

**PL: Opening Session (10:00-12:30)**

Chairpersons: Y. Awano, Fujitsu Labs. Ltd. and S. Zaima, Nagoya Univ.

**10:00 PL-0**

Welcome Address and Award Presentation

N. Yokoyama, Fujitsu Labs. Ltd.

**10:30 PL-1**

New Technology: Silicon Photonics: Opportunity, Challenges & Applications

M. Paniccia, Intel Corp., USA

**11:10 PL-2**

Organic Transistors: towards Ambient Electronics

T. Someya, Univ. of Tokyo, Japan

**11:50 PL-3**

Try Disruptive Technology!

H. Watanabe, Selete Inc., Japan

12:30-14:00 Lunch

Room 101 (A)	Room 102 (B)	Room 201A (C)	Room 201B (D)	Room 202A (E)	Room 202B (F)	Room 303 (G)	Room 304 (H)	Room 405 (I)	Room 406 (J)
<b>Area 1: Advanced Gate Stack/Si Processing Science</b>	<b>Area 3: CMOS Devices/Device Physics</b>	<b>Area 2: Characterization and Materials Engineering for Interconnect Integration</b>	<b>Area 5: Advanced Circuits and Systems</b>	<b>Area 7: Photonic Devices and Device Physics</b>	<b>Area 8: Advanced Material Synthesis and Crystal Growth Technology</b>	<b>Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics</b>	<b>Area 10: Organic Materials Science, Device Physics, and Applications</b>	<b>Area 9: Physics and Applications of Novel Functional Materials and Devices</b>	<b>Area 4: Advanced Memory Technology</b>
A-1: Metal Gate-I (14:00-15:50) Chairs: Y. Nara (Selete) J. Yugami (Renesas Tech. Corp.)	B-1: Ge, SiGe Channel Transistor Technology (14:00-16:00) Chairs: J. C. S. Woo (Univ. of California, Los Angeles) Y. Momiyama (Fujitsu Labs. Ltd.)	C-1: Novel Interconnects (14:00-15:50) Chairs: T. Yoda (Toshiba Corp.) M. Nihei (Fujitsu Labs. Ltd.)	D-1: Scaling and Circuit Design Concern (14:00-15:50) Chairs: H. Kobayashi (Gunma Univ.) T. Komuro (Agilent Technologies International Japan, Ltd.)	E-1: Quantum-Dot Devices (14:00-16:00) Chairs: M. Sugawara (Fujitsu Labs. Ltd.) M. Tokushima (NEC Corp.)	F-1: Compound Semiconductors (14:00-16:00) Chairs: M. Takahashi (JAEA) T. Fukui (Hokkaido Univ.)	G-1: GaN FETs I (14:00-16:00) Chairs: S. Tanaka (NEC Corp.) M. Kuzuhara (Univ. of Fukui)	H-1: Organic Photo-Electronics (14:00-16:00) Chairs: H. Usui (Tokyo Univ. of Agri. and Tech.) H. Kajii (Osaka Univ.)	I-1: Novel Si Transistors (14:00-16:00) Chairs: Y. Takahashi (Hokkaido Univ.) Y. Suda (Tokyo Univ. of Agri. and Tech.)	J-1: DRAM I (14:00-15:50) Chairs: I. Asano (Elpida Memory, Inc.) H. Jeong (Samsung Electronics Co., Ltd.)

※ Country of first author's affiliation is shown in parentheses.

Wednesday, September 19

Room 101 (A)	Room 102 (B)	Room 201A (C)	Room 201B (D)	Room 202A (E)
<b>Area 1: Advanced Gate Stack/Si Processing Science</b>	<b>Area 3: CMOS Devices/Device Physics</b>	<b>Area 2: Characterization and Materials Engineering for Interconnect Integration</b>	<b>Area 5: Advanced Circuits and Systems</b>	<b>Area 7: Photonic Devices and Device Physics</b>
<b>14:00 A-1-1 (Invited)</b> Challenges for PMOS metal gate electrodes and solutions for low power applications J. Schaeffer, <i>Freescale Semiconductor Inc. (USA)</i>	<b>14:00 B-1-1</b> High mobility Ge channel metal source/drain pMOSFETs with nickel fully silicided gate K. Ikeda <sup>1</sup> , N. Taoka <sup>2</sup> , Y. Yamashita <sup>1</sup> , M. Harada <sup>1</sup> , K. Suzuki <sup>1</sup> , T. Yamamoto <sup>1</sup> , N. Sugiyama <sup>1</sup> and S. Takagi <sup>2,3</sup> , <sup>1</sup> MIRAI-ASET, <sup>2</sup> MIRAI-ASRC and <sup>3</sup> Univ. of Tokyo (Japan)	<b>14:00 C-1-1 (Invited)</b> Si-Based Infrared Light Emitters Using Semiconducting Iron Disilicide T. Suemasu, S. Murase, Y. Ugajin and M. Suzuno, <i>Univ. of Tsukuba (Japan)</i>	<b>14:00 D-1-1 (Invited)</b> Next generation compact model for digital and analog circuit design T. Ohguro, <i>Toshiba Corp. (Japan)</i>	<b>14:00 E-1-1 (Invited)</b> High-Speed Quantum Dot Lasers P. Bhattacharya and Z. Mi, <i>Univ. of Michigan (USA)</i>
<b>14:30 A-1-2</b> PMOSFET Vth Modulation Technique using Fluorine Treatment through ALD-TiN Suitable for CMOS Devices K. Tai, S. Yamaguchi, K. Tanaka, T. Hirano, I. Oshiyama, S. Kazi, T. Ando, M. Nakata, M. Yamanaka, R. Yamamoto, S. Kanda, Y. Tateshita, H. Wakabayashi, Y. Tagawa, M. Tsukamoto, H. Iwamoto, M. Saito, N. Nagashima and S. Kadomura, <i>Sony Corp. (Japan)</i>	<b>14:20 B-1-2</b> Integration of Dual Channels MOSFET on Defect-Free, Tensile-Strained Germanium on Silicon H. Zang <sup>1,2</sup> , W. Y. Loh <sup>2</sup> , J. D. Ye <sup>2</sup> , T. H. Loh <sup>2</sup> , G. Q. Lo <sup>2</sup> and B. J. Cho <sup>1</sup> , <sup>1</sup> National Univ. of Singapore and <sup>2</sup> Inst. of Microelectronics (Singapore)	<b>14:30 C-1-2</b> Electrical properties of carbon nanotubes grown at a low temperature by radical chemical vapor deposition for future LSI interconnects D. Yokoyama <sup>1</sup> , K. Ishimaru <sup>1</sup> , T. Iwasaki <sup>1</sup> , S. Sato <sup>2</sup> , T. Hyakushima <sup>2</sup> , M. Nihei <sup>2</sup> , Y. Awano <sup>2</sup> and H. Kawarada <sup>1</sup> , <sup>1</sup> Waseda Univ. and <sup>2</sup> MIRAI-Selete (Japan)	<b>14:30 D-1-2 (Invited)</b> Characterization and modeling of layout dependent parametric variability of nanometer devices C. Guardiani, <i>PDF Solutions (Italy)</i>	<b>14:30 E-1-2 (Invited)</b> MOCVD Growth of Quantum-Dot Optical Devices K. Kawaguchi <sup>1</sup> , N. Yasuoka <sup>1</sup> , M. Ekawa <sup>1</sup> , H. Ebe <sup>2</sup> , T. Akiyama <sup>3</sup> , M. Sugawara <sup>1,3</sup> and Y. Arakawa <sup>2</sup> , <sup>1</sup> Fujitsu Labs. Ltd., <sup>2</sup> Univ. of Tokyo and <sup>3</sup> QD Laser Inc. (Japan)

