量中的应用 Jianbin Fu (Newkey Photonics) —— The application of microwave photonics technology in optoelectronic testing Invited
16:40	张爱国 (中电科思仪科技股份有限公司) —— 宽带光电网参数测试技术发展及挑战 Aiguo Zhang (Ceyear Technologies Co., Ltd.) —— Broadband photo-electric network parameter test technology development and challenge Invited
17:00	蔡衡 (武汉驿天诺科技有限公司) —— 硅光芯片测试及封装解决方案 Heng Cai (Wuhan Eternal Technologies Co., Ltd.) —— Silicon photonic chip testing and packaging solutions Invited



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

17:20	Lijie Shen, Nanjing University/Yongjiang Laboratory — — Design of an integrated optical transceiver module for interferometric fiber optic gyroscope (FPIC2024-04-002) Oral
17:30	Jia Chen, Institute of Semiconductors, Chinese Academy of Sciences——High-speed directly modulated distributed feedback laser with integrated SOA (FPIC2024-04-007) Oral
17:40	晚餐 Dinner



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

专题 14. 激光雷达 & 专题 13. 微波光子集成 & 专题 6. 新型光通信芯片

二楼深圳厅 1

7 月 14 日		Jul. 14
S1B: 激光雷达 I 主持人: 李雨		
Lidar I Presider: Yu Li		
13:30	麻云凤 (中国科学院空天信息创新研究院) —— 车载激光雷达测试方法标准研究 Yunfeng Ma (Aerospace Information Research Institute Chinese Academy of Sciences) —— Research on standardized measurement technique for automotive LiDAR Keynote	
14:00	孙笑晨 (洛微科技) —— FMCW 激光雷达技术和商业化进展 Xiaochen Sun (Luminwave) —— FMCW LiDAR: Technology and Commercialization Progress Keynote	
14:30	梁磊 (中国科学院长春光学精密机械与物理研究所) —— 面向 OPA 激光雷达的高功率 SOA 及其集成可调谐窄线宽激光器研究 Lei Liang (Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences) —— Research on High-Power SOA and Integrated Tunable Narrow Linewidth Laser for OPA LIDAR Invited	
14:55	Yu Lei, Institute of Semiconductors, Chinese Academy of Sciences —— Research on Silicon Photonic Chip-scale Lidar (T-FPIC2024-14-002) Oral	
15:05	Zeyang Zhang, Harbin Institute of Technology —— Design of Dual Polarization Receiving Grating Coupler Based on Polarization Beam Splitting Metalens (FPIC2024-14-003) Oral	
15:15	Li Renjie, Beijing Institute of Technology —— Lidar scene projector for mass production testing of automotive LiDAR (FPIC2024-14-001) Oral	
15:25	Guangqiang He, Shanghai Jiao Tong University —— Coherent Kerr Soliton Dual-microcomb Ranging with Extended Ambiguity Distance (FPIC2024-14-008) Oral	
15:35	茶歇 Tea break	
S2B: 激光雷达 II 主持人: 曾理		
Lidar II Presider: Li Zeng		
15:45	汪敬 (深圳市速腾聚创科技有限公司) —— 新体制车载激光雷达的研究进展 Jing Wang (Suteng Innovation Technology Co., LTD (RoboSense)) —— Research progress on new mechanism vehicle LiDAR Invited	
16:10	王春晖 (哈尔滨工业大学) —— 应用于激光雷达的相干和非相干光学系统设计方法 Chunhui Wang (Harbin Institute of Technology) —— Design methods for coherent and incoherent optical systems applied to LiDAR Invited	
16:35	张建伟 (中国科学院长春光学精密机械与物理研究所) —— 脉冲高功率面发射激光技术 Jianwei Zhang (Changchun Institute of Optics, Fine Mechanics and Physics, Chinese Academy of Sciences) —— Pulsed high-power surface-emitting lasers Invited	
17:00	张超 (灵明光子) —— 下一个大事件: 基于 spad 的固态激光雷达 Chao Zhang (Adaps Photonics) —— The next big thing: spad based solid state lidar Invited	



