

LTB-3D 2025 Satellite in China

*August 3-4, 2025, HOTELBanyan 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)

Day1: August 3, 2025 (Sunday) Banyan Ballroom	
08:30-08:45	Opening Remarks Chair: Xinyu Liu
08:45-09:00	Conference Overview Chairs: Tadatomo Suga, Xiaohua Ma
09:00-09:30	(Keynote) Surface Activated Bonding - History, Current Status, and Future outlook Tadatomo Suga, The University of Tokyo/Meisei University/IMSI, Japan
09:30-10:00	(Keynote) To be confirmed Yue Hao (郝跃)
10:00-10:30	(Keynote) Heterogeneous Integration and Packaging Manufacturing of Chips Sheng Liu (刘胜)
10:30-10:40	Coffee Break
Plenary Session I: Surface Activated Bonding and Its Extensions Chairs: Tadatomo Suga, Fengwen Mu (母凤文)	
10:40-11:10	(Keynote) Recent Advances in Atomic Diffusion Bonding: Bonding Mechanism and Applications Takehito Shimatsu, Tohoku University, Japan
11:10-11:30	(Invited) Large Area 5J Solar Cells Based on the Direct Bonded Process He Wang (王赫), Tianjin Institute of Power Source
11:30-11:45	Lowering thermal boundary resistance at bonded heterogeneous interfaces by surface-activated bonding Rulei Guo (郭汝磊), The University of Tokyo
11:45-12:00	N Polar GaN-AlN-Diamond structure fabricated by modified surface active bonding and selective dry etching Ye Tian (田野), Institute of Microelectronics of Chinese Academy of Sciences
12:00-12:15	High Bonding Strength of GaN and Diamond through Optimization of Bonding Area Mei Wu (武玫), Xidian university
12:15-12:30	Research on room-temperature heterogeneous integration technology for high-power photodetection applications Xin Chen (陈鑫), Nanjing Electronic Devices Institute
12:30-13:30	Lunch

Plenary Session II : Hybrid Bonding and 3D integration Chairs: Wei Wang (王玮) , Yunwen Wu (吴蕴雯)	
13:30-14:00	(Keynote) Flip 3D (F3D): A Novel 3D Integration Technology Enabled by the Advanced Bonding Jin Kang/Heng Wu (康劲/吴恒) , Semiconductor Manufacturing International Corporation (SMIC)
14:00-14:30	(Keynote) Enabling Technologies and 3D Integration for Edge AI Microsystems Chengkuo Lee (李正国) , National University of Singapore
14:30-14:50	(Invited) Low-temperature Cu/SiO ₂ and Co/SiO ₂ hybrid bonding for high-density interconnection Chenxi Wang (王晨曦) , Harbin Institute of Technology
14:50-15:10	(Invited) Interface Investigation for Hybrid Bonding Interconnects Qidong Wang/Renxi Jing (王启东/金仁喜) , Institute of Microelectronics of 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	(Invited) Spontaneous Formation of SiO ₂ Bonding Interface via Polysilazane Conversion Kai Takeuchi, Tohoku University, Japan
16:00-16:20	(Invited) Low Temperature Bonding Based on Electrodeposited Perpendicularly Nanotwinned Cu Yunwen Wu (吴蕴雯) , Shanghai Jiao Tong University
16:20-16:40	(Invited) Low Temperature Nanojoining for Device Integration Lei Liu (刘磊) , Tsinghua University
16:40-17:00	(Invited) Recent Progress in Ag-In Transient Liquid Phase Bonding Technologies for Next-Generation Optoelectronic Systems Yongjuan Huo (霍永隼) , Beijing Institute of Technology
17:00-18:00	<i>Poster session</i>
18:00-20:00	<i>Banquet</i>

Day2: August 4, 2025 (Monday) 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	(Keynote) 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	(Invited) 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	(Invited) 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	(Keynote) To be confirmed Peng Sun (孙鹏), Wuhan Xinxin Semiconductor Manufacturing Co., Ltd. (XMC)
11:10-11:30	(Invited) Heterogeneous integration of high-thermal-conductivity silicon carbide Zhe Cheng (程哲), Peking University
11:30-11:50	(Invited) 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, 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	(Keynote) Wide and Ultrawide Bandgap Semiconductor Electronics: The Importance of Interfaces Martin Kuball, University of Bristol (UK)
14:00-14:30	(Keynote) Surface Activated Room Temperature Bonding for Heterogeneous Photonics Integration and Packaging Ryo Takigawa, Kyushu University, Japan
14:30-14:50	(Invited) Power semiconductor and integration technology Guoyou Liu (刘国友), Southwest Jiaotong University/Zhuzhou CRRC Times Electric Co., Ltd

14:50-15:10	(Invited) Heterointegrated Ga ₂ O ₃ -on-SiC RF MOSFETs Jiandong Ye (叶建东), Nanjing University
15:10-15:30	(Invited) 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	(Keynote) Low-Temperature Bonding Technology for Heterogeneous Integration and Advances in Sensors and Electronic Devices Eiji Higurashi, Tohoku University, Japan
16:15-16:35	(Invited) 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	(Invited) Investigation of the interfacial bonding strength in heterogeneously integrated materials Dong Liu, University of Oxford (UK)
16:55-17:10	N-polar GaN/AlGa _N 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
17:10-17:25	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 Chinese Academy of Sciences
17:25-17:40	Ultrafast planarization of large-scale polycrystalline diamond used for bonding by microsecond laser Jinxin Zou (邹金鑫), University of Science and Technology Beijing
17:40-19:00	<i>Reception</i>