

# Thursday, September 29

5F Hall 1	5F Hall 2	10F 1002	10F 1003	11F 1101	11F 1102	11F 1103
		<p><b>B-3: Novel structure and fabrication process for OTFT (Area 10)</b> (9:00-10:15) Chairs: H. Maeda (Dai Nippon Printing Co. Ltd.) H. Usui (Tokyo Univ. of Agri. &amp; Tech.)</p>	<p><b>C-3: Memory Application (Area 2)</b> (9:00-10:00) Chairs: A. Ikeda (Panasonic Corp.) M. Ueki (Renesas Electronics Corp.)</p>		<p><b>E-3: Process Technology and Analysis (Area 1)</b> (9:00-10:20) Chairs: H. Nohira (Tokyo City Univ.) S. Tsujikawa (Sony Corp.)</p>	<p><b>F-3: NAND (Area 4)</b> (9:00-10:00) Chairs: E. Yang (eMemory Technology Inc.) M. Moniwa (Renesas Electronics Corp.)</p>
		<p><b>9:00 B-3-1</b> <b>Room temperature fabrication of HFON gate insulator for low-voltage operating pentacene-based organic field-effect transistors</b> <i>M. Liao<sup>1</sup>, H. Ishiura<sup>1,2</sup> and S. Ohmi<sup>1</sup>, <sup>1</sup>Tohoku Tech and <sup>2</sup>Konkuk Univ. (Japan)</i></p> <p><b>9:30 B-3-3</b> <b>UV-Ozone Effect of the Organic Thin Film Transistor with PVP Gate Dielectric in Low Temperature</b> <i>H. J. Yun<sup>1</sup>, K. H. Baek<sup>2</sup>, L. M. Do<sup>2</sup>, S. Y. Lee<sup>1</sup>, K. S. Jeong<sup>1</sup>, Y. M. Kim<sup>1</sup>, S. D. Yang<sup>1</sup>, H. D. Lee<sup>1</sup> and G. W. Lee<sup>1</sup>, <sup>1</sup>Chungnam National Univ. and <sup>2</sup>ETRI (Korea)</i></p> <p><b>9:45 B-3-4</b> <b>Spatial Control of the Threshold Voltage of Low-Voltage Organic Transistors by Microcontact Printing of Alkyl- and Fluoroalkyl-phosphonic Acids</b> <i>I. Hirata<sup>1</sup>, U. Zschieschang<sup>2</sup>, F. Ante<sup>2</sup>, T. Yokota<sup>1</sup>, K. Kuribara<sup>1</sup>, T. Yamamoto<sup>1</sup>, K. Takimiyama<sup>1</sup>, M. Ikeda<sup>1</sup>, H. Kuwabara<sup>1</sup>, H. Klauk<sup>2</sup>, T. Sekitani<sup>1</sup> and T. Someya<sup>1</sup>, <sup>1</sup>Univ. of Tokyo, <sup>2</sup>Max Planck Inst. for Solid State Res., <sup>3</sup>Hiroshima Univ. and <sup>4</sup>Nippon Kayaku Corp., Ltd. (Japan)</i></p> <p><b>10:00 B-3-5</b> <b>Air-Stable Polymer and Blade Coating Technique for High-Performance Vertical Polymer Transistors</b> <i>H. W. Zan, Y. C. Chao, C. H. Chung, Y. H. Hsu and H. F. Meng, National Chiao Tung Univ. (Taiwan)</i></p>	<p><b>9:00 C-3-1</b> <b>Improvement of thermal stability in High Density Ta<sub>2</sub>O<sub>5</sub> 3D capacitor by additional thin SiO<sub>2</sub> layer</b> <i>M. Detalle, H. Dekkers, G. Potoms, A. Phommahaxay, D. S. Tezcan, P. Soussan and G. Beyer, IMEC (Belgium)</i></p> <p><b>9:20 C-3-2</b> <b>Pico-Ampere Switching ReRAM with Vertically Contacted 5 nm-diameter Carbon Nanotube Electrodes for BEOL-Based Memory</b> <i>H. Nakano, M. Takahashi, T. Murakami, A. Kawabata, M. Sato, M. Nihei and N. Yokoyama, AIST (Japan)</i></p> <p><b>9:40 C-3-3</b> <b>Performance Evaluation of a Logic-IP Compatible (LIC) Embedded DRAM with Cylinder Capacitors in Low-k/Cu BEOL Layers</b> <i>I. kume, N. inoue, K. Hijioka, J. Kawahra, K. Takeda, N. Furutake, H. Shirai, K. Kazama, S. Kuwabara, M. Watarai, T. Sakoh, T. Takahashi, T. Ogura, T. Taiji, K. Kasama, M. Sakamoto, M. Hane and Y. Hayashi, Renesas Electronics Corp. (Japan)</i></p>		<p><b>9:00 E-3-1</b> <b>Soft X-ray Photoelectron Spectroscopy on Chemical Bonding States of Boron Doped in Si Fin Structures</b> <i>Y. Miyata<sup>1</sup>, J. Kanehara<sup>1</sup>, H. Nohira<sup>2</sup>, Y. Izumi<sup>2</sup>, T. Muro<sup>3</sup>, T. Kinoshita<sup>3</sup>, P. Ahmet<sup>1</sup>, K. Kakushima<sup>1</sup>, K. Tsutsui<sup>1</sup>, T. Hattori<sup>1</sup> and H. Iwai<sup>1</sup>, <sup>1</sup>Tokyo Tech, <sup>2</sup>Tokyo City Univ. and <sup>3</sup>JASRI/SPring-8 (Japan)</i></p> <p><b>9:20 E-3-2</b> <b>Concentration Depth Profiling of Heavily Doped Boron at and near SiO<sub>2</sub>/Si Interface by Angle-resolved Soft X-ray Photoelectron Spectroscopy</b> <i>K. Kakushima<sup>1</sup>, J. Kanehara<sup>1</sup>, Y. Izumi<sup>2</sup>, T. Muro<sup>2</sup>, T. Kinoshita<sup>2</sup>, P. Ahmet<sup>1</sup>, K. Tsutsui<sup>1</sup>, T. Hattori<sup>1</sup> and H. Iwai<sup>1</sup>, <sup>1</sup>Tokyo Tech and <sup>2</sup>JASRI/SPring-8 (Japan)</i></p> <p><b>9:40 E-3-3</b> <b>On the Si Surface Flattening Effect and Gate Insulator Breakdown Characteristic of Radical Reaction Based Insulator Formation Technology</b> <i>R. Kuroda, A. Teramoto, X. Li, T. Suwa, S. Sugawa and T. Ohmi, Tohoku Univ. (Japan)</i></p> <p><b>10:00 E-3-4</b> <b>High Quality and Low Thermal Budget Silicon Nitride Deposition Using PECVD for Gate Spacer, Silicide Block and Contact Etch Stopper</b> <i>Y. Nakao, R. Kuroda, H. Tanaka, A. Teramoto, S. Sugawa and T. Ohmi, Tohoku Univ. (Japan)</i></p>	<p><b>9:00 F-3-1</b> <b>First 64kb Ferroelectric-NAND Flash Memory Array with 7.5 V Program, 10<sup>8</sup> Endurance and Long Data Retention</b> <i>X. Zhang<sup>1</sup>, M. Takahashi<sup>1</sup>, K. Takeuchi<sup>2</sup> and S. Sakai<sup>1</sup>, <sup>1</sup>AIST and <sup>2</sup>Univ. of Tokyo (Japan)</i></p> <p><b>9:20 F-3-2</b> <b>Assessment of Erase-Verify Function in NAND Arrays with Charge-Based Capacitance Measurement</b> <i>L. H. Chong, Y. W. Chang, K. F. Chen, Y. J. Chen, S. H. Ku, N. K. Zous, I. J. Huang, T. T. Han, M. S. Chen, W. P. Lu, K. C. Chen and C. Y. Lu, Macronix Int. Co., Ltd. (Taiwan)</i></p> <p><b>9:40 F-3-3</b> <b>Disturb-free 3D vertical FG NAND with Separated-Sidewall Control Gate</b> <i>M. S. Seo<sup>1,2</sup> and T. Endoh<sup>1,2</sup>, <sup>1</sup>Tohoku Univ. and <sup>2</sup>CREST-JST (Japan)</i></p>

