

Friday, September 30

5F Hall 1	5F Hall 2	10F 1002	10F 1003	11F 1101	11F 1102	11F 1103
<p>AL-6: SiC&GaN Power Switching Devices (1) (Area 6&14) (9:00-10:45) Chairs: R. Hattori (Mitsubishi Electric Corp.) M. Ishiko (Toyota Central R&D Labs., Inc)</p>	<p>KM-6: Graphene Synthesis (Area 8&13) (9:00-10:45) Chairs: H. Hibino (NTT Basic Res. Labs.) S. Tanaka (Kyushu Univ.)</p>	<p>B-6: Device physics and characterization of OTFT (1) (Area 10) (9:00-10:45) Chairs: M. Yoshida (AIST) M. Sakai (Chiba Univ.)</p>		<p>D-6: Advanced CMOS Devices (Area 3) (9:00-10:30) Chairs: T. Hiramoto (Univ. of Tokyo) B. Doris (IBM)</p>	<p>E-6: Ge Process Technology (1) (Area 1) (9:00-10:20) Chairs: K. Kita (Univ. of Tokyo) J. Yugami (Renesas Electronics Corp.)</p>	<p>F-6: PRAM/ReRAM (1) (Area 4) (9:00-10:50) Chairs: Y. Sasago (Hitachi, Ltd.) Y. C. Chen (Macronix International Co., Ltd.)</p>
<p>9:00 AL-6-1 (Invited) High-Voltage SiC Power Devices for Energy Electronics <i>T. Kimoto and J. Suda, Kyoto Univ. (Japan)</i></p>	<p>9:00 KM-6-1 (Invited) Formation of graphene nanostructures on vicinal SiC surfaces <i>S. Tanaka, T. Kajiwara, Y. Kurisu and K. Morita, Kyushu Univ. (Japan)</i></p>	<p>9:00 B-6-1 (Invited) Device Physics of Organic Transistors <i>T. Hasegawa, AIST (Japan)</i></p>		<p>9:00 D-6-1 (Invited) Advanced Foundry CMOS: From Planar into the Multi-Gate Era <i>A. Wei, GLOBALFOUNDRIES (USA)</i></p>	<p>9:00 E-6-1 Hybrid-Formation of (100), (110), and (111) Ge-on-Insulator Structures on (100) Si Platform <i>M. Kurosawa^{1,2}, T. Sadoh¹ and M. Miyao¹, ¹Kyushu Univ. and ²JSPS (Japan)</i></p>	<p>9:00 F-6-1 (Invited) Entropy-controlled Phase-change Memory <i>J. Tominaga, P. Fons, A. Kolobov, R. Simpson and X. Wang, AIST (Japan)</i></p>
<p>9:30 AL-6-2 Thermodynamic Control of Interface Layer Formation in High-k Gate Stacks on 4H-SiC <i>S. Nakatsubo, T. Nishimura, K. Kita, K. Nagashio and A. Toriumi, Univ. of Tokyo (Japan)</i></p>	<p>9:30 KM-6-2 Tuning of Structural and Electronic properties of Epitaxial Graphene by Substrate Microfabrication <i>H. Fukidome¹, H. Handa¹, M. Kotsugi^{2,3}, Th. Seyller⁴, Y. Kawai¹, T. Ohkouchi², K. Horri², R. Takahashi¹, K. Imaizumi¹, Y. Enta⁶, M. Suemitsu¹ and T. Kinoshita^{2,3,1}, Tohoku Univ., ²JASRI/Spring-8, ³CREST-JST, ⁴Friedrich-Alexander-Universität Erlangen-Nürnberg, ⁵Fritz-Harber-Institut and ⁶Hirosaki Univ. (Japan)</i></p>	<p>9:30 B-6-2 Direct Observation of Charge Carrier Concentrations in Operating Field-Effect Transistors of Pentacene by Electron Spin Resonance <i>H. Tanaka¹, M. Hirate¹, S. Watanabe¹, H. Ito¹, K. Marumoto^{2,3}, T. Takenobu^{4,4}, Y. Iwasa¹ and S. Kuroda¹, Nagoya Univ., ²Univ. of Tsukuba, ³PRESTO-JST, ⁴Waseda Univ. and ⁵Univ. of Tokyo (Japan)</i></p>		<p>9:30 D-6-2 Observation of Hole Velocity Enhancement in Ge-rich Strained SiGe-on-insulator Tri-gate MOSFETs <i>K. Ikeda, M. Oda, T. Irisawa, Y. Kamimuta, Y. Moriyama and T. Tezuka, MIRAI-Toshiba (Japan)</i></p>	<p>9:20 E-6-2 Dual-Gate Germanium Junctionless p-MOSFETs <i>D. D. Zhao^{1,2,3}, C. H. Lee^{1,2}, T. Nishimura^{1,2}, K. Nagashio^{1,2} and A. Toriumi^{1,2,1}, Univ. of Tokyo, ²CREST-JST and ³Beijing Normal Univ. (Japan)</i></p>	<p>9:30 F-6-2 Effect of Resistance Drift on the Activation Energy for Crystallization in Phase Change Memory <i>C. Ahn¹, B. Lee¹, R. G. D. Jayasingh¹, M. Asheghi¹, G. Hurkx², K.E. Goodson¹ and H. S. P. Wong¹, ¹Stanford Univ. and ²NXP-TSMC Research Center (USA)</i></p>
<p>9:45 AL-6-3 Characteristics of 4H-SiC p-Channel MOSFETs with Ion-Implanted Buried Channel <i>M. Okamoto, M. Iijima, T. Nagano, K. Fukuda and H. Okumura, AIST (Japan)</i></p>	<p>9:45 KM-6-3 Theory on Initial Stage of Epitaxial Graphene Growth on SiC(0001) <i>H. Kageshima¹, H. Hibino¹, H. Yamaguchi¹ and M. Nagase¹, NTT Basic Res. Labs. and ²Univ. of Tokushima (Japan)</i></p>	<p>9:45 B-6-3 Probing ambipolar carrier injection into pentacene field effect transistors using charge modulation spectroscopy and displacement current measurement <i>T. Manaka, S. Kawashima, Y. Tanaka and M. Iwamoto, Tokyo Tech (Japan)</i></p>		<p>9:50 D-6-3 Extremely Small Within-Device Variability in Intrinsic Channel Tri-Gate Silicon Nanowire MOSFETs <i>K. Mao, T. Mizutani, A. Kumar, T. Saraya and T. Hiramoto, Univ. of Tokyo (Japan)</i></p>	<p>9:40 E-6-3 Control of Surface Roughness on Ge by Wet Chemical Treatments and Its Effects on Electron Mobility in n-FETs <i>C. H. Lee^{1,2}, T. Nishimura^{1,2}, T. Tabata^{1,2}, M. Yoshida¹, K. Nagashio^{1,2}, K. Kita^{1,2} and A. Toriumi^{1,2,1}, Univ. of Tokyo and ²CREST-JST (Japan)</i></p>	<p>9:50 F-6-3 Effect of Interfacial oxide layer on Switching Uniformity of Ge₂Sb₂Te₅ Based Resistive Switching Memory Device <i>J. Y. Woo, S. J. Jung, S. M. Sadaf, E. J. Cha and H. S. Hwang, Gwangju Inst. of Sci. and Tech. (Korea)</i></p>
<p>10:00 AL-6-4 A Simple Thermal Impedance Measurement of SiC JFETs with Constant Current Operation <i>T. Kim and T. Funaki, Osaka Univ. (Japan)</i></p>	<p>10:00 KM-6-4 Formation of Graphene on Diamond C(111) Surfaces by Vacuum Annealing <i>S. Ogawa¹, T. Yamada¹, S. Ishizuka¹, A. Yoshigoe¹, T. Kaga¹, H. Hozumi¹, M. Hasegawa², Y. Teraoka¹ and Y. Takakuwa¹, Tohoku Univ., ²AIST, ³Akita Nat. Col. Tech. and ⁴JAEA (Japan)</i></p>	<p>10:00 B-6-4 Four-Probe Measurements on Field-Effect Transistors of High-Mobility Conjugated Polymers <i>H. Ito, T. Nozaki, H. Tanaka and S. Kuroda, Nagoya Univ. (Japan)</i></p>		<p>10:10 D-6-4 Enhanced Performance of Tri-Gate Transistors with Gnox Using Optimized Novel SOI Realization Technology <i>S. H. Kim^{1,2}, H. J. Bae¹, C. W. Oh¹, D. W. Kim¹, S. Yamada¹, G. Y. Jin¹ and Y. H. Roh¹, ¹Samsung Electronics Co. and ²Sungkyunkwan Univ. (Korea)</i></p>	<p>10:00 E-6-4 Strain and Dislocation Structures of Ge_{1-x}Sn_x Heteroepitaxial Layers Grown on Ge(110) Substrates <i>T. Asano¹, Y. Shimura^{1,2}, O. Nakatsuka¹ and S. Zaima¹, Nagoya Univ. and ²JSPS (Japan)</i></p>	<p>10:10 F-6-4 Improvement in resistive switching parameters by selecting the SET polarity in IrO₂/TaO₂/WO₃/W structure <i>A. Prakash¹, S. Maikap¹, C. S. Lat¹, H. Y. Lee¹, W. S. Chen¹, F. T. Chen¹, M. J. Kao² and M. J. Tsai¹, ¹Chang Gung Univ. and ²ITRI (Taiwan)</i></p>
<p>10:15 AL-6-5 Effects of Substrate Defects on the Gate Leakage Current of AlGaIn/GaN Heterojunction FETs Fabricated on Na Flux Bulk GaN <i>R. Hasegawa¹, N. Yafune², H. Tokuda¹, Y. Mori¹, H. Amano¹ and M. Kuzuhara¹, Univ. of Fukui, ²Sharp Corp., ³Osaka Univ. and ⁴Nagoya Univ. (Japan)</i></p>		<p>10:15 B-6-5 Analyzing diffusion-like interfacial carrier transport process in pentacene organic field-effect transistors by time-resolved second harmonic generation and impedance spectroscopy <i>L. Zhang, D. Taguchi, H. Msada, T. Manaka and M. Iwamoto, Tokyo Tech (Japan)</i></p>				<p>10:30 F-6-5 Reset Current Reduction with Excellent Filament Controllability by using Area Minimized and Field Enhanced Unipolar RRAM structure <i>K. C. Ryoo^{1,2}, S. H. Park¹, J. H. Oh^{1,2}, S. H. Jung¹, H. S. Jeong² and B. G. Park¹, ¹Seoul National Univ. and ²Samsung Electronics Co., Ltd. (Korea)</i></p>
<p>10:30 AL-6-6 Fabrication of GaN MOSFET using Selectively Re-grown n-GaN Layer on Etched Source and Drain Regions <i>D. S. Kim, H. S. Kang, C. H. Won, C. H. Bu, K. I. Jang, C. M. Yang, K. S. Im, K. W. Kim, S. D. Jung, R. H. Kim, M. K. Kwon and J. H. Lee, Kyungpook National Univ. (Korea)</i></p>	<p>10:30 KM-6-6 Large Area CVD Graphene Film as Transparent Electrode for Organic Electronics <i>G. Kalita, K. Wakita and M. Umeno, Chubu Univ. (Japan)</i></p>	<p>10:30 B-6-6 Electric and structural characterizations on annealed dinaphthothienothiophene thin-film transistors. <i>K. Kuribara¹, H. Wang², N. Uchiyama¹, K. Fukuda¹, T. Yokota¹, T. Sekitani¹, U. Zschieschang³, C. Jaye⁴, D. Fischer⁴, H. Klauk⁵, T. Yamamoto³, K. Takimiya¹, M. Ikeda⁶, H. Kuwabara⁶, Y. L. Loo⁷ and T. Someya¹, ¹Univ. of Tokyo, ²Princeton Univ., ³Max Planck Inst. for Solid State Res., ⁴National Inst. of Standards and Tech., ⁵Hiroshima Univ. and ⁶Nippon Kayaku Corp., Ltd. (Japan)</i></p>				

