

Thursday, September 27

2F B-1	2F B-2	1F C-1	1F C-2	1F D	1F E
<p>A-6: III-V Photonic Devices (Area 7) (9:00-10:45) Chairs: N. Iizuka (Toshiba) J. Fujikata (PETRA)</p>	<p>B-6: ReRAM (3) (Area 4) (9:00-10:45) Chairs: M.J. Tsai (ITRI) M. Tada (LEAP)</p>	<p>C-6: CNT Growth and Devices (Area 13) (9:00-10:45) Chairs: E. I. Kauppinen (Aalto Univ.) O. Yutaka (Nagoya Univ.)</p>	<p>D-6: Junction Technology (Area 1) (9:00-10:20) Chairs: S. Migita (AIST) T. Yamaguchi (Renesas)</p>	<p>E-6: CMOS Platform (Area 3) (9:00-10:45) Chairs: N. Mori (Osaka Univ.) O. Weber (CEA-LETI)</p>	<p>F-6: SiC Power Devices (Area 6, 14) (9:00-10:45) Chairs: H. Tsuchida (CRIEPI) R. Hattori (Mitsubishi)</p>
<p>9:00 A-6-1 (Invited) Generic Integration Processes for InP based Application Specific Photonic Integrated Circuits (ASPICs) in Europe: Current Status and future Prospects <i>P. M. M. H. Ambrosius, J. M. X. Leijtens and M. K. Smit, Eindhoven Univ. of Tech. (The Netherlands)</i></p>	<p>9:00 B-6-1 (Invited) A Physics-based Model of Resistive Switching in Metal Oxides <i>D. Ielmini, S. Larentis and S. Balatti, Politecnico di Milano (Italy)</i></p>	<p>9:00 C-6-1 (Invited) Carbon-nanotube-based Plastic Electronics <i>Y. Ohno, Nagoya Univ. (Japan)</i></p>	<p>9:00 D-6-1 What determines Schottky Barrier Heights of Metal Silicides on Si and Ge <i>J. Robertson and L. Lin, Cambridge Univ. (UK)</i></p>	<p>9:00 E-6-1 (Invited) Design-friendly Scalability of Cost-effective 28LP technology Platform Featuring 2nd Generation Gate-first HK/MG Transistors without eSiGe <i>H. Fukutome, S. D. Kwon, S. Maeda and S. Paak, System LSI business, Samsung Electronics Co., Ltd. (Korea)</i></p>	<p>9:00 F-6-1 (Invited) SiC Vertical Power JFETs for Efficient Power Switching <i>K. Matocha, D. Sheridan, K. Chaty, V. Bondarenko and J. B. Casady, SemiSouth Laboratories Inc. (USA)</i></p>
<p>9:30 A-6-2 1.3-µm-Waveband Quantum-Dot External-Cavity Laser for Near-Infrared Microscopic Bio-Medical Imaging <i>Y. Yoshioka^{1,2}, N. Yamamoto¹, K. Akahane¹, T. Kawanishi¹, M. Kuroda¹ and H. Takai¹, ¹NICT and ²Tokyo Denki Univ. (Japan)</i></p>	<p>9:30 B-6-2 Impacts of Device Architecture and Low Current Operation on the Resistive Switching of HfOx Nanoscale Memory <i>Y. S. Chen¹, P. S. Chen¹, H. Y. Lee¹, K. H. Tsai¹, T. Y. Wu¹, C. H. Tsai¹, W. S. Chen¹, P. Y. Gu¹, F. Chen¹ and M. J. Tsai¹, ¹Indus. Tech. Res. Inst. and ²Ming-Shin Univ. of Science & Tech. (Taiwan)</i></p>	<p>9:30 C-6-2 Narrow Linewidth Carbon Nanotube Blackbody Emitter with a Microcavity <i>M. Fujiwara¹, D. Tsiya² and H. Maki¹, ¹Keio Univ. and ²NIMS (Japan)</i></p>	<p>9:20 D-6-2 Study of Fermi Level Pinning at Metal/Semiconductor Interface through Re-investigation of Interfacial Alloy Interaction <i>T. Nishimura^{1,2}, K. Nagashio^{1,2}, K. Kita^{1,2} and A. Toriumi^{1,2}, ¹Univ. of Tokyo and ²JST-CREST (Japan)</i></p>	<p>9:30 E-6-2 Statistical Analysis of Subthreshold Swing in Fully Depleted Silicon-on-Thin-BOX (SOTB) MOSFETs and Bulk MOSFETs <i>T. Mizutani¹, Y. Yamamoto², H. Makiyama², T. Tsunomura¹, T. Iwamatsu¹, H. Oda¹, N. Sugii² and T. Hiramoto¹, ¹Univ. of Tokyo and ²Low-power Electronics Association & Project (Japan)</i></p>	<p>9:30 F-6-2 600-V 27-mΩ Normally-off SiC JFET for High Efficiency Power Supply <i>H. Shimizu, H. Okino, S. Akiyama, K. Katoh, N. Yokoyama and K. Ishikawa, Hitachi Ltd. (Japan)</i></p>
<p>9:45 A-6-3 Low Power Consumption Operation of a 1.06-µm-Wavelength Single-Mode Laser for Efficient Second-Harmonic Generation Green Laser Modules <i>A. Hayakawa¹, H. Z. Song¹, T. Matsumoto¹, M. Matsuda¹, T. Kageyama², Y. Yokoyama¹, K. Nishi^{2,3}, K. Takemasa^{2,3}, M. Ekawa¹, Y. Tanaka¹, T. Yamamoto^{1,2}, M. Sugawara^{2,3} and Y. Arakawa⁴, ¹Fujitsu Laboratories Ltd., ²QD Laser, Inc., ³Inst. for Nano Quantum Info. Electronics and ⁴The Univ. of Tokyo (Japan)</i></p>	<p>9:50 B-6-3 Threshold Switching and Conductance Quantization in Al/HfO₂/Si(p) Structures <i>J. Sune¹, E. Miranda¹, D. Jimenez¹, X. Saura¹, S. Long², L. Ming², J. M. Rafi² and F. Campabadal³, ¹Univ. Autònoma de Barcelona, ²Inst. of Microelectronics Chinese Academy of Sciences and ³Inst. de Microelectronica de Barcelona, CSIC (Spain)</i></p>	<p>9:45 C-6-3 Electrical Properties of