

2F Conv. Hall 200	2F 201A	2F 201B	2F 202A	4F 405	4F 406	4F 403
<p><b>A-6: Non Volatile Memory and Logic 1</b> (9:30-11:00) Chairs: S. Mitani (NIMS) T. Nagahama (Hokkaido Univ.)</p>	<p><b>B-6: Optical Interconnection I</b> (9:30-10:45) Chairs: H. Ishii (Toyohashi Univ. of Tech.) F. Boeuf (STMicroelectronics)</p>	<p><b>C-6: Growth and Process of Oxides</b> (9:30-10:45) Chairs: T. Nagata (NIMS) T. Kawae (Kanazawa Univ.)</p>	<p><b>D-6: Bio Molecular Analysis</b> (9:30-10:30) Chairs: M. Sasaki (Toyota Tech. Inst.) S. Machida (Hitachi)</p>		<p><b>F-6: Thermal Oxidation and MOS Interface</b> (10:00-10:50) Chairs: M. Kato (Nagoya Inst. of Tech.) H. Nohira (Tokyo City Univ.)</p>	<p><b>G-6: Compound Semiconductor Photovoltaics</b> (9:30-10:30) Chairs: T. Okamoto (Kisarazu National Collage of Tech.) M. Isomura (Tokai Univ.)</p>
<p><b>9:30 A-6-1 (Invited) Progress of STT-MRAM Technology and its application to low-power memory systems</b> <i>A key Technology and Prospect of Normally-off memory systems</i> H. Yoda<sup>1</sup>, N. Shimomura<sup>2</sup>, J. Ito<sup>2</sup>, S. Fujita<sup>2</sup> and K. Ando<sup>3</sup>, <sup>1</sup>Center For Semiconductor Research &amp; Development, Toshiba Corp., <sup>2</sup>Corporate R&amp;D Center, Toshiba Corp. and <sup>3</sup>AIST (Japan)</p>	<p><b>9:30 B-6-1 (Invited) Luxtera's Silicon Photonics Platform for Transceiver Manufacturing</b> M.P. Mack, A. Ayazi, Y. Chi, A. Dahl, P. De Dobbelaere, S. Denton, S. Gloeckner, K.Y. Hon, S. Hovey, Y. Liang, G. Masini, A. Mekis, M. Peterson, T. Pinguet, S. Sahni, J. Schramm, M. Sharp, C. Sohn, K. Stechschulte, P. Sun, G. Vastola, L. Verslegers and R. Zhou, Luxtera, Inc. (USA)</p>	<p><b>9:30 C-6-1 (Invited) Epitaxial Growth, Doping, and Electron Transport of the Semiconducting Oxides In<sub>2</sub>O<sub>3</sub>, Ga<sub>2</sub>O<sub>3</sub>, and SnO<sub>2</sub></b> O. Bierwagen<sup>1,2</sup>, M.E. White<sup>2</sup>, M.-Y. Tsai<sup>2</sup>, J.S. Speck<sup>2</sup>, T. Nagata<sup>3</sup>, N. Preissler<sup>1</sup> and P. Vogl<sup>1</sup>, <sup>1</sup>Paul-Drude-Inst., <sup>2</sup>Univ. of California Santa Barbara and <sup>3</sup>NIMS (Germany)</p>	<p><b>9:30 D-6-1 DNA Single Base Polymerization Detection Using CMOS FET-Based Redox Potential Sensor Array</b> H. Ishihara, K. Nitsu and K. Nakazato, Univ. of Nagoya (Japan)</p>		<p><b>10:00 F-6-1 Depth Profile of Thermally Grown SiO<sub>2</sub> Film Density</b> R. Hasunuma, M. Hayashi and K. Yamabe, Univ. of Tsukuba (Japan)</p>	<p><b>9:30 G-6-1 (Invited) Cu<sub>2</sub>ZnSnS<sub>4</sub> Solar Cells Fabricated by an Electrochemical Technique</b> S. Ikeda, F. Jiang, W. Septina, T. Harada and M. Matsumura, Osaka Univ. (Japan)</p>
<p><b>10:00 A-6-2 Perpendicular Magnetic Tunnel Junctions with L10-MnGa/FeCo Bilayer Electrodes with Tunable Interfacial Exchange Coupling</b> Q.L. Ma, S. Mizukami, X.M. Zhang, Y. Ando and T. Miyazaki, Tohoku Univ. (Japan)</p>	<p><b>10:00 B-6-2 MOS Capacitor Type Si Optical Modulator Integrated with Ge Photodetector and its High Speed Operation with CMOS Driver</b> J. Fujikata<sup>1</sup>, S. Takahashi<sup>1</sup>, M. Takahashi<sup>2</sup>, M. Noguchi<sup>1</sup>, H. Noguchi<sup>3</sup>, T. Horikawa<sup>4</sup>, T. Nakamura<sup>1</sup> and Y. Arakawa<sup>1</sup>, <sup>1</sup>PETRA, <sup>2</sup>AIST, <sup>3</sup>NEC Corp. and <sup>4</sup>Univ. of Tokyo (Japan)</p>	<p><b>10:00 C-6-2 A New Classification of Nano-Scale Crystallinity of In-Ga-Zn-Oxide Films</b> Y. Nonaka, Y. Yamada, M. Oota, N. Ishihara, Y. Kurosawa, S. Nishino and S. Yamazaki, Semiconductor Energy Lab. Co., Ltd. (Japan)</p>	<p><b>9:45 D-6-2 DNA Biosensing using Ga<sub>2</sub>O<sub>3</sub> Based Metal/Oxide Diode</b> T. Rahman<sup>1</sup>, T. Masui<sup>2</sup> and T. Ichiki<sup>1</sup>, <sup>1</sup>Univ. of Tokyo and <sup>2</sup>Koha Co., Ltd (Japan)</p>		<p><b>10:20 F-6-2 Reduction of Defect State Density at SiO<sub>2</sub>/SiC Interface Formed by the Thermal Oxidation Accompanied with Direct CO Generation</b> R. Kikuchi<sup>1</sup>, Y. Fujino<sup>1</sup> and K. Kita<sup>1,2</sup>, <sup>1</sup>Univ. of Tokyo and <sup>2</sup>JST-PRESTO (Japan)</p>	<p><b>10:00 G-6-2 Properties of deep-level defect in Cu(In, Ga)Se<sub>2</sub> thin films</b> X.B. Hu<sup>1</sup>, T. Sakurai<sup>1</sup>, A. Yamada<sup>2</sup>, S. Ishizuka<sup>2</sup>, S. Niki<sup>2</sup> and K. Akimoto<sup>1</sup>, <sup>1</sup>Univ. of Tsukuba and <sup>2</sup>AIST (Japan)</p>
<p><b>10:20 A-6-3 Properties of Perpendicular-Anisotropy Magnetic Tunnel Junctions Fabricated over The Cu Via</b> S. Miura<sup>1</sup>, H. Honjo<sup>1</sup>, K. Kinoshita<sup>1</sup>, K. Tokutome<sup>1</sup>, H. Koike<sup>2</sup>, S. Ikeda<sup>2</sup>, T. Endoh<sup>2</sup> and H. Ohno<sup>2</sup>, <sup>1</sup>NEC Corp. and <sup>2</sup>Tohoku Univ. (Japan)</p>	<p><b>10:15 B-6-3 A Method Enables Height-Control of Bonding Chip for Edge-Emitting Laser Stacking</b> M. Aoyagi, T.T. Bui, L. Ma, T. Amano, K. Kikuchi and M. Mori, AIST (Japan)</p>	<p><b>10:15 C-6-3 Rapid Thermal Oxidation of Zinc Nitride Film</b> C.W. Lin, Y.P. Song and S.C. Chang, Tatung Univ. (Taiwan)</p>	<p><b>10:00 D-6-3 Single-Molecule Tunnel-Current based Detection Toward Amino-Acid Identification</b> T. Ohshiro, M. Tsutsui, K. Yokota, T. Kawai and M. Taniguchi, Osaka Univ. (Japan)</p>		<p><b>10:35 F-6-3 Estimation of Real SiC-MOS Characteristics by Using Novel High-Speed Pulse IV</b> N. Tega, D. Hisamoto, H. Yoshimoto, A. Shima and Y. Shimamoto, Hitachi, Ltd. (Japan)</p>	<p><b>10:15 G-6-3 Fabrication of Polycrystalline CdTe Thin-Film Solar Cells using Carbon Electrodes with Carbon Nanotubes</b> T. Okamoto<sup>1</sup>, R. Hayashi<sup>1</sup>, Y. Ogawa<sup>1</sup>, A. Hosono<sup>1</sup> and M. Doi<sup>2</sup>, <sup>1</sup>Kisarazu Natl. Coll. Tech. and <sup>2</sup>JFE Eng. Corp. (Japan)</p>
