

会议日程 CONFERENCE AGENDA

August 3-4, 2025, Banyan Tree Tianjin Riverside, Tianjin, China  
(August 2 is for registration)

Agenda

Program Chairs: Xinyu Liu, Tadatomo Suga, Xiaohua Ma

August 2, 2025 (Saturday)

10:30-20:00	Registration (HOTEL Banyan Tree Tianjin Riverside)
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Day1: August 3, 2025 (Sunday)  
2F Banyan Ballroom

08:30-08:45	<b>Opening Remarks</b> Chair: Xinyu Liu
08:45-09:00	<b>Conference Overview</b> Chairs: Tadatomo Suga, Xiaohua Ma
09:00-09:30	<b>(Keynote)</b> Surface Activated Bonding - History, Current Status, and Future outlook Tadatomo Suga, The University of Tokyo/Meisei University/IMSI, Japan
09:30-10:00	<b>(Keynote)</b> New Progress in Wide-Bandgap Semiconductor Devices and Chips Yue Hao (郝 跃), Xidian University
10:00-10:30	<b>(Keynote)</b> Heterogeneous Integration and Packaging Manufacturing of Chips Sheng Liu (刘 胜), Wuhan University
10:30-10:50	<i>Take Photos &amp; Coffee Break</i>

Plenary Session I: Surface Activated Bonding and Its Extensions

Chairs: Tadatomo Suga, Liangxing Hu (虎良省)

10:50-11:20	<b>(Keynote)</b> Recent Advances in Atomic Diffusion Bonding: Bonding Mechanism and Applications Takehito Shimatsu, Tohoku University, Japan
11:20-11:40	<b>(Invited)</b> Large Area 5J Solar Cells Based on the Direct Bonded Process He Wang (王 赫), Tianjin Institute of Power Source
11:40-11:50	Lowering thermal boundary resistance at bonded heterogeneous interfaces by surface-activated bonding Rulei Guo (郭汝磊), The University of Tokyo
11:50-12:00	N Polar GaN-AlN-Diamond structure fabricated by modified surface active bonding and selective dry Ye Tian (田 野), Institute of Microelectronics of the Chinese Academy of Sciences
12:00-12:10	High Bonding Strength of GaN and Diamond through Optimization of Bonding Area Mei Wu (武 玫), Xidian University
12:10-12:20	Research on room-temperature heterogeneous integration technology for high-power photodetection applications Xin Chen (陈 鑫), Nanjing Electronic Devices Institute
12:20-13:30	<i>Lunch</i>

Plenary Session II: Hybrid Bonding and 3D integration

Chairs: Wei Wang (王 玮), Yunwen Wu (吴蕴雯)

13:30-14:00	<b>(Keynote)</b> Flip 3D (F3D): A Novel 3D Integration Technology Enabled by the Advanced Bonding Heng Wu (吴 恒), Peking University
14:00-14:30	<b>(Keynote)</b> Enabling Technologies and 3D Integration for Edge AI Microsystems Chengkuo Lee (李正国), National University of Singapore
14:30-14:50	<b>(Invited)</b> Low-temperature Cu/SiO <sub>2</sub> and Co/SiO <sub>2</sub> hybrid bonding for high-density interconnection Chenxi Wang (王晨曦), Harbin Institute of Technology
14:50-15:10	<b>(Invited)</b> Interface Investigation for Hybrid Bonding Interconnects Qidong Wang/Renxi Jin (王启东/金仁喜), Institute of Microelectronics of the Chinese Academy of Sciences
15:10-15:25	3D heterogeneous integration for GaN HEMT and CNTFET Bowen Zhang (张博文), Xidian University
15:25-15:40	<i>Coffee Break</i>

Plenary Session III: Novel Low Temperature Bonding Processes and Materials

Chairs: Guisheng Zou (邹贵生), Ryo Takigawa

15:40-16:00	<b>(Invited)</b> Spontaneous Formation of SiO <sub>2</sub> Bonding Interface via Polysilazane Conversion Kai Takeuchi, Tohoku University, Japan
16:00-16:20	<b>(Invited)</b> Low Temperature Bonding Based on Electrodeposited Perpendicularly Nanotwinned Cu Yunwen Wu (吴蕴雯), Shanghai Jiao Tong University
16:20-16:40	<b>(Invited)</b> Low Temperature Nanojoining for Device Integration Lei Liu (刘 磊), Tsinghua University
16:40-17:00	<b>(Invited)</b> Recent Progress in Ag-In Transient Liquid Phase Bonding Technologies for Next-Generation Optoelectronic Systems Yongjuan Huo (霍永隽), Beijing Institute of Technology
17:00-18:00	<i>Poster session</i>
18:00-20:00	<i>Banquet</i>

Day2: August 4, 2025 (Monday)  
2F Banyan Ballroom

Plenary Session IV: Power, RF, Photonics, MEMS and Displays devices Applications (1)

Chairs: Eiji Higurashi, Qian Wang (王 谦)