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

17:25	马瑞 (西安电子科技大学) —— 硅 SPAD 飞行时间传感器关键电路与阵列集成 Rui Ma (Xidian University) —— Key Circuit and Array Integration of Silicon SPAD Time of Flight Sensor Invited
17:50	Jiaji Ma, Xidian University —— A 64×8 Multipurpose Line Profiling LiDAR SPAD imager with Compact Coincidence Detection Circuit and On-chip Nonlinear Histogram Utilizing Subframe Correlation (FPIC2024-14-005) Oral
18:00	晚餐 Dinner
7 月 15 日 Jul. 15	
S3B: 微波光子集成 I 主持人: 郝腾飞 Microwave Photonic Integration I Presider: Tengfei Hao	
08:30	周林杰 (上海交通大学) —— 硅基集成微波光子相控阵技术研究进展 Linjie Zhou (Shanghai Jiao Tong University) —— Research progress on silicon integrated microwave photonic phased array technologies Keynote
09:00	于源 (华中科技大学) —— 光电振荡器的关键技术研究 Yuan Yu (Huazhong University of Science and Technology) —— Investigation on key techniques of optoelectronic oscillators Invited
09:25	陈伯乐 (上海科技大学) —— 新型 III-V 族半导体光电探测器 Baile Chen (ShanghaiTech University) —— Novel III-V Semiconductor Photodetector Invited
09:50	舒浩文 (北京大学) —— 可重构宽频集成微波光子处理 Haowen Shu (Peking University) —— Key Technologies for integrated microwave photonics aimed at reconfigurable broadband processing Invited
10:15	茶歇 Tea break
S4B: 微波光子集成 II 主持人: 周林杰 Microwave Photonic Integration II Presider: Linjie Zhou	
10:25	杨宏志 (中国航天科技创新研究院) —— 集成光频梳在下一代卫星导航系统中的应用 Hongzhi Yang (China Academy of Aerospace Science and Innovation) —— Application of microcombs in the next generation satellite navigation system Invited
10:50	郝腾飞 (中国科学院半导体研究所) —— 集成光电振荡器 Tengfei Hao (Institute of Semiconductors, Chinese Academy of Sciences) —— Integrated optoelectronic oscillator Invited
11:15	田野 (南京航空航天大学) —— 基于边界优化的高性能光子器件设计 Ye Tian (Nanjing University of Aeronautics and Astronautics) —— Highly efficient photonic devices based on shape optimization Invited
11:40	Dabao Yang, The 13th Research Institute of China Electronics Technology Group Corporation —— High-Power InP-Based Uni-Travelling-Carrier Photodetectors (FPIC2024-13-001) Oral
11:50	午餐 Lunch
S5B: 新型光通信芯片 I 主持人: 迟楠 Novel Optical Communication Chips I Presider: Nan Chi	



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

13:30	蔡鑫伦（中山大学）——铌酸锂薄膜光子电子芯片 Xinlun Cai (Sun Yat-sen University)——Thin-film lithium niobate photonic integrated devices Keynote
14:00	张亮（中国科学院上海技术物理研究所）——卫星激光通信发展及通信器件 Liang Zhang (Institute of Technical Physics, Chinese Academy of Sciences)——Development of satellite laser communication and devices Invited
14:25	刘建平（中国科学院苏州纳米技术与纳米仿生研究所）——GaN 可见光激光器研究及通信应用进展 Jianping Liu (Suzhou Institute of Nano-Tech and Nano-Bionics (SINANO), CAS)——GaN-based visible LDs and applications in communication Invited
14:50	魏同波（中国科学院半导体研究所）——紫外光电器件片上集成技术研究 Tongbo Wei (Institute of Semiconductors, Chinese Academy of Sciences)——Ultraviolet photonic integrated chips for real time on-chip optical communication Invited
15:15	沈力（华中科技大学）——片上多波段集成光电子器件 Li Shen (Huazhong University of Science and Technology)——Toward on-chip multi-band integrated photonic devices Invited
15:40	茶歇 Tea break
S6B: 新型光通信芯片 II 主持人：陈伟 Novel Optical Communication Chips II Presider: Wei Chen	
15:50	王俊嘉（东南大学）——新型调制器件研究 Junjia Wang (Southeast University)——Emerging optical modulators Invited
16:15	王斌浩（中国科学院西安光学精密机械研究所）——高带宽集成光互连芯片 Binhao Wang (Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences)——High-bandwidth integrated optical interconnect chip Invited
16:40	邹毅（上海科技大学）——基于耦合调控的超密集波导阵列 Yi Zou (ShanghaiTech University)——Coupling manipulation enabled ultra-dense waveguide array Invited
17:05	谢启杰（鹏城实验室）——面向高速光无线通信的光学相控阵芯片 Qijie Xie (Peng Cheng Laboratory)——High-data-rate optical wireless communication based on optical phased array Invited
17:30	Dechao Ban, Institute of Semiconductors, Chinese Academy of Sciences——Improvement on stability of direct modulation laser with integrated active optical feedback based on partial corrugated grating (FPIC2024-06-002) Oral
17:40	晚餐 Dinner