<p><b>10:40 A-6-4 Study about the Process Damage Mechanism of the Patterned Interface Perpendicular Magnetic Tunnel Junctions (MTJs) by Hydrogen Ion Treatments</b> J.H. Jeong<sup>1,3</sup> and T. Endoh<sup>1,2</sup>, <sup>1</sup>Tohoku Univ., <sup>2</sup>Center for Innovative Integrated Electronic Systems (CIES) and <sup>3</sup>SAMSUNG Electronics Co., Ltd. (Japan)</p>	<p><b>10:30 B-6-4 Monolithically Integrated Quantum Dot Electro-Optic Modulator with Semiconductor Optical Amplifier for Short-Reach Optical Communications</b> N. Yamamoto, K. Akahane, T. Umezawa and T. Kawanishi, NICT (Japan)</p>	<p><b>10:30 C-6-4 Epitaxial Growth of ZnO Film on Patterned n-GaN Layer by Hydrothermal Method</b> R.M. Ko<sup>1</sup>, Y.C. Huang<sup>2</sup>, T.H. Yu<sup>2</sup>, S.M. Siu<sup>3</sup>, Y.R. Lin<sup>3</sup> and S.J. Wang<sup>2</sup>, <sup>1</sup>Adv. Optoelectronic Tech. Center, National Cheng Kung Univ., <sup>2</sup>Inst. of Microelectronics, National Cheng Kung Univ. and <sup>3</sup>Ming Chi Univ. of Tech. (Taiwan)</p>	<p><b>10:15 D-6-4 Nanoporous Organosilicates Thin Films for Selective Enrichment of Metabolites</b> C. Yeromonahos, A. Mombroun, C. Leclech, A. Bouamrani and V. Jousseau, CEA - LETI Grenoble (France)</p>			

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<p><b>H-6: Quantum Transport (1)</b> (9:30-10:45) Chairs: T. Tanamoto (Toshiba) T. Machida (Univ. of Tokyo)</p>	<p><b>J-6: Ge &amp; SiGe CMOS</b> (9:30-10:40) Chairs: N. Sugii (LEAP) F. -L. Yang (Academia Sinica)</p>	<p><b>K-6: OLED</b> (9:30-10:45) Chairs: H. Okada (Univ. of Toyama) H. Murata (JAIST)</p>	<p><b>M-6: MEMS and Energy Harvestors</b> (9:30-10:50) Chairs: H. Takao (Kagawa Univ.) Y. Mita (Univ. of Tokyo)</p>		<p><b>P-6: Nanowire Photonics</b> (9:30-10:45) Chairs: M. Arita (Univ. of Tokyo) N. Fukata (NIMS)</p>
<p><b>9:30 H-6-1 (Invited)</b> <b>Angular momentum conversion from single photons to single electron spins in a lateral double quantum dot</b> A. Oiwa<sup>1,2</sup>, T. Fujita<sup>2</sup>, K. Morimoto<sup>3</sup>, H. Kiyama<sup>1,2</sup>, G. Allison<sup>2,3</sup>, M. Larsson<sup>2</sup>, A. Ludwig<sup>4</sup>, A.D. Wieck<sup>4</sup> and S. Tarucha<sup>2,3</sup>, <sup>1</sup>Osaka Univ., <sup>2</sup>Univ. of Tokyo, <sup>3</sup>RIKEN and <sup>4</sup>Ruhr-Universität Bochum (Japan)</p>	<p><b>9:30 J-6-1 (Invited)</b> <b>Drive Current Performance of Inversion Mode Ge CMOS Transistors</b> X. Gong and Y.-C. Yeo, National Univ. of Singapore (Singapore)</p>	<p><b>9:30 K-6-1 (Invited)</b> <b>Recent Progress in Polymer Light Emitting Materials</b> T. Yamada, Y. Tsubata, K. Ohuchi, D. Fukushima and N. Akino, Sumitomo Chemical Co., Ltd. (Japan)</p>	<p><b>9:30 M-6-1</b> <b>A Sub-1G Tri-axis MEMS Capacitive Sensor for Integrated CMOS-MEMS Accelerometers</b> D. Yamane<sup>1</sup>, T. Konishi<sup>2</sup>, T. Matsushima<sup>2</sup>, H. Toshiyoshi<sup>2</sup>, K. Masu<sup>1</sup> and K. Machida<sup>1,2</sup>, <sup>1</sup>Tokyo Tech, <sup>2</sup>NTT Advanced Tech. Corp. and <sup>3</sup>Univ. of Tokyo (Japan)</p>		<p><b>9:30 P-6-1 (Invited)</b> <b>Advanced Emission Properties and Lasing from (In,Ga) As Nanowires</b> B. Mayer<sup>1</sup>, J. Treul<sup>1</sup>, S. Morkötter<sup>1</sup>, D. Rudolph<sup>1</sup>, G. Abstreiter<sup>1,2</sup>, J.J. Finley<sup>1</sup> and G. Koblmüller<sup>1</sup>, <sup>1</sup>WSI and <sup>2</sup>Technical Univ. Munich (Germany)</p>
<p><b>10:00 H-6-2</b> <b>Towards Cavity QED with InSb spin qubits</b> R.S. Deacon<sup>1</sup>, Y. Yamazaki<sup>1</sup>, T. Fuse<sup>1</sup>, G. Allison<sup>1</sup>, A. Oiwa<sup>2</sup>, M.T. Deng<sup>3</sup>, H.Q. Xu<sup>2,4</sup>, S. Tarucha<sup>1,5</sup> and K. Ishibashi<sup>1</sup>, <sup>1</sup>RIKEN, <sup>2</sup>Osaka Univ., <sup>3</sup>Lund Univ., <sup>4</sup>Peking Univ. and <sup>5</sup>Univ. of Tokyo (Japan)</p>	<p><b>10:00 J-6-2</b> <b>Strained Si<sub>1-x</sub>Ge<sub>x</sub> on Strained-Si-on-Insulator (sSOI) pMOSFETs for Low-Power sSOI Based CMOS</b> K. Ikeda, Y. Moriyama, T. Irisawa, M. Ono, Y. Kamimuta, M. Oda, T. Miyaki, E. Kurosawa and T. Tezuka, AIST (Japan)</p>	<p><b>10:00 K-6-2</b> <b>Measurement of Thermal Carrier de-Trapping in Double-Layer Organic Light-Emitting Diodes by Electric-Field-Induced Optical Second-Harmonic Generation</b> D. Taguchi, T. Manaka and M. Iwamoto, Tokyo Tech (Japan)</p>	<p><b>9:50: M-6-2</b> <b>Withdrawn</b></p>		<p><b>10:00 P-6-2</b> <b>Lasing Oscillation in Multi-stacked InGaAs/GaAs Quantum Dots with a Single GaAs Nanowire Cavity</b> J. Tatebayashi<sup>1</sup>, S. Kako<sup>1</sup>, J.F. Ho<sup>2</sup>, S. Iwamoto<sup>1,2</sup> and Y. Arakawa<sup>1,2</sup>, <sup>1</sup>NanoQUINE, Univ. of Tokyo and <sup>2</sup>IIS, Univ. of Tokyo (Japan)</p>