the Graphitic Carbon Contacts on Carbon Nanotube Field Effect Transistors <i>M. Tamaoki¹, S. Kishimoto^{1,2}, Y. Ohno¹ and T. Mizutani¹, ¹Nagoya Univ. and ²Nagoya Univ. Venture Business Lab. (Japan)</i></p>	<p>9:40 D-6-3 Comparative Study of Schottky Barrier Height Modulation in S-introduced NiGe/Ge and NiSi/Si Junctions <i>M. Koike, Y. Kamimuta and T. Tezuka, AIST (Japan)</i></p>	<p>9:50 E-6-3 Analysis of Read Margin Improvement for Low Voltage SRAM Composed of Nano-Scale MOSFETs with Ideal Subthreshold Factor and Small Variability <i>M. Tanaka, M. Saitoh, K. Ota and T. Numata, Toshiba Corp. (Japan)</i></p>	<p>9:45 F-6-3 Lateral High-Voltage 4H-SiC IGBTs <i>W. S. Lee¹, C. Y. Cheng¹, K. W. Chu¹, C. F. Huang¹, F. Zhao², L. S. Lee³, Y. S. Chen¹, C. Y. Lee³ and M. J. Tsai³, ¹National Tsing Hua Univ., ²Washington State Univ. and ³Indus. Tech. Res. Inst. (Taiwan)</i></p>
<p>10:00 A-6-4 GaAs/AlAs Multilayer Cavity with Er-doped InAs Quantum Dots Embedded in Extremely Thin Strain-relaxed InGaAs Barriers for Ultra-fast All-optical Switches <i>K. Morita¹, H. Ueyama¹, Y. Yasunaga¹, Y. Nakagawa^{1,2}, T. Kitada¹ and T. Izu¹, ¹Univ. of Tokushima and ²NICHIA Corp. (Japan)</i></p>	<p>10:10 B-6-4 Improved Resistive-switching Performance of HfO₂-based RRAM Devices by Reduction Effect of Hydrogen Annealing: Defect Engineering <i>S. Kim, D. Lee, J. Park, S. Jung, W. Lee, J. Shin, J. Woo, G. Choi, E. Cha and H. Hwang, Gwangju Inst. of Science and Tech. (Korea)</i></p>	<p>10:00 C-6-4 Change of the Electronic Conductivity of CNTs Caused by a Three-dimensional Strain Field <i>M. Ohnishi, Y. Suzuki, H. Kawakami, K. Suzuki and H. Miura, Tohoku Univ. (Japan)</i></p>	<p>10:00 D-6-4 Nickel Stannogermanide Ohmic Contact on N-type Germanium-Tin (Ge_{1-x}Sn_x) using Se and S Implant and Segregation <i>Y. Tong¹, S. Su¹, B. Liu¹, L. Wang¹, P. S. Y. Lim¹, Y. Yang¹, W. Wang¹, K. L. Low¹, G. Zhang², C. Xue², B. Cheng², G. Han¹ and Y. C. Ye¹, ¹National Univ. of Singapore and ²State Key Lab. on Integrated Optoelectronics, Inst. of Semiconductors, Chinese Academy of Sci. (Singapore)</i></p>	<p>10:10 E-6-4 A Comparative Study of Minimal Supply Voltage of 6T-SRAM at the 16nm Node using MAS-TAR into a Conventional CAD Environment <i>J. Lacord^{1,2}, G. Ghibaudo² and F. Boeuf¹, ¹STMicroelectronics and ²IMEP-LAHC Lab. (France)</i></p>	<p>10:00 F-6-4 Significant Effect of JFET Doping on Low On-resistance 4H-SiC DMOSFETs of 3300 V Rating <i>K. Hamada¹, N. Miura^{1,2}, S. Hino^{1,2}, T. Kawakami¹, M. Imaizumi¹, H. Simitani¹ and T. Oomori^{1,2}, ¹Mitsubishi Electric Corp. and ²R&D Partnership for Future Power Electronics Tech. (FUPET) (Japan)</i></p>
<p>10:15 A-6-5 Undercut GaAs/In_{0.5}Ga_{0.5}P High-Speed Laser Power Converter for Simultaneous 10 Gbit/sec Data Detection and Efficient DC Electrical Power Generation <i>J. M. Wun, J. W. Shi, C. Y. Tsai and Y. M. Hsin, Univ. of National Central Univ. (Taiwan)</i></p>	<p>10:30 B-6-5 (Late News) Physical Guiding Principles for High Quality ReRAM Stack with Al₂O₃ O Vacancy Barrier Layer <i>M. Y. Yang¹, K. Kamiya¹, B. Magyari Köpö², M. Nawa¹, Y. Nishi¹ and K. Shiraishi¹, ¹Univ. of Tsukuba and ²Stanford Univ. (Japan)</i></p>	<p>10:15 C-6-5 Chirality-Dependent Reactivity to O₂ of Single-Walled Carbon Nanotubes <i>B. Liu^{1,2}, H. Jiang¹, A. Krasheninnikov³, A. Nasibulin¹, W. Ren², C. Liu², H. M. Cheng² and E. Kauppinen¹, ¹Aalto Univ., ²Chenyang Nat. Lab. Materials Science, IMR, CAS and ³Univ. of Helsinki (Finland)</i></p>	<p>10:30 C-6-6 Towards the Growth of Monochiral Single-walled Carbon Nanotubes on MgO supported FeCu Bimetallic Catalysts <i>M. He¹, A. Chernov², E. Obraztsova², H. Jiang¹, J. Lentonen¹ and E. Kauppinen¹, ¹Aalto Univ. and ²A.M. prokhorov General Physics Inst. RAS (Finland)</i></p>	<p>10:30 E-6-5 (Late News) Optimization of 14-nm Node Bulk/SOI FinFETs for SoC Platform: Thermal Conductivity, Operation Temperature, and Analog Performance Analysis <i>T. Takahashi^{1,2}, N. Beppu^{1,2}, S. Oda¹ and K. Uchida^{1,2}, ¹Toyko Tech. Tech. and ²Keio Univ. (Japan)</i></p>	<p>10:15 F-6-5 (Invited) Advanced SiC Devices with Trench Structure <i>T. Nakamura, M. Aketa and Y. Nakano, New Material Devices R&D Center, ROHM Co., Ltd. (Japan)</i></p>