Coffee Break

Friday, September 30

11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
<p>G-6: Analog and Digital Circuits (Area 5) (9:00-10:50) Chairs: M. Ikebe (Hokkaido Univ.) T. Hirose (Kobe Univ.)</p>	<p>H-6: Micro Fabrication and Micro fluidic Devices (Area 11) (9:00-10:45) Chairs: M. Sasaki (Toyota Technological Inst.) T. Sakata (Univ. of Tokyo)</p>	<p>CI-6: Optical Interconnect (I) (Area 2&7) (9:00-10:45) Chairs: M. Tokushima (AIST) Y. Ishikawa (Univ. of Tokyo)</p>	<p>J-6: Photon & Spin in Nanostructures (Area 9) (9:00-10:45) Chairs: H. Gotoh (NTT Basic Res. Labs.) K. Oto (Chiba Univ.)</p>				<p>N-6: Spintronics materials and devices (Area 12) (9:00-10:45) Chairs: S. Kuroda (Univ. of Tsukuba) H. Saito (AIST)</p>
<p>9:00 G-6-1 A 220nA 32-kHz Crystal Oscillator with wide Voltage Range (1.0 - 5.5 V) for Battery-Operated MCUs <i>O. Ozawa, M. Horiguchi, Y. Okuda, A. Anzai, T. Ito, H. Shibata and M. Hiraki, Renesas Electronics Corp. (Japan)</i></p>	<p>9:00 H-6-1 (Invited) Wet Process Innovation based on Micro/Nano Science: Controllable Anisotropy in Silicon Etching for MEMS 3D Structuring <i>K. Sato, Nagoya Univ. (Japan)</i></p>	<p>9:00 CI-6-1 (Invited) Silicon Photonics in Next Generation Computers <i>M. R. Watts, MIT (USA)</i></p>	<p>9:00 J-6-1 (Invited) Acoustic transport and manipulation of carriers and spins in GaAs <i>P. V. Santos, K. Biermann, A. Hernández-Minguez, S. Lazić and R. Hey, Paul Drude Institute for Solid-State Electronics (Germany)</i></p>				<p>9:00 N-6-1 (Invited) Spin-torque induced magnetization switching and oscillation in half-metallic Co₂MnSi-based CPP-GMR devices <i>Y. Sakuraba, R. Okura, K. Izumi, T. Seki, S. Bosu, M. Mizuguchi, K. Saito and K. Takahashi, Tohoku Univ. (Japan)</i></p>
<p>9:20 G-6-2 A 12b Low Power Multi-Slope ADC with Time to Digital Converter <i>K. Kim, M. Ikebe, A. Kondou, J. Motohisa, Y. Amemiya and E. Sano, Hokkaido Univ. (Japan)</i></p>	<p>9:30 H-6-2 Oxygen sensor microarray sheet for <i>in situ</i> sensing of oxygen consumption of cultivated cell <i>M. Kojima¹, H. Takehara¹, T. Akagi¹, H. Shiono¹ and T. Ichiki¹, ¹Univ. of Tokyo and ²Nikon Instruments Inc. (Japan)</i></p>	<p>9:30 CI-6-2 (Invited) High Speed Optoelectronic Devices in Silicon <i>L. Vivien¹, D. Marris-Morini¹, G. Rasigade¹, M. Ziebell¹, P. Chaysakul¹, X. Le Roux¹, E. Cassan¹ and J. M. Fedéli², ¹Univ. Paris Sud and ²CEA-LETI/MINATEC (France)</i></p>	<p>9:30 J-6-2 (Invited) Imaging of Spin Polarized Quantum Hall Current in GaAs Quantum Well by Scanning Kerr Microscope <i>K. Oto¹, T. Matsuda¹, Y. Gunji¹, D. Fukuoka¹, K. Muro¹, N. Kumada² and Y. Hirayama^{3,4}, ¹Chiba Univ., ²NTT Basic Res. Labs., ³Tohoku Univ. and ⁴ERATO (Japan)</i></p>				<p>9:30 N-6-2 Magnetoresistance Effect in Current-Perpendicular-to-Plane Magnetoresistive Devices using Co₂Fe₂Mn_{1-x}Si Heusler Alloy <i>M. Oogane, J. Sato, H. Naganuma and Y. Ando, Tohoku Univ. (Japan)</i></p>
<p>9:40 G-6-3 Compact Multi-Bit Encoder for High Speed Frequency-Mapping Associative Memory <i>S. Sasaki, M. Yasuda, A. Kawabata, T. Koide and H. J. Mattausch, Hiroshima Univ. (Japan)</i></p>	<p>9:45 H-6-3 Silicon based Lab-On-a-Chip system for Single-Nucleotide-Polymorphism: Fabrication and characterization <i>B. Majeed¹, B. Jones¹, D. S. Tezcan¹, N. Tutun¹, L. Haspeslagh¹, S. Peeters², P. Fiorini¹, M. O. de Beek¹, C. van Hoof¹, M. Hiraoka³, H. Tanaka² and I. Yamashita⁴, ¹Imec and ²Panasonic corp. (Belgium)</i></p>	<p>10:00 CI-6-3 Si Waveguide-Integrated MSM Ge Photodiode <i>J. Fujikata^{1,2}, M. Noguchi^{1,2}, M. Miura^{1,2}, D. Okamoto^{1,2}, T. Horikawa¹ and Y. Arakawa^{1,3}, ¹PECST, ²PETRA, ³AIST and ⁴Univ. of Tokyo (Japan)</i></p>	<p>10:00 J-6-3 Inherently fast spin relaxation of exciton in photo-excited self-assembled quantum dots <i>Y. H. Liao¹, J. I. Clemente² and S. J. Cheng¹, ¹National Chiao-Tung Univ. and ²Universitat Jaume I, Castello (Taiwan)</i></p>				<p>9:45 N-6-3 Fabrication of Fully Epitaxial Magnetic Tunnel Junctions with CoFe Electrodes and a MgO Barrier on Ge(001) Substrates via a MgO Interlayer <i>G. F. Li, T. Taira, H. X. Liu, K. Matsuda, T. Uemura and M. Yamamoto, Hokkaido Univ. (Japan)</i></p>
<p>10:00 G-6-4 An Efficient Image-Vector-Generation Processor for Edge-Based Complementary Feature Representations <i>N. Yamashita and T. Shibata, Univ. of Tokyo (Japan)</i></p>	<p>10:00 H-6-4 Sub-micro-liter Electrochemical Single-Nucleotide-Polymorphism Detector for Lab-On-Chip System <i>H. Tanaka¹, P. Fiorini², S. Peeters², B. Majeed², T. Sierken², M. O. de Beek² and I. Yamashita¹, ¹Panasonic Corp. and ²Imec (Japan)</i></p>	<p>10:15 CI-6-4 Adjacent Channel Crosstalk in 0.18-μm Si CMOS Photodiode Arrays with Body Contact <i>G. Y. Chen, F. P. Chou, C. W. Wang and Y. M. Hsin, National Central Univ. (Taiwan)</i></p>	<p>10:15 J-6-4 Wavelength tunable single-photon source with a side gate <i>T. Nakaoka^{1,2,3}, Y. Tamura¹, T. Miyazawa¹, K. Watanabe¹, Y. Ota¹, S. Iwamoto¹ and Y. Arakawa¹, ¹Univ. of Tokyo, ²PRESTO-JST and ³Sophia Univ. (Japan)</i></p>				<p>10:00 N-6-4 Quasiparticle Tunneling Spectroscopy in Fe₃N/MgO/NbN Junctions <i>K. Sakuma¹, T. Hojoi¹, T. Miyavaki¹, K. Ueda¹, H. Asano¹, Y. Komazaki² and M. Tsunoda³, ¹Nagoya Univ. and ²Tohoku Univ. (Japan)</i></p>
<p>10:20 G-6-5 (Late News) Asynchronous Pulse Transmitter for Power Reduction in ThruChip Interface <i>M. Saito, N. Miura and T. Kuroda, Keio Univ. (Japan)</i></p>	<p>10:15 H-6-5 Recovery based nanowire field-effect transistor detection of pathogenic avian influenza DNA <i>C. H. Lin¹, K. N. Teng¹, C. J. Chu^{2,3}, C. D. Chen², L. C. Tsai³ and Y. S. Yang¹, ¹National Chiao Tung Univ., ²Academia Sinica and ³National Taipei Univ. of Tech. (Taiwan)</i></p>	<p>10:30 CI-6-5 Low-operation Voltage and High-speed Silicon Ring Optical Modulator with p/n Junctions along Waveguide <i>Y. Amemiya, R. Furutani, M. Fukuyama and S. Yokoyama, Hiroshima Univ. (Japan)</i></p>	<p>10:30 J-6-5 Donor-location-dependent RTS Observed by Trapping and Detrapping of a Photoexcited Electron by a Single Donor <i>A. Udhiarto, D. Moraru, T. Mizuno and M. Tabe, Shizuoka Univ. (Japan)</i></p>				<p>10:15 N-6-5 (Invited) Ultrafast Magneto-Optics Study on Magnetic Semiconductor (Ga,Mn)As <i>X. H. Zhang, Y. G. Zhu, L. F. Han, H. Yue, L. Chen and J. H. Zhao, Chinese Academy of Sci. (China)</i></p>
<p>10:35 G-6-6 (Late News) Post-Fabrication Independent L and Q Adjustment of On-Chip Inductors by Above-CMOS Processing for Rapid Prototyping of RF SoCs <i>Y. Sasaki and K. Kotani, Tohoku Univ. (Japan)</i></p>	<p>10:30 H-6-6 Ultralarge-scale DNA microreactor array enabling one-step synthesis of mutant protein library on chip <i>S. Sato^{1,2}, M. Bhyani^{1,3}, T. Akagi^{1,3} and T. Ichiki^{1,3}, ¹Univ. of Tokyo, ²CMSI and ³CREST-JST (Japan)</i></p>						