<p><b>10:15 H-6-3</b> <b>Signature of Superconducting Density of States in Luminescence Spectra of InAs Quantum Dots</b> S. S. Mou<sup>1</sup>, H. Irie<sup>2</sup>, K. Akahane<sup>3</sup>, H. Kurosawa<sup>1</sup>, H. Nakajima<sup>1</sup>, H. Kumano<sup>1</sup>, M. Sasaki<sup>3</sup> and I. Suemune<sup>1</sup>, <sup>1</sup>Hokkaido Univ., <sup>2</sup>NTT Basic Res. Labs. and <sup>3</sup>Nat. Inst. of Info. Comm. Tech. (Japan)</p>	<p><b>10:20 J-6-3</b> <b>Study of Si- and SiGe-on-Insulator <math>\Omega</math>-Gate Nanowire PMOS FETs by Low-frequency Noise Measurements</b> M. Koyama<sup>1,2</sup>, M. Cassé<sup>1</sup>, S. Barraud<sup>1</sup>, P. Nguyen<sup>1,3</sup>, G. Ghibaudo<sup>4</sup>, H. Iwai<sup>2</sup> and G. Reimbold<sup>4</sup>, <sup>1</sup>CEA-LETI, <sup>2</sup>Tokyo Tech, <sup>3</sup>SOITEC and <sup>4</sup>IMEP-LAHC (France)</p>	<p><b>10:15 K-6-3</b> <b>Application of Silver Nanowire for Transparent Electrode of OLED Device</b> A. Tadamasu, T. Matsui and A. Tsujimoto, Panasonic Corp. (Japan)</p>	<p><b>10:10 M-6-3</b> <b>An RF Energy Harvesting Power Management Circuit with Timing Detection</b> A. Shirane, H. Ito, N. Ishihara and K. Masu, Tokyo Tech (Japan)</p>		<p><b>10:15 P-6-3</b> <b>Room-temperature Electroluminescence of Radial p-i-n InP Nanowires with InAsP Quantum Wells in the 1.5-<math>\mu</math>m Wavelength Region</b> K. Kawaguchi<sup>1,2</sup>, H. Sudo<sup>1</sup>, M. Matsuda<sup>1</sup>, M. Ekawa<sup>1,2</sup>, T. Yamamoto<sup>1</sup> and Y. Arakawa<sup>2,3</sup>, <sup>1</sup>Fujitsu Labs., <sup>2</sup>INQIE, Univ. of Tokyo and <sup>3</sup>IIS, Univ. of Tokyo (Japan)</p>
<p><b>10:30 H-6-4 (Late News)</b> <b>Electrically Driven Dynamic Nuclear Spin Polarization in Single Quantum Dot</b> M. Kawamura, D. Gottwald, K. Ono and K. Kono, RIKEN (Japan)</p>		<p><b>10:30 K-6-4</b> <b>Improved Light-Emitting Properties of Bilayer Polymer Light-Emitting Transistors with Phosphorescent Dye Doped in Fluorene-Type Polymers</b> H. Kajii, H. Tanaka, I. Ikezoe, M. Hara, T. Ohtomo and Y. Ohmori, Osaka Univ. (Japan)</p>	<p><b>10:30 M-6-4</b> <b>Improvement of Power Conversion Efficiency in Photovoltaic-Assisted UHF Rectifiers by Adopting Non-Silicide PV Cells</b> K. Kotani and T. Bando, Tohoku Univ. (Japan)</p>		<p><b>10:30 P-6-4</b> <b>Strain Characterization of InAs Segment in Au-free InP/InAs Heterostructure Nanowires by Micro-Raman Measurement</b> G. Zhang<sup>1</sup>, K. Suzuki<sup>2</sup>, S. Nakagawa<sup>3</sup>, K. Taten<sup>1</sup>, T. Sogawa<sup>1</sup> and H. Gotoh<sup>1</sup>, <sup>1</sup>Basic Res. Labs., NTT Corp., <sup>2</sup>Tokyo Denki Univ. and <sup>3</sup>Toyohashi Univ. of Tech. (Japan)</p>

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<p><b>A-7: Non Volatile Memory and Logic II</b> (11:15-12:15) Chairs: Y. Saito (Toshiba) K. Takeuchi (Chuo Univ.)</p>	<p><b>B-7: Optical Interconnection II</b> (11:15-12:15) Chairs: Y. Ishikawa (Univ. of Tokyo) S. Itabashi (NTT-AT)</p>	<p><b>C-7: Properties of Oxides</b> (11:15-12:15) Chairs: T. Kawae (Kanazawa Univ.) T. Nagata (NIMS)</p>	<p><b>D-7: Microdevices for Biomedical Applications</b> (11:15-12:30) Chairs: J. Ohta (Nara Inst. of Sci. &amp; Tech.) C. -S. Lai (Chang Gung Univ.)</p>	<p><b>E-7: Oxide Devices</b> (11:15-12:30) Chairs: N. Hara (Fujitsu Labs.) E. Y. Chang (NCTU)</p>	<p><b>F-7: Ge Channel Devices</b> (11:15-12:35) Chairs: T. Aoyama (Toshiba) H. Morioka (Fujitsu Semicon.)</p>	<p><b>G-7: New Concepts</b> (11:15-12:30) Chairs: Y. Kurokawa (Tokyo Tech) N. Kojima (Toyota Tech. Inst.)</p>
<p><b>11:15 A-7-1</b> <b>A Power-gated 32bit MPU with a Power Controller Circuit Activated by Deep-sleep-mode Instruction Achieving Ultra-low Power Operation</b> H. Koike<sup>1</sup>, T. Ohsawa<sup>1</sup>, S. Miura<sup>1</sup>, H. Honjo<sup>1</sup>, K. Kinoshita<sup>2</sup>, S. Ikeda<sup>1</sup>, T. Hanyu<sup>1</sup>, H. Ohno<sup>1</sup> and T. Endoh<sup>1</sup>, <sup>1</sup>Tohoku Univ. and <sup>2</sup>NEC Corp. (Japan)</p>	<p><b>11:15 B-7-1 (Invited)</b> <b>High-density Silicon Optical Interposer for Inter-chip Interconnect</b> T. Nakamura<sup>1</sup>, Y. Urino<sup>1</sup> and Y. Arakawa<sup>2</sup>, <sup>1</sup>PETRA and <sup>2</sup>Univ. of Tokyo (Japan)</p>	<p><b>11:15 C-7-1</b> <b>High Proton Conductivity in Highly Defected Perovskite-Type Oxide Thin Films</b> Y. Zenitani, T. Nishihara, T. Asano, H. Adachi, A. Itou, H. Takeuchi, S. Badar and E. Fujii, Panasonic Corp. (Japan)</p>	<p><b>11:15 D-7-1</b> <b>An Implantable Subminiature PWM Image Sensor Based on Body Channel Communication</b> H. Hayami, K. Sasagawa, H. Takehara, T. Noda, T. Tokuda and J. Ohta, Nara Inst. of Sci. and Tech. (Japan)</p>	<p><b>11:15 E-7-1</b> <b>High-speed and Low-leakage Characteristics of 60-nm C-axis Aligned Crystalline Oxide Semiconductor FET with GHz-ordered Cutoff Frequency</b> Y. Yakubo<sup>1</sup>, S. Nagatsuka<sup>1</sup>, S. Matsuda<sup>1</sup>, S. Hondo<sup>1</sup>, Y. Hata<sup>1</sup>, Y. Okazaki<sup>1</sup>, Y. Yamamoto<sup>1</sup>, M. Nagai<sup>1</sup>, S. Sasagawa<sup>1</sup>, T. Atsumi<sup>1</sup>, M. Sakakura<sup>1</sup>, T. Nakura<sup>1</sup>, Y. Yamamoto<sup>1</sup> and S. Yamazaki<sup>1</sup>, <sup>1</sup>Semiconductor Energy Lab. Corp., Ltd. and <sup>2</sup>Univ. of Tokyo (Japan)</p>	<p><b>11:15 F-7-1</b> <b>Fermi-level Unpinning at Sn/Ge Interfaces; First-principles Calculation</b> K. Kobinata and T. Nakayama, Chiba Univ. (Japan)</p>	<p><b>11:15 G-7-1</b> <b>Photoelectrochemical CO<sub>2</sub> conversion system with 3C-SiC photo-anode and Pt counter electrode</b> J.T. Song, T. Iwasaki and M. Hatano, Tokyo Tech (Japan)</p>