1F G	1F H	2F I	2F J	2F K	SF 554	SF 555
	<p>H-6: Characterization and Advanced Process (Area 2) (9:00-10:55) Chairs: Y. Otsuka (Toray Research Center) J. Gambino (IBM)</p>	<p>I-6: Smart Biomedical Devices (Area 11) (9:00-10:45) Chairs: K. Ajito (NTT) Y. S. Yang (National Chiao Tung Univ.)</p>	<p>J-6: Wireless Circuits (I) (Area 5) (9:00-10:30) Chairs: N. WU (Chinese Academy of Sciences) M. Ikebe (Hokkaido Univ.)</p>	<p>K-6: Spintronic Devices and Memory (Area 12) (9:00-10:45) Chairs: Y. Saito (Toshiba) M. Yamamoto (Hokkaido Univ.)</p>		<p>M-6: Organic Photovoltaic Devices (Area 10&15) (9:00-10:45) Chairs: M. Ikegami (Toin Univ. of Yokohama) T. Shimada (Hokkaido Univ.)</p>
	<p>9:00 H-6-1 Development of magnetic field microscopy for interconnection testing inside passivation layer K. Kimura¹, Y. Mima¹, N. Oyabu², N. Kimura³ and T. Inao⁴, ¹Kobe Univ., ²Kyoto Univ., ³Osaka Univ. and ⁴Murata Manufacturing Company (Japan)</p> <p>9:20 H-6-2 Characterization of Tungsten-Based Pillars Deposited by Helium Ion Microscope Equipped with Gas Injection System K. Kohama, T. Iijima, M. Hayashida and S. Ogawa, AIST (Japan)</p> <p>9:40 H-6-3 MIM Capacitors with High Capacitance Density and Low Quadratic Voltage Coefficient Employing Canceling Effect by ZrLaO_x/ZrTiO_x/ZrLaO_x Laminate Insulator L. L. Chen, Y. B. Lin, C. C. Lin, Y. T. Chang and Y. H. Wu, National Tsing Hua Univ. (Taiwan)</p> <p>10:00 H-6-4 Reliability of MIM Capacitors Under Pads for Au or Cu Wire Bonding J.P. Gambino¹, C. Griffin¹, K. Watson¹, J. Malinowski¹, A. Cote¹, B. Guthrie¹, A. Vize¹ and T. Aoki², ¹IBM Microelectronics and ²IBM Yamato Laboratory (USA)</p> <p>10:20 H-6-5 Fat damascene wires for high bandwidth routing in silicon interposer M. Detalle, J. Kim, P. Nolmans, X. Sun, J. Ryckaert, A. La Manna, G. Beyer and E. Beyne, InterUniv. MicroElectronics Center (Belgium)</p> <p>10:40 H-6-6 (Late News) Development of Cu/insulation layer interface crack extension simulation with single crystal plasticity K. Koiva^{1,2}, M. Omiya^{2,3}, N. Shishido^{1,2}, S. Kamiya^{1,2}, H. Sato^{1,2}, M. Nishida^{1,2}, T. Suzuki¹, T. Nakamura⁴, T. Suzuki^{2,5} and T. Nokuo^{2,5}, ¹Nagoya Inst. of Tech., ²Japan Sci. and Tech. Agency, ³Keio Univ., ⁴Fujitsu labs. Ltd. and ⁵JEOL Ltd. (Japan)</p>	<p>9:00 I-6-1 (Invited) Bio-Medical Applications of Smart Sensing Devices M. Ishida^{1,2}, K. Sawada^{1,2}, T. Kawano¹, D. Aka² and I. Akita¹, ¹Toyoohashi Univ. of tech. and ²Electronics Inspired Interdisciplinary Research Inst. (EIRIS) (Japan)</p> <p>9:30 I-6-2 Development and In Vivo Evaluation of Conductive Polymer (PEDOT) Stimulus Electrodes for Fully Implantable Retinal Prosthesis C. Kigure¹, H. Naganuma¹, Y. Sasaki¹, H. Tomita¹ and T. Tanaka¹, ¹Tohoku Univ. and ²Iwate Univ. (Japan)</p> <p>9:45 I-6-3 Insertion Characteristics Investigation of Si Neural Probe with Sharpened Tip for Minimally Invasive Insertion to Brain S. Lee, S. Kanno, S. Iwanuma and T. Tanaka, Tohoku Univ. (Japan)</p> <p>10:00 I-6-4 EGFET-based biosensor using parasitic BJT effect J. K. Park and W. J. Cho, Kwangsu Univ. (Korea)</p> <p>10:15 I-6-5 PEDOT/PSS Membrane on Flexible Substrate for Conductometric pH Sensor Study S. K. Su¹, M. Y. Hua², S. L. Cheng², T. W. Juan¹, M. Y. Shih¹, C. M. Yang¹ and C. S. Lai¹, ¹Department of Electronic Engineering, Chang Gung Univ. and ²Department of Chemical and Materials Engineering, Chang Gung Univ. (Taiwan)</p> <p>10:30 I-6-6 Hydrogel-supported skeletal muscle cell-based assay device K. Nagamine, S. Otani, S. Ito, H. Kaji and M. Nishizawa, Tohoku Univ. (Japan)</p>	<p>9:00 J-6-1 (Invited) Low Power SoC Integrated Circuits Design for Wireless Medical and Health Care Applications Z. Wang, Tsinghua Univ. (China)</p> <p>9:30 J-6-2 A 3Gb/s Non-Contact Inter-Module Link with Duplex Transmission-Line-Couplers and Low-Frequency Compensation Equalizer A. Kosuge, T. Takeya, M. Shioya, M. Taguchi and T. Kuroda, Keio Univ. (Japan)</p> <p>9:50 J-6-3 -119.1 dBc/Hz Phase Noise Ring-VCO-Based PLL CMOS Circuit Using A Tunable Narrow-Deadzone Creator in Frequency Locked Loop K. Sogo¹, A. Toya^{1,2} and T. Kikkawa¹, ¹Hiroshima Univ. and ²Kure National College of Tech. (Japan)</p> <p>10:10 J-6-4 150GHz Divide-by-Three CMOS Frequency Divider with Power Line Injection K. Takano, M. Motoyoshi, K. Katayama and M. Fujishima, Hiroshima Univ. (Japan)</p>	<p>9:00 K-6-1 (Invited) Racetrack Memory 2.0 S.S.P. Parkin, IBM Almaden Research Center (USA)</p> <p>9:30 K-6-2 Spin Transfer Switching in Perpendicularly Magnetized GMR Nanopillars in both Dynamic and Thermally Assist Regimes S. Yamashita¹, H. Tomita¹, M. Shinji¹, N. Takayuki¹, T. Nagase², K. Nishiyama², E. Kitagawa¹, M. Yoshikawa², T. Daibou¹, M. Nagamine², T. Kishi², S. Ikegawa², N. Shimomura², H. Yada² and Y. Suzuki¹, ¹Osaka Univ. and ²Toshiba Corporation (Japan)</p> <p>9:45 K-6-3 Fabrication of Bottom Free Magnetic Tunnel Junctions for Bio-Magnetic Field Sensor Application K. Fujiwara¹, M. Oogane¹, T. Nishikawa², H. Naganuma¹ and Y. Ando¹, ¹Tohoku Univ. and ²KONICA MINOLTA Tech. CENTER, Inc. (Japan)</p> <p>10:00 K-6-4 Temperature dependence of spin-dependent tunneling resistances of MgO-buffered Co₂MnSi/MgO/Co₂MnSi magnetic tunnel junctions Y. Honda, H. Liu, K. Matsuda, T. Uemura and M. Yamamoto, Hokkaido Univ. (Japan)</p> <p>10:15 K-6-5 Study on Interface Magnetic Anisotropy Deterioration Mechanisms in Ta/CoFeB/MgO stacks N. Miyakawa¹, D. C. Worledge² and K. Kita¹, ¹Tokyo Univ. and ²IBM T. J. Watson Res. Center (Japan)</p> <p>10:30 K-6-6 Circuit Level Model of Phase-Locked Spin Torque Oscillators S. Ahn, H. Lim, H. Shin and S. Lee, Ewha Womans Univ. (Korea)</p>		<p>9:00 M-6-1 Improved Photovoltaic Characteristics by MoO₃-doping to Thick Hole Transporting Films Y. Shimura^{1,2}, M. Kubo^{1,2}, T. Kaji^{1,2} and M. Hiramoto^{1,2}, ¹Inst. Molecular Sci. and ²JST, CREST (Japan)</p> <p>9:15 M-6-2 Analysis of interfacial charging processes in pentacene/C₆₀/BCP triple-layer organic solar cells using a Maxwell-Wagner model X. Chen, D. Taguchi, K. Lee, T. Manaka and M. Iwamoto, Tokyo Inst. of Tech. (Japan)</p> <p>9:30 M-6-3 Double Co-deposited Organic Solar Cells with Sensitivity Through Visible to Near-Infrared K. Yokoyama^{1,2}, T. Kaji^{1,2} and M. Hiramoto^{1,2}, ¹Inst. for Molecular Sci. and ²CREST/JST (Japan)</p> <p>9:45 M-6-4 Investigation of Inverted Polymer Solar Cells with AZO-nanorod Array H. L. Huang, C. T. Lee and H. Y. Lee, National Cheng Kung Univ. (Taiwan)</p> <p>10:00 M-6-5 Photovoltaic Properties of Bulk-Heterojunction Organic Solar Cell with Ultrathin Titanium Oxide Nanosheet as an Electron Selective Layer E. Itoh¹, Y. Maruyama¹ and K. Fukuda², ¹Shinshu Univ. and ²Kyoto Univ. (Japan)</p> <p>10:15 M-6-6 Formation of mesoporous anatase TiO₂ spheres by hydrothermal method and dye-sensitized solar cells properties J. Archana, M. Navaneethan and Y. Hayakawa, Shizuoka Univ. (Japan)</p>