## Coffee Break

<b>Short Presentation (10:45-12:00)</b>						
<p>Short Presentation P-6 (10:45-12:00) Chairs: T. Suzuki (JAIST) S. Sasa (Osaka Inst. of Tech.)</p>		<p>Short Presentation P-10 (10:45-12:00) Chairs: T. Shimada (Hokkaido Univ.) S. Naka (Univ. of Toyama)</p>	<p>Short Presentation P-2 (10:45-12:00) Chairs: M. Ueki (Renesas Electronics Corp.) A. Ikeda (Panasonic Corp.)</p>	<p>Short Presentation P-3 (10:45-12:00) Chairs: H. Fujimoto (Panasonic Corp.) O. Weber (CEA-LETI/MINATEC)</p>	<p>Short Presentation P-1 (10:45-12:00) Chairs: K. Kita (Univ. of Tokyo) E. Nishimura (Tokyo Electron Ltd.)</p>	<p>Short Presentation P-4 (10:45-12:00) Chairs: T. Eshita (Fujitsu Semiconductor Ltd.) T. Endoh (Tohoku Univ.)</p>

## 12:00-13:30 Lunch

## Thursday, September 29

11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
<p><b>G-3: Variation and Reliability (Area 5)</b> (9:00-10:15) Chairs: H. Takao (Kagawa Univ.) S. Sugawa (Tohoku Univ.)</p>	<p><b>H-3: Electric, Magnetic and Optical Biosensing (Area 11)</b> (9:00-10:15) Chairs: Y. S. Yang (National Chiao Tung Univ.) H. Suzuki (Hiroshima Univ.)</p>	<p><b>I-3: Plasmonics and Nonlinear Devices (Area 7)</b> (9:00-10:15) Chairs: H. Isshiki (The Univ. of Electro-Communications) J. Fujikata (NEC Corp.)</p>	<p><b>J-3: Graphene Quantum Transport (Area 9)</b> (9:00-10:15) Chairs: T. Machida (Univ. of Tokyo) A. Kanda (Univ. of Tsukuba)</p>	<p><b>K-3: Nanowire/Nanotube FET (Area 13)</b> (9:00-10:00) Chairs: J. Motohisa (Hokkaido Univ.) C. Liu (Chinese Academy of Sciences)</p>	<p><b>L-3: Compound Thin Film Solar Cells. (Area 14)</b> (9:00-10:15) Chairs: N. J. Ekins-Daukes (Imperial College London) H. Katagiri (NNCT)</p>	<p><b>M-3: III-V Compounds (Area 8)</b> (9:00-10:15) Chairs: M. Kondow (Osaka Univ.) T. Suemasu (Univ. of Tsukuba)</p>	
<p><b>9:00 G-3-1</b> <b>Multi-core LSI Lifetime Extension by NBTI-Recovery-based Self-healing</b> <i>T. Matsumoto<sup>1</sup>, H. Makino<sup>1</sup>, K. Kobayashi<sup>3</sup> and H. Onodera<sup>1,2</sup>,<sup>1</sup>Kyoto Univ.,<sup>2</sup>Kyoto Inst. of Tech. and<sup>3</sup>CREST-JST (Japan)</i></p>	<p><b>9:00 H-3-1 (Invited)</b> <b>Bio-particles Detection based on Dielectrophoretic Microfluidic Chip Combined with Optical Method</b> <i>H. C. Chang, C. C. Chung and I. F. Cheng, National Cheng Kung Univ. (Taiwan)</i></p>	<p><b>9:00 I-3-1 (Invited)</b> <b>Plasmonic Nanophotonic Structures for Future Communications and Energy Applications</b> <i>H. A. Atwater, California Inst. of Tech. (USA)</i></p>	<p><b>9:00 J-3-1 (Invited)</b> <b>Electronic transport in graphene nanostructures</b> <i>T. Ihn, S. Dröscher, J. Güttinger, A. Jacobsen, H. Knowles, F. Molitor, S. Schnez, P. Simonet, C. Stampfer and K. Ensslin, Solid State Physics Lab. (Switzerland)</i></p>	<p><b>9:00 K-3-1</b> <b>Electron mobility calculations of free-standing Si-nanowires with atomistic electron-phonon interactions</b> <i>Y. Yamada, H. Tsuchiya and M. Ogawa, Kobe Univ. (Japan)</i></p>	<p><b>9:00 L-3-1 (Invited)</b> <b>Hetero Junction Engineering for High Efficiency Cu(In,Ga)Se<sub>2</sub> Solar Cells</b> <i>T. Minemoto, Ritsumeikan Univ. (Japan)</i></p>	<p><b>9:00 M-3-1 (Invited)</b> <b>Morphological and compositional interface stability of metastable ternary and quaternary (Ga,In)(As,Sb) quantum wells</b> <i>A. Trampert, Paul-Drude-Institute (Germany)</i></p>	
<p><b>9:20 G-3-2</b> <b>Experimental Comparison of Process Variation in 65nm and 180nm CMOS Using Ring Oscillators with Adjustable Delay</b> <i>T. Ansari, W. Imafuku, M. Yasuda, S. Sasaki, H. J. Mattausch and T. Koide, Hiroshima Univ. (Japan)</i></p>	<p><b>9:30 H-3-2</b> <b>Study on Micro Optical Diffusion Sensor using Laser-induced Dielectrophoresis</b> <i>Y. Ishii, Y. Taguchi and Y. Nagasaka, Keio Univ. (Japan)</i></p>	<p><b>9:30 I-3-2</b> <b>Femtosecond Two-photon Fluorescence Microscopy of Surface Plasmon Polariton</b> <i>T. Hattori<sup>1</sup>, A. Kubo<sup>1</sup>, K. Oguri<sup>2</sup>, H. Nakano<sup>2</sup> and H. T. Miyazaki<sup>3</sup>,<sup>1</sup>Univ. of Tsukuba,<sup>2</sup>NTT Basic Res. Labs. and<sup>3</sup>NIMS (Japan)</i></p>	<p><b>9:30 J-3-2</b> <b>Introducing Nonuniform Strain to Graphene: Toward Strain Engineering</b> <i>H. Tomori<sup>1,2</sup>, H. Goto<sup>1,2</sup>, Y. Nukui<sup>1,2</sup>, Y. Toyota<sup>1,2</sup>, Y. Ootuka<sup>1</sup>, K. Tsukagoshi<sup>2,3</sup>, S. Moriyama<sup>1</sup>, E. Watanabe<sup>1</sup>, D. Tsuya<sup>1</sup> and A. Kanda<sup>1,2</sup>,<sup>1</sup>Univ. of Tsukuba,<sup>2</sup>CREST-JST and<sup>3</sup>NIMS (Japan)</i></p>	<p><b>9:15 K-3-2</b> <b>Charge transfer by multiple donors in a Si nanowire</b> <i>G. P. Lansbergen, Y. Ono and A. Fujiwara, NTT Basic Res. Labs. (Japan)</i></p>	<p><b>9:30 L-3-2</b> <b>Cu(In,Al)S<sub>2</sub> thin film solar cells prepared from sulfurization of Cu-In-Al precursors</b> <i>Y. Oda, R. Hamazaki, S. Fukamizu, A. Yamamoto, T. Minemoto and H. Takakura, Ritsumeikan Univ. (Japan)</i></p>	<p><b>9:30 M-3-2</b> <b>High-speed three-dimensional reciprocal-space mapping during MBE growth of InGaAs</b> <i>W. Hu<sup>1</sup>, H. Suzuki<sup>2</sup>, T. Sasaki<sup>3</sup>, M. Kozu<sup>4</sup> and M. Takahashi<sup>4</sup>,<sup>1</sup>JAEA,<sup>2</sup>Univ. of Miyazaki,<sup>3</sup>Toyota Technological Inst. and<sup>4</sup>Univ. of Hyogo (Japan)</i></p>	