<p><b>11:35 A-7-2</b> <b>Nonvolatile FPGA Using 2T-1MTJ-Cell-Based Multi-Context Array for Power and Area Efficient Dynamically Reconfigurable Logic</b> D. Suzuki and T. Hanyu, Tohoku Univ. (Japan)</p>	<p><b>11:45 B-7-2</b> <b>Process Control for Silicon Photonics using 300mm SOI Wafers</b> F. Boeuf<sup>1</sup>, S. Cremer<sup>1</sup>, N. Vulliet<sup>1</sup>, B. Orlando<sup>1</sup>, F. Lever<sup>1</sup>, D. Ristoiu<sup>1</sup>, C. Baudot<sup>1</sup>, S. Joblot<sup>1</sup>, D. Pelissier-Tanon<sup>1</sup>, S. Jan<sup>1</sup>, H. Petiton<sup>1</sup>, A. Mekis<sup>2</sup>, T. Pingue<sup>2</sup> and L. Verslegers<sup>2</sup>, <sup>1</sup>STMicroelectronics and <sup>2</sup>Luxtera (France)</p>	<p><b>11:30 C-7-2</b> <b>BaTiO<sub>3</sub> Based Relaxor Ferroelectric Epitaxial Thin-films for High-temperature Operational Capacitors</b> S. Kumaragurubaran<sup>1</sup>, T. Nagata<sup>1</sup>, K. Takahashi<sup>2</sup>, S.G. Ri<sup>2</sup>, Y. Tsumekawa<sup>2</sup>, S. Suzuki<sup>2</sup> and T. Chikyov<sup>1</sup>, <sup>1</sup>NIMS and <sup>2</sup>COMET Inc. (Japan)</p>	<p><b>11:30 D-7-2</b> <b>Lower Invasive in vivo Brain Insertion of the Si Neural Probe with Triangular Shank and Sharpened Tip</b> T. Harashima<sup>1</sup>, T. Tani<sup>2</sup>, H. Kino<sup>2</sup>, N. Katayama<sup>3</sup> and T. Tanaka<sup>1,2</sup>, <sup>1</sup>Dept. of Bioengineering and Robotics, Tohoku Univ., <sup>2</sup>Dept. of Biomedical Engineering, Tohoku Univ. and <sup>3</sup>Dept. of Applied Information Sciences, Tohoku Univ. (Japan)</p>	<p><b>11:30 E-7-2</b> <b>A Novel Method for Fabrication of Sub-100nm IGZO TFTs</b> B.S. Shie<sup>1</sup>, H.C. Lin<sup>1,2</sup> and T.Y. Huang<sup>1</sup>, <sup>1</sup>NCTU and <sup>2</sup>National Nano Device Labs. (Taiwan)</p>	<p><b>11:35 F-7-2</b> <b>Impact of YScO<sub>3</sub> on Ge Gate Stack in Terms of EOT Reduction as Well as Interface</b> C. Lu<sup>1,2</sup>, C.H. Lee<sup>1,2</sup>, T. Nishimura<sup>1,2</sup>, K. Nagashio<sup>1,2</sup> and A. Toriumi<sup>1,2</sup>, <sup>1</sup>Univ. of Tokyo and <sup>2</sup>JST-CREST (Japan)</p>	<p><b>11:30 G-7-2</b> <b>Improvement in Solar Cell Efficiency via Addition of Luminescent Down-shifting Phosphors as Spectral Converters</b> W.Y. Lin<sup>1</sup>, H.V. Han<sup>1</sup>, T.L. Shen<sup>1</sup>, Y.L. Tsai<sup>1</sup>, C.C. Lin<sup>2</sup>, H.C. Kuo<sup>3</sup> and P.C. Yu<sup>1</sup>, <sup>1</sup>Department of Photonics and Institute of Electro-Optical Engineering, NCTU and <sup>2</sup>Institute of Photonic System, NCTU (Taiwan)</p>
<p><b>11:55 A-7-3</b> <b>CAAC-OS-based Nonvolatile Programmable Analog Device: Voltage Controlled Oscillator Realizing Instant Frequency Switching</b> Y. Okamoto<sup>1</sup>, T. Nakagawa<sup>1</sup>, T. Aoki<sup>1</sup>, M. Kozuma<sup>1</sup>, Y. Kurokawa<sup>1</sup>, T. Ikeda<sup>1</sup>, N. Yamada<sup>1</sup>, Y. Okazaki<sup>1</sup>, H. Miyairi<sup>1</sup>, M. Fujita<sup>2</sup> and S. Yamazaki<sup>1</sup>, <sup>1</sup>Semiconductor Energy Laboratory Co., Ltd. and <sup>2</sup>VLSI Design and Education Center, Univ. of Tokyo (Japan)</p>	<p><b>12:00 B-7-3</b> <b>Distribution of Refractive Indices of Si-Wire Waveguides Fabricated on a 300 mm SOI Wafer Using ArF Immersion Lithography</b> M. Soma<sup>1</sup>, Y. Tamushi<sup>1</sup>, T. Kita<sup>1</sup>, M. Toyama<sup>1,2</sup>, M. Seki<sup>2</sup>, N. Yokoyama<sup>2</sup>, M. Ohtsuka<sup>2</sup> and H. Yamada<sup>1</sup>, <sup>1</sup>Tohoku Univ. and <sup>2</sup>AIST (Japan)</p>	<p><b>11:45 C-7-3</b> <b>Luminescence Properties of Pr-doped La-GPS Grown by the Floating Zone Method</b> R. Murakami<sup>1</sup>, S. Kurosawa<sup>1,2</sup>, T. Shishido<sup>1,2</sup>, A. Suzuki<sup>1</sup>, Y. Shoji<sup>1,4</sup>, Y. Ohashi<sup>1</sup>, J. Pejchal<sup>2,3</sup>, K. Kamada<sup>2,4</sup>, Y. Yokota<sup>2</sup> and A. Yoshikawa<sup>1,2,4</sup>, <sup>1</sup>IMR, Tohoku Univ., <sup>2</sup>NICHE, Tohoku Univ., <sup>3</sup>Inst. of Phys. AS CR and <sup>4</sup>C&amp;A Corp. (Japan)</p>	<p><b>11:45 D-7-3</b> <b>A Multi-Modal Implantable CMOS Imaging Device with Two-Color Light Source for Intrinsic Signal Detection in a Brain</b> M. Haruta, Y. Sunaga, T. Yamaguchi, H. Takehara, T. Noda, K. Sasagawa, T. Tokuda and J. Ohta, Nara Inst. of Sci. and Tech. (Japan)</p>	<p><b>11:45 E-7-3</b> <b>All Solution Processed High Performance In-Ga-Zn-O Thin Film Transistor Fabricated at Low Temperature using Microwave irradiation</b> K.W. Jo and W.J. Cho, Kwangwoon Univ., Department of Electronic Materials Engineering (Korea)</p>	<p><b>11:55 F-7-3</b> <b>Origin of Self-limiting Oxidation of Ge in High-Pressure O<sub>2</sub> at Low Temperature</b> C.H. Lee<sup>1,2</sup>, T. Nishimura<sup>1,2</sup>, K. Nagashio<sup>1,2</sup> and A. Toriumi<sup>1,2</sup>, <sup>1</sup>Univ. of Tokyo and <sup>2</sup>JST-CREST (Japan)</p>	<p><b>11:45 G-7-3</b> <b>Photovoltaic effect in organically surface-modified nanocrystalline porous silicon layers</b> R. Mentek<sup>1</sup>, B. Gello<sup>2</sup>, D. Hippo<sup>1</sup> and N. Koshida<sup>1</sup>, <sup>1</sup>Tokyo Univ. of Agr. &amp; Tech. and <sup>2</sup>Nagoya Univ. (Japan)</p>