Wednesday, September 19

Room 202B (F)	Room 303 (G)	Room 304 (H)	Room 405 (I)	Room 406 (J)
<b>Area 8: Advanced Material Synthesis and Crystal Growth Technology</b>	<b>Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics</b>	<b>Area 10: Organic Materials Science, Device Physics, and Applications</b>	<b>Area 9: Physics and Applications of Novel Functional Materials and Devices</b>	<b>Area 4: Advanced Memory Technology</b>
<b>14:00 F-1-1 (Invited)</b> InAs/In(Ga,Al)AsSb Quantum Dot Heterostructures for Photonic Devices J. I. Chyi <sup>1,2</sup> , P. C. Chiu <sup>1</sup> , M. J. Shiau <sup>1</sup> , T. P. Hsieh <sup>1</sup> and M. N. Chang <sup>3</sup> , <sup>1</sup> National Central Univ., <sup>2</sup> Academic Sinica and <sup>3</sup> National Nano Device Labs. (Taiwan)	<b>14:00 G-1-1 (Invited)</b> Next Generation High-Efficiency RF Transmitter Technology for Basestations P. Asbeck <sup>1</sup> , D. Kimball <sup>1</sup> , J. Jeong <sup>2</sup> , P. Draxler <sup>1</sup> , C. Hsia <sup>1</sup> and L. Larson <sup>1</sup> , <sup>1</sup> Univ. of California, San Diego and <sup>2</sup> Kwangwoon Univ. (USA)	<b>14:00 H-1-1 (Invited)</b> Plastic dye-sensitized solar cells and solidification with nano-carbon materials T. Miyasaka <sup>1,2</sup> , <sup>1</sup> Toin Univ. of Yokohama and <sup>2</sup> Peccell Tech., Inc. (Japan)	<b>14:00 I-1-1 (Invited)</b> 3D Stacked Nanowires CMOS Integration with a Damascene Finfet Process T. Ernst <sup>1</sup> , C. Dupré <sup>1,2</sup> , E. Dornel <sup>1</sup> , J. C. Barbé <sup>1</sup> , S. Bécu <sup>1</sup> , C. Vizioz <sup>1</sup> , V. Delaye <sup>1</sup> , F. Andrieu <sup>1</sup> , J. M. Hartmann <sup>1</sup> , S. Barnola <sup>1</sup> , T. Poiroux <sup>1</sup> , O. Faynot <sup>1</sup> , G. Ghibaudo <sup>2</sup> and S. Deleonibus <sup>1</sup> , <sup>1</sup> CEA-LETI and <sup>2</sup> IMEP (France)	<b>14:00 J-1-1 (Invited)</b> Overview and Future Challenges of Floating Body RAM Technologies T. Shino, T. Ohsawa, T. Hamamoto and A. Nitayama, <i>Toshiba Corp. (Japan)</i>
<b>14:30 F-1-2 (Invited)</b> Present Status and Future Issues of III-V Semiconductor Nanowires K. Hiruma, M. Yazawa, K. Haraguchi, K. Ogawa and T. Katsuyama, <i>Hitachi, Ltd. (Japan)</i>	<b>14:30 G-1-2</b> Normally-off AlGaIn/GaN MIS-HFETs Using Non-polar a-Plane M. Kuroda, T. Ueda and T. Tanaka, <i>Matsushita Electric Industrial Co., Ltd. (Japan)</i>	<b>14:30 H-1-2</b> Efficiency Improvement of Organic Solar Cells by Annealing for Active Layer C. K. Chen, Y. S. Tsai, W. P. Chu, L. W. Ji and T. H. Meen, <i>National Formosa Univ. (Taiwan)</i>	<b>14:30 I-1-2</b> 3D Multi-gate NMOS Mobility Enhancement with High-tensile ILD-SiN <sub>x</sub> Stressor W. S. Liao <sup>1</sup> , S. Y. Huang <sup>1</sup> , K. M. Chen <sup>2</sup> , H. C. Tsen <sup>1</sup> and L. Chung <sup>1</sup> , <sup>1</sup> UMC and <sup>2</sup> National Nano Device Labs. (Taiwan)	<b>14:30 J-1-2</b> URCAT (U-shaped-Recess-Channel-Array Transistor) Technology for 60nm DRAM and beyond C. Lee, J. C. Park, S. H. Park, S. S. Lee, S. D. Hong, I. G. Kim, Y. J. Choi, T. W. Lee, G. Y. Jin and K. Kim, <i>Samsung Electronics Co., Ltd. (Korea)</i>

Wednesday, September 19

Room 101 (A)	Room 102 (B)	Room 201A (C)	Room 201B (D)	Room 202A (E)
<b>Area 1: Advanced Gate Stack/Si Processing Science</b>	<b>Area 3: CMOS Devices/Device Physics</b>	<b>Area 2: Characterization and Materials Engineering for Interconnect Integration</b>	<b>Area 5: Advanced Circuits and Systems</b>	<b>Area 7: Photonic Devices and Device Physics</b>
<b>14:50 A-1-3</b> Low Threshold Voltage Gate-First pMISFETs with Poly-Si/TiN/HfSiON Stacks Fabricated with PVD-based In-situ Solid Phase Interface Reaction (SPIR) Method N. Kitano <sup>1,3</sup> , H. Arimura <sup>1</sup> , S. Horie <sup>1</sup> , T. Hosoi <sup>1</sup> , T. Shimura <sup>1</sup> , H. Watanabe <sup>1</sup> , T. Kawahara <sup>2</sup> , S. Sakashita <sup>2</sup> , Y. Nishida <sup>2</sup> , J. Yugami <sup>2</sup> , T. Minami <sup>3</sup> and M. Kosuda <sup>3</sup> , <sup>1</sup> <i>Osaka Univ.</i> , <sup>2</sup> <i>Renesas Tech. Corp.</i> and <sup>3</sup> <i>Canon ANELVA Corp. (Japan)</i>	<b>14:40 B-1-3</b> Electrical Stress Effects on Mobility of Germanium-On-Insulator (GeOI) pMOSFETs with HfO <sub>2</sub> Gate Dielectric J. H. Yi, S. Oh and H. S. P. Wong, <i>Stanford Univ. (USA)</i>	<b>14:50 C-1-3</b> Carbon Nanotube Vias Fabricated by Remote Plasma-Enhanced Chemical Vapor Deposition M. Katagiri, N. Sakuma, M. Suzuki, T. Sakai, S. Sato, T. Hyakushima, M. Nihei and Y. Awano, <i>MIRAI-Selete (Japan)</i>	<b>15:10 D-1-3</b> Investigation of Matching Performance for Uniaxial Strained PMOSFETs J. J. Y. Kuo, W. P. N. Chen and P. Su, <i>National Chiao Tung Univ. (Taiwan)</i>	<b>15:00 E-1-3</b> First Demonstration of Electrically Driven 1.55 μm Single-Photon Generator T. Miyazawa <sup>1</sup> , S. Hirose <sup>2</sup> , S. Okumura <sup>2</sup> , K. Takemoto <sup>2</sup> , M. Takatsu <sup>2</sup> , T. Usuki <sup>1</sup> , N. Yokoyama <sup>2</sup> and Y. Arakawa <sup>1</sup> , <sup>1</sup> <i>Univ. of Tokyo</i> and <sup>2</sup> <i>Fujitsu Labs. Ltd. (Japan)</i>
<b>15:10 A-1-4</b> Achieving Band Edge Effective Work Function of Gate First Metal Gate by Oxygen Anneal Processes: Low Temperature Oxygen Anneal (LTOA) and High Pressure Oxygen Anneal (HPOA) Processes C. S. Park <sup>1</sup> , S. C. Song <sup>1</sup> , C. Burham <sup>2</sup> , H. B. Park <sup>3</sup> , H. Niimi <sup>4</sup> , B. S. Ju <sup>1</sup> , J. Barnett <sup>1</sup> , C. Y. Kang <sup>1</sup> , P. Lysaght <sup>1</sup> , G. Bersuker <sup>1</sup> , R. Choi <sup>1</sup> , H. K. Park <sup>5</sup> , H. Hwang <sup>5</sup> , B. H. Park <sup>6</sup> , S. Kim <sup>6</sup> , P. Kirsch <sup>7</sup> , B. H. Lee <sup>7</sup> and R. Jummy <sup>7</sup> , <sup>1</sup> <i>SEMATECH</i> , <sup>2</sup> <i>Univ. of Texas at Austin</i> , <sup>3</sup> <i>Samsung Assigner</i> , <sup>4</sup> <i>TI Assignee</i> , <sup>5</sup> <i>GIST</i> , <sup>6</sup> <i>Poongsan Microtec</i> and <sup>7</sup> <i>IBM (USA)</i>	<b>15:00 B-1-4</b> Pt-germanide Formed by Laser Annealing and Its Application for Schottky Source/Drain MOSFET Integrated with TaN/CVD-HfO <sub>2</sub> /Ge Gate Stack R. Li <sup>1</sup> , S. J. Lee <sup>1</sup> , D. Z. Chi <sup>2</sup> , M. H. Hong <sup>1</sup> and D. L. Kwong <sup>3</sup> , <sup>1</sup> <i>National Univ. of Singapore</i> , <sup>2</sup> <i>Inst. of Materials Research and Engineering</i> and <sup>3</sup> <i>Inst. of Microelectronics (Singapore)</i>	<b>15:10 C-1-4</b> A Novel Contact-plug Process with Low Resistance Nucleation Layer Using B <sub>2</sub> H <sub>6</sub> -reduction W-ALD Method for 32 nm CMOS Devices and Beyond A. Yutani, K. Ichinose, K. Maekawa, K. Asai and M. Kojima, <i>Renesas Tech. Corp. (Japan)</i>	<b>15:30 D-1-4</b> Novel Soft Error Hardened Latches and Flip-Flops T. Uemura, R. Tanabe, Y. Tosaka and S. Satoh, <i>Fujitsu Labs. Ltd. (Japan)</i>	<b>15:15 E-1-4</b> Electroluminescence from Multiple-Stacked Structures of Impurity Doped Si Quantum Dots K. Okuyama, K. Makihara, M. Ikeda, S. Higashi and S. Miyazaki, <i>Hiroshima Univ. (Japan)</i>

