2026 9th International Workshop on Low Temperature Bonding for 3D Integration

May 13, Wednesday				
12:00	*REGISTRATION*			
13:00	*Surface Activatged Bonding (I)*	*13O-01*	*(OPENING REMARKS)* **[Keynote]** Tadatomo Suga, Meisei University, Recent Progress in Surface Activated Bonding for 3D and Heterogenous Integration	Chairs: Naoteru Shigekawa Mark Goorsky
13:25		*13O-02*	**[invite]** Fuchao Liu, iSABers Group Co., Ltd., From Wafer Bonding to Production Lines: Industrializing Semiconductor Compound Substrates	
13:50		*13O-03*	Florent Cassouret, Institute for Molecular Science, Room temperature bonding of Cr:LiSAF and sapphire: interface analysis and thermal properties	
14:05		*13O-04*	Peter Kerepesi, EV Group, Xenon vs Argon Ion Activation for Room-Temperature Wafer Bonding of Si and SiC	
14:20	*BREAK*			
14:40	*Surface Activatged Bonding (II)*	*13O-05*	**[keynote]** Xinhua Wang, Institute of Microelectronics of Chinese Academy of Sciences, Application of surface activated bonding technology in heterogeneous integration of wide bandgap semiconductors	Chairs: Karine Abadie Hideki Takagi
15:20		*13O-06*	**[invite]** Jurgen Yeh, SEIKI-SEMI Co., GaN/Diamond Hetero-Integration: MicroLED and Thermal Solutions	
15:45		*13O-07*	Xiangjie Xing, Institute of Microelectronics of Chinese Academy of Sciences, Characterization of the Space-Charge Region at Surface-Activated-Bonded Si/SiC Interfaces by Electrostatic Force Microscopy	
16:00		*13O-08*	Yutaka Ohno, Tohoku University, In-situ high-temperature scanning transmission electron microscopy of GaN/Si interface fabricated by surface activated bonding	
16:15	BREAK			
16:35	*Hybrid Bonding and 3D Integration(I)*	*13O-09*	**[Invite]** Zhe Cheng, Peking University, Thermal resistance of interfaces in hybrid bonding process(online)	Chairs: Ryo Takigawa Fumihiro Inoue
17:00		*13O-10*	**[invite]** Hemanth Kumar Cheemalamarri, Applied Materials, Accelerated Evaluation and Optimization of Hydrophilic Bonding for Advanced Packaging: The Role of a Next-Generation Tool Set	
17:25		*13O-11*	Ryohei Nakata,Panasonic holdings corporation, Influence of Deposition N2 Flow on SiCN Surface Chemical Bonding States in SiCN/SiCN Hybrid Bonding	
17:40	*Reception*			

May 14, Thursday				
9:30	*New process for 3D integration*	*14O-01*	**[Invite]** Jun Mizuno, National Cheng Kung University, Thermal Management Strategy for Advanced Packaging	Chairs: Chieh Chen Yutaka Ohno
9:55		*14O-02*	Tetsu Yonezawa, Hokkaido University, Low-Temperature Sintering and Bonding Performance of Copper Nanoparticles for Power Device Packaging	
10:10		*14O-03*	Junsha Wang, Meisei University, Low-temperature Cu/Cu Wafer Bonding via SAB Combined with Sequential Plasma Activation	
10:25		*14O-04*	Miyuki Uomoto, Tohoku University, Atomic Diffusion Bonding of Wafers in Air Using Single-Sided Film Deposition	
10:40	*BREAK*			
11:00	*Hydrophilic and Fusion bonding*	*14O-05*	Yun-Hsuan Chen, National Yang Ming Chiao Tung University, Influence of Plasma Chemistry on Oxide Surfaces for Room Temperature Bonding	Chairs: Jun Mizuno Takehito Shimatsu
11:15		*14O-06*	Akihiro Shimizu, Ushio Inc., A ToF-SIMS Metric for Quantifying Surface Activation in Cu/SiO2 Hybrid Bonding Achieved by Vacuum Ultraviolet Irradiation	
11:30		*14O-07*	Hyuga Ishii, Yokohama National University, Edge-Void Morphology in Wafer-to-Wafer Fusion Bonding	
11:45		*14O-08*	Takashi Matsumae, National Institute of Advanced Industrial Science and Technology, High temperature bonding of diamond/Si substrate for warpage reduction	
12:00	*LUNCH*			
13:30	*Short presentation for poster*			*Chair: Takashi Matsumae*
14:45	*Poster Session*			
15:45	*BREAK*			
16:05	*Device Applications*	*14O-09*	**[Invite]** Shinji Matsuo, NTT, Membrane III-V Photonic Devices on Si Using Direct Bonding Technology	Chairs: Takunori Taira Minoru Sasaki
16:30		*14O-10*	**[Invite]** Heng Wu, Peking University, Crucial technology of transistor stacking to extend Moore's law into sub-1nm region (online)	
16:55		*14O-11*	**[invite]** Simon Bleiker, KTH, Heterogeneous transfer bonding for wafer-level MEMS integration	
17:20		*14O-12*	**[invite]**Roy Knechitel, Schmalkalden, Wafer Bonding in MEMS Technologies/Anodic Wafer Bonding: Method and Applications(online)	
17:45	*Banquet*			