		<p><b>12:00 C-7-4 (Late News)</b> <b>Intraocular Pressure Monitoring Using Moiré Patterns Generated from a Contact Lens</b> P.C. Lin, C.S. Ho, L.A. Wang, I.J. Wang and J.Y. Yen, National Taiwan Univ. (Taiwan)</p>	<p><b>12:00 D-7-4</b> <b>Intraocular Pressure Monitoring Using Moiré Patterns Generated from a Contact Lens</b> P.C. Lin, C.S. Ho, L.A. Wang, I.J. Wang and J.Y. Yen, National Taiwan Univ. (Taiwan)</p>	<p><b>12:00 E-7-4</b> <b>Fabrication of IGZO Thin-Film Transistors with Film Profile Engineering</b> R.J. Lyu<sup>1</sup>, H.C. Lin<sup>1,2</sup> and T.Y. Huang<sup>1</sup>, <sup>1</sup>NCTU and <sup>2</sup>National Nano Device Labs. (Taiwan)</p>	<p><b>12:15 F-7-4</b> <b>Very Low EOT in Ge MOS Devices with High Oxidation State Interfacial Layer</b> C.H. Lin, K.S. Chang-Liao, C.C. Li, L.J. Liu and T.M. Lee, National Tsing Hua Univ. (Taiwan)</p>	<p><b>12:00 G-7-4</b> <b>Fabrication And Optical Characterization Of <math>\alpha</math>-Germanium Nano Disk Structure Using Bio-Template And Neutral Beam Etching for Solar Cell Application</b> M.T. Chentir<sup>1,2</sup>, T. Fujii<sup>1,3</sup>, T. Okada<sup>1</sup>, T. Isoda<sup>4</sup>, K. Itoh<sup>2,4</sup>, H. Endo<sup>5</sup>, Y. Hoshi<sup>1</sup>, N. Usami<sup>6</sup> and S. Samukawa<sup>1,2,6</sup>, <sup>1</sup>Inst. of Fluid Sci., Tohoku Univ., <sup>2</sup>CREST Japan Sci. and Tech. Agency, <sup>3</sup>Honda R&amp;D Co., Ltd., <sup>4</sup>Keio Univ., <sup>5</sup>Nagoya Univ. and <sup>6</sup>WPI-Advanced Inst. for Materials Res., Tohoku Univ. (Japan)</p>
			<p><b>12:15 D-7-5</b> <b>Improvement of dynamic range on filter-less fluorescence sensor with body biasing technique</b> Y. Moriwaki<sup>1</sup>, K. Takahashi<sup>1</sup>, I. Akita<sup>1</sup>, M. Ishida<sup>1,2</sup> and K. Sawada<sup>1,2</sup>, <sup>1</sup>Toyoohashi Univ. of Tech. and <sup>2</sup>Electronics-Inspired Interdisciplinary Res. Inst. (Japan)</p>	<p><b>12:15 E-7-5</b> <b>Impact of Oriented Crystalline InGaZnO Semiconductor on Electrical Properties of Thin Film Transistor</b> S.S. Yen<sup>1</sup>, H.H. Hsu<sup>1</sup>, P. Chiou<sup>1</sup>, C.H. Cheng<sup>2</sup>, C.Y. Chang<sup>3</sup>, Y.C. Lai<sup>3</sup>, C.P. Chang<sup>3</sup>, H.H. Lu<sup>3</sup>, C.S. Chuang<sup>3</sup> and Y.H. Lin<sup>3</sup>, <sup>1</sup>NCTU, <sup>2</sup>National Taiwan Normal Univ. and <sup>3</sup>AU Optronics Corp. (Taiwan)</p>		<p><b>12:15 G-7-5</b> <b>Built-in Low Pressure Drop Liquid Cooling with Interfacial Graphene Fins on PV/T and CPV modules: Parametric Analysis and Experimental Study</b> P. Jarumongkonsak and Y.Y. Yan, Univ. of Nottingham (UK)</p>

4F 404	1F 101	2F 202B	3F 304	4F 401	4F 402
<p><b>H-7: Quantum Transport (2)</b> (11:15-12:15) Chairs: T. Ota (NTT) T. Nakaoka (Sophia Univ.)</p>	<p><b>J-7: Noise</b> (11:15-12:15) Chairs: Y. Fukuzaki (SONY) M. Masahara (AIST)</p>	<p><b>K-7: Characterization</b> (11:15-12:30) Chairs: M. Kitamura (Kobe Univ.) H. Kajii (Osaka Univ.)</p>			<p><b>P-7: Nanocarbon Based FETs &amp; ICs</b> (11:15-12:15) Chairs: Y. Ohno (Nagoya Univ.) K. Maehashi (Osaka Univ.)</p>
<p><b>11:15 H-7-1</b> <b>Thermal-Noise Suppression in Nanometer-Scale Si Field-Effect Transistors by Feedback Control with Single-Electron Resolution</b> K. Chida, K. Nishiguchi, G. Yamahata and A. Fujiwara, NTT BRL (Japan)</p>	<p><b>11:15 J-7-1</b> <b>Ultra Low-Frequency Noise in Vertical MOSFETs Having Tunable Threshold Voltage Fabricated with 60 nm CMOS Technology on 300 mm Wafer Process</b> T. Imamoto<sup>1,2</sup> and T. Endoh<sup>1,2,3</sup>, <sup>1</sup>Graduate School of Engineering, Tohoku Univ., <sup>2</sup>ACCEL, JST and <sup>3</sup>Center for Innovative Integrated Electronic Systems, Tohoku Univ. (Japan)</p>	<p><b>11:15 K-7-1 (Invited)</b> <b>Exciplex Forming Co-Hosts as a Platform for OLEDs with Ultimate Efficiency</b> J.-J. Kim, Seoul National Univ. (Korea)</p>			<p><b>11:15 P-7-1 (Invited)</b> <b>Carbon Nanotube FETs for Robust Digital Logic Systems</b> M. Shulaker, G. Hills, H. Wei, H.-Y. Chen, H.-S.P. Wong and S. Mitra, Stanford Univ. (USA)</p>
<p><b>11:30 H-7-2</b> <b>Charge Manipulations in Si-Based Quantum Dot Qubit Devices with Single Electron Transistors: Theory and Experiment</b> A. Andreev<sup>1</sup>, T. Ferrus<sup>1</sup>, S. Das<sup>1</sup>, T.Y. Yang<sup>1</sup>, T. Koderá<sup>2</sup>, S. Ihara<sup>2</sup>, K. Horibe<sup>2</sup>, S. Oda<sup>2</sup> and D. Williams<sup>1</sup>, <sup>1</sup>Hitachi Cambridge Lab. and <sup>2</sup>Tokyo Tech (UK)</p>	<p><b>11:35 J-7-2</b> <b>Comprehensive Studies on the Accuracy of Traps Characterization by Using Advanced Random Telegraph Noise Simulator</b> Y. Higashi, K. Matsuzawa and T. Ishihara, Toshiba Corp. (Japan)</p>	<p><b>11:45 K-7-2</b> <b>Evaluation of Layer-by-layer Thin Film of PDADMAC:Alcian Blue and PSS Using Surface Plasmon Resonance and Optical Waveguide Spectroscopies</b> M. Ishigooka, T. Ito, K. Shinbo, Y. Ohdaira, A. Baba, K. Kato and F. Kaneko, Niigata Univ. (Japan)</p>			<p><b>11:45 P-7-2</b> <b>Sub-10 <math>\mu\text{m}</math> Top-Gate Carbon Nanotube Thin-Film Transistors Fabricated by Flexographic Printing Process</b> M. Maeda<sup>1</sup>, K. Higuchi<sup>1</sup>, S. Kishimoto<sup>1</sup>, T. Tomura<sup>2</sup>, M. Takesue<sup>2</sup>, K. Hata<sup>2</sup> and Y. Ohno<sup>1</sup>, <sup>1</sup>Nagoya Univ. and <sup>2</sup>Bando Chemical Indus. Ltd. (Japan)</p>
<p><b>11:45 H-7-3</b> <b>Effect of Phase Inversion on Quantum Transport in Group IV Two-Dimensional U-shape Device</b> M. Sadi, G. Gupta and G. Liang, NUS (Singapore)</p>	<p><b>11:55 J-7-3</b> <b>Experiment Study on Random Telegraph Signal Noise in (110) pMOSFETS with 1 nm EOT</b> J. Chen and Y. Mitani, Toshiba Corp. (Japan)</p>	<p><b>12:00 K-7-3</b> <b>Establishing pn Junction of Doped Organic Semiconductors by Wet Process</b> K. Fujita, N. Mizutani and T. Hayashida, Kyushu Univ. (Japan)</p>			<p><b>12:00 P-7-3</b> <b>Wafer Scale Fabrication of Transistors using CVD-Grown Graphene and its Application to Inverter Circuit</b> S. Nakaharai<sup>1,2</sup>, T. Iijima<sup>2</sup>, S. Ogawa<sup>2</sup>, K. Yagi<sup>2</sup>, N. Harada<sup>2</sup>, K. Hayashi<sup>2</sup>, D. Kondo<sup>2</sup>, M. Takahashi<sup>2</sup>, S.L. Li<sup>1</sup>, K. Tsukagoshi<sup>1</sup>, S. Sato<sup>2</sup> and N. Yokoyama<sup>2</sup>, <sup>1</sup>NIMS and <sup>2</sup>AIST (Japan)</p>