08:30-09:00	<b>(Keynote)</b> Fusion of GaN and SiC for High-Performance Power Devices Kevin Jing Chen (陈 敬), The Hong Kong University of Science and Technology
09:00-09:20	<b>(Invited)</b> Room-Temperature Bonding of Polycrystalline Diamond and 3C-SiC and Its Application in Thermal Management of GaN Power Devices Jianbo Liang / Naoteru Shigekawa, Osaka Metropolitan University, Japan
09:20-09:40	<b>(Invited)</b> MEMS Heterogeneous Integration Empowers Ultrasonic and RF Applications Yansong Yang (杨岩松), The Hong Kong University of Science and Technology
09:40-09:55	Heterogeneous Substrates for Integrated Photonic Applications Ailun Yi (伊艾伦), Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences
09:55-10:10	Research progress of GaN HEMTs on diamond based on wafer bonding technique Xingye Zhou (周幸叶), Hebei Semiconductor Research Institute
10:10-10:25	High-Performance CMOS-compatible RF GaN-based HEMT technology using Gold-free Technology Hao Lu (芦 浩), Xidian University
10:25-10:40	<i>Coffee Break</i>

Plenary Session V: Fundamental Principles and Characterization

Chairs: Jiandong Ye (叶建东), Fujun Xu (许福军)

10:40-11:10	<b>(Keynote)</b> 3DIC Multi wafer hybrid bonding process technology challenge Sheng Hu (胡 胜), Wuhan Xinxin Semiconductor Manufacturing Co., Ltd. (XMC)
11:10-11:30	<b>(Invited)</b> Heterogeneous integration of high-thermal-conductivity silicon carbide Zhe Cheng (程 哲), Peking University
11:30-11:50	<b>(Invited)</b> Non-invasive transient thermorefectance for thermal properties and temperature characterization Chao Yuan (袁 超), Wuhan University
11:50-12:05	The Application of Morphological Measurement Technology in LTB-3D Aris Ma, AK Optics
12:05-12:20	Application of Ultrasonic Scanning Technology in Wafer Level Bonding Process Frank Duan (段忠福), SBT Ultrasonic Technology Co.,Ltd.
12:20-13:30	<i>Lunch</i>

Plenary Session VI: Power, RF, Photonics, MEMS and Displays devices Applications (2)

Chairs: Kevin Jing Chen (陈 敬), Qian Sun (孙 钱)

13:30-14:00	<b>(Keynote)</b> Wide and Ultrawide Bandgap Semiconductor Electronics: The Importance of Interfaces Martin Kuball, University of Bristol (UK)
14:00-14:30	<b>(Keynote)</b> Surface Activated Room Temperature Bonding for Heterogeneous Photonics Integration and Packaging Ryo Takigawa, Kyushu University, Japan
14:30-14:50	<b>(Invited)</b> Power semiconductor and integration technology Guoyou Liu (刘国友), Southwest Jiaotong University/Zhuzhou CRRC Times Electric Co., Ltd
14:50-15:10	<b>(Invited)</b> Heterointegrated Ga <sub>2</sub> O <sub>3</sub> -on-SiC RF MOSFETs Jiandong Ye (叶建东), Nanjing University
15:10-15:30	<b>(Invited)</b> Research progress on high-performance millimeter wave GaN RF devices Ling Yang (杨 凌), Xidian University
15:30-15:45	<i>Coffee Break</i>

Plenary Session VII: Heterogeneous Integration and Related Materials

Chairs: Takehito Shimatsu, Chenxi Wang (王晨曦)

15:45-16:15	<b>(Keynote)</b> Low-Temperature Bonding Technology for Heterogeneous Integration and Advances in Sensors and Electronic Devices Eiji Higurashi, Tohoku University, Japan
16:15-16:35	<b>(Invited)</b> Heterogeneous integrated materials and devices based on bonding technology Xin Ou / Tiangui You (欧 欣/游天桂), Shanghai Institute of Microsystem and Information Technology, Chinese Academy of Sciences
16:35-16:55	<b>(Invited)</b> Investigation of the interfacial bonding strength in heterogeneously integrated materials Dong Liu, University of Oxford (UK)
16:55-17:15	<b>(Invited)</b> The Enabling Role of Publicly Accessible R&D Platforms in Heterogeneous Integration Fei Zhong (钟 飞), Yongjiang Laboratory
17:10-17:25	N-polar GaN/AlGaN Heterostructures Fabricated by Direct Wafer Bonding with Polycrystalline Diamond Qian Li (李 倩), Suzhou institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences
17:25-17:40	Low-Temperature Integration of InP Heterostructure on Silicon via Surface-Activated Bonding and Selective Wet Etching Xuezheng Gang (刚学正), Institute of Microelectronics of the Chinese Academy of Sciences
17:40-17:55	Ultrafast planarization of large-scale polycrystalline diamond used for bonding by microsecond laser Jinxin Zou (邹金鑫), University of Science and Technology Beijing
18:00-19:00	<i>Reception</i>

