



Technical Program of 22nd International Workshop on Junction Technology (IWJT2025)

Start	End	Period	Session	Class	No.	Title	Speaker/ Affiliation	Chairs
June 5th on Thursday								
9:30	9:50	0:20	Opening Remarks					
Satoshi Shibata (General Chair), Tsunenobu Kimoto (JSAP), Tetsuo Narita (Program Chair)								
9:50	10:20	0:30	S1 Image Sensor	S1-1 INV	19	Overview of Pixel Scaling Technology in CMOS Image Sensors for Imaging and Sensing Applications	Kenji Tatani / Sony Semiconductor Solutions Corporation, Japan	Takashi Sakamoto Phillipe Rodriguez
10:20	10:40	0:20		S1-2 CNT	15	Novel production concept of CH ₂ F-molecular-ion implanted Si epitaxial wafer for highly sensitive 3D-stacked CMOS image	Ryo Hirose / SUMCO Corporation, Japan	
10:40	11:00	0:20		S1-3 CNT	14	Metallic impurity gettering behavior of hydrocarbon-molecular-ion-implanted epitaxial silicon wafer during the pn-junction diode fabrication process	Sho Nagatomo [Under 35] / SUMCO Corporation, Japan	
11:00	11:20	0:20	Coffee Break, Exhibition					
11:20	11:40	0:20	S2 Annealing 1	S2-1 CNT	16	Impact of Cumulative Pulsed Laser Irradiation on Recrystallization of Amorphized C ₂ H ₂ -molecular-ion-implanted	Koji Kobayashi [Under 35] / SUMCO Corporation, Japan	Ryuichi Miura Yoshihiro Sato
11:40	12:00	0:20		S2-2 CNT	13	Impact of Rapid Thermal Annealing on tensily-strained phosphorous-doped Si for advanced FD-SOI nodes	Theo Cabaret / Univ. Grenoble Alpes, CEA-LETI, France	
12:00	13:30	1:30	Group Photo, Committee Meeting with Lunch					
13:30	14:15	0:45	Keynote 1	KN1	30	Statistical Analysis of Subthreshold Current in Cryo-CMOS Transistor	Toshiro Hiramoto / University of Tokyo	Satoshi Shibata
14:15	14:45	0:30	S3 Annealing 2	S3-1 INV	10	Mechanistic Insights into Microwave Annealing for Lattice Defect Recovery	Satoshi Fujii / National Institute of Technology, Okinawa college, Japan	Akira Uedono Hideki Sakurai
14:45	15:05	0:20		S3-2 CNT	9	Photo-modulated reflectance for monitoring of the annealing of implanted Si samples	Laszlo Balogh [Under 35] / Semilab Co. Ltd., Hungary	
15:05	15:25	0:20		S3-3 CNT	27	Flash-Assisted Flash Lamp Annealing Technology for High (Re-) Activation of Epitaxial Si:P Layers	Yuma Ueno [Under 35] / SCREEN Semiconductor Solutions Co. Ltd, Japan	
15:25	15:45	0:20	Coffee Break, Exhibition					
15:45	16:15	0:30	S4 Doping / Contact 1	S4-1 INV	8	Advances in Plasma Doping Applications to Enable Novel Device Scaling	Deven Raj / Applied Materials Inc., United States	Osamu Nakatsuka Anabela Veloso
16:15	16:35	0:20		S4-2 CNT	25	Influence of dopant and Si:B cap on Ni(Pt)-based silicidation of SiGe:B for next generation PMOS FDSOI devices	Helen Grampeix / Univ. Grenoble Alpes, CEA-LETI, France	
16:35	16:55	0:20		S4-3 CNT	18	Co / GeSn Contacts: An Introductory Study	Philippe Rodriguez / Univ. Grenoble Alpes, CEA-LETI, France	
16:55	17:25	0:30		S4-4 INV	32	Interconnect Technology for the Angstrom Era and Beyond	Rinus Lee / TEL Technology Center, United States	
17:25	18:00	0:35	Preparation					
18:00	20:00	2:00	Conference Banquet					
June 6th on Friday								