<p><b>12:00 H-7-4 (Late News)</b> <b>Gate-Controlled Semimetal-Topological Insulator Transition in an InAs/GaSb Heterostructure</b> K. Suzuki, Y. Harada, K. Onomitsu and K. Muraki, NTT Basic Research Labs., NTT Corp. (Japan)</p>		<p><b>12:15 K-7-4</b> <b>Hybridization of HOMO and Next HOMO in Organic Semiconductor Crystals Revealed by Band Calculations</b> H. Matsui<sup>1</sup>, T. Okamoto<sup>1,2</sup>, C. Mitsui<sup>1</sup>, M. Yamagishi<sup>1,3</sup>, H. Sato<sup>4</sup>, A. Yamano<sup>4</sup> and J. Takeya<sup>1</sup>, <sup>1</sup>Univ. of Tokyo, <sup>2</sup>PRESTO, JST, <sup>3</sup>Toyama National College of Technology and <sup>4</sup>Rigaku Corp. (Japan)</p>			

2F Conv. Hall 200	2F 201A	2F 201B	2F 202A	4F 405	4F 406	4F 403
<p><b>A-8: MTJ/MRAM</b> (14:00-15:10) Chairs: T. Endoh (Tohoku Univ.) S. Shuto (Toshiba)</p>		<p><b>C-8: Growth of Germanium Based Semiconductors</b> (14:00-15:15) Chairs: N. Fujimura (Osaka Pref. Univ.) Y. Hotta (Univ. of Hyogo)</p>		<p><b>E-8: III-V MOS Technologies</b> (14:00-15:15) Chairs: M. Kuzuhara (Univ. of Fukui) N. Hara (Fujitsu Labs.)</p>		<p><b>G-8: Silicon Photovoltaics</b> (14:00-15:15) Chairs: K. Ohdaira (JAIST) S. Yata (Panasonic)</p>
<p><b>14:00 A-8-1 (Invited)</b> <b>Switching current and thermal stability of perpendicular magnetic tunnel junction with MgO/CoFeB/Ta/CoFeB/MgO recording structure scaling down to 1X nm</b> H. Sato<sup>1,2</sup>, T. Yamamoto<sup>1,3</sup>, E.C.I. Enobio<sup>1,4</sup>, M. Yamanouchi<sup>1,4</sup>, S. Ikeda<sup>1,2,4</sup>, S. Fukami<sup>1,2</sup>, K. Kinoshita<sup>1</sup>, F. Matsukura<sup>5,1,4</sup>, N. Kasai<sup>1</sup> and H. Ohno<sup>1,2,4,5</sup> <sup>1</sup>CSIS, Tohoku Univ., <sup>2</sup>CIIES, Tohoku Univ., <sup>3</sup>ULVAC, Inc., <sup>4</sup>Lab. for Nanoelectronics and Spintronics, RIEC, Tohoku Univ. and <sup>5</sup>WPI-AIMR, Tohoku Univ. (Japan)</p>		<p><b>14:00 C-8-1</b> <b>Growth of Two InCh Si<sub>0.5</sub>Ge<sub>0.5</sub> Bulk Single Crystals</b> K. Kinoshita<sup>1</sup>, Y. Arai<sup>1</sup>, O. Nakatsuka<sup>2</sup>, K. Taguchi<sup>3</sup>, H. Tomioka<sup>3</sup>, R. Tanaka<sup>3</sup> and S. Yoda<sup>1</sup>, <sup>1</sup>Japan Aerospace Exploration Agency, <sup>2</sup>Nagoya Univ. and <sup>3</sup>Advanced Engineering Services Co. Ltd. (Japan)</p>		<p><b>14:00 E-8-1 (Invited)</b> <b>High Performance III-V MOS Technologies</b> M.J.W. Rodwell<sup>1</sup>, S. Lee<sup>1</sup>, C.-Y. Huang<sup>1</sup>, D. Elias<sup>1</sup>, V. Chobpattana<sup>2</sup>, B.J. Thibeault<sup>1</sup>, W. Mitchell<sup>1</sup>, S. Stemmer<sup>2</sup> and A.C. Gossard<sup>2</sup>, <sup>1</sup>ECE Dept. Univ. of California, Santa Barbara and <sup>2</sup>Materials Dept. Univ. of California, Santa Barbara (USA)</p>		<p><b>14:00 G-8-1 (Invited)</b> <b>Development of Heterojunction Back Contact Si Solar Cells</b> J. Nakamura, Sharp Corp. (Japan)</p>
<p><b>14:30 A-8-2</b> <b>Impact of Sub-Volume Excitation for Improving Overdrive Delay Product in Sub-40nm p-MTJ and Its Beyond</b> S. Ohuchida<sup>1</sup>, K. Ito<sup>2</sup> and T. Endoh<sup>1,2</sup>, <sup>1</sup>Graduate School of Engineering, Tohoku Univ. and <sup>2</sup>Center for Innovative Integrated Electronic Systems, Tohoku Univ. (Japan)</p>		<p><b>14:15 C-8-2</b> <b>Formation and Energy Band Engineering of Ternary Alloy Ge<sub>1-x-y</sub>Sn<sub>x</sub>C<sub>y</sub> Layers</b> T. Yamaha<sup>1</sup>, H. Oda<sup>1</sup>, M. Kurosawa<sup>1,2</sup>, W. Takeuchi<sup>1</sup>, N. Taoka<sup>1</sup>, O. Nakatsuka<sup>1</sup> and S. Zaima<sup>1</sup>, <sup>1</sup>Nagoya Univ. and <sup>2</sup>JSPS Research Fellow (Japan)</p>		<p><b>14:30 E-8-2</b> <b>Hole Mobility Enhancements in Strained In<sub>0.5</sub>Ga<sub>0.5</sub>Sb Heterostructure PMOSFET</b> P.Y. Chang<sup>1</sup>, X.Y. Liu<sup>2</sup>, L. Zeng<sup>2</sup> and G. Du<sup>2</sup>, <sup>1</sup>School of Electronic and Computer Eng., Peking Univ. and <sup>2</sup>Inst. of Microelectronics, Peking Univ. (China)</p>		<p><b>14:30 G-8-2</b> <b>Surface Passivation of c-Si by Nanoengineered AlOx toward Low-Cost, High-Efficiency c-Si Solar Cells</b> H. Lee<sup>1,4</sup>, N. Sawamoto<sup>1</sup>, K. Ueda<sup>2</sup>, Y. Enomoto<sup>2</sup>, K. Arafune<sup>2,4</sup>, H. Yoshida<sup>2,4</sup>, S. Satoh<sup>2,4</sup>, T. Nagata<sup>3</sup>, T. Chikyow<sup>4</sup> and A. Ogura<sup>1,4</sup>, <sup>1</sup>Meiji Univ., <sup>2</sup>Univ. of Hyogo, <sup>3</sup>NIMS and <sup>4</sup>CREST, JST (Japan)</p>
<p><b>14:50 A-8-3</b> <b>A 500ps/8.5ns Array Read/Write Latency 1Mb Twin 1T1MTJ STT-MRAM designed in 90nm CMOS/40nm MTJ Process with Novel Positive Feedback S/A Circuit</b> T. Ohsawa<sup>1</sup>, S. Miura<sup>2</sup>, H. Honjo<sup>2</sup>, S. Ikeda<sup>1</sup>, T. Hanyu<sup>1</sup>, H. Ohno<sup>1</sup> and T. Endoh<sup>1</sup>, <sup>1</sup>Tohoku Univ. and <sup>2</sup>NEC Corp. (Japan)</p>		<p><b>14:30 C-8-3</b> <b>Impact of Hydrogen Surfactant Epitaxy and Annealing on Crystallinity of Epitaxial Ge<sub>1-x</sub>Sn<sub>x</sub> Layers</b> T. Asano<sup>1,2</sup>, N. Taoka<sup>3</sup>, K. Hozaki<sup>1</sup>, W. Takeuchi<sup>1</sup>, M. Sakashita<sup>1</sup>, O. Nakatsuka<sup>1</sup> and S. Zaima<sup>1</sup>, <sup>1</sup>Nagoya Univ., <sup>2</sup>JSPS Research Fellow and <sup>3</sup>IHP (Japan)</p>		<p><b>14:45 E-8-3</b> <b>Body Width Dependence of Subthreshold Slope and On-Current in GaAsSb/InGaAs Double-Gate Vertical Tunnel FETs</b> K. Ohashi, M. Fujimatsu and Y. Miyamoto, Tokyo Tech (Japan)</p>		<p><b>14:45 G-8-3</b> <b>Epitaxial Growth of Germanium Thin Films on Crystal Silicon Substrates by Solid Phase Crystallization</b> M. Kanai and M. Isomura, Tokai Univ. (Japan)</p>