<p><b>9:40 G-3-3</b> <b>Effect of Resin-Molded Package Structure on Silicon Chip Surface Stress Distribution</b> <i>N. Ueda, E. Nishiyama and H. Watanabe, RICOH Co., Ltd. (Japan)</i></p>	<p><b>9:45 H-3-3</b> <b>Development and Evaluation of Local Illumination Device beyond Diffraction Limit using Polymeric Nanohole Array</b> <i>T. Ono<sup>1,2</sup>, R. Iizuka<sup>1,2</sup>, T. Akagi<sup>1,2</sup>, T. Funatsu<sup>1,2</sup> and T. Ichiki<sup>1,2</sup>,<sup>1</sup>Univ. of Tokyo and<sup>2</sup>CREST-JST (Japan)</i></p>	<p><b>9:45 I-3-3</b> <b>Modal phase matcing in ZnO channel waveguide for highly efficient second harmonic generation</b> <i>Y. Taira, T. Kita, Y. Morales and H. Yamada, Tohoku Univ. (Japan)</i></p>	<p><b>9:45 J-3-3</b> <b>Device Performance of Graphene Nanoribbon MOSFET and Tunneling FET with Phonon Scattering: A Computation Study</b> <i>K. T. Lam<sup>1</sup>, S. K. Chin<sup>2</sup> and G. Liang<sup>1,2</sup>,<sup>1</sup>National Univ. of Singapore and<sup>2</sup>Inst. of High Performance Computing (Singapore)</i></p>	<p><b>9:30 K-3-3</b> <b>High-performance Carbon Nanotube Thin-film Transistors with &gt;600 cm<sup>2</sup>V<sup>-1</sup>s<sup>-1</sup> Mobility and &gt;10<sup>7</sup> On/off Ratio</b> <i>D. M. Sun<sup>1</sup>, M. Y. Timmermans<sup>2</sup>, Y. Tian<sup>2</sup>, A. G. Nasibulin<sup>2</sup>, S. Kishimoto<sup>1</sup>, T. Mizutani<sup>1</sup> and E. I. Kauppinen<sup>2</sup>, Y. Ohno<sup>1</sup>,<sup>1</sup>Nagoya Univ. and<sup>2</sup>Aalto Univ. (Japan)</i></p>	<p><b>9:45 L-3-3</b> <b>Effect of Solid-Phase-Epitaxy Si Layers on Suppression of Sb Diffusion from Sb-Doped n<sup>-</sup>BaSi<sub>2</sub>/p<sup>-</sup>Si Tunnel Junction to Undoped BaSi<sub>2</sub> Overlayers</b> <i>W. J. Du<sup>1</sup>, T. Saito<sup>1</sup>, M. A. Khan<sup>1</sup>, K. Nakamura<sup>1</sup>, M. Baba<sup>1</sup>, K. Toh<sup>1</sup>, K. Toko<sup>1</sup>, N. Usami<sup>2,3</sup> and T. Suemasu<sup>1,3</sup>,<sup>1</sup>Univ. of Tsukuba,<sup>2</sup>Tohoku Univ. and<sup>3</sup>CREST-JST (Japan)</i></p>	<p><b>9:45 M-3-3</b> <b>Effect of Initial In Coverage for Preparation of InSb Bilayer on Electrical Properties of InSb Films Grown By Surface Reconstruction Controlled Epitaxy</b> <i>M. Mori<sup>1</sup>, Y. Yasui<sup>1</sup>, K. Nakayama<sup>1</sup>, K. Nakatani<sup>1</sup> and K. Maezawa<sup>1</sup>, Univ. of Toyama (Japan)</i></p>	
<p><b>10:00 G-3-4 (Late News)</b> <b>Investigation of Subthreshold Drain Current Mismatch Characteristics for Nanoscale MOSFETs</b> <i>J. J. Y. Kuo and P. Su, National Chiao Tung Univ. (Taiwan)</i></p>	<p><b>10:00 H-3-4</b> <b>Point of care biosensing protocol based on magnetically induced self-assembly of functionalized particles dispersed in colloids</b> <i>Y. Yang<sup>1,2</sup>, T. Takamura<sup>1</sup> and A. Sandhu<sup>1,3</sup>,<sup>1</sup>Tokyo Tech,<sup>2</sup>Tsinghua Univ. and<sup>3</sup>Toyoashi Univ. of Tech. (Japan)</i></p>	<p><b>10:00 I-3-4</b> <b>MgO:LiNbO<sub>3</sub> Waveguide Second-Harmonic Generation Devices with Domain-Inverted Gratings Formed by 2-Step Voltage Application under UV Light</b> <i>M. Fujimura, E. Kitado, T. Inoue and T. Suhara, Osaka Univ. (Japan)</i></p>	<p><b>10:00 J-3-4</b> <b>Mobility Difference in Top and Bottom Surfaces of Multilayer Graphene Placed on Silicon Dioxide</b> <i>Y. Nukui<sup>1,2</sup>, H. Tomori<sup>1,2</sup>, H. Goto<sup>1,2</sup>, Y. Toyota<sup>1,2</sup>, Y. Ootuka<sup>1</sup>, K. Tsukagoshi<sup>2,3</sup> and A. Kanda<sup>1,2</sup>,<sup>1</sup>Univ. of Tsukuba,<sup>2</sup>CREST-JST and<sup>3</sup>NIMS (Japan)</i></p>	<p><b>9:45 K-3-4</b> <b>Ambipolar Conversion of Polymer-Coated All Single-Walled Carbon Nanotube Field-Effect Transistors</b> <i>S. Aikawa<sup>1,2</sup>, E. Einarsson<sup>1</sup>, S. Chiashi<sup>1</sup>, E. Nishikawa<sup>1</sup> and S. Maruyama<sup>1</sup>,<sup>1</sup>Univ. of Tokyo and<sup>2</sup>Tokyo Univ. of Sci. (Japan)</i></p>	<p><b>10:00 L-3-4</b> <b>Annealing of the BaSi<sub>2</sub> Epitaxial Films Implanted with BF<sub>3</sub> Ions</b> <i>K. O. Hara<sup>1,4</sup>, N. Usami<sup>1,4</sup>, Y. Hoshi<sup>2</sup>, Y. Shiraki<sup>2</sup>, M. Suzuno<sup>3</sup>, K. Toko<sup>3,4</sup> and T. Suemasu<sup>1,4</sup>,<sup>1</sup>Tohoku Univ.,<sup>2</sup>Tokyo City Univ.,<sup>3</sup>Univ. of Tsukuba and<sup>4</sup>CREST-JST (Japan)</i></p>	<p><b>10:00 M-3-4</b> <b>Characteristics of Nitrogen δ-doped AlGaAs/GaAs Quantum Wells grown by Molecular Beam Epitaxy</b> <i>S. Furuse, K. Sumiya, M. Morifuji and F. Ishikawa, Osaka Univ. (Japan)</i></p>	