9:20	10:05	0:45	Keynote 2	KN2	6	CMOS 2.0: The next compute scaling paradigm	Julien Ryckaert / Imec, Belgium	Yoshiaki Kikuchi Hiro Ito
10:05	10:35	0:30	S5 Doping / Contact2	S5-1 INV	24	Source/drain epitaxy and contacts for CFET applications	Clement Porret / Imec, Belgium	
10:35	10:55	0:20	Coffee Break, Exhibition					
10:55	11:25	0:30	S6 Memory Device	S6-1 INV	26	Reliability of HfO ₂ -based Ferroelectric Memory Devices	Marina Yamaguchi / KIOXIA Corporation, Japan	Hiroki Okamoto Hi-Deok Lee
11:25	11:45	0:20		S6-2 CNT	12	UVC Driven Data Retention in Polyimide-based Nonvolatile Photomemory Device	Yen Jin Pui [Under 35] / Feng Chia University, Taiwan	
11:45	12:15	0:30		S6-3 INV	31	Resistive Memories: Multifaceted Impact on Neuromorphic Computing	Elisa Vianello / Univ. Grenoble Alpes, CEA-LETI, France	
12:15	13:30	1:15	Lunch					
13:30	14:00	0:30	S7 2D Materials	S7-1 INV	17	Synthesis and Device Applications 2.5D Materials: Beyond 2D Materials with New Degrees of Freedom	Hiroki Ago / Kyushu University, Japan	Tsuyoshi Ishikawa Takamasa Kawanago
14:00	14:20	0:20		S7-2 CNT	11	P-type doping of PVD-MoS ₂ film with nitrogen annealing accelerated by hydrogen incorporation	Jaehyo Jang [Under 35] / Institute of Science Tokyo	
14:20	14:40	0:20	S8 Power Device 1	S8-1 CNT	22	Enhancement-mode GaN Tri-gate MISHEMT with Fluorine Doped Charge Trapping Layer in Hybrid Ferroelectric Gate Stack.	Rahul Rai [Under 35] / National Yang Ming Chiao Tung University, Taiwan	
14:40	15:00	0:20		S8-2 CNT	20	Optimization of n-type GaN Grown by MOCVD for Low Contact Resistance	You-Chen Weng / National Yang Ming Chiao Tung University, Taiwan	
15:00	15:20	0:20	Coffee Break, Exhibition					
15:20	15:40	0:20	S9 Power Device 2	S9-1 CNT	21	All Ion-implanted Vertical GaN Planar-Gate MOSFETs Fabricated on 4-inch Substrates	Ryo Tanaka / Fuji Electric Co., Ltd., Japan	Tetsuo Narita Yoji Kawasaki
15:40	16:00	0:20		S9-2 CNT	4	Characterization of vacancy-type defects in Mg- and N-implanted GaN by using a monoenergetic positron beam	Akira Uedono / University of Tsukuba, Japan	
16:00	16:20	0:20		S9-3 CNT	23	Electron density estimation of forward-biased SiC pn diodes by LO phonon-plasmon coupled Raman spectra	Kuniharu Kobashi [Under 35] / Institute of Science Tokyo, Japan	
16:20	16:40	0:20		S9-4 CNT	29	Effects of Dose Rate on Cryogenic Carbon Pre-Amorphous Implantation	Seiya Sakakura / Toshiba Electronic Devices and Strage Corporation, Japan	
16:40	16:50	0:10	Short Break					
16:50	17:20	0:30	S10 Power Device 3	S10-1 INV	5	Stacking Fault Knocking-down by High-energy Ion Implantation (SF-KHI) Method to Fabricate Reliable SiC Devices	Masashi Kato / Nagoya Insitute of Technology, Japan	Takuji Hosoi Yasuhiko Matsunaga
17:20	17:50	0:30		S10-2 INV	28	Key technologies supporting high performance and reliability of SiC VMOSFETs	Takeyoshi Masuda / Sumitomo Electric Industries, Ltd., Japan	
17:50	18:00	0:10	Preparation of Closing and Award Ceremony					
18:00	18:15	0:15	Award Ceremony and Closing Remarks					

KN: Keynote lecture, 2 papers, each 40 min-talk + 5 min-Q&A
 INV: Invited lecture, 10 papers, each 25 min-talk + 5 min-Q&A
 CNT: Contributed talk, 16 papers, each 15 min-talk + 5 min-Q&A