		<p><b>14:45 C-8-4</b> <b>Melting-Sn Induced Seeding-Processing for Low-Temperature Lateral-Crystallization of a-GeSn on Insulating Substrate</b> H. Chikita<sup>1</sup>, R. Matsumura<sup>1,2</sup>, Y. Kai<sup>1</sup>, T. Sadoh<sup>1</sup> and M. Miyao<sup>1</sup>, <sup>1</sup>Kyushu Univ. and <sup>2</sup>JSPS Research Fellow (Japan)</p>		<p><b>15:00 E-8-4</b> <b>RF Modeling of III-V FINFETs</b> E. Lind, C.B. Zota and L.E. Wernersson, Lund Univ. (Sweden)</p>		<p><b>15:00 G-8-4</b> <b>Degradation by Acetic Acid for Crystalline Si Photovoltaic Modules</b> N. Uchiyama and A. Masuda, AIST (Japan)</p>
		<p><b>15:00 C-8-5</b> <b>Formation of Large-Grain Ge-Based Group-IV Crystals on Insulator by Seedless Rapid-Melting Growth in Solid-Liquid-Coexisting Temperature Region</b> R. Matsumura<sup>1,2</sup>, Y. Kai<sup>1</sup>, H. Chikita<sup>1</sup>, Y. Sadoh<sup>1</sup> and M. Miyao<sup>1</sup>, <sup>1</sup>Kyushu Univ. and <sup>2</sup>JSPS Research Fellow (Japan)</p>				

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4F 404	1F 101	2F 202B	3F 304	4F 401	4F 402
		<p><b>K-8: OTFT</b> (14:00-15:00) Chairs: J. Takeya (Univ. of Tokyo) H. Endoh (NEC)</p>	<p><b>M-8: Wireless Circuits</b> (14:00-15:10) Chairs: K. Okada (Tokyo Tech) T. Minotani (NTT TELECON)</p>	<p><b>N-8: Device Modeling and Characterization</b> (14:00-15:15) Chairs: C. -F. Huang (National Tsing Hua Univ.) H. Umezawa (AIST)</p>	<p><b>P-8: Nanocarbon Growth &amp; Applications</b> (14:00-15:00) Chairs: K. Nagashio (Univ. of Tokyo) S. Nakaharai (NIMS)</p>
		<p><b>14:00 K-8-1</b> <b>Pentacene Thin-Film Transistors with Controlled Threshold Voltages and Their Application to Pseudo CMOS Inverters</b> <i>Y. Kimura<sup>1</sup>, M. Kitamura<sup>1,2</sup> and Y. Arakawa<sup>2</sup>, <sup>1</sup>Kobe Univ. and <sup>2</sup>Univ. of Tokyo (Japan)</i></p>	<p><b>14:00 M-8-1 (Invited)</b> <b>Ultra-Wideband Technology for Short-Range Communications</b> <i>W. Rhee, X. Chen, D. Liu, F. Chen and Z. Wang, Tsinghua Univ. (China)</i></p>	<p><b>14:00 N-8-1 (Invited)</b> <b>Accurate physical compact models of high-voltage/power semiconductor devices for efficient design of performance-optimized circuits and systems</b> <i>H.J. Mattausch, T. Umeda, H. Kikuchihiro and M. Miura-Mattausch, Hiroshima Univ. (Japan)</i></p>	<p><b>14:00 P-8-1</b> <b>Development of Two-dimensional Tactile Sensor Using Carbon Nanotubes</b> <i>M. Ohnishi, M. Yang, T. Nozaki, K. Suzuki and H. Miura, Tohoku Univ. (Japan)</i></p>
		<p><b>14:15 K-8-2</b> <b>Single-Crystal Structure and Transport Analyses of Rubrene under High Pressure</b> <i>J. Tsurumi<sup>1</sup>, K. Sakai<sup>2</sup>, H. Matsui<sup>1</sup>, Y. Okada<sup>1</sup>, T. Okamoto<sup>1</sup>, H. Sato<sup>2</sup>, A. Yamano<sup>2</sup>, K. Sugimoto<sup>3</sup>, A. Fujiwara<sup>3</sup> and J. Takeya<sup>1</sup>, <sup>1</sup>Univ. of Tokyo, <sup>2</sup>Rigaku Corp. and <sup>3</sup>JASRI (Japan)</i></p>	<p><b>14:30 M-8-2</b> <b>A 0.5-V 5.8-GHz Highly Linear VCO with Back-Gate Tuning Technique</b> <i>S. Ikeda, S. Lee, H. Ito, N. Ishihara and K. Masu, Tokyo Tech (Japan)</i></p>	<p><b>14:30 N-8-2</b> <b>Two-component model for threshold voltage shifts of SiC MOSFETs under negative bias stress</b> <i>M. Matsumura, K. Kobayashi, Y. Mori, N. Tega, A. Shima, D. Hisamoto and Y. Shimamoto, Hitachi, Ltd., (Japan)</i></p>	<p><b>14:15 P-8-2</b> <b>Enhancement of Carrier Injection in OLEDs Utilizing Field Concentration to Carbon Nanotubes</b> <i>T. Yamada, S. Kishimoto and Y. Ohno, Nagoya Univ. (Japan)</i></p>
		<p><b>14:30 K-8-3</b> <b>Estimating the Density of Trap States in the Middle of the Bandgap using Ambipolar Organic Field-Effect Transistors</b> <i>R. Hausermann<sup>1</sup>, S. Chauvin<sup>1</sup>, A. Facchetti<sup>2</sup>, Z. Chen<sup>2</sup> and B. Batlogg<sup>1</sup>, <sup>1</sup>ETH Zurich and <sup>2</sup>Polyera Corp. (Switzerland)</i></p>	<p><b>14:50 M-8-3</b> <b>A Varactor-Less and Dither-Less LC-Digitally Controlled Oscillator with 9-bit Fine Bank, 0.26 mm<sup>2</sup> Area, and 6.7 kHz Frequency Resolution</b> <i>Z. Xu, M. Sugawara, K. Mori, M. Miyahara and A. Matsuzawa, Tokyo Tech (Japan)</i></p>	<p><b>14:45 N-8-3</b> <b>High-temperature and High-voltage characteristics of Cu/diamond Schottky diodes</b> <i>K. Ueda, K. Kawamoto, S. Aichi, M. Nishiwaki and H. Asano, Nagoya Univ. (Japan)</i></p>	<p><b>14:30 P-8-3</b> <b>Graphene Synthesis by Laser-Annealing Technique Using Co Catalyst</b> <i>Y. Ishibashi, K. Koshida, Y. Kanai, Y. Ohno, K. Maehashi, K. Inoue and K. Matsumoto, Osaka Univ. (Japan)</i></p>
		<p><b>14:45 K-8-4</b> <b>Effects of Deposition Pressure on the Characteristics of Organic Thin-Film Transistors Fabricated with Film Profile Engineering</b> <i>M.H. Wu<sup>1</sup>, H.C. Lin<sup>1,2</sup> and T.Y. Huang<sup>1</sup>, <sup>1</sup>NCTU and <sup>2</sup>National Nano Device Lab. (Taiwan)</i></p>		<p><b>15:00 N-8-4</b> <b>Microwave reflectivity from 4H-SiC in the high injection condition: Impacts of the electron-hole scattering</b> <i>M. Kato, Y. Mori and M. Ichimura, Nagoya Inst. of Tech. (Japan)</i></p>	<p><b>14:45 P-8-4 (Late News)</b> <b>Subthreshold transport in mono- and multi-layered MoS<sub>2</sub> FETs</b> <i>F. Nan, K. Nagashio and A. Toriumi, The Univ. of Tokyo (Japan)</i></p>