Wednesday, September 19

Room 202B (F)	Room 303 (G)	Room 304 (H)	Room 405 (I)	Room 406 (J)
<b>Area 8: Advanced Material Synthesis and Crystal Growth Technology</b>	<b>Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics</b>	<b>Area 10: Organic Materials Science, Device Physics, and Applications</b>	<b>Area 9: Physics and Applications of Novel Functional Materials and Devices</b>	<b>Area 4: Advanced Memory Technology</b>
<b>15:00 F-1-3</b> In situ Metal Mask for Selective Area Growth of Thin Epitaxial Layers S. Ohkouchi <sup>1,2</sup> , N. Ozaki <sup>3</sup> , Y. Takata <sup>3</sup> , Y. Kitagawa <sup>3</sup> , Y. Nakamura <sup>4</sup> , N. Ikeda <sup>5</sup> , Y. Sugimoto <sup>3,5</sup> and K. Asakawa <sup>3</sup> , <sup>1</sup> <i>AIST</i> , <sup>2</sup> <i>NEC Corp.</i> , <sup>3</sup> <i>Univ. of Tsukuba</i> , <sup>4</sup> <i>Kumamoto Univ.</i> and <sup>5</sup> <i>NIMS (Japan)</i>	<b>14:45 G-1-3</b> Gain Improvement of Enhancement-mode AlGaIn/GaN HEMTs Using Dual-Gate Architectures R. Wang, Y. Wu, W. C. W. Tang, K. M. Lau and K. J. Chen, <i>Hong Kong Univ. of Sci. and Tech. (China)</i>	<b>14:45 H-1-3</b> Surface Plasmon Excitation and Emission Light properties for Prism/MgF <sub>2</sub> /Ag/MEH-PPV Film Structure K. Shinbo, M. Hafuka, M. Minagawa, Y. Ohdaira, A. Baba, K. Kato and F. Kaneko, <i>Niigata Univ. (Japan)</i>	<b>14:45 I-1-3</b> The Drivability Enhancement Mechanisms in Nano-grating MOSFETs X. Zhu <sup>1</sup> , S. Kuroki <sup>1</sup> , K. Kotani <sup>1</sup> , M. Fukuda <sup>2</sup> , H. Shido <sup>2</sup> , Y. Mishima <sup>2</sup> and T. Ito <sup>1</sup> , <sup>1</sup> <i>Tohoku Univ.</i> and <sup>2</sup> <i>Fujitsu Labs. Ltd (Japan)</i>	<b>14:50 J-1-3</b> RC-FinFET (Recessed Channel FinFET) Cell Transistor Technology for Future Generation DRAMs M. Yoshida, J. R. Kahng, J. S. Moon, K. H. Jung, K. Kim, H. Sung, C. Lee, C. K. Kim, W. Yang and D. Park, <i>Samsung Electronics Co., Ltd. (Korea)</i>
<b>15:15 F-1-4</b> Optimization of Well Width and of N Composition on Optical Properties for GaNAs/GaAs MQW grown by RF-MBE K. Fujii <sup>1</sup> , D. Nakase <sup>1</sup> , T. Kumamoto <sup>1</sup> , Y. Iwata <sup>1</sup> , N. Tsurumachi <sup>1</sup> , H. Miyagawa <sup>1</sup> , H. Itoh <sup>1</sup> , S. Nakanishi <sup>1</sup> , H. Akiyama <sup>2</sup> and S. Koshihara <sup>1</sup> , <sup>1</sup> <i>Kagawa Univ.</i> and <sup>2</sup> <i>Univ. of Tokyo (Japan)</i>	<b>15:00 G-1-4</b> p-type InGaN Cap Layer for Normally-off Operation in AlGaIn/GaN HFETs M. Shimizu <sup>1</sup> , G. Piao <sup>1</sup> , M. Inada <sup>1</sup> , H. Okumura <sup>1</sup> , Y. Yano <sup>2</sup> and N. Akutsu <sup>2</sup> , <sup>1</sup> <i>AIST</i> and <sup>2</sup> <i>Taiyo Nippon Sanso Corp. (Japan)</i>	<b>15:00 H-1-4</b> Fabrication of Dual-disks Microlasers in Thiophene/Phenylene Co-oligomers F. Sasaki <sup>1</sup> , S. Kobayashi <sup>1</sup> , S. Haraichi <sup>1</sup> , S. Fujiwara <sup>2</sup> , Y. Ido <sup>2</sup> , K. Bando <sup>2</sup> , Y. Masumoto <sup>2</sup> and S. Hotta <sup>3</sup> , <sup>1</sup> <i>AIST</i> , <sup>2</sup> <i>Univ. of Tsukuba</i> and <sup>3</sup> <i>Kyoto Inst. of Tech. (Japan)</i>	<b>15:00 I-1-4</b> Low Contact Resistance with Low Schottky Barrier for N-type Silicon Using Yttrium Silicide T. Isogai, H. Tanaka, T. Goto, A. Teramoto, S. Sugawa and T. Ohmi, <i>Tohoku Univ. (Japan)</i>	<b>15:10 J-1-4</b> Investigation on the Body Bias Dependency of Gate Induced Drain Leakage Current in the Body-Tied finFET C. Lee, M. Yoshida, K. H. Jung, C. K. Kim, H. J. Kim, H. Park, W. S. Lee, K. Kim, J. Kahng, W. Yang and D. Park, <i>Samsung Electronics Co., Ltd. (Korea)</i>