### Coffee Break

Short Presentation (10:45-12:00)							
<p>Short Presentation P-5 (10:45-12:00) Chairs: K. Kagawa (Shizuoka Univ.) T. Koide (Hiroshima Univ.)</p>	<p>Short Presentation P-11 (10:45-12:00) Chairs: K.Sawada (Toyoashi University of Tech.) T.Tanaka (Tohoku Univ.)</p>	<p>Short Presentation P-7 (10:45-12:00) Chairs: H. Isshiki (The Univ. of Electro-Communications) N. Iizuka (Toshiba Corp.)</p>	<p>Short Presentation P-9 (10:45-12:00) Chairs: K. Ono (RIKEN) H. Gotoh (NTT Basic Res. Labs.)</p>	<p>Short Presentation P-13 (10:45-12:00) Chairs: Y. Ohno (Nagoya Univ.) J. Motohisa (Hokkaido Univ.)</p>	<p>Short Presentation P-14 (10:45-12:00) Chairs: M. Ishiko (Toyota Central R&amp;D Labs., Inc) Y. Kurokawa (Tokyo Tech)</p>	<p>Short Presentation P-8 (10:45-12:00) Chairs: H. Hibino (NTT Basic Res. Labs.) T. Iwai (Fujitsu Labs. Ltd.)</p>	<p>Short Presentation P-12 (10:45-12:00) Chairs: M. Yamamoto (Hokkaido Univ.) H. Munekata (Tokyo Tech.)</p>

### 12:00-13:30 Lunch

## Thursday, September 29

5F Hall 1	5F Hall 2	10F 1002	10F 1003	11F 1101	11F 1102	11F 1103
<p><b>A-4: Novel III-V Devices and Applications (Area 6)</b> (15:25-16:25) Chairs: S. Tanaka (Shibaura Inst. of Tech.) J. H. Lee (Kyungpook National Univ.)</p>	<p><b>KM-4: Nanowire Growth and Characterization (Area 8&amp;13)</b> (15:25-16:40) Chairs: T. Iwai (Fujitsu Labs. Ltd.) K. Tateno (NTT &amp; Basic Res. Labs.)</p>	<p><b>B-4: Organic memory and photonic devices (I) (Area 10)</b> (15:25-16:40) Chairs: K. Kato (Niigata Univ.) T. Shimada (Hokkaido Univ.)</p>	<p><b>C-4: Characterization (I) (Area 2)</b> (15:25-16:35) Chairs: K. Ito (Kyoto Univ.) M. Kodera (Toshiba Corp.)</p>	<p><b>D-4: Tunnel-FET (Area 3)</b> (15:25-16:45) Chairs: Y. Nishida (Renesas Electronics Corp.) F. L. Yang (National Nano Device Labs.)</p>	<p><b>E-4: Junction Technology and Physics (Area 1)</b> (15:25-16:55) Chairs: S. Migita (AIST) T. Aoyama (Toshiba Corp.)</p>	<p><b>F-4: e-Flash (Area 4)</b> (15:25-16:25) Chairs: T. Endoh (Tohoku Univ.) E. Yang (eMemory Technology Inc.)</p>
<p><b>15:25 A-4-1</b> <b>GaAsSb/InGaAs Vertical Tunnel FET with a 25 nm-wide Channel Mesa Structure</b> M. Fujimatsu, H. Saito and Y. Miyamoto, Tokyo Tech (Japan)</p>	<p><b>15:25 KM-4-1 (Invited)</b> <b>Analysis of Nanowire Dopant Incorporation and Distribution with Atom Probe Tomography and Nano Probe Scanning Auger Microscopy</b> J. Connell<sup>1</sup>, U. Givan<sup>1,2</sup>, J. S. Hammond<sup>3</sup>, D. F. Paul<sup>3</sup>, Y. Rosenwaks<sup>2</sup> and L. J. Lauhon<sup>1</sup>, <sup>1</sup>Northwestern Univ., <sup>2</sup>Tel Aviv Univ. and <sup>3</sup>Physical Electronics Inc. (USA)</p>	<p><b>15:25 B-4-1 (Invited)</b> <b>Organic resistive memory device composed of hyperbranched polystyrene and gold nanoparticles</b> K. Fujita<sup>1</sup>, K. Yasui<sup>2</sup>, M. Ozawa<sup>2</sup>, K. Odoi<sup>2</sup> and H. Ichikawa<sup>1</sup>, <sup>1</sup>Kyushu Univ. and <sup>2</sup>Nissan Chemical Industries, Ltd. (Japan)</p>	<p><b>15:25 C-4-1 (Invited)</b> <b>1X nm Copper and Low-k reliability</b> A. Tökei and K. Croes, IMEC (Belgium)</p>	<p><b>15:25 D-4-1</b> <b>Device characteristics of planar-type In<sub>0.53</sub>Ga<sub>0.47</sub>As channel band-to-band tunneling MOSFETs</b> R. Iida, S. H. Kim, M. Yokoyama, N. Taoka, S. H. Lee, M. Takenaka and S. Takagi, Univ. of Tokyo (Japan)</p>	<p><b>15:25 E-4-1 (Invited)</b> <b>Challenges to Strained Source/Drain and Advanced Silicide for High Performance Transistors</b> T. Yamaguchi, Renesas Electronics Corp. (Japan)</p>	<p><b>15:25 F-4-1</b> <b>A Zero Additional Process to Standard CMOS, 8F<sup>2</sup>, Scalable Embedded Flash Memory with Drain-side Assisted Erase Scheme</b> Y. Shinozuka, K. Miyaji and K. Takeuchi, Univ. of Tokyo (Japan)</p>
<p><b>15:40 A-4-2</b> <b>Pnp AlGaIn/InGaIn Heterojunction Bipolar Light-Emitting Transistors with a Quantum Well in the Base</b> K. Kumakura, T. Makimoto and H. Yamamoto, NTT Basic Res. Labs. (Japan)</p>	<p><b>15:55 KM-4-2</b> <b>Heteroepitaxy of Vertical InAs Nanowires on Thin Graphitic Films</b> Y. J. Hong and T. Fukui, Hokkaido Univ. (Japan)</p>	<p><b>15:55 B-4-2</b> <b>Organic Ferroelectric FET Memory using Flat P(VDF-TeFE) thin film</b> T. Kanashima, K. Yabe and M. Okuyama, Osaka Univ. (Japan)</p>	<p><b>15:55 C-4-2</b> <b>Characterization of Patterned SiOC film by STEM-VEELS at Lower (80kV) Acceleration Energy</b> Y. Otsuka<sup>1</sup>, Y. Shimizu<sup>1</sup>, T. Najjou<sup>1</sup> and S. Ogawa<sup>2</sup>, <sup>1</sup>Toray Research Center Inc. and <sup>2</sup>AIST (Japan)</p>	<p><b>15:45 D-4-2</b> <b>Design of Thin-Body Double-Gated Vertical-Channel Tunneling Field-Effect Transistors for Ultra-Low Power Logic Circuits</b> M. C. Sun<sup>1,2</sup>, S. W. Kim<sup>1</sup>, H. W. Kim<sup>1</sup>, G. Kim<sup>1</sup>, H. Kim<sup>1</sup>, J. H. Lee<sup>1</sup>, H. Shin<sup>1</sup> and B. G. Park<sup>1</sup>, <sup>1</sup>Seoul National Univ. and <sup>2</sup>Samsung Electronics Co., Ltd. (Korea)</p>	<p><b>15:55 E-4-2</b> <b>Reduction of NiGe/nGe Schottky Barrier Height by S and P Co-introduction for Metal Source/Drain in Ge nMOSFETs</b> M. Koike, Y. Kamimuta and T. Tezuka, MIRAI-Toshiba (Japan)</p>	<p><b>15:45 F-4-2</b> <b>Practical Consideration of Endurance and Performance for sub-90 nm Embedded 2T-1F1N Flash Memory beyond Smart Card IC</b> Y. K. Lee, B. Seo, J. Park, C. Jeon, Y. Jeong, S. B. Ryu, H. Yoo, Y. Kim, J. U. Han and E. Jung, Samsung Electronics Co. (Korea)</p>
<p><b>15:55 A-4-3</b> <b>Fluidic Self-Assembly for Heterogeneous Integration of High Performance Resonant Tunneling Diodes Using Low-Melting Point Alloy Bumps</b> J. Nakano, T. Shibata, T. Okatsu, M. Mori and K. Maezawa, Univ. of Toyama (Japan)</p>			<p><b>16:15 C-4-3</b> <b>Nano-scale Boron Mapping in Silicon Devices Using C<sub>1</sub>-corrected STEM-EELS</b> N. Nakanishi, H. Arie, Y. Kunimune, T. Ide, Y. Hirose, N. Hattori and T. Koyama, Renesas Electronics Corp. (Japan)</p>	<p><b>16:05 D-4-3</b> <b>Tunnel Field-Effect Transistor using InAs Nanowire/Si Heterojunction</b> K. Tomioka<sup>1,2</sup> and T. Fukui<sup>1</sup>, <sup>1</sup>Hokkaido Univ. and <sup>2</sup>PRESTO-JST (Japan)</p>	<p><b>16:15 E-4-3</b> <b>Improvement of Phosphorus Activation in In-Situ Phosphorus Doped Silicon Epitaxial Film by Cryogenic Silicon Ion-Implantation and Recrystallization Annealing</b> H. Itokawa<sup>1</sup>, S. Teehan<sup>2</sup>, J. Li<sup>2</sup>, P. W. De-Haven<sup>2</sup>, N. C. Berliner<sup>2</sup>, J. J. Demarest<sup>2</sup>, N. R. Klymko<sup>3</sup>, P. Ronsheim<sup>3</sup> and V. Paruchuri<sup>2</sup>, <sup>1</sup>Toshiba America Electronic Components, Inc., <sup>2</sup>IBM Research at Albany Nanotech Center and <sup>3</sup>IBM Semiconductor Research and Development Center (USA)</p>	<p><b>16:05 F-4-3</b> <b>Direct Comparison of Electrical Characteristics for Double-Gate and Tri-Gate Flash Memories</b> Y. X. Liu<sup>1</sup>, T. Kamei<sup>2</sup>, T. Matsukawa<sup>1</sup>, K. Endo<sup>1</sup>, S. Ouchi<sup>1</sup>, J. Tsukada<sup>1</sup>, H. Yamauchi<sup>1</sup>, Y. Ishikawa<sup>1</sup>, T. Hayashida<sup>2</sup>, K. Sakamoto<sup>1</sup>, A. Ogura<sup>2</sup> and M. Masahara<sup>1,2</sup>, <sup>1</sup>AIST and <sup>2</sup>Meiji Univ. (Japan)</p>
<p><b>16:10 A-4-4</b> <b>Operating Principle and Integration of In-Plane Gate Logic Devices</b> Y. Komatsuzaki<sup>1</sup>, K. Saba<sup>1</sup>, K. Onomitsu<sup>2</sup>, H. Yamaguchi<sup>2</sup> and Y. Horikoshi<sup>1</sup>, <sup>1</sup>Waseda Univ. and <sup>2</sup>NTT Basic Res. Labs. (Japan)</p>	<p><b>16:25 KM-4-4</b> <b>Low voltage operable field emission triodes with high transconductance based on laterally grown ZnO nanowires</b> T. H. Lin, F. S. Tsai, Y. C. Tu, R. M. Ko and S. J. Wang, National Cheng Kung Univ. (Taiwan)</p>	<p><b>16:25 B-4-4</b> <b>ADE-FDTD Analysis of Lasing Dynamics in Cholesteric Liquid Crystal as a Chiral Photonic Media</b> T. Matsui and M. Kitaguchi, Mie Univ. (Japan)</p>		<p><b>16:25 D-4-4</b> <b>Tunnel Field-Effect Transistor with L-shaped Germanium Source: Device Physics and Design</b> K. L. Low<sup>1</sup>, C. Zhan<sup>1</sup>, G. Han<sup>1</sup>, Y. Yang<sup>1</sup>, K. H. Goh<sup>1</sup>, P. Guo<sup>1</sup>, E. H. Toh<sup>2</sup> and Y. C. Yeo<sup>1</sup>, <sup>1</sup>National Univ. of Singapore and <sup>2</sup>GLOBALFOUNDRIES Singapore Pte. Ltd. (Singapore)</p>	<p><b>16:35 E-4-4</b> <b>A Study of Fermi-level Pinning in Ge Schottky and MIS Tunnel Junctions</b> T. Nishimura<sup>1,2</sup>, K. Nagashio<sup>1,2</sup>, K. Kita<sup>1,2</sup> and A. Toriumi<sup>1,2</sup>, <sup>1</sup>Univ. of Tokyo and <sup>2</sup>CREST-JST (Japan)</p>	