Coffee Break

Friday, September 30

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<p>AL-7: SiC&GaN Power Switching Devices (2) (Area 6&14) (11:15-12:30) Chairs: N. Ikeda (Advanced Power Device Res. Assoc.) M. Kuzuhara (Univ. of Fukui)</p>	<p>KM-7: Graphene Application (Area 8&13) (11:15-12:30) Chairs: K. Maehashi (Osaka Univ.) H. Kageshima (NTT Basic Res. Labs.)</p>	<p>B-7: Device physics and characterization of OTFT (2) (Area 10) (11:15-12:30) Chairs: E. Itoh (Shinshu Univ.) T. Manaka (Tokyo Tech)</p>		<p>D-7: ET-SOI and Nanowire Devices (Area 3) (11:15-12:25) Chairs: M. Hane (Renesas Electronics Corp.) O. Weber (CEA-LETI/MINATEC)</p>	<p>E-7: Ge Process Technology (2) (Area 1) (10:45-12:05) Chairs: T. Aoyama (Toshiba Corp.) T. Nabatame (NIMS)</p>	<p>F-7: ReRAM (2) (Area 4) (11:15-12:40) Chairs: M. J. Tsai (ITRI) K. Ishihara (Sharp Corp.)</p>
<p>11:15 AL-7-1 InAlN/AlN/GaN Schottky Source/Drain MIS-HEMT with High Breakdown Voltage Q. Zhou¹, H. Chen², C. Zhou², Z. H. Feng¹, S. J. Cai² and K. J. Chen¹, ¹Hong Kong Univ. of Sci. and Tech. and ²Hebei Semiconductor Res. Inst. (China)</p>	<p>11:15 KM-7-1 (Invited) Epitaxial CVD Growth of Graphene and Influence of Domain Structure on Transport Property H. Ago¹, C. M. Orofeo¹, Y. Ogawa¹, B. Hu¹, Y. Ito¹, K. Kawahara¹, M. Tsuji¹, K. Ikeda¹, S. Mizuno¹ and H. Hibino², ¹Kyushu Univ. and ²NTT Basic Res. Labs. (Japan)</p>	<p>11:15 B-7-1 Upward and Downward Orientation of an Interface Dipole Monolayer on Pentacene Organic Field-Effect Transistors: A Comparison Study O. Y. Wei¹, M. Weis², T. Manaka¹ and M. Iwamoto¹, ¹Tokyo Tech and ²Slovak Academy of Sci (Japan)</p>		<p>11:15 D-7-1 (Invited) Extremely Thin SOI (ETSOI) - a Planar CMOS Technology for System-on-chip Applications K. Cheng¹, A. Khakifirooz¹, P. Kulkarni¹, S. Ponoth¹, B. Haran¹, A. Kumar¹, T. Adam¹, A. Reznicek¹, N. Loubet¹, H. He¹, J. Kuss¹, M. Wang¹, T. M. Levin¹, F. Monsieur¹, Q. Liu², R. Sreenivasan¹, J. Cai¹, A. Kimball¹, S. Mehta¹, S. Luming¹, Y. Zhu¹, Z. Zhu¹, T. Yamamoto¹, A. Bryant¹, C. H. Lin¹, S. Naczas¹, H. Jagannathan¹, L. F. Edge¹, S. Allegret-Maref¹, A. Dube¹, S. Kanakasabapathy¹, S. Schmitz¹, A. Inada¹, S. Seo¹, M. Raymond¹, Z. Zhang¹, A. Yagishita¹, J. Demarest¹, J. Li¹, M. Hopstaken¹, N. Berliner¹, A. Upham¹, R. Johnson¹, S. Holmes¹, T. Standaert¹, M. Smalley¹, N. Zamdmer¹, Z. Ren¹, T. Nagumo¹, T. Wu¹, H. Bu¹, V. Paruchuri¹, D. Sadana¹, V. Narayanan¹, W. Haensch¹, J. O'Neill¹, T. Hook¹, M. Khare¹, G. Shahidi¹ and B. Doris¹, ¹IBM, ²STMicroelectronics, ³GLOBALFOUNDRIES, ⁴Renesas and ⁵Toshiba (USA)</p>	<p>10:45 E-7-1 Strained Ge Layers on SiGe(Sn) Buffer Layers Formed by Solid-phase Mixing Method T. Yamaha¹, K. Mochizuki¹, Y. Shimura^{1,2}, O. Nakatsuka¹ and S. Zaima¹, ¹Nagoya Univ. and ²JSPS (Japan)</p>	<p>11:15 F-7-1 (Invited) Current Status and Future Challenges of Resistive Switching Memories W. C. Chien, F. M. Lee, Y. Y. Lin, Y. C. Chen, M. H. Lee, H. L. Lung, K. Y. Hsieh and C. Y. Lu, <i>Macronix International Co., Ltd. (Taiwan)</i></p>
<p>11:30 AL-7-2 Selective Electrochemical Formation of Recessed-Oxide-Gate Structures for Al-GaN/GaN HEMTs N. Azumaishi¹, N. Harada¹ and T. Hashizume^{1,2}, ¹Hokkaido Univ. and ²CREST-JST (Japan)</p>	<p>11:45 KM-7-2 Touch Pressure Sensor using Metal/PVDF-TrFE/Graphene Device E. J. Paek, H. J. Hwang, S. K. Lee, C. G. Kang, C. H. Cho, Y. G. Lee, S. K. Lim and B. H. Lee, <i>GIST (Korea)</i></p>	<p>11:30 B-7-2 Mobility Improvement in Top-Gate Benzothienobenzothiophene Organic Transistors Processed by Spin Coating F. Mochizuki¹, T. Endo¹, T. Nagase¹, T. Kobayashi¹, K. Takimiya², M. Ikeda^{3,4} and H. Naito¹, ¹Osaka Prefecture Univ., ²Hiroshima Univ., ³Nippon Kayaku Corp., Ltd. and ⁴Kyushu Univ. (Japan)</p>		<p>11:45 D-7-2 Carrier Transport Mechanisms in Schottky Barrier Source/Drain Nanowire FETs with Lateral Silicidation Process T. Ishikawa, M. Saitoh, K. Ota, C. Tanaka and T. Numata, <i>Toshiba Corp. (Japan)</i></p>	<p>11:05 E-7-2 Evaluation of Anisotropic Strain Relaxation in SSOI Nanostructure by Oil-Immersion Raman Spectroscopy D. Kosemura¹, M. Tomita¹, K. Usuda² and A. Ogura¹, ¹Meiji Univ. and ²AIST (Japan)</p>	<p>11:45 F-7-2 Investigation of Forming and Its Controllability in Novel HfO₂-Based 1T1R 40nm-Crossbar RRAM Cells B. Govoreanu¹, S. Kubicek¹, G. Kar¹, Y. Y. Chen^{1,2}, V. Paraschiv¹, M. Rakowski^{1,2}, R. Degraeve¹, L. Goux¹, S. Clima¹, N. Jossart¹, C. Adelman¹, O. Richard¹, T. Raes¹, D. Vangoidenhoven¹, T. Vandeweyer¹, H. Tielens¹, K. Kellens¹, K. Devriendt¹, N. Heylen¹, S. Brus¹, B. Verbrugge¹, L. Pantisano¹, H. Bender¹, G. Pourtois¹, J.A. Kittl¹, D.J. Wouters^{1,2}, L. Altimime¹ and M. Jurczak¹, ¹Imec and ²Katholieke Univ. Leuven (Belgium)</p>
<p>11:45 AL-7-3 AlGaIn/GaN HFET grown on 6-inch diameter Si(111) substrates by MOCVD S. M. Cho, E. J. Hwang, J. Park, K. C. Kim and T. Jang, <i>LG Electronics Inst. of Tech. (Korea)</i></p>	<p>12:00 KM-7-3 Valinomycin-Modified Graphene Field-Effect Transistors for Potassium Ion Sensors Y. Sofue, Y. Ohno, K. Maehashi, K. Inoue and K. Matsumoto, <i>Osaka Univ. (Japan)</i></p>	<p>11:45 B-7-3 TIPS-Pentacene Organic Field-Effect Transistors Utilizing Poly(p-silsesquioxane) Insulating Layers With Different Phenol Groups Y. Nakanishi¹, H. Kajii¹, K. Tamura² and Y. Ohmori¹, ¹Osaka Univ. and ²Tokyo Ohka Kogyo Corp. Ltd. (Japan)</p>		<p>12:05 D-7-3 Advantages of Silicon Nanowire MOS-FETs over Planar Ones Investigated from the Viewpoints of Static and Noise Properties W. Feng^{1,2}, R. Hettiarachchi^{1,2}, S. Sato³, K. Kakushima³, M. Niwa^{1,2}, H. Iwai¹, K. Yamada^{1,2} and K. Ohmori^{1,2}, ¹Univ. of Tsukuba, ²CREST-JST and ³Tokyo Tech (Japan)</p>	<p>11:25 E-7-3 Channel strain measurements in 32nm-node CMOSFETs M. Takei¹, H. Hashiguchi¹, T. Yamaguchi¹, D. Kosemura¹, K. Nagata^{1,2} and A. Ogura¹, ¹Meiji Univ. and ²JSPS (Japan)</p>	<p>12:05 F-7-3 CMOS Compatible Hf-based RRAM with Ultra-low Switching Currents/Power F. Zhang¹, X. Li², B. Gao¹, B. Chen¹, P. Huang¹, Y. Fu¹, Y. Chen¹, L. Liu¹, J. Kang¹, N. Singh¹, G. Q. Lo² and D. L. Kwong², ¹Peking Univ. and ²A*STAR (China)</p>
<p>12:00 AL-7-4 AlGaIn/GaN HEMTs on Silicon with Hybrid Schottky-Ohmic Drain for Improved DC Characteristics Y. S. Lin, Y. W. Lian, H. C. Lu, Y. C. Huang and S. S. H. Hsu, <i>National Tsing Hua Univ. (Taiwan)</i></p>	<p>12:15 KM-7-4 Effect of ionic liquid on transfer characteristic of graphene channel on PZT J. Suzuki¹, S. Kataoka¹, T. Arie^{1,2} and S. Akita^{1,2}, ¹Osaka prefecture Univ. and ²CREST-JST (Japan)</p>	<p>12:00 B-7-4 Effects of Film Morphology on Ambipolar Transport of Solution-Processed Top-gate-Type Organic Field-Effect Transistors Utilizing Blended Fluorene Derivatives H. Kajii, K. Koivai and Y. Ohmori, <i>Osaka Univ. (Japan)</i></p>		<p>11:45 E-7-4 Characterization of strain and crystallinity in patterned embedded Silicon Germanium structures S. Mochizuki¹, A. Madan², A. Pofelski³, A. G. Domenicucci², P. L. Flaitz², J. Li², Y. Y. Wang², T. Pinto², C. W. Lai², J. R. Holst², E. C. T. Harley², M. W. Stoker², A. Reznicek², D. Schepis² and V. Paruchuri², ¹Renesas Electronics, ²IBM, ³STMicroelectronics and ⁴GLOBALFOUNDRIES Singapore (USA)</p>	<p>12:25 F-7-4 (Late News) Alloy and Strain Induced Multivalency in Magneli Phase Ti₃O_{2n+3} and TiO₂-HfO₂ Alloys: Singlet Negative Ion States and Non-Linear Metallic Conduction G. Lucovsky and J. W. Kim, <i>NC State Univ. (USA)</i></p>	