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<p><b>A-9: Flash Memory</b> (15:30-16:40) Chairs: S. Shuto (Toshiba) M. -H. Lee (Macronix)</p>		<p><b>C-9: Growth Processing of Group IV Semiconductors</b> (15:30-16:15) Chairs: Y. Hotta (Univ. of Hyogo) N. Fujimura (Osaka Pref Univ.)</p>				
<p><b>15:30 A-9-1 (Invited)</b> <b>Trends on Advanced Semiconductor Memories</b> <i>A. Nitayama, Tohoku Univ. (Japan)</i></p>		<p><b>15:30 C-9-1</b> <b>Deposition of Thin Si, Ge, and SiGe Films by Ballistic Hot Electron Reduction</b> <i>M. Yagi<sup>1</sup>, R. Suda<sup>1</sup>, A. Kojima<sup>1</sup>, R. Mentek<sup>1</sup>, N. Mori<sup>2</sup>, J. Shirakashi<sup>1</sup> and N. Koshida<sup>1</sup>, <sup>1</sup>Tokyo Univ. of Agri. &amp; Tech. and <sup>2</sup>Osaka Univ. (Japan)</i></p>				
<p><b>16:00 A-9-2</b> <b>Substrate Doping Concentration Dependence on Random Telegraph Noise Spatial and Statistical Distribution in 30nm NAND Flash Memory</b> <i>T. Tomita and K. Miyaji, Shinshu Univ. (Japan)</i></p>		<p><b>15:45 C-9-2</b> <b>Grain Growth Control by Micro-Thermal-Plasma- Jet Irradiation to Very Narrow Amorphous Silicon Strips and Its Application to Thin Film Transistors</b> <i>S. Yamamoto, S. Morisaki, S. Hayashi, T. Nakatani and S. Higashi, Hiroshima Univ. (Japan)</i></p>				
<p><b>16:20 A-9-3</b> <b>Comparative Study of Floating Gate Type 3D Fin-Channel Flash Memories with Different Channel Shapes and Interpoly Dielectric Layers</b> <i>Y.X. Liu<sup>1</sup>, T. Nabatame<sup>2</sup>, N. Nguyen<sup>2</sup>, T. Matsukawa<sup>1</sup>, K. Endo<sup>1</sup>, S. O'uchi<sup>1</sup>, J. Tsukada<sup>1</sup>, H. Yamauchi<sup>1</sup>, Y. Ishikawa<sup>1</sup>, W. Mizubayashi<sup>1</sup>, Y. Morita<sup>1</sup>, S. Migita<sup>1</sup>, H. Ota<sup>1</sup>, T. Chikyow<sup>2</sup> and M. Masahara<sup>1</sup>, <sup>1</sup>AIST and <sup>2</sup>NIMS (Japan)</i></p>		<p><b>16:00 C-9-3</b> <b>Versatile Doping Technique for Diamond by Solid Dopant Immersion During Microwave Plasma CVD</b> <i>T. Tamura<sup>1</sup>, T. Yanase<sup>1</sup>, T. Nagahama<sup>1</sup>, S. Sato<sup>2</sup> and T. Shimada<sup>1</sup>, <sup>1</sup>Hokkaido Univ. and <sup>2</sup>Arios Inc. (Japan)</i></p>				

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4F 404	1F 101	2F 202B	3F 304	4F 401	4F 402
			<p><b>M-9: Image Sensors</b> (15:30-16:45) Chairs: K. Kagawa (Shizuoka Univ.) K. Takeuchi (Chuo Univ.)</p>		<p><b>P-9: 2D Materials &amp; Devices</b> (15:30-16:30) Chairs: H. Miyazaki (Toshiba) T. Kawai (NEC)</p>
			<p><b>15:30 M-9-1</b> <b>300 <math>\mu</math>s Short Interval Continuous Capturing Image Sensor with C-axis Aligned Crystalline Oxide Semiconductor FET/ p-channel Silicon FET Stacked CMOS Structure</b> S. Yoneda, Y. Okamoto, T. Nakagawa, S. Maeda, T. Aoki, M. Kozuma, T. Ohmaru, H. Inoue, S. Nagatsuka, Y. Kurokawa, T. Ikeda, Y. Suzuki, N. Yamada, H. Miyairi and S. Yamazaki, Semiconductor Energy Lab. Corp., Ltd. (Japan)</p> <p><b>15:50 M-9-2</b> <b>A Platform for Backside Illuminated CMOS Image Sensors for UV and Visible Applications</b> B. Vereecke, C. Cavaco, K. De Muynck, L. Haspelslagh, K. Minoglou, D. Sabuncuoglu, K. Tack and H. Osman, imec (Belgium)</p> <p><b>16:10 M-9-3</b> <b>A Micro-Machined IR Thermal Detector Using Torsional Oscillation: Improvement of Resonator Profile for High Sensitivity</b> J.H. Jeong<sup>1</sup>, S. Kumagai<sup>1,3</sup>, I. Yamashita<sup>2,3</sup>, Y. Uraoka<sup>2,3</sup> and M. Sasaki<sup>1,3</sup>, <sup>1</sup>Toyota Tech. Inst., <sup>2</sup>NAIST and <sup>3</sup>CREST-JST (Japan)</p> <p><b>16:30 M-9-4 (Late News)</b> <b>Leakage-Delay Analysis of Monolithic 3D Logic Circuits using Ultra-Thin-Body InGaAs/Ge MOSFETs considering Interlayer Electrical Coupling</b> K.-C. Yu, M.-L. Fan, P. Su and C.-T. Chuang, National Chiao Tung Univ. (Taiwan)</p>		<p><b>15:30 P-9-1</b> <b>Multi-Layered MoS<sub>2</sub> Thin Film Formed by High-Temperature Sputtering for Enhancement-Mode nMOSFETs</b> T. Ohashi<sup>1</sup>, K. Suda<sup>2</sup>, S. Ishihara<sup>2</sup>, N. Sawamoto<sup>2</sup>, S. Yamaguchi<sup>1</sup>, K. Matsuura<sup>1</sup>, K. Kakushima<sup>1</sup>, N. Sugii<sup>1</sup>, A. Nishiyama<sup>1</sup>, Y. Kataoka<sup>1</sup>, K. Natori<sup>1</sup>, K. Tsutsui<sup>1</sup>, H. Iwai<sup>1</sup>, A. Ogura<sup>2</sup> and H. Wakabayashi<sup>1</sup>, <sup>1</sup>Tokyo Tech and <sup>2</sup>Meiji Univ. (Japan)</p> <p><b>15:45 P-9-2</b> <b>Direct Deposition of High-k Y<sub>2</sub>O<sub>3</sub> on h-BN by Atomic Layer Deposition</b> N. Takahashi<sup>1</sup>, K. Watanabe<sup>2</sup>, T. Taniguchi<sup>2</sup> and K. Nagashio<sup>1</sup>, <sup>1</sup>Univ. of Tokyo and <sup>2</sup>NIMS (Japan)</p> <p><b>16:00 P-9-3</b> <b>Epitaxial Graphene Devices for Scanning Probe Measurements</b> A. Iagallo<sup>1</sup>, S. Tanabe<sup>2</sup>, S. Roddaro<sup>1</sup>, M. Takamura<sup>2</sup>, Y. Sekine<sup>2</sup>, H. Hibino<sup>2</sup>, V. Misekic<sup>3</sup>, C. Coletti<sup>3</sup>, V. Piazza<sup>3</sup>, F. Beltram<sup>1</sup> and S. Heun<sup>1</sup>, <sup>1</sup>NEST, Istituto Nanoscienze-CNR and Scuola Normale Superiore, <sup>2</sup>NTT Basic Res. Lab., NTT Corp. and <sup>3</sup>Center for Nanotechnology Innovation @ NEST, Istituto Italiano di Tecnologia (Italy)</p> <p><b>16:15 P-9-4</b> <b>Low Pull-in Voltage Graphene Contact Switch Fabricated without Acid-Etching</b> J. Sun<sup>1</sup>, W.Z. Wang<sup>1</sup>, M. Muruganathan<sup>1</sup> and H. Mizuta<sup>1,2</sup>, <sup>1</sup>AIST and <sup>2</sup>Univ. of Southampton (Japan)</p>