Wednesday, September 19

Room 101 (A)	Room 102 (B)	Room 201A (C)	Room 201B (D)	Room 202A (E)
<b>Area 1: Advanced Gate Stack/Si Processing Science</b>	<b>Area 3: CMOS Devices/Device Physics</b>	<b>Area 2: Characterization and Materials Engineering for Interconnect Integration</b>		<b>Area 7: Photonic Devices and Device Physics</b>
<b>15:30 A-1-5</b> Gate First PFET Poly-Si/TiN/Al <sub>2</sub> O <sub>3</sub> Gate Stacks with Inversion Thicknesses Less than 15Å for High Performance or Low Power CMOS Applications B. P. Linder, V. Narayanan, V. K. Paruchuri, E. Cartier and S. Kanakasabapathy, <i>IBM (USA)</i>	<b>15:20 B-1-5</b> Silicon Strain-Transfer-Layer (STL) and Graded Source/Drain Stressors for Enhancing the Performance of Silicon-Germanium Channel P-MOSFETs G. H. Wang <sup>1</sup> , E. H. Toh <sup>1</sup> , K. M. Hoe <sup>1</sup> , S. Tripathy <sup>1</sup> , S. Balakumar <sup>1</sup> , G. Q. Lo <sup>2</sup> , G. Samudra <sup>1</sup> and Y. C. Ye <sup>1</sup> , <sup>1</sup> National Univ. of Singapore and <sup>2</sup> Inst. of Microelectronics (Singapore)	<b>15:30 C-1-5</b> Plasma-Enhanced ALD Ru Thin Films on PVD-TaN Films with Smooth Morphology at Low Temperature Using DER Ru Precursor K. Namba <sup>1</sup> , N. Hosoi <sup>1</sup> , N. Tarumi <sup>1</sup> , H. Shinriki <sup>2</sup> and S. Ogawa <sup>1</sup> , <sup>1</sup> Selete and <sup>2</sup> ASM Japan K.K. (Japan)		<b>15:30 E-1-5</b> Electric-field control of coupled states in weakly coupled quantum dots I. Morohashi, K. Komori, K. Goshima, T. Sugaya, S. Yamauchi and A. Shikanai, <sup>1</sup> AIST and <sup>2</sup> CREST-JST (Japan)
	<b>15:40 B-1-6</b> New Observations on the Narrow Width Effect of the Hot Carrier and NBTI Reliabilities in pMOSFETs with Various Types of Strains S. S. Chung <sup>1</sup> , D. C. Huang <sup>2</sup> , C. S. Lai <sup>2</sup> , C. H. Tsai <sup>3</sup> , P. W. Liu <sup>3</sup> , Y. H. Lin <sup>3</sup> , C. T. Tsai <sup>3</sup> , G. H. Ma <sup>3</sup> , S. C. Chien <sup>3</sup> and S. W. Sun <sup>3</sup> , <sup>1</sup> National Chiao Tung Univ., <sup>2</sup> Chang Gung Univ. and <sup>3</sup> UMC (Taiwan)			<b>15:45 E-1-6</b> Improvement in Characteristics of InGaAs/GaAs Quantum-Dot PIN Photodetectors with Antireflection Photonic Crystals J. J. Chen, Y. K. Su, R. W. Chuang, H. C. Yu, W. C. Chen, K. Y. Cheng and T. H. Shen, <i>National Cheng Kung Univ. (Taiwan)</i>

Wednesday, September 19

Room 202B (F)	Room 303 (G)	Room 304 (H)	Room 405 (I)	Room 406 (J)
<b>Area 8: Advanced Material Synthesis and Crystal Growth Technology</b>	<b>Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics</b>	<b>Area 10: Organic Materials Science, Device Physics, and Applications</b>	<b>Area 9: Physics and Applications of Novel Functional Materials and Devices</b>	<b>Area 4: Advanced Memory Technology</b>
<b>15:30 F-1-5</b> Formation of InGaAs-On-Insulator Structures by Epitaxial Lateral Over Growth from (111) Si T. Hoshii <sup>1</sup> , M. Deura <sup>1</sup> , M. Shichijo <sup>1</sup> , M. Sugiyama <sup>1</sup> , S. Sugahara <sup>2</sup> , M. Takenaka <sup>1</sup> , Y. Nakano <sup>1</sup> and S. Takagi <sup>1</sup> , <sup>1</sup> Univ. of Tokyo and <sup>2</sup> Tokyo Tech. (Japan)	<b>15:15 G-1-5</b> Finger Length Optimization for AlGaIn/GaN HEMT and InGaP/GaAs HBT by Using FDTD Electromagnetic and Device Co-Simulation Technique A. Chokki, Y. Shinohara, R. Ishikawa and K. Honjo, <i>Univ. of Electro-Communications (Japan)</i>	<b>15:15 H-1-5</b> Orientational Re-ordering of Polar Organic Monolayers by Cooperative Molecular Field Effect D. Taguchi, N. Kajimoto, T. Manaka and M. Iwamoto, <i>Tokyo Tech. (Japan)</i>	<b>15:15 I-1-5</b> Double-Spacer Impact-ionization MOS Transistor: Characterization and Analysis E. H. Toh <sup>1</sup> , G. H. Wang <sup>1</sup> , G. Q. Lo <sup>2</sup> , L. Chan <sup>1</sup> , G. Samudra <sup>1</sup> and Y. C. Ye <sup>1</sup> , <sup>1</sup> National Univ. of Singapore and <sup>2</sup> Inst. of Microelectronics (Singapore)	<b>15:30 J-1-5</b> The Effect of Radical Oxidation on DRAM Cell Transistor with S-RCAT S. G. Park, S. H. Joe, J. H. Kim, H. S. Song, I. D. Choi, S. H. Han, Y. S. Ahn, S. B. Park, J. S. Lee, S. N. Kim, W. T. Choi, K. J. Kim and K. S. Oh, <i>SamSung Electronics Co., Ltd. (Korea)</i>
<b>15:45 F-1-6</b> Growth of GaN on Si (111) using simultaneous AlN/ $\alpha$ -Si <sub>3</sub> N <sub>4</sub> buffer structure T. H. Yang, J. C. Chang, J. T. Ku, S. G. Shen, Y. C. Chen and C. Y. Chang, <i>National Chiao Tung Univ. (Taiwan)</i>	<b>15:30 G-1-6</b> Layout Optimization of AlGaIn/GaN HEMTs for High-power Applications Y. S. Lin <sup>1</sup> , T. C. Li <sup>2</sup> , Y. C. Wang <sup>3</sup> and S. S. H. Hsu <sup>1</sup> , <sup>1</sup> National Tsing Hua Univ., <sup>2</sup> Industrial Tech. Research Inst. and <sup>3</sup> National Chiao Tung Univ. (Taiwan)	<b>15:30 H-1-6</b> Embedded Process and Characterization Analysis of Discrete Capacitor in Organic-Base Substrate S. M. Wu <sup>1</sup> , E. Jahja <sup>1</sup> , J. W. Wang <sup>2</sup> , Z. Z. Lai <sup>1</sup> and W. K. Yeh <sup>1</sup> , <sup>1</sup> National Univ. of Kaohsiung and <sup>2</sup> ASE Electronics, Inc. (Taiwan)	<b>15:30 I-1-6</b> Identification of Single and Coupled Acceptors in Silicon Nano Field-Effect Transistors M. A. H. Khalafalla, Y. Ono, K. Nishiguchi and A. Fujiwara, <i>NTT Corp. (Japan)</i>	