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

专题 12. 光显示与光传感 & 专题 11. 多维光存储和光成像 & 讲座. 透明介质中激光诱导微区晶体生长 & 专题 8. 纳米技术制造与装备

二楼深圳厅 2

7 月 14 日	Jul. 14
S1C: 光显示与光传感 I 主持人: 黄玲玲 Optical Display and Sensing I Presider: Lingling Huang	
13:30	程德文 (北京理工大学) —— 眼镜式 AR 显示技术研究 compact near eye display with freeform optics Keynote
14:00	吴仍茂 (浙江大学) —— 自由全息光学元件设计与制备 Rengmao Wu (Zhejiang University) —— Design and fabrication of freeform holographic optical elements Invited
14:20	董建文 (中山大学) —— 面向计算显示/成像的微纳光学超表面芯片 Jianwen Dong (Sun Yat-sen University) —— Micro/nano optical metasurface chips for computing, display and imaging Invited
14:40	胡伟 (南京大学) —— 基于液晶微结构的多自由度光场调控 Wei Hu (Nanjing University) —— Multidegree optical field manipulation based on liquid crystal microstructures Invited
15:00	乔文 (苏州大学) —— 面向元宇宙的虚实融合真 3D 显示 Wen Qiao (Soochow University) —— Augmented Reality 3D Display towards Metaverse Invited
15:20	秦宗 (中山大学) —— 可变焦增强现实车载抬头显示器 Zong Qin (Sun Yat-Sen University) —— Varifocal augmented reality vehicle head-up display Invited
15:40	茶歇 Tea break
S2C: 光显示与光传感 II 主持人: 张楠 Optical Display and Sensing II Presider: Nan Zhang	
15:50	桑新柱 (北京邮电大学) —— 大视角高清晰度 3D 光场显示技术 Xinzhu Sang (Beijing University of Posts and Telecommunications) —— High-Definition 3D Light-Field Display Technologies with Large Viewing Angle Keynote
16:20	陈林 (华中科技大学) —— 新型微纳光子集成器件研究 Lin Chen (Huazhong University of Science and Technology) —— Study on novel micro-nano photonic integrated devices Invited
16:40	纪德洋 (天津大学) —— 界面调控有机神经形态视觉传感器 Deyang Ji (Tianjin University) —— Interface modulating organic neuromorphic visual sensor Invited
17:00	崔开宇 (清华大学) —— 超表面实时超光谱成像芯片 Kaiyu Cui (Tsinghua University) —— Real-time ultra-spectral imaging chip based on metasurfaces Invited



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

17:20	马欲飞 (哈尔滨工业大学) —— 高灵敏石英光谱传感技术 Yufei Ma (Harbin Institute of Technology) — — High sensitive gas sensing based on quartz-enhanced spectroscopy Invited
17:40	Sarp Kerman (上海近观科技有限责任公司) —— 集成光子学在医疗健康中的应用 Sarp Kerman (Shanghai Photonic View Technology Co., Ltd.) — — Integrated Photonics for Healthcare Invited
18:00	Chunlei Sun, Westlake University —— FSR-free optical microcavity design and applications (FPIC2024-12-001) Oral
18:10	Qiang Jiang, Beijing Institute of Technology —— Inverse Design Faciliates the Design of Multi-Dimensional Multiplexed Metasurface (FPIC2024-12-002) Oral
18:20	Jiahua Yang, Hangzhou Dianzi University —— Ultra-High-Speed Optical Fiber Sensing Demodulation System Based on Pulsed Light Source and Frequency Chirping (FPIC2024-12-004) Oral
18:30	Xiaopei Shi, Tianjin University —— Bionic high-speed low-noise spike vision image sensor (FPIC2024-12-005) Oral
18:40	Weijie Guo, Xiamen University —— Research on the sidewall treatment and the microscopic light emission of Micro-LEDs (FPIC2024-12-009) Oral
18:50	Jin Li, Beihang University —— Hologram Carriers Toward Photorealistic 3D Holography (FPIC2024-12-003) Oral
19:00	晚餐 Dinner

7月15日

Jul. 15

S3C: 多维光存储和光成像 I 主持人: 张继军

Multidimensional Optical Storage and Imaging I Presider: Jijun Zhang

08:30	阮昊 (中国科学院上海光学精密机械研究所) —— Pb 级存储容量三维纳米光盘存储 Hao Ruan (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences) — — A 3D nanoscale optical disk memory with petabit capacity Keynote
09:00	曹耀宇 (暨南大学) —— 面向高密度多维光存储的光场调制技术 Yaoyu Cao (Jinan University) —— Optical field modulation for high-density multi-dimensional optical storage Invited
09:20	林枭 (福建师范大学) —— 同轴全息数据存储实用化进展 Xiao Lin (Fujian Normal University) — — Practical progress in collinear holographic data storage Invited
09:40	谢浩 (中国科学院物理研究所) —— 介观光学显微神经成像 Hao Xie (Insitute of Physics, Chinese Academy of Sciences) —— Mesoscopic optical microscopy for neural imaging Invited
10:00	刘成波 (中国科学院深圳先进技术研究院) —— 快速光声成像技术及应用 Chengbo Liu (Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences) —— Fast photoacoustic imaging technology and its applications Invited
10:20	茶歇 Tea break