Coffee Break

## Thursday, September 29

11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
<p><b>G-4: Circuits for 3D Structure (Area 5)</b> (15:25-16:35) Chairs: H. C. Lin (National Chung Hsing Univ.) T. Koide (Hiroshima Univ.)</p>	<p><b>H-4: Neural Interface Technology (Area 11)</b> (15:25-16:40) Chairs: T. Tanaka (Tohoku Univ.) Y. Taguchi (Keio Univ.)</p>	<p><b>I-4: Novel Optical Devices (Area 7)</b> (15:25-16:25) Chairs: J. Fujikata (NEC Corp.) Y. Ishikawa (Univ. of Tokyo)</p>	<p><b>J-4: Advanced MOSFETs and Transport (Area 9)</b> (15:25-16:40) Chairs: Y. Uraoka (NAIST) S. Kuroki (Tohoku Univ.)</p>				
<p><b>15:25 G-4-1 (Invited)</b> <b>Challenges and Trends of Resistive Memory (Memristor) Based Circuits for 3D-IC Applications</b> <i>M. F. Chang<sup>1,2</sup>, P. F. Chiu<sup>2</sup>, C. H. Chuang<sup>1</sup>, C. W. Wu<sup>1</sup>, M. S. Ho<sup>3</sup>, P. C. Chen<sup>4</sup>, S. S. Sheu<sup>2</sup>, M. J. Tsai<sup>2</sup> and T. K. Ku<sup>2</sup>, <sup>1</sup>National Tsing Hua Univ., <sup>2</sup>ITRI, <sup>3</sup>National Chung Hsing Univ. and <sup>4</sup>I-Shou Univ. (Taiwan)</i></p>	<p><b>15:25 H-4-1 (Invited)</b> <b>CMOS LSI for excitation and measurement of neural activity with microelectrode array</b> <i>A. Shimada<sup>1</sup>, T. Iwata<sup>2</sup>, N. Nakano<sup>2</sup> and K. Torimitsu<sup>1</sup>, <sup>1</sup>NTT Basic Res. Labs. and <sup>2</sup>Keio Univ. (Japan)</i></p>	<p><b>15:25 I-4-1</b> <b>Silicon Mach-Zehnder optical phase shifter</b> <i>M. Saito, T. Kita and H. Yamada, Tohoku Univ. (Japan)</i></p>	<p><b>15:25 J-4-1</b> <b>Multi Electron Wave Packet Dynamics in Applied Electric Fields</b> <i>Y. Takada<sup>1</sup>, Y. T. Yoon<sup>1</sup>, T. Shiokawa<sup>1</sup>, S. Konabe<sup>1,3</sup>, M. Arikawa<sup>2</sup>, M. Muraguchi<sup>2,3</sup>, T. Endoh<sup>2,3</sup>, Y. Hatsugai<sup>1,2,3</sup> and K. Shiraishi<sup>1,3</sup>, <sup>1</sup>Univ. of Tsukuba, <sup>2</sup>Tohoku Univ. and <sup>3</sup>CREST-JST (Japan)</i></p>				
<p><b>15:55 G-4-2</b> <b>A Block-Parallel SAR ADC for CMOS Image Sensor with 3-D Stacked Structure</b> <i>K. Kiyoyama<sup>1,2</sup>, K. W. Lee<sup>2</sup>, T. Fukushima<sup>2</sup>, H. Naganuma<sup>2</sup>, H. Kobayashi<sup>1</sup>, T. Tanaka<sup>2</sup> and M. Koyanagi<sup>2</sup>, <sup>1</sup>Nagasaki Institute of Applied Science, <sup>2</sup>Tohoku Univ. and <sup>3</sup>Association of Super-Advanced Electronics Technologies (Japan)</i></p>	<p><b>15:55 H-4-2</b> <b>Development of Pillar-Shaped Stimulus Electrode Array for High Efficient Stimulation of Fully Implantable Retinal Prosthesis</b> <i>Y. Watanabe, C. Kigure, K. Lee, T. Fukushima, M. Koyanagi and T. Tanaka, Tohoku Univ. (Japan)</i></p>	<p><b>15:40 I-4-2</b> <b>Terahertz radiation from a (113)B GaAs/AlAs coupled multilayer cavity by ultrashort laser pulse excitation</b> <i>S. Katoh<sup>1</sup>, T. Takimoto<sup>1</sup>, Y. Nakagawa<sup>1,2</sup>, K. Morita<sup>1</sup>, T. Kitada<sup>1</sup> and T. Isu<sup>1</sup>, <sup>1</sup>Univ. of Tokushima and <sup>2</sup>NICHIA Corp. (Japan)</i></p>					
<p><b>16:15 G-4-3</b> <b>Adaptive Through-Silicon-Via Control with Clustering for 3D Solid-State-Drive Boost Converter System</b> <i>K. Johguchi, T. Hatanaka and K. Takeuchi, Univ. of Tokyo (Japan)</i></p>	<p><b>16:10 H-4-3</b> <b>CMOS image sensor for fluorescent beads counting</b> <i>K. Sasagawa<sup>1,3</sup>, K. Ando<sup>1</sup>, T. Kobayashi<sup>1,3</sup>, T. Noda<sup>1,3</sup>, T. Tokuda<sup>1,3</sup>, R. Iino<sup>2,3</sup>, H. Noji<sup>2,3</sup> and J. Ohta<sup>1,3</sup>, <sup>1</sup>NAIST, <sup>2</sup>Univ. of Tokyo and <sup>3</sup>CREST-JST (Japan)</i></p>	<p><b>15:55 I-4-3 (Late News)</b> <b>A High-Sensitivity Gate/Body-Tied PMOSFET-Type Photodetector with an Overlapping Control Gate</b> <i>J. Jung<sup>1</sup>, S. H. Seo<sup>2</sup>, S. H. Jo<sup>1</sup>, M. Bae<sup>1</sup> and J. K. Shin<sup>1</sup>, <sup>1</sup>Kyungpook National Univ. and <sup>2</sup>Samsung Mobile Display (Korea)</i></p>	<p><b>15:55 J-4-3</b> <b>Impact of Quantum Confinement on Backgate-Bias Modulated Threshold-Voltage Characteristics for Ultra-Thin-Body Germanium-On-Insulator MOSFETs</b> <i>C. H. Yu, Y. S. Wu, V. P. H. Hu and P. Su, National Chiao Tung Univ. (Taiwan)</i></p>				
	<p><b>16:25 H-4-4</b> <b>Brain interface device with permeable hydrogel membrane for <i>in vivo</i> analysis of neural cells</b> <i>H. Takehara, A. Nagaoka, J. Noguchi, T. Akagi, H. Kasai and T. Ichiki, Univ. of Tokyo (Japan)</i></p>						
			<p><b>16:10 J-4-4</b> <b>Fabrication of spin-MOSFETs using CoFe/Mg/AIO<sub>2</sub>/Si Tunnel Junctions for the source and drain</b> <i>T. Okishio, Y. Takamura and S. Sugahara, Tokyo Tech (Japan)</i></p>				
			<p><b>16:25 J-4-5</b> <b>Strain Effects on Avalanche Multiplication in a Silicon Nanodot Array</b> <i>N. Mori<sup>1,2</sup>, H. Minari<sup>1,2</sup>, S. Uno<sup>3,4</sup>, H. Mizuta<sup>4,5</sup> and N. Koshida<sup>6</sup>, <sup>1</sup>Osaka Univ., <sup>2</sup>CREST-JST, <sup>3</sup>Ritsumeikan Univ., <sup>4</sup>Univ. of Southampton, <sup>5</sup>JAIST and <sup>6</sup>Tokyo Univ. of Agri. and Tech. (Japan)</i></p>				