Room 101 (A) Room 102 (B) Room 201A (C) Room 201B (D) Room 202A (E)

Room 202B (F) Room 303 (G) Room 304 (H) Room 405 (I) Room 406 (J)

**Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics**

**15:45 G-1-7**  
A New 20-element distributed Small-Signal Model and Integrated Intelligent Extraction Method applied to AlGaIn/GaN HEMTs up to 40GHz  
J. Lu, B. Liu, Y. Wang, M. Li, L. Ma, Z. Wang and Z. P. Yu, *Tsinghua Univ. (China)*

**Area 10: Organic Materials Science, Device Physics, and Applications**

**15:45 H-1-7**  
Influence of Organic Functional Groups on the Electrical Properties of Carbon Black - A Theoretical Study  
A. Chutia, Z. Zhu, R. Sahnoun, H. Tsuboi, M. Koyama, N. Hatakeyama, A. Endou, H. Takaba, M. Kubo, C. A. Del Carpio and A. Miyamoto, *Tohoku Univ. (Japan)*

**Area 9: Physics and Applications of Novel Functional Materials and Devices**

**15:45 I-1-7**  
Photon-induced single-hole-tunneling current modulation in Si multiple-tunnel-junction field-effect transistor  
Z. A. Burhanudin, R. Nuryadi and M. Tabe, *Shizuoka Univ. (Japan)*

**Break**

**Area 1: Advanced Gate Stack/Si Processing Science**

**Area 3: CMOS Devices/Device Physics**

**Area 12: Spintronic Materials and Devices**

**Area 11: Micro/Nano Electromechanical and Bio-Systems (Devices)**

**Area 7: Photonic Devices and Device Physics**

A-2: Ge MIS (16:15-18:15)  
Chairs: S. Miyazaki (Hiroshima Univ.)  
H. Hwang (Gwangju Inst. of Sci. & Engineering)

B-2: Transport in Nanoscale MOSFETs (16:15-18:25)  
Chairs: F. Boeuf (STMicroelectronics)  
Y. Kamakura (Osaka Univ.)

C-2: Spintronic Materials and Quantum Structures (16:15-17:30)  
Chairs: Y. Ohno (Tohoku Univ.)  
S. Sugahara (Tokyo Tech.)

D-2: MEMS Technology (16:15-18:15)  
Chairs: M. Sasaki (Toyota Technological Inst.)  
O. Nakagawara (Murata Manufacturing Co., Ltd.)

E-2: Special Session: Photonic Crystals and Si Photonics I (16:15-18:15)  
Chairs: M. Sugawara (Fujitsu Labs. Ltd.)  
M. Tokushima (NEC Corp.)

**Break**

**Area 8: Advanced Material Synthesis and Crystal Growth Technology**

**Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics**

**Area 10: Organic Materials Science, Device Physics, and Applications**

**Area 9: Physics and Applications of Novel Functional Materials and Devices**

**Area 4: Advanced Memory Technology**

F-2: Oxides (16:15-17:30)  
Chairs: J. I. Chyi (National Central Univ.)  
H. Yamaguchi (NTT Basic Research Labs.)

G-2: GaN FETs II (16:15-18:00)  
Chairs: T. Tanaka (Matsushita Electric Industrial Co., Ltd.)  
Y. Ohno (Univ. of Tokushima)

H-2: Organic Light Emitting Devices (16:15-18:00)  
Chairs: S. Tokito (NHK)  
M. Iwamoto (Tokyo Tech.)

I-2: Transport Through Novel Materials and Structures (16:15-18:00)  
Chairs: T. Fujisawa (NTT)  
K. Hirakawa (Univ. of Tokyo)

J-2: Flash Memory I (16:15-17:45)  
Chairs: Y. Yamauchi (Sharp Corp.)  
C. Hsu (eMemory Technology Inc.)