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

S4C: 多维光存储和光成像 II 主持人: 张启明

Multidimensional Optical Storage and Imaging II Presider: Qiming Zhang

10:30	刘丽炜 (深圳大学) ——非线性光学显微成像技术及应用 Liwei Liu (Shenzhen University) — — Nonlinear optical microscopy imaging and its applications Keynote
11:00	金欣 (清华大学深圳国际研究生院) ——利用光场的散射成像 Xin Jin (Tsinghua Shenzhen International Graduate School)——Scattering Imaging using Light Field Invited
11:20	陈子阳 (华侨大学) ——数字全息技术在单帧定量复场成像中应用 Ziyang Chen (Huaqiao University)—— Digital holography for singleshot-based quantitative complex imaging Invited
11:40	甘棕松 (华中科技大学) ——透明介质中激光诱导微区晶体生长 Zongsong Gan, Huazhong University of Science and Technology——Laser induced nanocrystal growth in a transparent medium Tutorial
12:25	午餐 Lunch

S5C: 纳米技术制造与装备 I 主持人: 张宝顺

Nano Manufacturing and Equipment I Presider: Baoshun Zhang

13:30	张建军 (中国科学院物理研究所) ——图形化硅衬底上化合半导体外延和集成 Jianjun Zhang (Institute of Physics, Chinese Academy of Sciences)——Epitaxy and Integration of Compound Semiconductors on patterned Si(001) Keynote
14:00	赵崇凌 (中国科学院沈阳科学仪器股份有限公司) ——光电子领域分子束外延技术发展国产化 Chongling zhao (SKY Technology Development Co.,Ltd.Chinese Academy of Sciences) — — Development and localization of molecular beam epitaxy technology in the field of optoelectronics Invited
14:25	丁抗 (深圳技术大学) —— 高速 DFB 激光器的加工和应用 Kang Ding (Shenzhen Technology University)——Fabrication and Application of High Speed DFB Lasers Invited
14:50	张轶铭 (北方华创) ——面向光电子芯片的装备与工艺解决方案 Yiming Zhang (NAURA)——Equipment and Process Solutions for photonic devices Invited
15:15	茶歇 Tea break

S6C: 纳米技术制造与装备 II 主持人: 张建军

Nano Manufacturing and Equipment II Presider: Jianjun Zhang

15:25	孙聂枫 (中国电子科技集团公司第十三研究所) ——大尺寸磷化铟衬底 Niefeng Sun (CETC 13th Research Institute)——Large diameter Indium Phosphide substrate Keynote
15:55	解意洋 (北京工业大学) ——基于 VCSEL 和超构表面的片上结构光束生成芯片 Yiyang Xie (Beijing University of Technology)——On-chip structured beam generation chips based on VCSELs and Metasurface Invited



第五届光电子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

16:20	阚强（中国科学院半导体所）——面发射激光器的模式控制及传感应用 Qiang Kan (Institute of semiconductor, Chinese Academy of Sciences)——Single-Mode Control and sensing applications of surface emitting lasers Invited
16:45	谭明（苏州苏纳光电有限公司）——基于刻蚀工艺的晶圆级微透镜芯片的研制和产业化 Ming Tan (Suzhou Suna Optoelectronic Co., Ltd)—— Development and industrialization of wafer-level microlens chips based on etching technology Invited
17:10	Changqing Song, National University of Defense Technology — — The investigation of whispering-gallery mode lasers of upconversion Y3Al5O12 microsphere made by flame spray pyrolysis (FPIC2024-08-001) Oral
17:20	晚餐 Dinner