Coffee Break

## Thursday, September 29

5F Hall 1	5F Hall 2	10F 1002	10F 1003	11F 1101	11F 1102	11F 1103
<b>A-5: Oxide Devices (Area 6)</b> (17:05-18:20) Chairs: S. Sasa (Osaka Inst. of Tech.) T. Suzuki (JAIST)	<b>KM-5: Nanowire and Quantum Structures (Area 8&amp;13)</b> (17:05-18:20) Chairs: T. Suemasu (Univ. of Tsukuba) L. Lauhon (Northwestern University)	<b>B-5: Organic memory and photonic devices (2) (Area 10)</b> (17:05-18:20) Chairs: T. Someya (Univ. of Tokyo) H. Usui (Tokyo Univ. of Agri. & Tech.)	<b>C-5: 3D Interconnect (1) (Area 2)</b> (17:05-18:25) Chairs: T. Fukushima (Tohoku Univ.) N. Nakano (Keio Univ.)	<b>D-5: Noise and Fluctuation (Area 3)</b> (17:05-18:25) Chairs: F. L. Yang (National Nano Device Labs.) F. Boeuf (STMicroelectronics)	<b>E-5: Ge Metallization (Area 1)</b> (17:20-18:20) Chairs: B. H. Lee (GIST) S. Migita (AIST)	<b>F-5: CT-Flash (Area 4)</b> (17:05-18:05) Chairs: S. Shuto (Toshiba Corp.) Y. Sasago (Hitachi, Ltd.)
<b>17:05 A-5-1</b> <b>Zinc Oxide Thin-Film Transistors on Flexible Plastic Substrates and Glass Substrates Fabricated at Room Temperature</b> T. Higaki, Y. Kimura, T. Maemoto, S. Sasa and M. Inoue, Osaka Inst. of Tech. (Japan)	<b>17:05 KM-5-1 (Invited)</b> <b>Epitaxial metal nanocrystal-semiconductor quantum dot plasmonic nanostructures</b> A. Urbanczyk <sup>1</sup> , F. W.M. van Otten <sup>1</sup> and R. Nötzel <sup>2</sup> , <sup>1</sup> Eindhoven Univ. of Tech. and <sup>2</sup> Technical Univ. of Madorid (Netherlands)	<b>17:05 B-5-1</b> <b>Evaluation of Polyvinylalcohol:Rhodamine Film Deposition Using Optical Waveguide and Surface Plasmon Resonance Spectroscopies</b> S. Yokoyama, K. Shinbo, Y. Ohdaira, A. Baba, K. Kato and F. Kaneko, Niigata Univ. (Japan)	<b>17:05 C-5-1</b> <b>Through Silicon Via (TSV) Fabrication with Low-k Dielectric Liner and Its Implications on Parasitic Capacitance and Leakage Current</b> L. Zhang <sup>1,2</sup> , H. Y. Li <sup>1</sup> , S. Gao <sup>1</sup> and C. S. Tan <sup>2</sup> , <sup>1</sup> A*STAR and <sup>2</sup> Nanyang Technological Univ. (Singapore)	<b>17:05 D-5-1</b> <b>Impact of Random Telegraph Noise Reduction with Buried Channel MOSFET</b> H. Suzuki, R. Kuroda, A. Teramoto, A. Yonezawa, S. Sugawa and T. Ohmi, Tohoku Univ. (Japan)	<b>17:20 E-5-1</b> <b>Formation and Properties of Epitaxial NiGe/Ge(110) Contacts</b> J. Yokoi, O. Nakatsuka and S. Zaima, Nagoya Univ. (Japan)	<b>17:05 F-5-1</b> <b>A Novel Operating Scheme for 2-bit/Cell Split Gate SONOS Flash Memory</b> C. H. Chou <sup>1</sup> , S. S. Chung <sup>1</sup> , C. H. Lee <sup>2</sup> , T. M. Hsieh <sup>2</sup> , J. C. Liou <sup>2</sup> , C. H. Chen <sup>2</sup> , P. ZP. Chen <sup>3</sup> and H. H. Chen <sup>1</sup> , <sup>1</sup> National Chiao Tung Univ., <sup>2</sup> Solid State System and <sup>3</sup> UMC (Taiwan)
<b>17:20 A-5-2</b> <b>Low Temperature Processed Zinc Oxide Thin Film Transistors by Plasma Assisted Atomic Layer Deposition</b> Y. Kawamura <sup>1</sup> , M. Tani <sup>1</sup> , N. Hattori <sup>2</sup> , N. Miyatake <sup>2</sup> , M. Horita <sup>1</sup> , Y. Ishikawa <sup>1</sup> and Y. Uraoka <sup>1,3</sup> , <sup>1</sup> NAIST, <sup>2</sup> Mitsui Eng. and Shipbuilding Co., Ltd. and <sup>3</sup> CREST-JST (Japan)	<b>17:35 KM-5-2</b> <b>Growth and Characterization of MnAs Nanoclusters Embedded in GaAs Nanowires by Metal-Organic Vapor Phase Epitaxy</b> M. Yatago <sup>1</sup> , S. Sakita <sup>1</sup> and S. Hara <sup>1,2</sup> , <sup>1</sup> Hokkaido Univ. and <sup>2</sup> PRESTO-JST (Japan)	<b>17:20 B-5-2</b> <b>Two-stage polarization reversal process in a pentacene/poly(vinylidene fluoride-trifluoroethylene) double-layer capacitor</b> J. Li, D. Taguchi, T. Manaka and M. Iwamoto, Tokyo Tech (Japan)	<b>17:25 C-5-2</b> <b>Impacts of Microbump-Induced Local Bending Stress in 3D-LSI</b> H. Kino <sup>1</sup> , M. Murugesan <sup>1</sup> , K. W. Lee <sup>1</sup> , J. C. Bea <sup>1</sup> , C. Miyazaki <sup>2</sup> , H. Kobayashi <sup>1</sup> , H. Shimamoto <sup>2</sup> , T. Fukushima <sup>1</sup> , T. Tanaka <sup>1</sup> and M. Koyanagi <sup>1</sup> , <sup>1</sup> Tohoku Univ. and <sup>2</sup> ASET (Japan)	<b>17:25 D-5-2</b> <b>Random Trap Fluctuation (RTF) Induced Vth Variability and the Impact on the Reliability of Strained-Silicon CMOS Devices</b> E. R. Hsieh <sup>1</sup> , C. Y. Cheng <sup>1</sup> , S. S. Chung <sup>1</sup> , C. H. Tsai <sup>2</sup> , R. M. Huang <sup>2</sup> , C. T. Tsa <sup>2</sup> and C. W. Liang <sup>2</sup> , <sup>1</sup> National Chiao Tung Univ. and <sup>2</sup> UMC (Taiwan)	<b>17:40 E-5-2</b> <b>Improvement of Thermal stability of Ni-Germanide with Ni/Co/Ni/TiN Structure for High Performance Ge MOSFETs</b> H. S. Shin <sup>1</sup> , S. K. Oh <sup>1</sup> , M. H. Kang <sup>1,2</sup> , H. M. Kwon <sup>1</sup> , J. W. Oh <sup>1</sup> , P. Majhi <sup>3</sup> , R. Jammy <sup>3</sup> , G. W. Lee <sup>1</sup> and H. D. Lee <sup>1</sup> , <sup>1</sup> Chungnam National Univ., <sup>2</sup> National NanoFab Center and <sup>3</sup> SEMATECH (Korea)	<b>17:25 F-5-2</b> <b>Re-examination of Performance and Reliability Degradation in MONOS Memory with Ultra-thin (~ 2nm) SiN Charge Trap Layers</b> H. Kusai, M. Morota, M. Oda, S. Fujii, K. Sakuma and M. Koyama, Toshiba Corp. (Japan)