Thursday, September 27

2F B-1	2F B-2	1F C-1	1F C-2	1F D	1F E
A-6: III-V Photonic Devices (Area 7)	B-6: ReRAM (3) (Area 4)	C-6: CNT Growth and Devices (Area 13)	D-6: Junction Technology (Area 1)	E-6: CMOS Platform (Area 3)	F-6: SiC Power Devices (Area 6, 14)
Coffee Break					
A-7: Silicon Photonics III : Ge-related Devices (Area 7) (11:15-12:45) Chairs: H. Isshiki (The Univ. of Electro-Communications) Y. Tanaka (Fujitsu)	B-7: ReRAM (4) (Area 4) (11:15-12:25) Chairs: H. S. Hwang (POSTECH) M. Moniwa (Renesas)	C-7: Graphene Properties (Area 8&9&13) (11:15-12:30) Chairs: A. Kanda (Tsukuba Univ.) T. Kawai (NEC)	D-7: Process Technology (Area 1) (10:45-12:15) Chairs: T. Nakayama (Chiba Univ.) S. Migita (AIST)	E-7: Device Physics (Area 3) (11:15-12:35) Chairs: Y. Nishida (Renesas) B. Doris (IBM)	F-7: GaN Interface Characterization (Area 6) (11:15-12:15) Chairs: M. Kazuhara (Univ. of Fukui) J. H. Lee (Kyungpook National Univ.)
11:15 A-7-1 Monolithically Integrated 16x10-Gb/s WDM Receiver on a Silicon-Silica-Germanium Photonic Platform <i>T. Hiraki^{1,2}, R. Kou^{1,2}, H. Nishi^{1,2}, H. Fukuda^{1,2}, T. Tsuchizawa^{1,2}, Y. Ishikawa³, K. Wada⁴ and K. Yamada^{1,2}, ¹NTT Microsystem Integration Labs., ²Nanophotonics Center, NTT Corp. and ³Univ. of Tokyo (Japan)</i>	11:15 B-7-1 (Invited) Resistive Switching in Transition Metal Oxide ReRAM Devices <i>B. Magyari-Köpe and Y. Nishi, Department of Electrical Engineering, Stanford Univ. (U.S.A.)</i>	11:15 C-7-1 (Invited) Strain Engineered Graphene: Current Trends and Prospects <i>V. M. Pereira, National Univ. of Singapore (Singapore)</i>	10:45 D-7-1 (Invited) CMOS Contact Resistance Reduction through Aluminum Profile Engineering <i>S. M. Koh and Y. C. Yeo, Department of Electrical and Computer Engineering, National Univ. of Singapore (Singapore)</i>	11:15 E-7-1 Comprehensive Understandings on Reliability Modulations in Compressive Stressed (100)- and (110)-Orientated Silicon CMOSFETs <i>J. Chen, I. Hirano, M. Saitoh, K. Tatsumura and Y. Mitani, Advanced LSI Tech. Lab., Corporate Research & Development Center, Toshiba Corp. (Japan)</i>	11:15 F-7-1 High Quality SiO₂/Al₂O₃ Gate Stack for GaN MOSFET <i>H. Kambayashi^{1,2}, T. Nomura¹, H. Ueda³, K. Harada¹, Y. Morozumi⁴, K. Hasebe⁴, A. Teramoto², S. Sugawa² and T. Ohmi², ¹Advanced Power Device Reserch Association, ²Tohoku Univ., ³Tokyo Electron Tech. Development Inst. Inc. and ⁴Tokyo Electron Tohoku Ltd. (Japan)</i>
11:30 A-7-2 P-I-N Ge on Si Photodiodes for High Speed and Low Power Consumption Receivers <i>L. Virof^{1,2,3}, L. Vivien¹, J. M. Hartmann², J. M. Fedeli¹, D. Marris Morini¹, E. Cassan¹, C. Baudot³ and F. Boeuf¹, ¹Univ. Paris-Sud, ²CEA LETI and ³STMicroelectronics (France)</i>	11:45 B-7-2 Promising Bipolar and Unipolar Resistive Switching in Ti-Doped Yb₂O₃ Thin Film <i>S. Somnath¹, F. H. Chen¹, C. W. Wang¹, J. L. Her¹, Y. H. Matsuda¹ and T. M. Pan¹, ¹Chang Gung Univ. and ²Univ. of Tokyo (Taiwan)</i>	11:45 C-7-2 Electron Transport in Graphene with One-dimensional Local Strain <i>H. Tomori^{1,2}, H. Karube^{1,2}, Y. Ootuka¹ and A. Kanda^{1,2}, ¹Univ. of Tsukuba and ²TIMS (Japan)</i>	11:15 D-7-2 W vs. Co-Al as Gate Fill-Metal for Aggressively Scaled Replacement High-k/Metal Gate Devices for (Sub)-22 nm Technology Nodes <i>A. Veloso¹, S. A. Chew¹, T. Schram¹, H. Dekkers¹, A. Van Ammel¹, T. Witters¹, H. Tielsens¹, N. Heylen¹, K. Devriendt¹, F. Sebaai¹, S. Brus¹, L. A. Ragnarsson¹, L. Pantisano¹, G. Eneman¹, L. Carbonell¹, O. Richard¹, P. Favia¹, J. Geypen¹, H. Bender¹, Y. Higuchi², A. Phatak³, A. Thean¹ and N. Horiguchi¹, ¹IMEC, ²Panasonic and ³Applied Materials Belgium NV (Belgium)</i>	11:35 E-7-2 Inelastic Acoustic Phonon Scattering in Ultrathin SOI and Nanowire Structures <i>N. Mori^{1,2}, ¹Osaka Univ. and ²JST CREST (Japan)</i>	11:30 F-7-2 Interface Characterization of Al₂O₃/AlGaN/GaN Structure with Inductively Coupled Plasma Etching of AlGaN Surface <i>Z. Yatabe¹, Y. Hori¹, S. Kim¹ and T. Hashizume^{1,2}, ¹Hokkaido Univ. and ²JST-CREST (Japan)</i>
11:45 A-7-3 45 GHz Bandwidth of Si Waveguide-Integrated PIN Ge Photodiode and its Zero-Bias Voltage Operation <i>J. Fujikata^{1,2}, M. Noguchi^{1,2}, M. Miura^{1,2}, D. Okamoto^{1,2}, T. Horikawa^{1,3} and Y. Arakawa^{1,4}, ¹PECST, ²PETRA, ³AIST and ⁴Univ. of Tokyo (Japan)</i>	12:05 B-7-3 Set Voltage Statistics in Unipolar HfO₂-Based RRAM <i>S. Long^{1,2}, C. Cagli¹, J. Buchley³, Q. Liu¹, H. Lv¹, X. Lian¹, E. Miranda², D. Jimenez², M. Liu¹ and J. Sune², ¹Inst. of Microelectronics, Chinese Academy of Sciences, ²Universitat Autònoma de Barcelona and ³CEA, LETI (China)</i>	12:00 C-7-3 Tuning Semiconducting Property of Bilayer Graphene by Ionic Molecules <i>N. T. Cuong^{1,3}, M. Otani^{1,3} and S. Okada^{2,3}, ¹AIST, ²Univ. of Tsukuba and ³JST-CREST (Japan)</i>	11:35 D-7-3 Low-barrier Hetero Junction to N-type Silicon Using Novel Ultrathin Epitaxial Silicide Consisting of Tungsten-encapsulating Silicon Clusters <i>N. Okada^{1,2}, N. Uchida² and T. Kanayama^{1,2}, ¹Univ. of Tsukuba and ²AIST (Japan)</i>	11:55 E-7-3 Surface-Orientation/Strain Dependence of Quantum Confinement Effects in Si Monolayers for Future CMOS Devices <i>T. Mizuno¹, K. Higa¹, Y. Nakajima¹, D. Urata¹, Y. Abe¹, H. Akamatsu¹, Y. Nagata¹, K. Sato¹, J. Takehi¹ and T. Sameshima², ¹Kanagawa Univ. and ²Tokyo Univ. of Agriculture and Tech. (Japan)</i>	11:45 F-7-3 Characterization of Gate-control Efficiency in AlN/AlGaIn/GaN Metal-Insulator-Semiconductor Structure by Capacitance-Frequency-Temperature Mapping <i>H. A. Shih, T. Q. Nguyen, M. Kudo and T. Suzuki, JAIST (Japan)</i>
12:00 A-7-4 Infrared Absorption of N-type Tensile-Strained Ge-on-Si <i>X. Wang¹, H. Li¹, R. Camacho², Y. Cai², L. C. Kimmerling², M. Jurgen² and J. Liu¹, ¹Dartmouth College and ²Massachusetts Inst. of Tech. (USA)</i>		12:15 C-7-4 Definite Observation of Interfacial Charge Transfer in Graphene Transistor by Using Soft X-ray 3D Scanning Photoelectron Microscopy <i>H. Fukidome¹, N. Nagamura^{2,3}, K. Horiba^{2,3,4}, S. Toyoda², S. Kurosumi², T. Shinohara², T. Ide¹, M. Suemitsu¹, K. Nagashio², A. Toriumi² and M. Oshima⁴, ¹Tohoku Univ., ²Univ. of Tokyo, ³Synchrotron Radiation Research Organization of Univ. of Tokyo and ⁴CREST-JST (Japan)</i>	11:55 D-7-4 Quantitative Evaluation of Dopant Concentration in Shallow Silicon pn Junctions by Tunneling Current Mapping with Multimode Scanning Probe Microscopy <i>L. Bolotov^{1,2}, K. Fukuda², H. Arimoto², T. Tada² and T. Kanayama², ¹Univ. of Tsukuba and ²Nat. Inst. of Advanced Indus. Sci. and Tech. (Japan)</i>	12:15 E-7-4 Quantitative Analysis of Surface Potential Fluctuation at MOS interfaces Using Conductance Method <i>S. H. Shin¹, N. Taoka², M. Takenaka¹ and S. Takagi¹, ¹Univ. of Tokyo and ²Nagoya Univ. (Japan)</i>	12:00 F-7-4 Mechanism Study of Gate Leakage Current for AlGaIn/GaN HEMT Structure under High Reverse Bias by TSB Model and TCAD Simulation <i>T. Oishi¹, K. Hayashi¹, Y. Yamaguchi¹, H. Otsuka¹, K. Yamanaka¹, M. Nakayama¹ and Y. Miyamoto², ¹Mitsubishi Electric Corp. and ²Tokyo Inst. of Tech. (Japan)</i>
12:15 A-7-5 Ge Selective Growth in Micron and Submicron Trenches with UHV-CVD <i>Y. Mizuno, Y. Ishikawa and K. Wada, Univ. of Tokyo (Japan)</i>					