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11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
<p>G-7: RF Circuits (2) (Area 5) (11:15-12:35) Chairs: J. C. Guo (National Chiao Tung Univ.) M. Ikebe (Hokkaido Univ.)</p>	<p>H-7: Nano fabrication and Application (Area 11) (11:15-12:15) Chairs: K. Ajito (NTT Corp.) H. Nishio (OMRON Corp.)</p>	<p>CI-7: Optical Interconnect (2) (Area 2&7) (11:15-12:25) Chairs: S. Ogawa (AIST) H. Ishii (Toyohashi Univ. of Tech.)</p>	<p>J-7: Quantum Transport in Nanostructures (Area 9) (11:15-12:30) Chairs: T. Machida (Univ. of Tokyo) T. Nakaoka (Sophia Univ.)</p>				<p>N-7: Spin transport in semiconductors (Area 12) (11:15-12:30) Chairs: M. Yamamoto (Hokkaido Univ.) Y. Ohno (Tohoku Univ.)</p>
<p>11:15 G-7-1 A 60-GHz Band Low Power Differential CMOS LNA with Current-Reuse Topology Y. Subouchi, S. Kawai, T. Mitomo, S. Saigusa and O. Watanabe, Toshiba Corp. (Japan)</p>	<p>11:15 H-7-1 Electrostatic Control Mechanism of Lipid Bilayer Self-Spreading Using Nanogap as Molecule Gate Y. Kashimura, K. Furukawa and K. Torimitsu, NTT Basic Res. Labs. (Japan)</p>	<p>11:15 CI-7-1 (Invited) Optical Interconnection based on Silicon photonics S. Itabashi, K. Yamada, R. Kou, T. Watanabe, H. Shinjima, H. Nishi and T. Tsuchizawa, NTT Microsystem Integration Labs. (Japan)</p>					<p>11:15 N-7-1 (Invited) Spin Injection and Transport in a Si Channel at Room Temperature T. Suzuki¹, T. Sasaki², T. Oikawa³, M. Shiraishi³, Y. Suzuki³ and K. Noguchi², ¹AIT, ²TDK Corp. and ³Osaka Univ. (Japan)</p>
<p>11:35 G-7-2 Low Voltage and Low power UWB CMOS LNA using Forward Body Biasing Technique J. R. Huang and J. C. Guo, National Chiao Tung Univ. (Taiwan)</p>	<p>11:30 H-7-2 Fabrication of a micro-lens array for Reflective Electron Beam Lithography B. Vereecke¹, L. Haspeslagh¹, F. Lazarino¹, R. A. Miller¹, K. Kellens¹, H. Dekkers¹, R. Freed² and L. Grella², ¹Imec and ²KLA-Tencor Corp. (Belgium)</p>	<p>11:45 CI-7-2 High Efficient Unidirectional Optical Coupler for Through Silicon Photonic Via in Optoelectronic 3D-LSI A. Noriki, K. W. Lee, J. Bea, T. Fukushima, T. Tanaka and M. Koyanagi, Tohoku Univ. (Japan)</p>	<p>11:30 J-7-2 Coulomb diamonds and Two-electron Spin Blockade in Cotunneling Regime of Serial Vertical Triple Quantum Dot Device S. Amaha^{1,2}, W. Izumida³, T. Hatano^{3,4}, S. Teraoka^{2,5}, K. Ono^{1,2}, K. Kono¹, S. Taucha^{2,5}, J. Gupta⁶ and D. G. Austing⁸, ¹RIKEN, ²ICORP-JST, ³Tohoku Univ., ⁴ERATO-JST, ⁵Univ. of Tokyo and ⁶NRC-Canada (Japan)</p>				<p>11:45 N-7-2 Electrical Creation of Spin Accumulation in p-type Ge H. Saito¹, S. Watanabe^{1,2}, Y. Mineno^{1,3}, S. Sharma¹, R. Jansen¹, S. Yuasa¹ and K. Ando¹, ¹AIST and ²Univ. of Tsukuba (Japan)</p>
<p>11:55 G-7-3 An Inverter-based Wideband Low Noise Amplifier in 40nm CMOS Process D. N. Saimi Dharmiza, M. Otoru, S. Tanoi, H. Ito, N. Ishihara and K. Masu, Tokyo Tech (Japan)</p>	<p>11:45 H-7-3 Fabricating a 2D Array of Φ6-nm, High Density ($1.2 \times 10^{12} \text{ cm}^{-2}$), and Periodic Silicon-Nanodisk Structures and Its Optical Characteristics for Solar Cells M. F. Budiman^{1,4}, M. Igarashi^{1,4}, K. M. Itoh^{2,4}, I. Yamashita^{3,4}, W. Hu^{1,4} and S. Samukawa^{1,4}, ¹Tohoku Univ., ²Keio Univ., ³NAIST and ⁴CREST-JST (Japan)</p>	<p>12:05 CI-7-3 Investigation of grating coupler type optical I/O interface at the 1.55 μm wavelength range T. Osaka, T. Kita and H. Yamada, Tohoku Univ. (Japan)</p>	<p>11:45 J-7-3 Electrostatic tuning of plasmonic cavities for edge magnetoplasmons M. Hashisaka¹, N. Kumada², H. Kamata^{1,2}, K. Washio¹, K. Muraki² and T. Fujisawa¹, ¹Tokyo Tech and ²NTT Basic Res. Labs. (Japan)</p>				<p>12:00 N-7-3 Radius dependence of Aharonov-Casher spin interference in InGaAs ring arrays F. Nagasawa¹, J. Takagi¹, Y. Kunihashi¹, M. Kohda^{1,2} and J. Nitta¹, ¹Tohoku Univ. and ²PRESTO-JST (Japan)</p>
<p>12:15 G-7-4 A High Efficiency Linear CMOS Power Amplifier for 5.8 GHz Dedicated Short Range Wireless Communication Systems Y. Suh¹, S. He¹, Q. Liu¹, K. Horie² and T. Yoshimasu¹, ¹Waseda Univ. and ²Toshiba Corp. (Japan)</p>			<p>12:00 J-7-4 Effect of Free Carriers on Dopant-induced Surface Potential in SOI-FETs M. Anwar¹, R. Nowak^{1,2}, D. Moraru¹, R. Jablonski², T. Mizuno¹ and M. Taber¹, ¹Shizuoka Univ. and ²Warsaw Univ. of Tech. (Japan)</p>				<p>12:15 N-7-4 Effect of MgO Barrier Insertion on Spin-dependent Transport Properties of CoFe/n-GaAs T. Akiho, T. Uemura, M. Harada, K. Matsuda and M. Yamamoto, Hokkaido Univ. (Japan)</p>