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

专题 9. 智能光计算 & 专题 10. 光量子器件与系统 & 专题 1. 前沿光子器件及集成 & 专题 7. 光模块配套电芯片

二楼贵宾厅 2

7 月 14 日	Jul. 14
S1D: 智能光计算 主持人: 董晓文 Smart Optical Computing Presider: Xiaowen Dong	
13:30	何建军 (浙江大学) ——面向人工智能计算系统的光交换和光计算芯片 Jianjun He (Zhejiang University) ——Photonic Switching and Computing Chips for Artificial Intelligence Computing Systems Keynote
14:00	黄超然 (香港中文大学) ——硬件软件协同优化实现可靠的光子神经网络 Chaoran Huang (Chinese University of Hong Kong) ——Towards reliable photonic neural networks through hardware-software co-optimization Invited
14:20	阮智超 (浙江大学) ——基于波分复用的空间光学伊辛机 Zhichao Ruan (Zhejiang University) ——Spatial optical Ising machine by wavelength-division multiplexing Invited
14:40	杨佳苗 (上海交通大学) ——DLP 光场调控技术及应用 Jiamiao Yang (Shanghai Jiao Tong University) ——DLP Light Field Modulation Technology and Applications Invited
15:00	周文 (西安交通大学) ——相变存储电控光算器件研发 Wen Zhou (Xi'an Jiaotong University) ——Research on electrically reconfigurable in-memory photonic computing phase-change waveguide devices Invited
15:20	Xiyuan Ke, Zhejiang University —— High-speed matrix-vector multiplication using a calibration-free low-loss silicon photonic processor (FPIC2024-09-006) Oral
15:30	Haifei Guo, ShanghaiTech University —— Broadband Optical Activation Function Based on Semiconductor Lasers (FPIC2024-09-008) Oral
15:40	茶歇 Tea break
S2D: 光量子器件与系统 主持人: 任希锋 Optical Quantum Devices and Systems Presider: Xifeng Ren	
15:50	任希锋 (中国科学技术大学) ——基于二维材料的量子光源 Xifeng Ren (University of science and technology of China) ——Quantum photonic sources based on 2D materials Keynote
16:20	陈岩 (国防科技大学) ——微腔耦合量子点光源及应力调控 Yan Chen (National University of Defense Technology) ——Cavity-coupled quantum dot light sources and strain engineering Invited
16:40	赵清源 (南京大学) ——超导纳米线单光子探测器与成像器 Qingyuan Zhao (Nanjing University) ——Superconducting nanowire single-photon detectors and imagers Invited
17:00	柳必恒 (中国科学技术大学) ——高维量子网络 Biheng Liu (University of Science and Technology of China) ——high-dimensional quantum



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

	networks Invited
17:20	胡耀文（北京大学）——基于薄膜铌酸锂的微纳光学与光电融合 Yaowen Hu (Peking University) —— Integrated electro-optics on thin-film lithium niobate: From device to system Invited
17:40	丁禹阳（合肥硅臻芯片技术有限公司）——面向产业化应用的泛量子光集成芯片技术 David Ding (HeFei SiliconExtreme Chip Tec. Ltd.) —— Pan-quantum photonic integrated chip technology for industrial applications Invited
18:00	Guangqiang He, Shanghai Jiao Tong University —— The generation of bipartite entangled quantum frequency combs based on silicon nitride microring resonators (FPIC2024-10-003) Oral
18:10	晚餐 Dinner
7月15日	
Jul. 15	
S3D: 前沿光电子器件及集成 I 主持人：俞泽杰 Frontier Optoelectronic Devices and Integration I Presider: Zejie Yu	
08:30	余思远（中山大学）——先进光电子集成技术 Si yuan Yu (Sun Yat-sen University) —— Advanced photonic and optoelectronic integration technologies Keynote
09:00	李明/祁楠（中国科学院半导体研究所）——基于 45 nm CMOS 工艺的硅基光电融合单片集成光互连芯片 Ming Li, Nan Qi (Institute of Semiconductors, Chinese Academy of Sciences) —— An electronic-photonic monolithically integrated transceiver in 45 nm CMOS Invited
09:25	余宇（华中科技大学）——高性能锗硅光电探测器 Yu Yu (Huazhong University of Science and Technology) —— High performance Ge-Si photodetector Invited
09:50	谢卫强（上海交通大学）——基于薄膜铝镓砷非线性光子集成平台的高效非线性应用 Weiqiang Xie (Shanghai Jiao Tong University) —— AlGaAsOI nonlinear photonics integration platform for ultra-efficient nonlinear applications Invited
10:15	茶歇 Tea break
S4D: 前沿光电子器件及集成 II 主持人：谢卫强 Frontier Optoelectronic Devices and Integration II Presider: Weiqiang Xie	
10:25	彭超（北京大学）——拓扑调控光子集成进展与展望 Chao Peng (Peking University) —— Progress and perspectives on topological photonic integration Keynote
10:55	Mingzhe Li, Tianjin University —— An intelligent inverse design algorithm for integrated photonics (FPIC2024-01-008) Oral
11:05	Mingming Pan, Sun Yat-Sen University —— E-beam lithography fabricated optical 90° hybrid on InP platform (FPIC2024-01-010) Oral
11:15	Zhenxing Sun, Nanjing University —— Monolithic multi-port multi-wavelength source with Tbps transmission for optical I/O technology (FPIC2024-01-014) Oral



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Forum on Photonic Integrated Circuits 2024