<b>17:35 A-5-3</b> <b>Effects of Excimer Laser annealing of Oxide Semiconductor Films</b> M. Fujii <sup>1</sup> , R. Ishihara <sup>2</sup> , T. Chen <sup>2</sup> , J. der Cingel <sup>2</sup> , M. R. T. Mofrad <sup>2</sup> , M. Kasami <sup>3</sup> , K. Yano <sup>3</sup> , M. Horita <sup>1,4</sup> , Y. Ishikawa <sup>1,4</sup> and Y. Uraoka <sup>1,4</sup> , <sup>1</sup> NAIST, <sup>2</sup> Delft Univ. of Tech., <sup>3</sup> Idemitsu Kosan Co., Ltd. and <sup>4</sup> CREST-JST (Japan)	<b>17:50 KM-5-3</b> <b>Study of the Indium Content Distribution of Core-shell InGaN/GaN Multi-Quantum Wells (MQWs) on GaN Nanorods</b> Y. J. Li, S. P. Chang, J. R. Chang, Y. C. Chen, K. P. Sou, Y. C. Hsu, H. C. Kuo and C. Y. Chang, National Chiao Tung Univ. (Taiwan)	<b>17:35 B-5-3</b> <b>In situ Electrochemical and Transmission Surface Plasmon Resonance for Studies of Electropolymerized Poly(3-Aminobenzoic acid) Thin Film</b> S. Sriwichai <sup>1</sup> , A. Baba <sup>2</sup> , S. Phanichphant <sup>1</sup> , K. Shinbo <sup>2</sup> , K. Kato <sup>2</sup> and F. Kaneko <sup>2</sup> , <sup>1</sup> Chiang Mai Univ. and <sup>2</sup> Niigata Univ. (Thailand)	<b>17:45 C-5-3</b> <b>Room-Temperature Bonding of LSI Chips on PEN Film Using Mechanical Caulking of Au Cone Bump</b> T. Shuto, N. Watanabe, A. Ikeda and T. Asano, Kyushu Univ. (Japan)	<b>17:45 D-5-3</b> <b>Uniaxial Strain Effect on Flicker Noise and Random Telegraph Noise of SiC Strained nMOSFETs in 40nm Technology</b> K. L. Yeh, C. S. Chang and J. C. Guo, National Chiao Tung Univ. (Taiwan)	<b>18:00 E-5-3</b> <b>Marked Suppression of the Fermi-level Pinning at Atomically Matched Fe<sub>3</sub>Si/p-Ge(111) Contacts</b> K. Kasahara <sup>1</sup> , S. Yamada <sup>1</sup> , M. Miyao <sup>1</sup> and K. Hamaya <sup>1,2</sup> , <sup>1</sup> Kyushu Univ. and <sup>2</sup> PRESTO-JST (Japan)	<b>17:45 F-5-3</b> <b>Robust Data Retention and Superior Endurance SONOS Nonvolatile Memory with NH<sub>3</sub> Plasma Treated and Pd NCS Embedded Charge Storage Layer</b> S. H. Liu <sup>1</sup> , W. L. Yang <sup>1</sup> , S. T. Chen <sup>1</sup> , M. R. Ye <sup>1</sup> and T. S. Chao <sup>2</sup> , <sup>1</sup> Feng Chia Univ. and <sup>2</sup> National Chiao Tung Univ. (Taiwan)
<b>17:50 A-5-4</b> <b>High Mobility Amorphous Indium-Gallium-Zinc Oxide Thin-Film Transistor with a Strong Reduction Capping Layer</b> H. W. Zan <sup>1</sup> , C. C. Yeh <sup>1</sup> , C. C. Tsa <sup>1</sup> , H. F. Meng <sup>1</sup> and C. C. Yeh <sup>1</sup> , <sup>1</sup> National Chiao Tung Univ. and <sup>2</sup> E Ink Holdings Inc. (Taiwan)	<b>18:05 KM-5-4</b> <b>Study on the growth of In-rich InGaAs nanowires by selective-area metal-organic vapor phase epitaxy</b> Y. Kohashi, S. Hara and J. Motohisa, Hokkaido Univ. (Japan)	<b>17:50 B-5-4</b> <b>Transient Absorption Decay and Photoconductive Characteristics of NPh<sub>2</sub>-Silole Doped Fluorene Blend Film</b> T. Fukuda <sup>1</sup> , S. Kimura <sup>1</sup> , Z. Honda <sup>1</sup> , N. Kamata <sup>1</sup> , K. Mori <sup>1</sup> , K. Hatano <sup>1</sup> and A. Furube <sup>2</sup> , <sup>1</sup> Saitama Univ. and <sup>2</sup> AIST (Japan)	<b>18:05 C-5-4</b> <b>3D Chip Stacking of RF Devices with Cu TSV, Cu/Sn Bumps and Sealing Ring</b> W. Zhang <sup>1</sup> , B. Majeed <sup>1</sup> , X. Sun <sup>1</sup> , G. Posada <sup>1</sup> , C. Diekmann <sup>2</sup> , C. Eggs <sup>2</sup> , E. Schmidhammer <sup>2</sup> and W. De Raedt <sup>1</sup> , <sup>1</sup> IMEC and <sup>2</sup> EPCOS AG (Belgium)	<b>18:05 D-5-4</b> <b>Characteristics of hot hole injection, trapping, and detrapping in gate oxide of poly-Si TFTs</b> Y. Kamakura <sup>1,2</sup> , T. Himukashi <sup>1</sup> , H. Tsuji <sup>1</sup> and K. Taniguchi <sup>1</sup> , <sup>1</sup> Osaka Univ. and <sup>2</sup> CREST-JST (Japan)		
<b>18:05 A-5-5</b> <b>The Influence of a SnInGaZnO Electron Barrier Layer on the performance of Low-Driving Voltage InGaZnO Thin-Film Transistors</b> H. Y. Huang <sup>1</sup> , S. J. Wang <sup>1</sup> , C. H. Wu <sup>2</sup> , C. K. Chiang <sup>1</sup> , Y. C. Huang <sup>1</sup> and J. Y. Su <sup>1</sup> , <sup>1</sup> National Cheng Kung Univ. and <sup>2</sup> Chung Hua Univ. (Taiwan)		<b>18:05 B-5-5 (Late News)</b> <b>Antireflective Protective Coating by Ion-Assisted Vapor Deposition Polymerization of Fluoropolymer Thin Films</b> K. Senda <sup>1,2</sup> , T. Matsuda <sup>1</sup> , K. Tanaka <sup>1</sup> and H. Usui <sup>2</sup> , <sup>1</sup> Sumitomo Precision Products Co., Ltd. and <sup>2</sup> Tokyo Univ. Agri. & Tech. (Japan)				