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5F Hall 1	5F Hall 2	10F 1002	10F 1003	11F 1101	11F 1102	11F 1103
<p>AL-7: SiC&GaN Power Switching Devices (2) (Area 6&14)</p> <p>12:15 AL-7-5 Step-stress Reliability Studies on AlGaIn/GaN HEMTs on Silicon with Buffer Thickness Dependence <i>A. F. Wilson, A. Wakejima, S. L. Selvaraj and T. Egawa, Nagoya Inst. of Tech. (Japan)</i></p>	<p>KM-7: Graphene Application (Area 8&13)</p>	<p>B-7: Device physics and characterization of OTFT (2) (Area 10)</p> <p>12:15 B-7-5 Effects of Silver Nanoparticles Organic Envelope on Pentacene Organic Field-effect Transistors <i>K. Lee, M. Weis, X. Chen, D. Taguchi, T. Manaka and M. Iwamoto, Tokyo Tech (Japan)</i></p>		<p>D-7: ET-SOI and Nanowire Devices (Area 3)</p>	<p>E-7: Ge Process Technology (2) (Area 1)</p>	<p>F-7: ReRAM (2) (Area 4)</p>
12:30-14:00 Lunch						
<p>A-8: Processing and Characterization Technologies (Area 6) (14:00-15:30) Chairs: Y. Miyamoto (Tokyo Tech) Y. Ohno (Univ. of Tokushima)</p>		<p>B-8: OTFT application (1) (Area 10) (14:00-15:45) Chairs: M. Sakai (Chiba Univ.) M. Yoshida (AIST)</p>	<p>C-8: 3D Interconnect (2) and Characterization (2) (Area 2) (14:00-15:50) Chairs: P. Leduc (CEA-LETI/MINATEC) T. Hasegawa (Sony Corp.)</p>	<p>D-8: Device Reliability (Area 3) (14:00-15:30) Chairs: D. Hisamoto (Hitachi, Ltd.) B. Doris (IBM)</p>	<p>E-8: III-V CMOS Technology (Area 1) (13:35-15:55) Chairs: E. Nishimura (Tokyo Electron Ltd.) T. Nakayama (Chiba Univ.)</p>	<p>F-8: ReRAM (3) (Area 4) (14:00-15:40) Chairs: K. Ishihara (Sharp Corp.) M. Moniwa (Renesas Electronics Corp.)</p>
<p>14:00 A-8-1 High Integrity SiO₂ Gate Insulator Formed by Microwave-Excited PECVD for AlGaIn/GaN Hybrid MOS-HFET on Si Substrate <i>H. Kamabayashi^{1,3}, T. Nomura¹, S. Kato¹, H. Ueda², A. Teramoto³, S. Sugawa³ and T. Ohmi³, ¹Advanced Power Device Res. Association, ²Tokyo Electron Tech. Development Inst. Inc. and ³Tohoku Univ. (Japan)</i></p> <p>14:15 A-8-2 Low-Leakage Current n-GaN/AlGaIn/GaN HEMT with TaO_xN_x Gate Dielectric <i>T. Sato, J. Okayasu, T. Yamanouchi, T. Yashiro, J. Suzuki and M. Takikawa, Advantest Labs. Ltd. (Japan)</i></p> <p>14:30 A-8-3 Impacts of Dry Etching of GaN and Al-GaN Surfaces on Interface Properties of GaN-based MOS Structures <i>S. Kim¹, Y. Hori¹, N. Azumaishi¹ and T. Hashizume^{1,2}, ¹Hokkaido Univ. and ²CREST-JST (Japan)</i></p> <p>14:45 A-8-4 Damage-free GaN Etching by Chlorine Neutral Beam <i>Y. Tamura^{1,3}, X. Y. Wang^{1,3}, C. H. Huang^{1,3}, T. Kubota¹, J. Ohta¹, H. Fujioka^{2,3} and S. Samukawa^{1,3}, ¹Tohoku Univ., ²Univ. of Tokyo and ³CREST-JST (Japan)</i></p>	<p>14:00 B-8-1 (Invited) Organic Thin-Film Transistor-Based Non-Volatile Memory Devices <i>J. S. Lee, Kookmin Univ. (Korea)</i></p> <p>14:30 C-8-2 Stress from Tungsten-Filled TSVs Measured by Raman Spectroscopy on Cross-Sectional Samples <i>J. Gambino¹, D. Vanslette¹, B. Webb¹, C. Luce¹, G. Chrisman¹, T. Ueda², T. Ishigaki², K. Kang² and W.S. Yoo², ¹IBM and ²Wafer-Masters, Inc. (USA)</i></p> <p>14:50 C-8-3 Evaluation of Thermo-Mechanical Stress Induced by W-TSVs in 3D-LSI with W/Cu Hybrid TSVs <i>H. Hashiguchi¹, M. Murugesan¹, J. C. Bea¹, K. W. Lee¹, T. Fukushima¹, H. Kobayashi², T. Tanaka¹ and M. Koyanagi¹, ¹Tohoku Univ. and ²Association of Super-Advanced Electronics Tech. (Japan)</i></p> <p>15:00 B-8-4 Variation of Active Layer Thickness of Polymer Thin Film Transistors and its Effect on Digital Circuits Performance <i>L. Reséndiz¹, M. Estrada¹, A. Cerdeira² and V. Cabrera¹, ¹Inst. UPIITA - IPN and ²Res. CINVESTAV (Mexico)</i></p>	<p>14:00 C-8-1 (Invited) Low temperature curable nano-inks for printed wiring and transparent films <i>K. Suganuma, M. Nogi, T. Tokuno and J. Jiu, Osaka Univ. (Japan)</i></p> <p>14:30 C-8-2 Stress from Tungsten-Filled TSVs Measured by Raman Spectroscopy on Cross-Sectional Samples <i>J. Gambino¹, D. Vanslette¹, B. Webb¹, C. Luce¹, G. Chrisman¹, T. Ueda², T. Ishigaki², K. Kang² and W.S. Yoo², ¹IBM and ²Wafer-Masters, Inc. (USA)</i></p> <p>14:50 C-8-3 Evaluation of Thermo-Mechanical Stress Induced by W-TSVs in 3D-LSI with W/Cu Hybrid TSVs <i>H. Hashiguchi¹, M. Murugesan¹, J. C. Bea¹, K. W. Lee¹, T. Fukushima¹, H. Kobayashi², T. Tanaka¹ and M. Koyanagi¹, ¹Tohoku Univ. and ²Association of Super-Advanced Electronics Tech. (Japan)</i></p> <p>15:10 C-8-4 Size and Deformation Mode Dependencies on the Strength of Dry-Etched Single Crystal Silicon Micro-Beams <i>T. Namazu^{1,2}, H. Yamagiwa¹, T. Fujii¹, M. Saito¹, K. Yamada¹ and T. Miyatake³, ¹Univ. of Hyogo, ²PRESTO-JST and ³Panasonic Electric Works Co., Ltd. (Japan)</i></p>	<p>14:00 D-8-1 (Invited) A Consistent Modeling Framework to Explain Negative Bias Temperature Instability (NBTI) DC Stress, Recovery and AC Experiments <i>S. Mahapatra¹, A. E. Islam², S. Deora¹, V. D. Maheta¹ and M. A. Alam², ¹IIT Bombay and ²Purdue Univ. (India)</i></p> <p>14:30 D-8-2 HCl and NBTI Induced statistical Variability in CMOS Transistors <i>A. Cathignol¹, F. Cacho², X. Federspiel² and D. Roy², ¹IBM and ²STMicroelectronics (France)</i></p> <p>14:50 D-8-3 Compact Reaction-Diffusion Model for Accurate NBTI Prediction <i>C. Ma^{1,3}, M. Miyake¹, H. J. Mattausch¹, K. Matsuzawa², T. Itzuka², T. Hozhida², A. Kinoshita², T. Arakawa², J. He² and M. Miura-Mattausch¹, ¹Hiroshima Univ., ²STARC and ³Peking Univ. (Japan)</i></p> <p>15:10 D-8-4 Enhanced Degradation by NBT stress in Si Nanowire Transistor <i>K. Ota¹, M. Saitoh¹, C. Tanaka¹, Y. Nakabayashi¹, K. Uchida² and T. Numata¹, ¹Toshiba Corp. and ²Tokyo Tech (Japan)</i></p>	<p>13:35 E-8-1 (Invited) Challenges for High-k/III-V CMOS: Interfacial Chemistry, Defects, and Fermi Level Pinning <i>R. M. Wallace, Univ. of Texas (USA)</i></p> <p>14:05 E-8-2 Guiding Principles for Bonding and Passivation at III-V – oxide Interfaces <i>J. Robertson and L. Lin, Cambridge Univ. (UK)</i></p> <p>14:25 E-8-3 Effect of sulfur treatment on HfO₂/InGaAs MOS interfaces properties <i>R. Suzuki¹, S. Lee¹, S. H. Kim¹, T. Hoshii¹, M. Yokoyama¹, N. Taoka¹, T. Yasuda², W. Jevasuwan², T. Maeda², O. Ichikawa¹, N. Fukuhara³, M. Hata³, M. Takenaka¹ and S. Takagi¹, ¹Univ. of Tokyo, ²AIST and ³Sumitomo Chemical Co., Ltd. (Japan)</i></p> <p>14:55 E-8-4 Effects of Nitrided-InGaAs Interfacial Layers formed by ECR nitrogen plasma on Al₂O₃/InGaAs MOS Properties <i>T. Hoshii¹, S. Lee¹, R. Suzuki¹, N. Taoka¹, M. Yokoyama¹, H. Yamada², W. Jevasuwan², M. Hata², T. Yasuda³, M. Takenaka¹ and S. Takagi¹, ¹Univ. of Tokyo, ²AIST and ³Sumitomo Chemical Co., Ltd. and ³AIST (Japan)</i></p>	<p>14:00 F-8-1 50nm HfO₂ ReRAM with 50-Times Endurance Enhancement by Set/Reset Turnback Pulse & Verify Scheme <i>K. Higuchi, K. Miyaji, K. Johguchi and K. Takeuchi, Univ. of Tokyo (Japan)</i></p> <p>14:20 F-8-2 Hetero-device complementary resistive switches with high switch speed and reliability for cross point array applications <i>D. Lee, J. Park, S. Jung, G. Choi, J. M. Lee, M. Siddik, J. Shin, S. Kim, J. Woo and H. Hwang, Gwangju Inst. of Sci. and Tech. (Korea)</i></p> <p>14:40 F-8-3 Flexible One Diode-One Resistor Cross-bar Resistive-Switching Memory <i>C. W. Hsu¹, J. J. Huang¹, Y. M. Tseng¹, T. H. Hou¹, W. H. Chang², W. Y. Jiang² and C. H. Lin², ¹National Chiao Tung Univ. and ²Winbond Electronics Corp. (Taiwan)</i></p> <p>15:00 F-8-4 Formation free low power resistive switching memory using IrO_x/AlO_x/W cross-point with excellent uniformity and multi level operation <i>W. Banerjee, S. Z. Rahaman and S. Maikap, Chang Gung Univ. (Taiwan)</i></p>	

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11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
G-7: RF Circuits (2) (Area 5)	H-7: Nano fabrication and Application (Area 11)	CI-7: Optical Interconnect (2) (Area 2&7)	J-7: Quantum Transport in Nanostructures (Area 9)				N-7: Spin transport in semiconductors (Area 12)
			12:15 J-7-5 Nanoparticle Single-Electron Transistor with Metal Bridged Top-Gate Electrodes <i>Y. Azuma^{1,2}, S. Suzuki^{1,2}, K. Maeda^{1,2}, N. Okabayashi^{1,2}, D. Tanaka^{2,3}, T. Teranishi^{2,3}, M. R. Buitelaar⁴, C. G. Smith⁴ and Y. Majima^{1,2,3}, ¹Tokyo Tech, ²CREST-JST, ³Tsukuba Univ., ⁴Univ. of Cambridge and ⁵Sunchon National Univ. (Japan)</i>				