11:25	Haohua Wang, South China Normal University——Optical switch with an ultralow DC drift based on thin-film lithium tantalate (FPIC2024-01-020) Oral
11:35	Chi Xu, Institute of Semiconductors, Chinese Academy of Sciences——Development of novel group-IV semiconductor materials and infrared optoelectronic devices (FPIC2024-01-022) Oral
11:45	午餐 Lunch
S5D: 光模块配套电芯片 I 主持人: 祁楠 Electrical Chips for Optical Modules I Presider: Nan Qi	
13:30	吴越 (华为技术有限公司) ——数据通信 800GE 光模块方案选型与规划思考 Yue Wu (Huawei) —— Data communication 800GE optical module program selection and planning thoughts Keynote
14:00	陈春章 (鹏城实验室) ——高速接口 IP 与硅光芯片互联 I/O 验证及应用 Chunzhang Chen (Pengcheng Laboratory) —— High speed interface IP and silicon-photonics chip interconnect I/O verification and application Invited
14:25	潘权 (南方科技大学) ——高速和高密通信集成电路系统的研究进展 Quan Pan (Southern University of Science and Technology) —— Research progress of high-speed and high-density communication IC systems Invited
14:50	陈赟 (复旦大学) ——高速光纤传输中关键技术及基带芯片设计 Yun Chen (FuDan University) —— Key technology and baseband chip design in high speed optical fiber transmission Invited
15:15	茶歇 Tea break
S6D: 光模块配套电芯片 II 主持人: 史方 Electrical Chips for Optical Modules II Presider: Fang Shi	
15:25	商松泉 (深圳傲科光电) ——相干光 400G/800G 驱动与跨阻放大器的进展 Songquan Shang (Aluksen Optoelectronics) —— Progress of coherent optical 400G/800G drivers and TIAs Keynote
15:55	王琨 (橙科微电子) ——全集成高速 DSP 芯片及应用 Hui Wang (Citrus Technology) —— Fully integrated high-speed DSP chips and applications Invited
16:20	陈涛 (深圳市芯波微电子有限公司) ——50G PON 关键芯片的研发 Tao Chen (Sibroad Microelectronics) ——The Development of the key ICs for 50G PON Invited
16:45 -16:55	Weiwei Zhang, Songshan Lake Materials Laboratory —— A 100Gb/s 3D Integrated silicon photonics MOSCAP-CMOS transmitter with energy efficiency of 2.4 pJ/bit (FPIC2024-07-001) Oral



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Forum on Photonic Integrated Circuits 2024

专题 15. AI 大模型光电子芯片 & 专题 5. 光通信与数据中心应用 &
讲座. 数字孪生光网络关键技术与最新进展

二楼贵宾厅 1

7 月 15 日 Jul. 15	
S1E: AI 大模型光电子芯片 I 主持人: 黄卫平 AI Large Model Optoelectronic Chip I Presider: Weiping Huang	
08:30	周斌 (山东大学/华为技术有限公司) ——AI 发展趋势和对计算系统的挑战及思考 Bin Zhou (Shandong University/ Huawei)——The development trend of AI and the challenges and thinking of computing systems Keynote
09:00	陈琤 (京东科技信息技术有限公司) ——AI 网络中的光互连技术 Cheng Chen (JingDong Technology)——Optical interconnection solutions for AI network Invited
09:25	宁超 (青岛海信宽带多媒体技术有限公司) ——无制冷大功率 EML Chao Ning (Hisense BroadBand)——Uncooled high power EML Invited
09:50	杨莉 (苏州熹联光芯微电子科技有限公司) ——硅光在 AI 大模型中的应用 Vivian Yang (Suzhou Dawning Semi Technology Co., Ltd.)——Silicon photonics applications in AI computing Invited
10:15	茶歇 Tea break
S2E: AI 大模型光电子芯片 II 主持人: 满江伟 AI Large Model Optoelectronic Chip II Presider: Jiangwei Man	
10:25	王雪 (新华三) ——光互联在 AI 网络中的应用与演进 Xue Wang, (H3C)——Development and evolution of optical interconnects for AI clusters Keynote
10:55	战永兴 (上海图灵智算量子科技有限公司) ——大模型时代下的光互联技术 Andy Zhan (TuringQ)——Optical interconnection technology in the era of large models Invited
11:20	尧舜 (华芯半导体科技有限公司) ——IDM 制造高可靠性全系列 850nm 高速数通 VCSEL 芯片 Shun Yao (Sino-semiconductor Photonics Integrated Circuit Co., Ltd.)——Mass production of high reliability high speed 850nm VCSELs for datacom in IDM mode Invited
11:45	午餐 Lunch
S3E: 光通信与数据中心应用 I 主持人: 李俊杰 Optical Communication and Data Center Application I Presider: Junjie Li	
13:30	李晗 (中国移动研究院) ——新一代智算中心组网技术 Han Li (China Mobile Research Institute)——Networking technology for the new generation of AI data center Keynote
14:00	蔡轶 (苏州大学) ——带宽受限高波特率光传输系统中的时钟恢复技术 Yi Cai (Soochow University)——Clock recovery technique in bandwidth-constrained