Wednesday, September 19

Room 101 (A)	Room 102 (B)	Room 201A (C)	Room 201B (D)	Room 202A (E)
<b>Area 1: Advanced Gate Stack/Si Processing Science</b>	<b>Area 3: CMOS Devices/Device Physics</b>	<b>Area 12: Spintronic Materials and Devices</b>	<b>Area 11: Micro/Nano Electromechanical and Bio-Systems (Devices)</b>	<b>Area 7: Photonic Devices and Device Physics</b>
<b>16:15 A-2-1</b> Evaluation of SiO <sub>2</sub> /GeO <sub>2</sub> /Ge MIS Interface Properties by Low Temperature Conductance Method H. Matsubara <sup>1</sup> , H. Kumagai <sup>1</sup> , S. Sugahara <sup>2</sup> , M. Takenaka <sup>1</sup> , S. Takagi <sup>1</sup> , <sup>1</sup> Univ. of Tokyo and <sup>2</sup> Tokyo Tech. (Japan)	<b>16:15 B-2-1 (Invited)</b> Technology Oriented Analytical Models of MOSFETs in the Quasi-Ballistic Regime R. Clerc <sup>1</sup> , Q. Raffay <sup>1</sup> , M. Ferrrier <sup>1</sup> , P. Palestri <sup>2</sup> , G. Ghibaudo <sup>1</sup> and L. Selmi <sup>2</sup> , <sup>1</sup> IMEP and <sup>2</sup> Univ. of Udine (France)	<b>16:15 C-2-1</b> Atomically Controlled Hetero-Epitaxy of DO3-type Fe <sub>3</sub> Si on Ge(111) Substrate K. Ueda <sup>1</sup> , Y. Ando <sup>1</sup> , M. Kumano <sup>1</sup> , T. Sadoh <sup>1</sup> , K. Narumi <sup>2</sup> , Y. Maeda <sup>3</sup> and M. Miyao <sup>1</sup> , <sup>1</sup> Kyushu Univ., <sup>2</sup> JAEA and <sup>3</sup> Kyoto Univ. (Japan)	<b>16:15 D-2-1 (Invited)</b> Fabrication of 3-dimensional structure by nanoimprint process Y. Hirai, <i>Osaka Prefecture Univ. (Japan)</i>	<b>16:15 E-2-1 (Invited)</b> Nanophotonic technologies for PC-SMZ-based all-optical flip-flop Switch: PC-FF Y. Sugimoto <sup>1,2</sup> and K. Asakawa <sup>1</sup> , <sup>1</sup> Univ. of Tsukuba, <sup>2</sup> NIMS (Japan)
<b>16:35 A-2-2</b> Direct Evidence of GeO Volatilization from GeO <sub>2</sub> Films and Impact of Its Suppression on GeO <sub>2</sub> /Ge MIS Characteristics S. Suzuki, K. Kita, H. Nomura, T. Nishimura and A. Toriumi, <i>Univ. of Tokyo (Japan)</i>	<b>16:45 B-2-2</b> Influences of Elastic and Inelastic Scatterings on Ballistic Transport in MOSFETs H. Tsuchiya <sup>1</sup> , S. Takagi <sup>2,3</sup> , <sup>1</sup> Kobe Univ., <sup>2</sup> MIRAI-ASRC and <sup>3</sup> Univ. of Tokyo (Japan)	<b>16:30 C-2-2</b> MOVPE Condition Dependences of MnAs Nanoclusters Grown on GaInAs (111)A Surfaces H. Iguchi, S. Hara, J. Motohisa and T. Fukui, <i>Hokkaido Univ. (Japan)</i>	<b>16:45 D-2-2</b> Large Displacement Micro XY-Stage with Paired Moving Plates M. Sasaki <sup>1</sup> , F. Bono <sup>2</sup> and K. Hane <sup>2</sup> , <sup>1</sup> Toyota Technological Inst. and <sup>2</sup> Tohoku Univ. (Japan)	<b>16:45 E-2-2</b> Optical-Nonlinearity-Induced Phase Shift via Selective Area Grown InAs-QDs in a Photonic Crystal Waveguide Y. Kitagawa <sup>1</sup> , N. Ozaki <sup>1</sup> , Y. Takata <sup>1</sup> , N. Ikeda <sup>2</sup> , S. Ohkouchi <sup>1,3,4</sup> , Y. Sugimoto <sup>1,2</sup> and K. Asakawa <sup>1,2</sup> , <sup>1</sup> Univ. of Tsukuba, <sup>2</sup> NIMS, <sup>3</sup> NEC Corp. and <sup>4</sup> AIST (Japan)
<b>16:55 A-2-3</b> Experimental Evidence of Coexistence of Interface Traps Interacting with Majority and Minority Carriers in Ge MIS Structures N. Taoka <sup>1</sup> , Y. Yamashita <sup>2</sup> , M. Harada <sup>2</sup> , K. Ikeda <sup>2</sup> , T. Yamamoto <sup>2</sup> , N. Sugiyama <sup>2</sup> and S. Takagi <sup>1,3</sup> , <sup>1</sup> MIRAI-ASRC, <sup>2</sup> MIRAI-ASET and <sup>3</sup> Univ. of Tokyo (Japan)	<b>17:05 B-2-3</b> Mobility and Backscattering in Germanium n-type Inversion Layers Q. Raffay <sup>1,2</sup> , P. Palestri <sup>2</sup> , D. Esseni <sup>2</sup> , R. Clerc <sup>1</sup> and L. Selmi <sup>2</sup> , <sup>1</sup> IMEP and <sup>2</sup> Univ. of Udine (France)	<b>16:45 C-2-3</b> Structure and Magnetic Properties of Gd-doped Gallium Arsenide grown by MBE H. Miyagawa <sup>1</sup> , H. Shiraoka <sup>1</sup> , S. Higuchi <sup>1</sup> , K. Fujii <sup>1</sup> , N. Takahashi <sup>1</sup> , Y. Watanabe <sup>2</sup> , K. Oda <sup>2</sup> , N. Tsurumachi <sup>1</sup> , S. Nakanishi <sup>1</sup> , H. Itoh <sup>1</sup> and S. Koshiba <sup>1</sup> , <sup>1</sup> Kagawa Univ. and <sup>2</sup> Univ. of Tokyo (Japan)	<b>17:00 D-2-3</b> RF-MEMS Switch Structure for Low-Voltage Actuation and High-Density Integration K. Kuwabara <sup>1</sup> , N. Sato <sup>1</sup> , H. Morimura <sup>1</sup> , J. Kodate <sup>1</sup> , T. Kamei <sup>2</sup> , K. Machida <sup>2</sup> and H. Ishii <sup>1</sup> , <sup>1</sup> NTT Corp. and <sup>2</sup> NTT Advanced Tech. Corp. (Japan)	<b>17:00 E-2-3</b> Imprint Property of Optical Mach-Zehnder Interferometer Using Sputter Deposited (Ba,Sr)TiO <sub>3</sub> at Low Temperature M. Suzuki, K. Nagata and S. Yokoyama, <i>Hiroshima Univ. (Japan)</i>

Wednesday, September 19

Room 202B (F)	Room 303 (G)	Room 304 (H)	Room 405 (I)	Room 406 (J)
<b>Area 8: Advanced Material Synthesis and Crystal Growth Technology</b>	<b>Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics</b>	<b>Area 10: Organic Materials Science, Device Physics, and Applications</b>	<b>Area 9: Physics and Applications of Novel Functional Materials and Devices</b>	<b>Area 4: Advanced Memory Technology</b>
<b>16:15 F-2-1</b> Characterization of Zinc Oxide Films Grown by a Newly Developed Plasma Enhanced MOCVD Employing Microwave Excited High Density Plasma H. Asahara <sup>1,2</sup> , A. Inokuchi <sup>1,3</sup> , K. Watanuki <sup>1,4</sup> , M. Hirayama <sup>1</sup> , A. Teramoto <sup>1</sup> and T. Ohmi <sup>1</sup> , <sup>1</sup> Tohoku Univ., <sup>2</sup> ROHM Co., Ltd., <sup>3</sup> Tokyo Electron Ltd. and <sup>4</sup> Ube Industries Ltd. (Japan)	<b>16:15 G-2-1 (Invited)</b> Parasitic effects and reliability issues on GaN based HEMTs G. Meneghesso <sup>1</sup> , C. Dua <sup>2</sup> , M. Peroni <sup>3</sup> , M. Uren <sup>4</sup> and E. Zanoni <sup>1</sup> , <sup>1</sup> Univ. of Padova, <sup>2</sup> Alcatel-Thales III-V Lab., <sup>3</sup> Selex-SI and <sup>4</sup> QinetiQ Ltd. (Italy)	<b>16:15 H-2-1 (Invited)</b> Charge Transport through Molecular Wires and Inorganic Nanowires T. Lee, W. K. Hong, G. Jo, T. W. Kim, J. Maeng, H. Song, G. Wang and A. Yoon, <i>GIST (Korea)</i>	<b>16:15 I-2-1 (Invited)</b> Nanopatterned epitaxial graphene for nano electronics C. Berger, <i>Georgia Inst. of Tech. (USA)</i>	<b>16:15 J-2-1 (Invited)</b> 3D Device Stacking Technology for Future Memory S. M. Jung, <i>Samsung Electronics Co., Ltd. (Korea)</i>
<b>16:30 F-2-2</b> Dot-height dependence of Photoluminescence from ZnO quantum dots A. Nakamura <sup>1</sup> , K. Okamatsu <sup>1</sup> , T. Tawara <sup>2</sup> , H. Gotoh <sup>2</sup> , J. Temmyo <sup>1</sup> and Y. Matsui <sup>3</sup> , <sup>1</sup> Shizuoka Univ., <sup>2</sup> NTT Corp. and <sup>3</sup> NIMS (Japan)	<b>16:45 G-2-2</b> Reduced gate leakage for AlGaIn/GaN HEMTs grown on a-plane (1120) sapphire S. Lawrence Selvaraj and T. Egawa, <i>Nagoya Inst. of Tech. (Japan)</i>	<b>16:45 H-2-2</b> Polymer Light-Emitting Diodes Using Poly(9,9-dioctylfluorene) Gel by Thermal Printing Method H. Kajii, D. Kasama and Y. Ohmori, <i>Osaka Univ. (Japan)</i>	<b>16:45 I-2-2</b> Room Temperature Oscillation in Si/Si <sub>1-x</sub> Ge <sub>x</sub> Resonant Tunneling Diode Y. Suda <sup>1</sup> , H. Maekawa <sup>1</sup> , N. Asaoka <sup>2</sup> and M. Suhara <sup>2</sup> , <sup>1</sup> Tokyo Univ. of Agri. and Tech. and <sup>2</sup> Tokyo Metropolitan Univ. (Japan)	<b>16:45 J-2-2</b> Improving the Cell Characteristics Using SiN Liner at Active Edge in 4 G NAND Flash D. Kang <sup>1,2</sup> , S. Jang <sup>2</sup> , K. Lee <sup>2</sup> , J. Kim <sup>2</sup> , D. Chang <sup>2</sup> , H. Kwon <sup>2</sup> , W. Lee <sup>2</sup> , I. H. Park <sup>1</sup> , J. S. Kim <sup>1</sup> , J. H. Lee <sup>1</sup> , B. G. Park <sup>1</sup> , J. D. Lee <sup>1</sup> and H. Shin <sup>1</sup> , <sup>1</sup> Seoul National Univ. and <sup>2</sup> Samsung Electronics Co., Ltd. (Korea)
<b>16:45 F-2-3</b> Theoretical Study on Electronic and Electrical Properties of Nano Structural ZnO Z. Zhu, A. Chutia, R. Sahnoun, H. Tsuboi, M. Koyama, N. Hatakeyama, A. Endou, H. Takaba, M. Kubo, C. A. Del Carpio and A. Miyamoto, <i>Tohoku Univ. (Japan)</i>	<b>17:00 G-2-3</b> First Operation of AlGaIn Channel High Electron Mobility Transistors with Sufficiently Low Resistive Source/Drain Contact formed by Si Ion Implantation T. Nanjo <sup>1</sup> , M. Takeuchi <sup>2,3</sup> , M. Suita <sup>1</sup> , Y. Abe <sup>1</sup> , T. Oishi <sup>1</sup> , Y. Tokuda <sup>1</sup> and Y. Aoyagi <sup>2,3</sup> , <sup>1</sup> Mitsubishi Electric Corp., <sup>2</sup> RIKEN and <sup>3</sup> Tokyo Tech. (Japan)	<b>17:00 H-2-3</b> Co-doping in Spin-coated Hole Transport Layer for Flexible Organic Light Emitting Diodes S. L. Chen <sup>1</sup> , S. H. Wang <sup>1</sup> , F. S. Juang <sup>1</sup> , Y. S. Tsai <sup>1</sup> and P. H. Yeh <sup>2</sup> , <sup>1</sup> National Formosa Univ. and <sup>2</sup> TPO Displays Corp. (Taiwan)	<b>17:00 I-2-3</b> Direct Observation of Freeze-out Effect in Si by Kelvin Probe Force Microscope M. Ligowski <sup>1,2</sup> , R. Nuryadi <sup>1</sup> , A. Ichiraku <sup>1</sup> , M. Anwar <sup>1</sup> , R. Jablonski <sup>2</sup> and M. Tabe <sup>1</sup> , <sup>1</sup> Shizuoka Univ. and <sup>2</sup> Warsaw Univ. of Tech. (Japan)	<b>17:05 J-2-3</b> Nanocrystal floating gate memory devices using atomic layer deposited TiN/Al <sub>2</sub> O <sub>3</sub> nanolaminate layers S. Maikap <sup>1</sup> , P. J. Tzeng <sup>2</sup> , M. Anwar <sup>1</sup> , H. Y. Lee <sup>2</sup> , C. H. Lin <sup>2</sup> , S. C. Lo <sup>2</sup> , L. S. Lee <sup>2</sup> , J. R. Yang <sup>3</sup> , M. J. Kao <sup>3</sup> and M. J. Tsai <sup>2</sup> , <sup>1</sup> Chang Gung Univ., <sup>2</sup> Industrial Tech. Research Inst. and <sup>3</sup> National Taiwan Univ. (Taiwan)

