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)

Day1: August 3, 2025 (Sunday)
2F 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)** New Progress in Wide-Bandgap Semiconductor Devices and Chips Yue Hao（郝 跃）, Xidian University
10:00-10:30	**(Keynote)** Heterogeneous Integration and Packaging Manufacturing of Chips Sheng Liu（刘 胜）, Wuhan University
10:30-10:50	*Take Photos & Coffee Break*

Plenary Session I: Surface Activated Bonding and Its Extensions

Chairs: Tadatomo Suga, Liangxing Hu （虎良省）

10:50-11:20	**(Keynote)** Recent Advances in Atomic Diffusion Bonding: Bonding Mechanism and Applications Takehito Shimatsu, Tohoku University, Japan
11:20-11:40	**(Invited)** 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）, Insitute 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	*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 Heng Wu（吴 恒）, Peking University
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 Jin（王启东/金仁喜）, Insitute 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	*Coffee Break*

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（霍永隽）, Beijing Institute of Technology
17:00-18:00	*Poster session*
18:00-20:00	*Banquet*

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	**(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	*Coffee Break*

Plenary Session V: Fundamental Principles and Characterization

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

10:40-11:10	**(Keynote)** 3DIC Multi wafer hybrid bonding process techonology challenge Sheng Hu（胡胜）, 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 thermoreflectance 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	*Lunch*

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_2O_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	*Coffee Break*

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)
16:55-17:15	**(Invited)** The Enabling Role of Publicly Accessible R&D Platforms in Heterogeneous Integration Wali Zhang （张瓦利）, 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）, Insitute 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	*Reception*