Thursday, September 27

1F G	1F H	2F I	2F J	2F K	5F 554	5F 555
	H-6: Characterization and Adveceed Process (Area 2)	I-6: Smart Biomedical Devices (Area 11)	J-6: Wireless Circuits (1) (Area 5)	K-6: Spintronic Devices and Memory (Area 12)		M-6: Organic Photovoltaic Devices (Area 10&15) 10:30 M-6-7 The Study of Dye Sensitized Solar Cells with Thin HfO ₂ Barrier Layers C. H. Chen ¹ , Y. H. Tsai ² and S. K. Liu ² , ¹ Cheng Shiu Univ. and ² National Kaohsiung Univ. of Applied Sciences (Taiwan)
Coffee Break						
		I-7: Biomedical Imaging Technologies (Area 11) (11:15-12:30) Chairs: M. Sasaki (Toyota Technological Institute) J. K. Shin (Kyungpook National Univ.)	J-7: Wireless Circuits (2) (Area 5) (11:15-12:15) Chairs: K. Okada (Tokyo Tech.) J. C. Guo (National Chiao-Tung Univ.)	K-7: Spintronic Materials (Area 12) (11:15-12:30) Chairs: S. Kuroda (Tsukuba Univ.) K. Ito (Hitachi)		M-7: Organic Photovoltaic Devices (Area 10&15) (11:15-11:30) Chairs: M. Ikegami (Toin Univ. of Yokohama) T. Shimada (Hokkaido Univ.)
		11:15 I-7-1 (Invited) Direct Imaging of Acid Release from Biological Specimens on a Solid State 2D Detector S. Terakawa ^{1,3} , Y. Fukushi ¹ , H. Taki ² , T. Sakurai ^{2,3} , K. Okumura ^{2,3} and K. Sawada ^{2,3} , ¹ Medical Photonics Research Center, Hamamatsu University School of Medicine, ² Electronics-Inspired Interdisciplinary Research Institute, Toyohashi University of Technology and ³ JST CREST (Japan)	11:15 J-7-1 Fractionally Injection-Locked Frequency Multiplication Technique with Multi-Phase Ring VCO S. Ikeda, S. Lee, T. Kamimura, H. Ito, N. Ishihara and K. Masu, Tokyo Inst. of Tech. (Japan)	11:15 K-7-1 (Invited) Electric Field Induced Room Temperature Ferromagnetism in Transition Metal Doped Oxide Semiconductor T. Fukumura, Department of Chemistry, Univ. of Tokyo (Japan)		11:15 M-7-1 (Late News) Photocurrent Enhancement in Dye-Sensitized Solar Cells with Au-loaded TiO ₂ on Metallic Grating Surface H. Ninsontit ^{1,2} , W. Chomkitichai ^{1,2} , A. Baba ¹ , W. Kangvansupamonkon ³ , S. Phanichphant ² , K. Shinbo ¹ , K. Kato ¹ and F. Kaneko ¹ , ¹ Niigata Univ., ² Chiang Mai Univ. and ³ National Science and Tech. Development Agency (Japan)
		11:45 I-7-2 Single-Molecule Fluorescence Imaging using Polymeric Nanoholes beyond Diffraction Limit T. Ono ^{1,2,3} , R. Iizuka ^{1,2} , T. Akagi ^{1,2} , T. Funatsu ^{1,2} and T. Ichiki ^{1,2} , ¹ Univ. of Tokyo, ² JST-CREST and ³ JSPS research fellow (Japan)	11:35 J-7-2 Analysis and Design of Coil with Feed Line for ThruChip Interface M. Saito, N. Miura and T. Kuroda, Keio Univ. (Japan)	11:45 K-7-2 Magnetic and Transport Properties of Group-IV Based Ferromagnetic Semiconductor Ge _{1-x} Fe _x with Boron Doping Y. Ban, R. Akiyama, R. Nakane and M. Tanaka, Univ. of Tokyo (Japan)		
		12:00 I-7-3 Enhancement of Taxol Effectiveness on HeLa Cells by Narrow Bandwidth Infrared Radiation S. R. Tsai ¹ , B. C. Sheu ² , P. S. Huang ² and S. C. Lee ³ , ¹ Graduate Inst. of Biomedical Electronics and Bioinformatics, Univ. of Taiwan, ² College of Medicine, Univ. of Taiwan and ³ Department of Electrical Engineering, Univ. of Taiwan (Taiwan)	11:55 J-7-3 THz Matrix-Based Layered Wrapper Model of Common-Source MOSFET K. Katayama, M. Motoyoshi, K. Takano and M. Fujishima, Hiroshima Univ. (Japan)	12:00 K-7-3 (Invited) Graphene, an ideal material for spintronics? I. J. Vera Marun, Physics of Nanodevices, Zernike Inst. for Advanced Materials, Univ. of Groningen (The Netherlands)		
		12:15 I-7-4 Electrochemical Imaging Device Consisting of Microelectrode Arrays to Induce Local Redox Cycling for High-throughput Cell Analyses K. Ino, T. Nishijo, Y. Kamno, H. Shiku and T. Matsue, Tohoku Univ. (Japan)				