Wednesday, September 19

Room 101 (A)	Room 102 (B)	Room 201A (C)	Room 201B (D)	Room 202A (E)
<b>Area 1: Advanced Gate Stack/Si Processing Science</b>	<b>Area 3: CMOS Devices/Device Physics</b>	<b>Area 12: Spintronic Materials and Devices</b>	<b>Area 11: Micro/Nano Electromechanical and Bio-Systems (Devices)</b>	<b>Area 7: Photonic Devices and Device Physics</b>
<b>17:15 A-2-4</b> Fabrication of HfO <sub>x</sub> N <sub>y</sub> Dielectrics on Ge from HfN <sub>x</sub> Deposition T. Maeda <sup>1</sup> , Y. Morita <sup>1</sup> and S. Takagi <sup>1,2</sup> , <sup>1</sup> MIRAI, ASRC-AIST and <sup>2</sup> Univ. of Tokyo (Japan)	<b>17:25 B-2-4</b> Schottky Barrier MOSFETs as Resonant Tunneling Devices S. Toriyama <sup>1</sup> and N. Sano <sup>2</sup> , <sup>1</sup> Toshiba Corp. and <sup>2</sup> Univ. of Tsukuba (Japan)	<b>17:00 C-2-4</b> Spin resolved spectroscopy of upper subbands in two-dimensional electron systems by direct transport measurements Y. Niida <sup>1,2</sup> , K. Takashina <sup>1</sup> , A. Fujiwara <sup>1</sup> , T. Fujisawa <sup>1</sup> and Y. Hirayama <sup>2,3</sup> , <sup>1</sup> NTT Corp., <sup>2</sup> Tohoku Univ. and <sup>3</sup> SORST-JST (Japan)	<b>17:15 D-2-4</b> Performance of Tense Thin Film Torsion Bar for Large-Rotation and Low-Voltage Driving of Micromirror M. Sasaki <sup>1</sup> , S. Yuki <sup>2</sup> and K. Hane <sup>2</sup> , <sup>1</sup> Toyota Technological Inst. and <sup>2</sup> Tohoku Univ. (Japan)	<b>17:15 E-2-4 (Invited)</b> Quantum Confined Ultra-Thin Silicon Light-Emitting Transistor for On-Chip Optical Interconnection S. Saito, D. Hisamoto, H. Shimizu, H. Hamamura, R. Tsuchiya, Y. Matsui, T. Mine, T. Arai, N. Sugii, K. Torii, S. Kimura and T. Onai, Hitachi, Ltd. (Japan)
<b>17:35 A-2-5</b> Thermally Robust Germanium MIS Gate Stacks with LaYO <sub>3</sub> Dielectric Film T. Takahashi, Y. Zhao, T. Nishimura, K. Kita and A. Toriumi, Univ. of Tokyo (Japan)	<b>17:45 B-2-5</b> Coarse-Grain 3D Quantum Simulations of Nanoscale MOSFET G. Mil'nikov <sup>1</sup> , N. Mori <sup>1</sup> , Y. Kamakura <sup>1</sup> and T. Ezaki <sup>2</sup> , <sup>1</sup> Osaka Univ. and <sup>2</sup> Hiroshima Univ. (Japan)	<b>17:15 C-2-5</b> The Reduction of g factor at Different Quantum States S. M. Huang <sup>1,2</sup> , H. Akimoto <sup>1</sup> , K. Kono <sup>1</sup> , J. J. Lin <sup>2</sup> , S. Tarucha <sup>3,4</sup> and K. Ono <sup>1,4</sup> , <sup>1</sup> RIKEN, <sup>2</sup> National Chiao Tung Univ., <sup>3</sup> Univ. of Tokyo and <sup>4</sup> SORST-JST (Japan)	<b>17:30 D-2-5</b> Ferrite and copper electroless plating to photopolymerized resin for micro molding of three-dimensional structures S. Kitayama, T. Yoshimura, S. Maruo and K. Mukai, Yokohama National Univ. (Japan)	<b>17:45 E-2-5</b> Cavity Effect in Nanocrystalline Porous Silicon Ballistic Lighting Device B. Gelloz, M. Sato and N. Koshida, Tokyo Univ. of Agri. and Tech. (Japan)
<b>17:55 A-2-6</b> Effects of Sulfur Passivation on Ge MOS Capacitors with High-k Gate Dielectric R. L. Xie, C. X. Zhu, National Univ. of Singapore (Singapore)	<b>18:05 B-2-6</b> Multiband Simulation of Uniaxially Stressed Silicon MOSFETs Based on Non-Equilibrium Green's Function Method H. Fitriawan, S. Souma and M. Ogawa, Kobe Univ. (Japan)		<b>17:45 D-2-6</b> Durability of Quartz Mold and Failure Mode Analysis in Imprint Lithography H. Ooe, T. Kanagawa, T. Hagi and Y. Yoshino, Murata Manufacturing Co., Ltd. (Japan)	<b>18:00 E-2-6</b> Visible Light Emission from Controlled $\alpha$ -Si/SiN Multi-layer Structures Q. Chen <sup>1</sup> , W. K. Tan <sup>1</sup> , M. B. Yu <sup>1</sup> , L. Ding <sup>2</sup> , T. P. Chen <sup>2</sup> , G. Q. Lo <sup>1</sup> and D. L. Kwong <sup>1</sup> , <sup>1</sup> Inst. of Microelectronics and <sup>2</sup> Nanyang Technological Univ. (Singapore)