12:30-14:00 Lunch

		I-8: SiGe-Based Optical Devices (Area 7) (14:00-15:30) Chairs: S. Saito (Hitachi Ltd.) N. Iizuka (Toshiba Corp.)	J-8: Qubit and Novel Functional Devices (Area 9) (14:00-15:45) Chairs: K. Ono (RIKEN) T. Tanamoto (Toshiba Corp.)	K-8: Graphene Property (Area 13) (14:00-15:45) Chairs: J. H. Ahn (Sungkyunkwan Univ.) S. Sato (AIST)	L-8: Power Devices & ICs (Area 14) (14:00-15:45) Chairs: M. Ishiko (Toyota Central R&D Labs., Inc) N. Ikeda (Advanced Power Device Res. Assoc.)	M-8: Growth techniques of Si and Ge (Area 8) (14:00-15:45) Chairs: H. Hibino (NTT Basic Res. Labs.) K. Hara (Shizuoka Univ.)	N-8: Circuit application of spintronics devices (Area 12) (14:00-15:30) Chairs: K. Ito (Hitachi, Ltd.) M. Oogane (Tohoku Univ.)
		14:00 I-8-1 Electroluminescence from One-dimensionally Self-Aligned Si-based Quantum Dots with High Areal Dot Density <i>K. Makihara¹, H. Deki², M. Ikeda³ and S. Miyazaki¹, ¹Nagoya Univ., ²Hiroshima Kokusai Gakuin Univ. and ³Hiroshima Univ. (Japan)</i>	14:00 J-8-1 (Invited) Atomic physics and quantum optics using circuits behaving as tunable artificial atoms <i>F. Nori^{1,2}, ¹RIKEN and ²Univ. of Michigan (Japan)</i>	14:00 K-8-1 (Invited) Trends and Future of Ultrafast Transistors and Terahertz Light Amplification by Stimulated Emission of Radiation Using Graphene <i>T. Otsuji^{1,2}, ¹Tohoku Univ. and ²CREST-JST (Japan)</i>	14:00 L-8-1 (Invited) Key Power Device Technologies Catering to Sustainable Growth of Power Electronics <i>G. Majumdar, Mitsubishi Electric Corp. (Japan)</i>	14:00 M-8-1 Impact on TFT Characteristics of Rapid Crystallization of Si using Nickel-Metal Induced Lateral Crystallization <i>S. Nagata, G. Nakagawa and T. Asano, Kyushu Univ. (Japan)</i>	14:00 N-8-1 Anisotropic phase coherent length affected by coexistence of a spin orbit interaction and an in-plane magnetic field in InGaAs narrow wire structures <i>S. Nonaka¹, Y. Kunihashi¹, M. Kohda^{1,2} and J. Nitta¹, ¹Tohoku Univ. and ²PRESTO-JST (Japan)</i>
		14:15 I-8-2 Demonstration of Silicon Nanocavity LED with Enhanced Luminescence <i>S. Nakayama, S. Iwamoto, S. Kako, S. Ishida and Y. Arakawa, Univ. of Tokyo (Japan)</i>	14:30 J-8-2 Steady-state solution for dark states using a three-level system in coupled quantum dots <i>T. Tanamoto¹, K. Ono² and F. Nori^{2,3}, ¹Toshiba Corp., ²RIKEN and ³Univ. of Michigan (Japan)</i>	14:30 K-8-2 Effects of Randomly Distributed Local Dirac Points in Graphene Channel on Its FET Transfer Characteristics <i>R. Ifuku, K. Nagashio, T. Nishimura and A. Toriumi, Univ. of Tokyo (Japan)</i>	14:30 L-8-2 Extraction enhanced lateral IGBT (E² LIGBT) : A super high speed LIGBT superior to LDMOS <i>S. Ashida¹, S. Takahashi¹, S. Shiraki¹, N. Tokura¹ and A. Nakagawa², ¹DENSO Corp. and ²Nakagawa Consulting Office (Japan)</i>	14:15 M-8-2 High Speed Lateral Crystallization of Amorphous Silicon Films on Glass Substrates by Micro-Thermal-Plasma-Jet Irradiation and Its Application to Thin Film Transistor Fabrication <i>Y. Fujita, S. Hayashi, H. Murakami and S. Higashi, Hiroshima Univ. (Japan)</i>	14:15 N-8-2 A Compact Nonvolatile Logic Element Using an MTJ/MOS-Hybrid Structure <i>D. Suzuki, M. Natsui, T. Endoh, H. Ohno and T. Hanyu, Tohoku Univ. (Japan)</i>
		14:30 I-8-3 Si/SiO₂ Bilayer Beam Structure for Photoelastic Control of Si Photonic Devices <i>M. Hirase, Y. Ishikawa and K. Wada, Univ. of Tokyo (Japan)</i>	14:45 J-8-3 Ultra-Low-Power Superconducting Logic Devices using Adiabatic Quantum Flux Parametron <i>N. Yoshikawa, D. Ozawa and Y. Yamamashi, Yokohama National Univ. (Japan)</i>	14:45 K-8-3 Graphene Growth on Sidewall of Catalyst by CVD and Its Application to Graphene Transistors <i>H. An¹, W. G. Lee² and J. W. Jung¹, ¹Sejong Univ. and ²National Nano Fab Center (Korea)</i>	14:45 L-8-3 High Voltage and high reliability SOI power IC technologies and their application to 750V 4.5A micro-inverter IC <i>S. Shiraki, S. Takahashi, A. Yamada, M. Yamamoto, K. Senda, Y. Ashida, A. Hiruma and N. Tokura, DENSO Corp. (Japan)</i>	14:30 M-8-3 Investigation of Ni Metal Induced Lateral Crystallization with a-Si Film Thickness at Very Thin Extent <i>G. Nakagawa, T. Nakamae and T. Asano, Kyushu Univ. (Japan)</i>	14:30 N-8-3 Physics-based SPICE Model of Spin Torque Oscillators <i>H. Lim, S. Ahn, S. Lee and H. Shin, Ewha Womans Univ. (Korea)</i>
		14:45 I-8-4 Light Detection and Emission in Germanium-On-Insulator Diodes <i>K. Tani^{1,2,3}, S. Saito^{1,2,3}, Y. Lee¹, K. Oda^{1,2,3}, T. Mine¹, T. Sugawara^{1,2,3} and T. Ido^{1,2,3}, ¹PECST, ²PETRA and ³Hitachi, Ltd. (Japan)</i>	15:00 J-8-4 Atto-Joule Operation of High-Speed Shift Register Based on Ultra Low-Power Rapid Single Flux Quantum Circuit Technology <i>A. Fujimaki¹, M. Tanaka^{1,2}, A. Kitayama¹, T. Kouketsu¹ and M. Ito¹, ¹Nagoya Univ. and ²UC, Berkeley (Japan)</i>	15:00 K-8-4 Electrical Conductance in Graphene Contacting with Metal <i>T. Moriyama, K. Nagashio, T. Nishimura and A. Toriumi, Univ. of Tokyo (Japan)</i>	15:00 L-8-4 A Novel FEM-LDMOS of Improved Off-state Breakdown Voltage Without Additional Mask <i>H. B. Chen¹, C. J. Chang², J. J. Wu¹, W. C. Chen¹, C. C. Tsai² and C. Y. Chang¹, ¹National Chiao Tung Univ., ²Himax Technologies and ³Yanguard International Semiconductor Corp. (Taiwan)</i>	14:45 M-8-4 Orientation Control of Al-Induced Crystallized Silicon by Diffusion Barrier Layers <i>A. Okada¹, K. Toko¹, K. Hara², N. Usami^{2,3} and T. Suemasu^{1,3}, ¹Univ. of Tsukuba, ²Tohoku Univ. and ³CREST-JST (Japan)</i>	14:45 N-8-4 Time-Resolved Switching Characteristic in Magnetic Tunnel Junction with Spin Transfer Torque Write Scheme <i>F. Iga, Y. Yoshida, S. Ikeda, T. Hanyu, H. Ohno and T. Endoh, Tohoku Univ. (Japan)</i>

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5F Hall 1	5F Hall 2	10F 1002	10F 1003	11F 1101	11F 1102	11F 1103
A-8: Processing and Characterization Technologies (Area 6) 15:00 A-8-5 Germanium/Ni-InGaAs Solid-State Reaction for Contact Resistance Reduction on n⁺ In_{0.53}Ga_{0.47}As <i>H. X. Guo, E. Y. J. Kong, X. Zhang and Y. C. Yeo, National Univ. of Singapore (Singapore)</i> 15:15 A-8-6 Fabrication and analysis of AlN/GaAs(001) metal-insulator-semiconductor structure <i>M. Kudo, H. A. Shih, M. Akabori and T. Suzuki, JAIST (Japan)</i>		B-8: OTFT application (1) (Area 10) 15:15 B-8-5 Control of switching voltage of low voltage organic complementary inverter using floating gate structure <i>T. Yokota¹, T. Sekitani¹, T. Nakagawa¹, Y. Noguchi¹, K. Takeuchi¹, U. Zschieschang², H. Klauk² and T. Someya¹, ¹Univ. of Tokyo, and ²Max Planck Inst. for Solid State Res. (Japan)</i> 15:30 B-8-6 3V-Operation Organic Transistors on Shape-Memory Film with Polyimide Planarization Layer <i>Y. Kato¹, T. Sekitani¹, T. Yokota¹, K. Kuribara¹, U. Zschieschang², H. Klauk², T. Yamamoto³, K. Takimiya⁴, M. Ikeda⁴, H. Kuwabara⁴ and T. Someya¹, ¹Univ. of Tokyo, ²Max Planck Inst. for Solid State Res., ³Hiroshima Univ. and ⁴Nippon Kayaku Corp. Ltd. (Japan)</i>	C-8: 3D Interconnect (2) and Characterization (2) (Area 2) 15:30 C-8-5 Local Interface Strength Evaluation for LSI Interconnect with Micron Resolution <i>N. Shishido^{1,3}, C. Chen¹, H. Sato^{1,5}, S. Kamiya^{1,5}, M. Nishida^{1,5}, M. Omiya^{2,5}, T. Nokuo^{3,5}, T. Nagasawa^{3,5}, T. Suzuki¹ and T. Nakamura⁴, ¹Nagoya Inst. of Tech., ²Keio Univ., ³JEOL Ltd., ⁴Fujitsu Labs. Ltd. and ⁵CREST-JST (Japan)</i>	D-8: Device Reliability (Area 3)	E-8: III-V CMOS Technology (Area 1) 15:15 E-8-5 Controlling anion composition at MIS interfaces on III-V Channels by Plasma Processing <i>W. Jevasiwan¹, Y. Urabe¹, T. Maeda¹, N. Miyata¹, T. Yasuda¹, A. Ohtake², H. Yamada³, M. Hata³, S. Lee¹, T. Hoshii⁴, M. Takenaka⁴ and S. Takagi¹, ¹AIST, ²NIMS, ³Sumitomo Chemical. Co., Ltd. and ⁴Univ. of Tokyo (Japan)</i> 15:35 E-8-6 Formation of Ultra-thin and Uniform Ni-InGaAs Alloyed Contact for Scaled Metal S/D InGaAs MOSFETs <i>T. Irisawa, M. Oda and T. Tezuka, AIST (Japan)</i>	F-8: ReRAM (3) (Area 4) 15:20 F-8-5 Highly Uniform and Reliable Switching Properties in NbO_x Based RRAM Devices <i>S. M. Sadaf, X. Liu, S. H. Choudhury, J. Shin, J. Woo, M. Siddik and H. Hwang, Gwangju Inst. of Sci. and Tech. (Korea)</i>