Thursday, September 27

2F B-1	2F B-2	1F C-1	1F C-2	1F D	1F E
A-7: Silicon Photonics III : Ge-related Devices (Area 7)	B-7: ReRAM (4) (Area 4)	C-7: Graphene Properties (Area 8&9&13)	D-7: Process Technology (Area 1)	E-7: Device Physics (Area 3)	F-7: GaN Interface Characterization (Area 6)
12:30 A-7-6 SiGe Quantum Dots on Si Pillars for Visible Photodetection <i>W. T. Lai¹, P. H. Liao¹, A. Homyk², A. Scherer² and P. W. Li¹, ¹National Central Univ. and ²California Inst. of Tech. (Taiwan)</i>					

12:30-14:00 Lunch

	B-8: ReRAM (5) (Area 4) (14:00-15:20) Chairs: K. Ishihara (Sharp) T. Eshita (Fujitsu Semiconductor)	C-8: Graphene Growth (2) (Area 8&9&13) (14:00-15:00) Chairs: H. Fukidome (Tohoku Univ.) H. Hibino (NTT)	D-8: Characterization in Gate Stack (2) (Area 1) (14:00-15:20) Chairs: T. Aoyama (Toshiba) T. Nakayama (Chiba Univ.)	E-8: BTI & Noise (Area 3) (14:00-15:20) Chairs: K. Sukegawa (Fujitsu) T. S. Chao (Nctu)	F-8: Thin Film Transistors (Area 6) (14:00-15:00) Chairs: S. Sasa (Osaka Institute of Technology) R. Hattori (Mitsubishi Electric)	
14:00 B-8-1 High-density ISIR Flexible Bipolar Resistive-Switching Memory <i>C. W. Hsu, C. L. Lo, I. T. Wang and T. H. Hou, National Chiao Tung Univ. (Taiwan)</i>	14:00 B-8-2 Effects of Thin Metal Insertion on Resistive Switching of Flexible ZnO RRAM <i>C. L. Lin¹, Y. H. Lai¹, S. R. Yang¹, C. M. Wu¹, Y. H. Yang¹, C. H. Soh¹, T. Y. Lin¹, C. F. Sung² and P. C. Juan¹, ¹Feng Chia Univ., ²Indus. Tech. Res. Inst. (ITRI) and ³Mingchi Univ. of Tech. (Taiwan)</i>	14:00 C-8-1 (Invited) Epitaxial Graphene: Synthesis, Integration, and Nanoscale Devices <i>J. A. Robinson, M. J. Hollander, M. La Bella III, K. A. Trumbull, R. Cavaleiro and D. W. Snyder, H. Madan and S. Datta, The Pennsylvania State Univ. (USA)</i>	14:00 D-8-1 Measurements of Anisotropic Biaxial Stresses in $x = 0.15$ and 0.30 Si_{1-x}Ge_x Nanostructures by Oil-Immersion Raman Spectroscopy <i>D. Kosemura¹, M. Tomita¹, K. Usuda², T. Tezuka² and A. Ogura¹, ¹Meiji Univ. and ²Green Nanoelectronics Collaborative Research Center, AIST (Japan)</i>	14:00 E-8-1 NBTI Induced Mobility Degradation - Models for TCAD and SPICE Applications <i>A. Chaudhary and S. Mahapatra, IIT Bombay (India)</i>	14:00 F-8-1 Fully Transparent AZO Thin-film Transistors Fabricated on Flexible Plastic Substrates at Room Temperature <i>W. Wang, D. D. Han, J. Cai, Y. F. Geng, L. L. Wang, Y. Tian, Y. Wang and S. D. Zhang, Peking Univ. (China)</i>	
14:40 B-8-3 Bipolar Read in ReRAM for 3x Write Speed and 5x Faster Read with Disturb Immunity <i>T. O. Iwasaki¹, S. Ning² and K. Takeuchi¹, ¹Chuo Univ. and ²Univ. of Tokyo (Japan)</i>	14:30 C-8-2 Epitaxial Graphene Resonators Obtained by Electrochemical Etching <i>M. Takamura, K. Furukawa, H. Okamoto, S. Tanabe, H. Yamaguchi and H. Hibino, NTT Basic Research Labs. (Japan)</i>	14:40 D-8-2 Role of Ar on Structural Phase Transformation of Sputtered HfO₂ <i>T. Iwai, Y. Nakajima, T. Nishimura, K. Nagashio and A. Toriumi, Univ. of Tokyo (Japan)</i>	14:20 D-8-3 Tensor Evaluation of Anisotropic Stress Relaxation in Mesa-shaped SiGe Layer on Si Substrate by EBSP <i>M. Tomita^{1,2}, M. Nagasaka¹, D. Kosemura¹, K. Usuda², T. Tezuka³ and A. Ogura¹, ¹Meiji Univ., ²Research Fellow of the Japan Society for the Promotion of Sci. and ³Green Nanoelectronics Collaborative Research Center, AIST (Japan)</i>	14:20 E-8-2 Evolution of Electron Trapping under Positive-Bias Temperature Stressing of the HfO₂/TiN Gate n-MOSFET <i>Y. Gao¹, D. S. Ang¹, C. D. Young² and G. Bersuker², ¹Nanyang Technological Univ. and ²SEMATECH (Singapore)</i>	14:15 F-8-2 High Performance Dual Gate Amorphous In-Ga-Zn-O Thin Film Transistor with Nanometer Dot-like Doping <i>H. W. Zan¹, C. H. Liao¹, C. H. Li¹, C. C. Tsai¹, W. T. Chen² and C. H. Hsu², ¹National Chiao Tung Univ. and ²E Ink Holdings Inc. (Taiwan)</i>	
15:00 B-8-4 Single Contact RRAM in Pure 65nm CMOS Logic Process <i>T. H. Yang¹, U. Liauh¹, Y. D. Chih², C. J. Lin¹ and Y. C. King¹, ¹National Tsing-Hua Univ. and ²Taiwan Semiconductor Manufacturing Company (Taiwan)</i>	14:45 C-8-3 Theory of Graphene on SiC(11-20)a Substrate <i>H. Kageshima and H. Hibino, NTT Basic Res. Labs. (Japan)</i>	14:40 D-8-3 Analysis of Micro-Raman Spectra Combined with FDTD Electromagnetic Simulation and FEM Stress Simulation for Local Stress Distribution in Si MOSFETs <i>T. Tada¹, A. Satoh¹, H. Arimoto¹, K. Fukuda¹, K. Fujita² and T. Kanayama¹, ¹AIST and ²ASTOM R&D (Japan)</i>	14:40 E-8-3 Random Telegraph Signals under External Mechanical Stress: A New Method to Probe Trap Structural Relaxation in MOSFET Gate Dielectrics <i>K. C. Tu and M. J. Chen, Univ. of National Chiao Tung (Taiwan)</i>	14:30 F-8-3 High-Performance Transparent Top-Gate AZO TFTs Fabricated by Low-Temperature Process <i>J. Cai¹, D. D. Han¹, Y. F. Geng¹, W. Wang¹, L. L. Wang¹, Y. Tian¹, H. K. Yao¹, L. X. Qian², S. D. Zhang¹ and Y. Wang¹, ¹Peking Univ. and ²Beijing Inst. of Tech. (China)</i>	15:00 E-8-4 Low Frequency Noise Assessment of Accumulation Si p-MOSFETs <i>P. Gaubert¹, A. Teramoto¹, S. Sugawa^{1,2} and T. Ohmi¹, ¹New Industry Creation Hatchery Center, Tohoku Univ. and ²Graduate School of Engineering, Tohoku Univ. (Japan)</i>	14:45 F-8-4 Amorphous Indium Zinc Oxide Thin Film Transistors with Ultra-High Saturation Mobility Using Sm₂O₃ as Gate Insulator <i>W. K. Lin¹, J. W. Zheng², S. T. Chang¹ and K. C. Liu², ¹National Chung Hsing Univ. and ²Chang Gung Univ. (Taiwan)</i>