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

	optical transmission systems Invited
14:25	朱宸（百度）——长距离高性能网络光互连的机遇和挑战 Chen Zhu (Baidu)—The opportunities and challenges of long-distance high-performance network optical interconnect Invited
14:50	郭蕾（字节跳动）——点亮字节跳动 AI 集群：800G 光互联技术的创新与实践 Lei Guo (ByteDance)—Innovation and practice of 800G optical interconnection technology Invited
15:15	茶歇 Tea break
S4E: 光通信与数据中心应用 II 主持人：谢崇进 Optical Communication and Data Center Application II Presider: Chongjin Xie	
15:25	张德智（中国电信研究院）——50G-PON 技术发展与应用 Dezhi Zhang (China Telecom Research Institute)—50G-PON technology progress and application Keynote
15:55	陈国耀（腾讯科技（北京）有限公司）——C+L 波段 DWDM 系统在数据中心互联的应用 Yorke Chen (Tencent)—C+L wide band WDM considerations For DCI applications Invited
16:20	张德江（华为技术有限公司）——智算时代高速光传输技术演进 Zhang Dejiang (Huawei Technologies Co., Ltd.)—Evolution of High-Speed Optical Transmission Technology in the era of Intelligent Computing Invited
16:45	孙雨舟（苏州旭创科技有限公司）——AI 网络的光学解决方案 Oliver Sun (InnoLight)—Optics solutions for AI Invited
17:10	王丹石（北京邮电大学）——数字孪生光网络关键技术与最新进展 Danshi Wang (Beijing University of Posts and Telecommunications)—Recent advances in digital twin for optical networks Tutorial
17:55	晚餐 Dinner



第五届光子集成芯片立强大会

Forum on Photonic Integrated Circuits 2024

海报展示

7月14日 19:00-20:00		Jul. 14	
01-002	Ultra-small size, high shape factor bandpass filter based on silicon-on-insulator	Shasha Liao	Chongqing University of Posts and Telecommunications
01-003	TE-pass polarizers based on mode rotation in LNOI platform for gyroscopes	Siyan Chen	Beihang University
01-004	4-channel optical circulator based on traveling-wave electro-optic modulation	Zhihao Li	Tianjin University
01-005	Study on InP-based DFB semiconductor laser with dual-transverse mode hybrid resonance	Miao Xu	Nanjing University
01-006	Broadband silicon nitride arbitrary ratio power splitters	Hanmeng Li	United Microelectronics Center
01-007	Design of high-efficiency and broadband SiN-on-SOI grating couplers based on CUMEC's process platform	Wenhao Zhai	United Microelectronics Center
01-009	Simulation and calculation of the group velocity dispersion related with the etching process for the fabrication of thin film lithium niobate based phase modulators	Shiqi Kang	Beihang University
01-011	Design and verification of a miniaturized high density WDM array device	Cong Chen	Dongguan Mentech Optical & Magnetic Co., Ltd.
01-012	Design of a low-loss and low-crosstalk dual-mode waveguide bend based on Quasi-uniform B-spline curve	Yuqin Yuan	Fudan University
01-013	Simulation design and experimental study of low-loss couplers for integrated optical gyroscope based on Si ₃ N ₄ waveguide	Jiawen Liu	Beihang University
01-016	Passively Q-switched laser on a graphene-coated semiconductor saturable absorber mirror	Yifan Cui, Yi Wang	Huazhong University of Science and Technology
01-017	A four-segment InP-based monolithically integrated chaotic semiconductor laser chip	Xiaona Wang	Taiyuan University of Technology
01-018	The mechanisms of total ionizing dose effect on photoelectric responses of SnO ₂ microwire arrays UV photodetectors	Teng Ma	China Electronic Product Reliability and Environmental Testing Research Institute



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Forum on Photonic Integrated Circuits 2024

01-019	High performance room temperature mid-infrared linear array utilizing semimetal ZrTe_3	Guanchu Ding	Xiamen University
01-021	A phase-compensated silicon-based 90-degree optical hybrid	Yan Fan	Southeast University
01-023	A polarization-insensitive MMI coupler based on X-cut thin film lithium niobate	Lingfeng Wu	South China Normal University
01-024	Design and simulation of a butt-coupling based high-performance GeSi electro-absorption modulator	Guoqi Zhou	Institute of Microelectronics, Chinese Academy of Sciences
02-001	Elimination of size effects in InGaN quantum dot cyan-green Micro-LEDs by constructing a full-M-plane hexagonal structure	Peng Zhang	Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences
02-002	Preparation of GaN based flexible detection/luminescence composite devices based on electrochemical etching technology	Binbin Hou	University of Science and Technology of China
02-003	Design and fabrication process of the grating coupler with high efficiency over 58% based on the silicon nitride platform	Chengcheng Shi	Beihang University
02-004	Three-wavelength smoke detector based on STM32	Xiuhuang Long	Civil Aviation Flight University of China
02-006	A simulation design of a polarization-insensitive arrayed waveguide grating (AWG)	Liyong Guo	Institute of Semiconductors, Chinese Academy of Sciences
02-007	Silicon MOSCAP ring modulator: Arbitrary design rule of the modulation bandwidth, phase efficiency and compactness	Changyu Hu	Hubei JFS Laboratory
03-001	An equivalent circuit model of thin film Lithium Niobate Mach-Zehnder modulators with T-rail travelling wave electrodes	Qingyang Wang	Nanjing University
03-002	Theoretical and simulated analysis of a 6×6 MZI-based optical neural network	Yujing Zhang	Shandong University
03-003	Research on dual-objective directional coupler based on a two-step inverse design method	Yuanji Zhu	Shanghai Max-Optics Information Technology Co., Ltd.
04-003	Trident structure achieves direct and efficient facet coupling between silicon waveguides and lasers	Qing Liu	Dongguan Mentech Optical & Magnetic Co., Ltd.