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		B-9: OTFT application (2) (Area 10) (16:10-17:25) Chairs: T. Manaka (Tokyo Tech) K. Kato (Niigata Univ.)	C-9: Characterization (3) (Area 2) (16:10-17:30) Chairs: J. Gambino (IBM Microelectronics) Y. Otsuka (Toray Research Center Inc.)		E-9: Advanced Si Technology (Area 1) (16:10-17:25) Chairs: J. Yugami (Renesas Electronics Corp.) T. Nakayama (Chiba Univ.)	F-9: ReRAM (4) (Area 4) (16:10-17:10) Chairs: Y. C. Chen (Macronix International Co., Ltd.) T. Endoh (Tohoku Univ.)
		16:10 B-9-1 Bending test of organic TFTs with a soluble polycrystalline semiconductor <i>T. Tokuhara, T. Sekitani, T. Yokota and T. Someya, Univ. of Tokyo (Japan)</i>	16:10 C-9-1 In Situ Analysis of Plasma-Induced Modification on Porous SiOCH Films <i>H. Yamamoto, K. Asano, K. Ishikawa, K. Takeda, H. Kondo, M. Sekine and M. Hori, Nagoya Univ. (Japan)</i>		16:10 E-9-1 Silicon-On-Insulator Fabrication Using Si/HfO₂/Si Epitaxial Structure <i>S. Migita and H. Ota, AIST (Japan)</i>	16:10 F-9-1 Record resistance ratio and bipolar/unipolar resistive switching scenario using novel Cu/GeO_x/W memory device <i>S. Z. Rahaman¹, S. Maikap¹, S. K. Ray^{1,2}, H. Y. Lee³, W. S. Chen³, F. T. Chen³, M. J. Kao³ and M. J. Tsai³, ¹Chang Gung Univ., ²Indian Inst. of Tech. and ³ITRI (Taiwan)</i>
		16:25 B-9-2 Solution-processed C₆₀ field-effect transistors with high mobility <i>W. Kang¹, M. Kitamura^{1,2}, M. Kamura^{1,3}, S. Amori^{1,4} and Y. Arakawa¹, ¹Univ. of Tokyo, ²Kobe Univ. and ³Sharp Corp. (Japan)</i>	16:30 C-9-2 Potential Characterization of Interconnect Corrosion by Kelvin Probe Force Microscopy <i>M. Kodera, Y. Yoshimizu and K. Uchida, Toshiba Corp. (Japan)</i>		16:30 E-9-2 Enabling epitaxy on ultrathin implanted SOI <i>L. Grenouillet¹, N. Posseme¹, S. Ponoth², N. Loubet¹, V. Destefanis¹, Y. Le Tiec¹, S. Mehta², A. Kumar², Q. Liu³, B. Haran², K. Cheng², N. Berliner², J. Fullam², J. Kuss², G. Shahidi², O. Faynot², B. Doris² and M. Vinet¹, ¹CEA-LETI, ²IBM and ³ST Microelectronics (USA)</i>	16:30 F-9-2 Effects of Ti interfacial layer on resistive switching memory performance using Cu filament in high-κ Ta₂O₅ solid-electrolyte <i>A. K. Sahoo¹, S. Z. Rahaman¹, S. Maikap¹, H. Y. Lee², W. S. Chen², F. T. Chen², M. J. Kao² and M. J. Tsai², ¹Chang Gung Univ. and ²ITRI (Taiwan)</i>

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11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
		<p>I-8: SiGe-Based Optical Devices (Area 7)</p> <p>15:00 I-8-5 Improving Optical Properties of Ge Layers Fabricated by Epitaxial Growth Combined with Ge Condensation <i>K. Oda^{1,2,3}, K. Tani^{1,2,3}, S. Saito^{1,2,3}, T. Okumura¹ and T. Ido^{1,2,3}</i>¹PETRA, ²PECST and ³Hitachi Ltd. (Japan)</p> <p>15:15 I-8-6 Photoluminescence from n⁺-Ge microdisk on Si-on-Insulator Structure <i>K. Takinai¹, A. Yoshida¹, Y. Ishikawa¹, K. Wada¹, T. Tsuchizawa², T. Watanabe², K. Yamada² and S. Itabashi²</i>¹Univ. of Tokyo and ²NTT Microsystem Integration Labs. (Japan)</p>	<p>J-8: Qubit and Novel Functional Devices (Area 9)</p> <p>15:15 J-8-5 Induced Dielectric Polarization and Piezoelectric Effects on Valence Band alignment in Multi-Quantum Well Composed of Wurtzite Semiconductors <i>S. Emura, M. Morifuji, M. Kondow and H. Asahi, Osaka Univ. (Japan)</i></p> <p>15:30 J-8-6 (Late News) Correlation measurement of I/f noise in semiconductor point contacts with a common lead <i>M. Yamagishi¹, M. Hashisaka¹, K. Muraki² and T. Fujisawa¹</i>¹Tokyo Tech and ²NTT Basic Res. Labs. (Japan)</p>	<p>K-8: Graphene Property (Area 13)</p> <p>15:15 K-8-5 Electronic Structure Modulation of Graphene Adsorbed by Metal Pillars <i>Y. Takagi^{1,2} and S. Okada^{1,2}</i>¹Univ. of Tsukuba and ²CREST-JST (Japan)</p> <p>15:30 K-8-6 (Late News) Field-Effect Transistor with Graphene by Direct Alcohol CVD <i>M. Ishii, A. Nakamura, H. Inokawa and J. Temmyo, Shizuoka Univ. (Japan)</i></p>	<p>L-8: Power Devices & ICs (Area 14)</p> <p>15:15 L-8-5 Reduction of Power Loss of Zero Current Switching Converter by Optimizing Power Devices <i>S. Machida¹, N. Kikuchi¹, T. Segawa², Y. Shimo² and M. Kobayashi²</i>¹Toyota Central R&D Labs. Inc. and ²Toyota Motor Corp. (Japan)</p> <p>15:30 L-8-6 Dynamic-Carrier-Distribution-Based Compact Modeling of P-i-N Diode Reverse Recovery Effect <i>J. Nakashima, M. Miyake and M. Miura-Mattausch, Hiroshima Univ. (Japan)</i></p>	<p>M-8: Growth techniques of Si and Ge (Area 8)</p> <p>15:00 M-8-5 Phosphorus Mediated Growth of Ge Layer on Si(001) Substrate <i>H. Hanafusa¹, N. Hirose², A. Kasamatsu², T. Mimura², T. Matsui² and Y. Suda¹</i>¹Tokyo Univ. of Agri. and Tech. and ²NICT (Japan)</p> <p>15:15 M-8-6 Precise thickness and strain control during epitaxial growth of strained Ge/SiGe multilayers by industrial class CVD <i>M. Myronov, X. C. Liu, A. Dobbie and D. R. Leadley, Univ. of Warwick (UK)</i></p> <p>15:30 M-8-7 Boron and Carbon co-doping in high percentage Silicon-Germanium Alloys - Effects of Dopant Incorporation, Strain Compensation and Microstructure - <i>A. Reznicek, T. N. Adam, Z. Zhu, J. Li, R. Murphy, S. W. Badell, V. Paruchuri and D.K. Sadana, IBM (USA)</i></p>	<p>N-8: Circuit application of spintronics devices (Area 12)</p> <p>15:00 N-8-5 Mixing Effect in Magnetic Tunnel Junctions <i>G. Shiomi¹, Y. Masugata¹, S. Ishibashi¹, H. Tomita¹, D. Maehara², T. Nozaki², S. Miwa¹, H. Kubota², A. Fukushima², S. Yuasa² and Y. Suzuki¹</i>¹Osaka Univ. and ²AIST (Japan)</p> <p>15:15 N-8-6 Role of Synthetic Ferrimagnets in MTJs from Wave Packet Dynamics <i>M. Arikawa¹, M. Muraguchi^{1,2}, Y. Hatsugai^{1,3}, K. Shiraiishi³ and T. Endoh¹</i>¹Tohoku Univ., ²CREST-JST and ³Univ. of Tsukuba (Japan)</p>