Coffee Break

Thursday, September 27

1F G	1F H	2F I	2F J	2F K	5F 554	5F 555
		I-7: Biomedical Imaging Technologies (Area 11)	J-7: Wireless Circuits (2) (Area 5)	K-7: Spintronic Materials (Area 12)		M-7: Organic Photovoltaic Devices (Area 10&15)
12:30-14:00 Lunch						
		I-8: Bio-/Nano- Sensors (Area 11) (14:00-15:30) Chairs: S. Machida (Hitachi) Y. Chen (Kyoto Univ.)		K-8: Photonics and Quantum Effects (Area 12) (14:00-15:15) Chairs: H. MuneKata (Tokyo Institute of Technology) Y. Saito (Toshiba)		
		<p>14:00 I-8-1 (Invited) Monolithically Integrated CMUT-on-CMOS Microsystems for Intravascular Ultrasound Imaging <i>F. L. Degerterkin, C. Tekes, J. Zahorian, G. Gurun, S. Satir and T. Xu, Georgia Inst. of Tech. (USA)</i></p> <p>14:30 I-8-2 Controlling Crystallized Domain Positions in Poly-Si Film by using Ni Ferritin for Low Energy Loss and High Efficiency MEMS/NEMS Devices <i>T. Takashi¹, S. Ogawa¹, S. Kumagai^{1,3}, I. Yamashita^{2,3}, Y. Uraoka^{2,3} and M. Sasaki^{1,3}, ¹Toyota Technological Inst., ²Nara Inst. of Science and Tech. and ³CREST-JST (Japan)</i></p> <p>14:45 I-8-3 Development of Si Opto-Neural Probe with Multiple Optical Waveguides and Metal-cover as Versatile Tool for Optogenetics <i>S. Kanno, S. Lee, S. Iwanuma, T. Ishizuka, N. Katayama, H. Mushiake, H. Yao and T. Tanaka, Tohoku Univ. (Japan)</i></p> <p>15:00 I-8-4 Single-Molecule Electrical Identification Towards Nucleotide Sequencing by using Nano-Gap devices <i>T. Ohshiro, M. Tsutsui, M. Furuhashi, S. Ryuzaki, K. Yokota, M. Taniguchi and T. Kawai, Osaka Univ. (Japan)</i></p> <p>15:15 I-8-5 Differential Si Ring Optical Resonator Biosensors <i>T. Taniguchi¹, Y. Amemiya¹, T. Ikeda^{1,3}, A. Kuroda^{1,3} and S. Yokoyama^{1,2}, ¹Res. Inst. for Nanodevice and Bio Systems, Hiroshima Univ., ²Dept of Semiconductor Electronics and Integration and ³Dept of Molecular BioTech. AdSM Hiroshima Univ. (Japan)</i></p>		<p>14:00 K-8-1 (Invited) Room Temperature Laser Oscillation with Circular Polarization in Spin VC-SELS <i>H. Kawaguchi, Graduate School of Materials Science, Nara Inst. of Science and Tech. (Japan)</i></p> <p>14:30 K-8-2 Spin pumping InAs/GaAs QDs: controlling linear and circular polarization <i>E. Harbord¹, Y. Ota¹, M. Shirane^{1,2}, Y. Igarashi^{1,2}, N. Kumagai¹, S. Ohkouchi¹, S. Iwamoto^{1,2}, S. Yorosti^{1,2} and Y. Arakawa^{1,2}, ¹Inst. for Nano Quantum Information Electronics, ²Univ. of Tokyo and ³NEC Corp. (Japan)</i></p> <p>14:45 K-8-3 Anisotropic effect of in-plane magnetic field on spin interference in an InGaAs based ring array <i>S. Tantiamornpong, F. Nagasawa, M. Kohda and J. Nitta, Univ. of Tohoku (Japan)</i></p> <p>15:00 K-8-4 Detection of magneto-optical effects in optical waveguides in close contact with thin film of GdFe alloy <i>K. Nishibayashi¹, H. MuneKata¹, H. Yoneda² and K. Kuga³, ¹Tokyo Inst. of Tech., ²Univ. of Electro-Communications and ³Japan Broadcasting Corp. (Japan)</i></p>		
Coffee Break						