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Forum on Photonic Integrated Circuits 2024

04-005	Laser emission module for hybrid integrated with DFB laser diode and thin-film LiNbO ₃ modulator	Keqi Cao	Institute of Semiconductors, Chinese Academy of Sciences
05-002	Digital chaos-based phase encryption for secure free-space optical communication	Ya Jin	Institute of Semiconductors, Chinese Academy of Sciences
05-004	8×53 Gbps receiver optical subassembly based on silica hybrid integrated technology	Song Huang	Institute of Semiconductors, Chinese Academy of Sciences
06-004	Micro-LEDs based on InGaN quantum dots grown by molecular beam epitaxy for visible light communication	Haowen Hua	SINANO, Chinese Academy of Sciences
09-001	Nonlinear activation function unit based on optical gradient force for in-situ training	Shasha Liao	Chongqing University of Posts and Telecommunications
09-002	Dual-drop microring weight banks with linear configuration	Ziyi Fu	Zhejiang University
09-003	Nonlinear InGaAsP photodiode for optical neural network	Mengxin Zha, Xuxiang Zhang	ShanghaiTech University
09-004	Nonconvex program accelerator using silicon photonics	Sicong Ouyang	Key Laboratory of Optoelectronic Materials and Devices, Chinese Academy of Sciences
09-005	Intrinsic nonlinearity in silicon modulator for integrated photonic analog computing	Kaifei Tang	Nanjing University
09-009	Photonic time-delayed reservoir computing based on lithium niobate microring resonators	Hongliang Ren	Zhejiang University of Technology
09-010	Monolithically integrated photonic spiking neuron based on two-section DFB laser chip	Wentao Sun	Nanjing University
09-011	Slimmed optical neural networks with multiplexed neuron sets	Yifeng Liu	Zhejiang University
09-012	Incoherent programmable silicon photonic processor for solving differential equations	Jiachen Wu	Zhejiang University
10-001	Integrated spatially multiplexed single-photon sources in a bidirectionally pumped spiral waveguide	Fanjie Ruan	Zhejiang University
10-002	An on-chip quantum splitter of degenerate photon pairs using spiral waveguide	Haoran Ma	Zhejiang University



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11-001	Study of super-resolution imaging and memory enabled by core-shell metal nanoparticles	Xiangyu Ma	University of Shanghai for Science and Technology
11-003	Event-driven single photon tracking using a superconducting nanowire imager	Sai-Ying Ru	Nanjing University
11-004	A big data storage technology based on domestic autonomous controllable characteristics	Xiangzhen Li	Beijing Institute of Technology
12-006	Study of optoelectronic synaptic devices and image memory based on BST thin film	Hao-Yan Sun	University of Electronic Science and Technology of China
12-007	Uncertainty estimation of the NETD of infrared focal plane array detectors	Yuebo Liu	China Electronic Product Reliability and Environmental Testing Research Institute
12-008	Coherent receiver based on silicon photonics for distributed acoustic sensing	Xiaoqian Shu	Zhejiang Lab
13-002	Secure optical communication system based on polarization regulation of data fragmentation multipath transmission technology	Xinyan Zhang	Institute of Semiconductors, Chinese Academy of Sciences
13-003	Design of an on-chip microwave photonic full-adder for optical directed logic using micro-ring resonators	Zilong Liu	The 54th Research Institute of CECT
13-004	High-speed frequency switching characteristics research based on integrated mutual-injection semiconductor lasers	Shuya Liu	Army Engineering University
14-002	High-directionality grating coupler-based optical antenna for chip-level lidar applications	Zheng Wang	Institute of Semiconductors, Chinese Academy of Sciences
14-004	A compact SPAD pixel with clocked recharging and analog photon-counting	Ruiqi Fan	Xidian University
14-006	Pile-up suppression in SPAD-based LiDAR by nonlinear high-voltage modulation circuit	Yulong Ma	Xidian University
14-007	A digital-SiPM based dTOF sensor with PDP optimization using configurable on-chip charge pump	Yi Zhang	Xidian University
14-009	FMCW laser source based on optical sideband modulation and injection locking	Renheng Zhang	Institute of Semiconductors, Chinese Academy of Sciences



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	for high-precision lidar ranging		
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