Coffee Break

		<p>I-9: Quantum-Dot Devices (Area 7) (16:10-17:25) Chairs: A. Wakahara (Toyohashi Univ. of Tech.) M. Tokushima (AIST)</p>		<p>K-9: Graphene Device (Area 13) (16:10-17:25) Chairs: T. Otsuji (Tohoku Univ.) H. Tsuchiya (Kobe Univ.)</p>	<p>L-9: Novel Concepts (Area 14) (16:10-17:25) Chairs: N. Usami (Tohoku Univ.) Y. Kurokawa (Tokyo Tech)</p>	<p>M-9: Characterization of group IV related materials (Area 8) (16:10-17:10) Chairs: K. Hara (Shizuoka Univ.) H. Hibino (NTT Basic Res. Labs.)</p>	<p>N-9: Physics of spintronics devices (Area 12) (16:10-17:25) Chairs: J. H. Zhao (Chinese Academy of Sciences) K. Ito (Hitachi, Ltd.)</p>
		<p>16:10 I-9-1 Effect of Reduced Stacking Periods on Modulation Bandwidth of Self-Assembled Quantum-Dot Lasers: Theoretical Study <i>M. Ishida¹, Y. Tanaka^{2,3,4,5}, T. Yamamoto^{2,3,4,5}, M. Sugawara² and Y. Arakawa¹</i>¹Univ. of Tokyo, ²Fujitsu Labs. Ltd., ³Fujitsu Ltd., ⁴PETRA and ⁵QD Laser, Inc. (Japan)</p> <p>16:25 I-9-2 Characterization of wavelength tunable quantum dot external cavity laser (QD-ECL) for 1.3-μm waveband narrow line-width coherent light source <i>N. Yamamoto¹, K. Akahane¹, T. Kawanishi¹, Y. Yoshioka¹ and H. Takai²</i>¹NICT and ²Tokyo Denki Univ. (Japan)</p>		<p>16:10 K-9-1 Electrical Characterization of Bilayer Graphene Formed by Hydrogen Intercalation of Monolayer Graphene on SiC(0001) <i>S. Tanabe, Y. Sekine, H. Kageshima and H. Hibino, NTT Basic Res. Labs. (Japan)</i></p> <p>16:25 K-9-2 Electric-field-induced band gap of bilayer graphene in ionic liquid <i>Y. Yamashiro, Y. Ohno, K. Maehashi, K. Inoue and K. Matsumoto, Osaka Univ. (Japan)</i></p>	<p>16:10 L-9-1 CO₂ conversion with light and water by GaN photo-electrode <i>S. Yotsuhashi¹, M. Deguchi¹, Y. Zenitani¹, R. Hinogami¹, H. Hashiba¹, Y. Yamada¹ and K. Ohkawa¹</i>¹Panasonic Corp. and ²Tokyo Univ. of Sci. (Japan)</p> <p>16:25 L-9-2 Local Characterization of Multicrystalline Silicon Solar Cells through Photothermal and Potential Measurements by Scanning Probe Microscopy <i>K. Hara and T. Takahashi, Univ. of Tokyo (Japan)</i></p>	<p>16:10 M-9-1 Probing Transverse-Optical Phonons in Strained Si Nanowire: Strain Profiles and Nanomechanical properties <i>A. Tarun¹, N. Hayazawa¹, O. Moutanabbir² and S. Kawata¹</i>¹RIKEN and ²Max Planck Inst. (MPI) (Japan)</p> <p>16:25 M-9-2 Leakage Current Control of Fluoride Ultra-thin Films Grown on Ge Substrates <i>K. Takahashi, Y. Hayashi, R. Kayanuma and K. Tsutsui, Tokyo Tech (Japan)</i></p>	<p>16:10 N-9-1 Giant Zeeman splitting in the magneto-reflectance spectra of a dilated magnetic semiconductor (Zn,Cr)Te <i>N. Matsumoto, K. Kanazawa and S. Kuroda, Univ. of Tsukuba (Japan)</i></p> <p>16:25 N-9-2 Observation of magnetic domain wall motion induced by adiabatic spin transfer torque in Co/Ni nanowires <i>T. Koyama¹, K. Ueda¹, D. Chiba^{1,2}, S. Fukami¹, H. Tanigawa³, T. Suzuki¹, N. Ohshima³, N. Ishiwata³, Y. Nakatani³ and T. Ono¹</i>¹Kyoto Univ., ²PRESTO-JST, ³NEC Corp. and ⁴Univ. of Electro-communications (Japan)</p>

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		<p>B-9: OTFT application (2) (Area 10)</p> <p>16:40 B-9-3 Inkjet printing of small-molecule semiconductor thin films for high-performance organic transistors <i>H. Minemawari¹, T. Yamada¹, M. Matsui¹, J. Tsutsumi¹, S. Haas¹, R. Kumai^{1,2} and T. Hasegawa¹, ¹AIST and ²KEK (Japan)</i></p> <p>16:55 B-9-4 High performance top-contact organic thin-film-transistors using screen printed source and drain electrodes <i>Y. Zhao¹, M. Kaltenbrunner², T. Sekitani¹, S. Bauer² and T. Someya¹, ¹Univ. of Tokyo and ²Johannes Kepler Univ. Linz (Japan)</i></p> <p>17:10 B-9-5 Hotpress Method for Thin Crystalline Organic Field-Effect Transistors <i>A. Inoue¹, T. Okamoto¹, Y. Joho¹, M. Sakai¹, H. Yamauchi¹, M. Nakamura^{1,2} and K. Kudo¹, ¹Chiba Univ. and ²NAIST (Japan)</i></p>	<p>C-9: Characterization (3) (Area 2)</p> <p>16:50 C-9-3 Oxidation Resistance of Ti Oxide Self-Formed Barrier in Cu Interconnects <i>K. Ito¹, K. Kohama¹, K. Hamasaka¹, Y. Shirai¹ and M. Murakami², ¹Kyoto Univ. and ²The Ritsumeikan Trust (Japan)</i></p> <p>17:10 C-9-4 Effects of Cu Film Texture and Barrier Structure on Cu Grain Growth <i>K. Kohama¹, T. Matsumoto¹, K. Ito¹, Y. Shirai¹ and M. Murakami², ¹Kyoto Univ. and ²The Ritsumeikan Trust (Japan)</i></p>		<p>E-9: Advanced Si Technology (Area 1)</p> <p>16:50 E-9-3 Performance and Variability Comparisons between ALD- and PVD-TiN Gate FinFET <i>T. Hayashida^{1,2}, K. Endo³, Y. X. Liu³, S. Ouchi³, T. Matsukawa³, W. Mizubayashi³, S. Migita³, Y. Morita³, H. Ota³, H. Hashiguchi¹, D. Kosemura¹, T. Kamei¹, J. Tsukada³, Y. Ishikawa³, H. Yamauchi³, A. Ogura¹ and M. Masahara^{1,3}, ¹Meiji Univ., ²JSPS and ³AIST (Japan)</i></p> <p>17:10 E-9-4 (Late News) Extremely scaled (~0.2 nm) equivalent oxide thickness of higher-k ALD-HfO₂ gate stacks <i>Y. Morita, S. Migita, W. Mizubayashi and H. Ota, AIST (Japan)</i></p>	<p>F-9: ReRAM (4) (Area 4)</p> <p>16:50 F-9-3 Improving switching characteristics of Cu/Si₃N₄/Pt device with low voltage stress to perform forming <i>Q. Liu, H. B. Lv, S. B. Long, W. Wang, Y. T. Li, Y. Wang, M. Wang, K. W. Zhang, H. W. Xie and M. Liu, Chinese Academy of Sci. (China)</i></p>

Friday, September 30

11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
		<p>I-9: Quantum-Dot Devices (Area 7)</p> <p>16:40 I-9-3 Integrated Amplifier for Gain Spectra Measurement of Bilayer Quantum Dot Laser Material <i>H. Shahid¹, D. T. D. Childs¹, M. A. Majid¹, K. Kennedy¹, R. Airey¹, R. A. Hogg¹, E. Clarke², P. Spencer² and R. Murray², ¹Univ. of Sheffield and ²Imperial College (UK)</i></p> <p>16:55 I-9-4 Optimization of quantum dot molecular beam epitaxy diode for broadband applications <i>M. A. Majid, M. Hugues, D. T. D. Childs and R. A. Hogg, Univ. of Sheffield (UK)</i></p> <p>17:10 I-9-5 Photoresponse improvement of InAs/GaAs quantum dot infrared photodetectors using GaAs_xSb_x overgrown layer <i>C. T. Huang, Y. C. Chen and S. C. Lee, National Taiwan Univ. (Taiwan)</i></p>		<p>K-9: Graphene Device (Area 13)</p> <p>16:40 K-9-3 Electron tunneling in bilayer graphene <i>p-n</i> junction controlled by gate electric field <i>H. Miyazaki^{1,2}, M. Lee¹, S. L. Li¹, A. Kanda^{2,3} and K. Tsukagoshi^{1,2}, ¹MANA, NIMS, ²CREST-JST and ³Univ. of Tsukuba (Japan)</i></p> <p>16:55 K-9-4 Gating Operation of Transport Current in Graphene Nanoribbon Fabricated by Helium Ion Microscope <i>S. Nakahara¹, T. Iijima², S. Ogawa², H. Miyazaki¹, S. Li³, K. Tsukagoshi¹, S. Sato¹ and N. Yokoyama¹, ¹AIST-GNC, ²AIST-ICAN and ³NIMS-MANA (Japan)</i></p> <p>17:10 K-9-5 RF Performance of Graphene Nano-Ribbon MOSFET vs. TFET <i>V. P. Sreenivas, K. T. Lam and G. Liang, National Univ. of Singapore (Singapore)</i></p>	<p>L-9: Novel Concepts (Area 14)</p> <p>16:40 L-9-3 Impact of light element impurities on crystalline defect generation in silicon substrate <i>T. Tachibana¹, T. Sameshima¹, T. Kojima¹, K. Arafune¹, K. Kakimoto¹, Y. Miyamura¹, H. Harada¹, T. Sekiguchi², Y. Ohshita² and A. Ogura¹, ¹Meiji Univ., ²Toyota Tech. Inst., ³Univ. of Hyogo, ⁴Kyusyu Univ. and ⁵NIMS (Japan)</i></p> <p>16:55 L-9-4 Flash-Lamp-Induced Explosive Crystallization of Amorphous Films Leaving Behind Periodic Microstructures <i>K. Ohdaira^{1,2} and H. Matsumura¹, ¹JAIST and ²PRESTO-JST (Japan)</i></p> <p>17:10 L-9-5 Preparation of a Diameter-controlled Silicon Nanowire Array by Metal Assisted Chemical Etching using Silica Nanoparticles (MAC-ES) <i>S. Kato¹, Y. Watanabe¹, Y. Kurokawa¹, A. Yamada¹, Y. Ohta², Y. Niwa² and M. Hirota², ¹Tokyo Tech and ²Nissan Res. Center (Japan)</i></p>	<p>M-9: Characterization of group IV related materials (Area 8)</p> <p>16:40 M-9-3 Analysis of Atomic Arrangement at 3C-SiC/Si(001) Interface by Aberration-Corrected Transmission Electron Microscopy <i>J. Yamasaki, S. Inamoto, H. Tamaki and N. Tanaka, Nagoya Univ. (Japan)</i></p> <p>16:55 M-9-4 (Late News) Germanium layer Transfer with Epitaxial Lift-off Technique <i>T. Maeda¹, H. Ishii¹, T. Itatani¹, T. Takada², M. Hata² and T. Yasuda¹, ¹AIST and ²Sumitomo Chemical Co., Ltd. (Japan)</i></p>	<p>N-9: Physics of spintronics devices (Area 12)</p> <p>16:40 N-9-3 Magnetic States and Minor loop analysis in Co/Cu/Co trilayer ring structures <i>A.S. Demiray¹, T. Miyawaki¹, Y. Watanabe¹, M. Kohda^{1,2} and J. Nitta¹, ¹Tohoku Univ. and ²PRESTO-JST (Japan)</i></p> <p>16:55 N-9-4 (Invited) Spin Current Generation and Utilization in Metals and Insulators <i>Eiji Saitoh, ¹Tohoku Univ., ²CREST-JST and ³ASRC-JAEA (Japan)</i></p>