Thursday, September 27

2F B-1	2F B-2	1F C-1	1F C-2	1F D	1F E
				<p>E-9: Characterization (Area 3) (15:40-17:00) Chairs: N. Mori (Osaka Univ.) M. Hane (Renesas)</p>	<p>F-9: GaN Process Technology (Area 6) (15:40-16:55) Chairs: T. Ueda (Panasonic) T. Yoshikawa (Fujitsu)</p>
				<p>15:40 E-9-1 Characterization and Modeling of Back Bias Impacts on Remote-Coulomb-Limited Mobility in UTBB-FDSOI Devices <i>D. Rideau¹, F. Monsieul¹, I. Ben-Akkez^{1,2}, S. Haendler¹, A. Cros¹, O. Nier^{1,2}, O. Saxod¹, C. Tavernier¹ and H. Jaouen¹, ¹STMicroelectronics and ²IMEP-LAHC (France)</i></p>	<p>15:40 F-9-1 Reverse Gate Bias Stress on high-voltage AlGaIn/GaN-on-Si Heterostructure FETs <i>S. Choi, J. Lee, H. Yoon, H. Cha and H. Kim, Hongik Univ. (Korea)</i></p>
				<p>16:00 E-9-2 Novel Extraction Method for Source and Drain Series Resistances in Silicon Nanowire MOS-FETs Based on Radio-Frequency Analysis <i>K. R. Kim¹, S. Shin¹, S. Cho², J. H. Lee³ and I. M. Kang³, ¹Ulsan National Inst. of Sci. and Tech., ²Stanford Univ. and ³Kyungpook National Univ. (Korea)</i></p>	<p>15:55 F-9-2 Effect of Buffer Thickness on Degradation of AlGaIn/ GaN HEMTs on Si <i>A. Frank Wilson, A. Wakejima and T. Egawa, Nagoya Inst. of Tech. (Japan)</i></p>
				<p>16:20 E-9-3 A Novel and Direct Measurement of the Mobility on Very Small Dimension CMOS Devices with Channel Length Down to 20nm <i>E. R. Hsieh¹, S. Chung¹, C. H. Tsai², R. M. Huang², C. T. Tsai² and C. W. Liang², ¹National Chiao Tung Univ. and ²UMC (Taiwan)</i></p>	<p>16:10 F-9-3 The investigation of p-GaN gate HFET on 6-inch silicon using AlN interlayer <i>Y. S. Eum, W. S. Kim, J. Park, K. C. Kim, E. J. Hwang and T. Jang, LG Electronics (Korea)</i></p>
				<p>16:40 E-9-4 Radiation-Induced Parasitic Bipolar Effect in PMOS with Embedded SiGe <i>T. Kato, T. Uemura, H. Mori, Y. Ikeda, K. Suzuki, S. Satoh and H. Matsuyama, Fujitsu Semiconductor Ltd. (Japan)</i></p>	<p>16:25 F-9-4 Roles of Unintentionally-doped channel on Carbon doped GaN for high performance AlGaIn/ GaN HFET <i>J. H. Shin, Y. S. Eum, J. M. Kim, K. C. Kim and T. Jang, IGBT part, System IC R&D, LG Electronics (Korea)</i></p>
					<p>16:40 F-9-5 Damage-free Neutral Beam Etching for High-performance GaN HEMT <i>Y. Tamura^{1,3}, J. Ohta^{2,3}, H. Fujioka^{2,3} and S. Samukawa^{1,3}, ¹Tohoku Univ., ²The Univ. of Tokyo and ³CREST (Japan)</i></p>

1F G	1F H	2F I	2F J	2F K	5F 554	5F 555
		<p>I-9: Lab-on-a-chip and Microfluidic devices (Area 11) (15:40-16:55) Chairs: J. Ohta (Nara Institute of Science and Technology) C. S. Lai (Chang Gung Univ.)</p>		<p>K-9: Spins in Semiconductors (Area 12) (15:40-17:25) Chairs: R. Jansen (AIST) J. Nitta (Tohoku Univ.)</p>		
		<p>15:40 I-9-1 (Invited) Lobule-mimetic Reconstruction on a Liver Lab Chip <i>C.H. Liu, Department of Power Mechanical engineering, National Tsing Hua Univ. (Taiwan)</i></p> <p>16:10 I-9-2 A Lab-on-Chip System for Direct SNP Detection from Human Blood <i>H. Tanaka¹, B. Jones², S. Peeters², L. Zhang², P. Fiorini², B. Majeed², M. Hiraoaka¹, M. Op de Beeck², C. Van Hoof², M. Iwasaki¹ and I. Yamashita¹, ¹Panasonic corp. and ²IMEC vzw (Japna)</i></p> <p>16:25 I-9-3 Shape-memory polymer microvalves and its application to a field-programmable valve array <i>H. Takehara^{1,2}, K. Uto³, M. Ebara³, T. Aoyagi³ and T. Ichiki¹, ¹Univ. of Tokyo, ²JSPS and ³NIMS (Japan)</i></p> <p>16:40 I-9-4 Controlling Macroscopic Lipid Bilayer Self-Spreading by Molecule Gate Modulation in a Nanometer-Scale Gap <i>Y. Kashimura, K. Furukawa and K. Torimitsu, NTT Basic Res. Labs. (Japan)</i></p>		<p>15:40 K-9-1 Room-Temperature Detection of Spin-Accumulation Signals in a Silicon-Based MOSFET Structure with a Schottky-Tunnel Contact <i>K. Hamaya¹, K. Masaki¹, Y. Fujita¹, S. Yamada¹, K. Sawano² and M. Miyao¹, ¹Department of Electronics, Kyushu Univ. and ²Res. Center for Silicon Nano-Sci., Tokyo City Univ. (Japan)</i></p> <p>15:55 K-9-2 Transient oblique Hanle signals observed in Co₂MnSi/CoFe/n-GaAs with non-local four-terminal configuration <i>J. Shan, T. Akiho, K. Matsuda, M. Yamamoto and T. Uemura, Hokkaido Univ. (Japan)</i></p> <p>16:10 K-9-3 Spin Accumulation in Nondegenerate and Heavily Doped p-Type Germanium <i>S. Iba¹, H. Saito¹, A. Spiesser¹, S. Watanabe², R. Jansen¹, S. Yuasa¹ and K. Ando¹, ¹AIST and ²Univ. of Tsukuba (Japan)</i></p> <p>16:25 K-9-4 Tunnel barrier thickness dependence of Hanle-type signals in CoFe/MgO/n-Si and CoFe/MgO/n-Ge junctions investigated through three-terminal configuration <i>T. Uemura, G. J. Li, J. Fujisawa, K. Kondo, K. i. Matsuda and M. Yamamoto, Hokkaido Univ. (Japan)</i></p> <p>16:40 K-9-5 Effective creation of spin polarization in p-type Germanium from a Fe/GeO₂ tunnel contact. <i>A. Spiesser¹, S. Watanabe², H. Saito¹, S. Yuasa¹ and K. Ando¹, ¹National Inst. of Advanced Indus. Sci. and Tech. (AIST) and ²Univ. of Tsukuba (Japan)</i></p> <p>16:55 K-9-6 Asymmetric bias voltage dependence in spin accumulation signals observed by the three-terminal Hanle measurements for CoFe/crystalline MgO/SOI devices <i>M. Ishikawa¹, H. Sugiyama¹, T. Inokuchi¹, T. Tanamoto¹, K. Hamaya², N. Tezuka² and Y. Saito¹, ¹Corporate R&D Center, Toshiba Corp., ²Kyushu Univ. and ³Tohoku Univ. (Japan)</i></p> <p>17:10 K-9-7 Effects of interface resistance asymmetry on magnetoresistance of spin transistor structures <i>T. Tanamoto, H. Sugiyama, T. Inokuchi, M. Ishikawa and Y. Saito, Toshiba Corp. (Japan)</i></p>		