May 15, Friday				
9:30	*Fundamental of wafer bonding(I)*	*15O-01*	**[Keynote]** Mark Goorsky, UCLA, Materials Integration of Ultra-wide Bandgap and Piezoelectric Thin Films	Chairs: Jenn-Ming Song Eiji Higurashi
10:10		*15O-02*	Takehito Shimatsu, Tohoku University, Atomic Diffusion Bonding of Wafers Using Single-Sided Oxide Film Deposition	
10:25		*15O-03*	Szuyu Huang, SHW Technology Co., Ltd, Backside Plasma Activation via Lift-Pin Architecture for High-Integrity Wafer Bonding	
10:40	*BREAK*			
11:00	*Fundamental of wafer bonding(II)*	*15O-04*	**[Keynote]** Karine Abadie, CEA leti, Impact of amorphous layer in covalent bonding mechanisms	Chairs: Chuan-Sen Tan Kai Takeuchi
11:40		*15O-05*	**[invite]** Nathan Ip, TEL USA, Bond Wave Propagation Mechanics in Hybrid Bonding Processes	
12:05		*15O-06*	**[invite]** Jenyu Lee, KOKUSAI ELECTRIC CORPORATION, Fusion bonding using ALD-Al2O3 thin films for 3D integration	
12:30	*LUNCH*			
13:55	*Hybrid Bonding and 3D Integration(II)*	*15O-07*	**[invite]** Jenn-Ming Song, National Chung Hsing University, Light Enhanced Direct Metal Bonding for Advanced Electronic Assembly	Chairs: Hemanth Kumar Cheemalamarr Wang Junsha
14:20		*15O-08*	**[invite]** Chuan-Sen Tan, Nanyang univ., Enabling Functional Diversity with Heterogeneous Integration	
14:45		*15O-09*	**[Invite]** Chih Chen, National Yang Ming Chiao Tung University, Effect of Cu Microstructures on the Thermal Expansion of Cu pads in SiO2 vias for 3D IC Heterogeneous Integration	
15:10	*SHORT BREAK*			
15:15	*Closing Session*			

Poster Session				
14P-01	Takashi Matsumae	National Institute of Advanced Industrial Science and Technology	Structural Analysis of Warpage in Composite Wafers Considering Vacuum Chucking	Fundamentals and Characterization
14P-02	Shinya Taki	Tohoku University	Atomic Diffusion Bonding of Wafers using W films in Relation to Initial Film Growth	
14P-03	Pin Lin Chen	National Yang Ming Chiao Tung University	Effect of Temperature Ramping Rate on Thermal Expansion of Nanocrystalline Cu pads in Fine-Pitch SiO2 Vias for 3D IC Hybrid Bonding	
14P-04	Keishiro Iida	Toyota Technological Institute,	Patterning trenches with vertical sidewalls	Hybrid Bonding and Related Technologies
14P-05	Yihao Meng (Renxi Jin)	Institute of Microelectronics of the Chinese Academy of Sciences	SiCN-SiCN Bonding Enabled by NaOH Activation	
14P-06	Masaaki Tsukamoto	Samco Inc.	Si/SiC Direct Bonding at 200 °C using Water Vapor Plasma with Low Interfacial Thermal Resistance	Hydrophilic and Plasma-assisted Bonding
14P-07	Takashi Matsumae	National Institute of Advanced Industrial Science and Technology	Ga_2O_3 Layer Transfer on SiC Substrate by Hydrophilic Bonding and Ion-Cut Technology	
14P-08	Yufei Bai	Harbin Institute of Technology	Low-temperature direct Ru–Ru bonding enabled by ternary synergistic plasma surface activation	Metal Bonding for High-density Interconnect
14P-09	Yoshiyuki Kawamoto	National Institute of Advanced Industrial Science and Technology	Accelerated Impedance Testing of Parylene-C Based Neural Electrodes for High-Density Chip Integration	
14P-10	Takamichi Ohara	Tohoku University	Atomic Diffusion Bonding of Wafers in Air Using Single-Sided Au film Deposition with Zr Underlayer	New Applications of Low-temperature Bonding
14P-11	Naoki Yanagisawa	Tokyo University of Science	Silicon-Based Vapor Chamber with Jumping Droplet Structures via MEMS Technology	
14P-12	Kazuma Inoue	Osaka Metropolitan University	Effects of InGaP Interlayers on Electrical Characteristics of GaAs/GaN Junctions Fabricated Using Surface-Activated Bonding	Power, RF, Photonic, and MEMS Device Applications
14P-13	Hikaru Iwamoto	Osaka Metropolitan University	Fabrication of GaN/Diamond Templates for Advanced III-Nitride Process	
14P-14	Takashi Matsumae	National Institute of Advanced Industrial Science and Technology	Thermo-Compression Bonding of Cu/Diamond/Cu Stacks for Advanced Power Modules	
14P-15	Takuji Takahashi	The University of Tokyo	Cross-sectional Investigation by Dual Bias Modulation Electrostatic Force Microscopy on GaN/GaN Junction Fabricated by Surface-activated Bonding	
14P-16	Junya Saito	Chiba Institute of Technology	Room-temperature GaAs//a-Si/SiC and InGaAs//a-Si/SiC bonding	Surface Activated Bonding (SAB) and its Extensions
14P-17	Yoshiki Maruyama	Chiba Institute of Technology	Surface activated bonding of Si//GaN and diamond//GaN using a-Si sputtered thin films	
14P-18	Yoshiki Katoda	Kyushu University	Bond Quality in Surface Activated Room Temperature Bonding of Lithium Tantalate Wafers	