Wednesday, September 19

Room 202B (F)	Room 303 (G)	Room 304 (H)	Room 405 (I)	Room 406 (J)
<b>Area 8: Advanced Material Synthesis and Crystal Growth Technology</b>	<b>Area 6: Compound Semiconductor Circuits, Electron Devices and Device Physics</b>	<b>Area 10: Organic Materials Science, Device Physics, and Applications</b>	<b>Area 9: Physics and Applications of Novel Functional Materials and Devices</b>	<b>Area 4: Advanced Memory Technology</b>
<b>17:00 F-2-4</b> Defect Passivation by Hydrogen in Zinc Oxide Films Grown by MOCVD J. Jo <sup>1</sup> , O. Seo <sup>2</sup> , H. Choi <sup>1</sup> and B. Lee <sup>3</sup> , <sup>1</sup> Ajou Univ., <sup>2</sup> Samsung Advanced Inst. of Tech. and <sup>3</sup> CDA Co., Ltd. (Korea)	<b>17:15 G-2-4</b> Hot-Carrier Stress Effects on AlGaIn/GaN HEMTs Employing 500 °C Oxidized Ni/Au Gate Y. H. Choi, J. Lim, I. H. Ji, K. H. Cho and M. K. Han, Seoul National Univ. (Korea)	<b>17:15 H-2-4</b> Interface Control by Surface-Initiated Deposition Polymerization and its Application to Organic Light Emitting Devices A. Kawakami <sup>1</sup> , K. Katsuki <sup>1</sup> , R. C. Advincula <sup>2</sup> , K. Tanaka <sup>1</sup> and H. Usui <sup>1</sup> , <sup>1</sup> Tokyo Univ. of Agri. And Tech. and <sup>2</sup> Univ. of Houston (Japan)	<b>17:15 I-2-4</b> Effect of Size Reduction on Operation Temperature and Switching Power in GaAs-Based Schottky-Wrap-Gate Quantum Wire Transistors Y. Shiratori and S. Kasai, Hokkaido Univ. (Japan)	<b>17:25 J-2-4</b> Memory Window Enhancement of MOS Memory Devices with High Density Self-Assembled Tungsten Nano-dot Y. Pei, T. Fukushima, T. Tanaka and M. Koyanagi, Tohoku Univ. (Japan)
<b>17:15 F-2-5</b> Development of the multi-scale simulator for the dye-sensitized TiO <sub>2</sub> nanoporous electrode based on quantum chemical calculation K. Ogiya, C. Lv, R. Sahnoun, M. Koyama, H. Tsuboi, N. Hatakeyama, A. Endou, H. Takaba, M. Kubo, C. A. Del Carpio and A. Miyamoto, Tohoku Univ. (Japan)	<b>17:30 G-2-5</b> Increase of Breakdown Voltage in AlGaIn/GaN HEMTs by Employing As+ Ion Implantation on SiO <sub>2</sub> Passivation Layer J. Lim <sup>1</sup> , Y. H. Choi <sup>1</sup> , I. H. Ji <sup>1</sup> , K. H. Cho <sup>1</sup> , J. Lee <sup>2</sup> , W. Jo <sup>2</sup> and M. K. Han <sup>1</sup> , <sup>1</sup> Seoul National Univ. and <sup>2</sup> Ewha Womans Univ. (Korea)	<b>17:30 H-2-5</b> Multi-Color Panel Based on a White Organic Light Emitting Diode with Color Filter S. H. Su <sup>1</sup> , C. C. Hou <sup>1</sup> , H. Tu <sup>1</sup> , C. M. Wu <sup>1</sup> , G. Y. Lian <sup>1</sup> , J. F. Li <sup>2</sup> , M. Yokoyama <sup>1</sup> and K. S. Hwang <sup>2</sup> , <sup>1</sup> I-Shou Univ. and <sup>2</sup> National Chung Cheng Univ. (Taiwan)	<b>17:30 I-2-5</b> Structure, Conductance and Strength of Atomic-Sized Iridium Wires T. Kizuka and M. Ryu, Univ. of Tsukuba (Japan)	
	<b>17:45 G-2-6</b> Enhanced DC Characteristics of Si delta-doped AlGaIn/GaN HFETs with p-GaN Backbarrier H. C. Lee <sup>1</sup> , S. Y. Hyun <sup>1</sup> , S. W. Yun <sup>1</sup> , C. Ostermaier <sup>1</sup> , W. Y. Lee <sup>1</sup> , J. B. Ha <sup>1</sup> , H. I. Cho <sup>1</sup> , S. H. Hahn <sup>1</sup> , C. K. Hahn <sup>2</sup> , H. C. Choi <sup>1</sup> and J. H. Lee <sup>1</sup> , <sup>1</sup> Kyungpook National Univ. and <sup>2</sup> Korea Electronics Tech. Inst. (Korea)	<b>17:45 H-2-6</b> Utilizing Transparent ZnO Thin Film as Permeation-Barrier to Assist Top Emission Polymer Light-Emitting Devices Light Outcoupling and Longevity Y. H. Lu, Y. H. Liao, C. Y. Shih, Y. C. Huang and K. C. Liu, Chang Gung Univ. (Taiwan)	<b>17:45 I-2-6</b> Pulse-controlled electromigration T. Hayashi and T. Fujisawa, NTT Corp. (Japan)	

Wednesday, September 19

Room 101 (A)

Room 102 (B)

Room 201A (C)

Room 201B (D)

Room 202A (E)

Area 11: Micro/Nano  
Electromechanical  
and Bio-Systems  
(Devices)

**18:00 D-2-7**  
Dual-FFPI  
Temperature Sensor  
with a Low-Cost LED  
Light Source  
M. C. Wang<sup>1</sup>,  
Y. T. Tseng<sup>2</sup>,  
F. G. Tseng<sup>2</sup>,  
J. E. Wang<sup>3</sup> and  
H. F. Taylor<sup>3</sup>, <sup>1</sup>*Ming-  
Hsin Univ. of Sci. and  
Tech.*, <sup>2</sup>*National Tsing  
Hua Univ.* and <sup>3</sup>*Texas  
A&M Univ. (Taiwan)*

18:30-20:30 Banquet/Paper Award & Young Reseacher Award (Multi-Purpose Hall 1F)

Wednesday, September 19

Room 202B (F)

Room 303 (G)

Room 304 (H)

Room 405 (I)

Room 406 (J)

18:30-20:30 Banquet/Paper Award & Young Reseacher Award (Multi-Purpose Hall 1F)