**Rump Sessions : 5F Hall 1 “Opportunities and Challenges of Heterogeneous Integration on CMOS” - Photonics, MEMS, Sensors, etc - , 5F Hall 2 “Future Roadmap for Graphene Science and Technology”**

Thursday, September 29

11F 1104	11F 1107	12F 1201	12F 1202	12F 1203	12F 1204	12F 1207	12F 1208
<p><b>G-5: RF Circuits (1) (Area 5)</b> (17:05-18:20) Chairs: M. Horiguchi (Renesas Electronics Corp.) H. Morimura (NTT Microsystem Integration Labs.)</p>		<p><b>I-5: Er-Doped Devices (Area 7)</b> (17:05-18:05) Chairs: A. Wakahara (Toyohashi Univ. of Tech.) H. Isshiki (The Univ. of Electro-Communications)</p>	<p><b>J-5: MEMS &amp; Thin-Film Devices (Area 9)</b> (17:05-18:20) Chairs: Y. Uraoka (NAIST) H. Inokawa (Shizuoka Univ.)</p>				
<p><b>17:05 G-5-1</b> <b>An Injection-Locked LC Frequency Divider to Achieve Wide Locking Range and Low Power Consumption</b> <i>H. M. Hsu and G. L. Fu, National Chung Hsin Univ. (Taiwan)</i></p>		<p><b>17:05 I-5-1</b> <b>A GaAs/AlAs multilayer cavity with Er-doped InAs quantum dots embedded in strain-relaxed InGaAs barriers for ultrafast all-optical switches</b> <i>H. Ueyama<sup>1</sup>, T. Takahashi<sup>1</sup>, Y. Nakagawa<sup>1,2</sup>, K. Morita<sup>1</sup>, T. Kitada<sup>1</sup> and T. Isu<sup>1</sup>, <sup>1</sup>Univ. of Tokushima and <sup>2</sup>NICHLA Corp. (Japan)</i></p>	<p><b>17:05 J-5-1</b> <b>Micromechanical Characterization of Optical Absorption in a GaAs/AlGaAs Heterostructure</b> <i>T. Watanabe<sup>1,2</sup>, H. Okamoto<sup>1</sup>, K. Onomitsu<sup>1</sup>, H. Gotoh<sup>1</sup>, T. Sogawa<sup>1</sup> and H. Yamaguchi<sup>1,2</sup>, <sup>1</sup>NTT Basic Res. Labs. and <sup>2</sup>Tohoku Univ. (Japan)</i></p>				
<p><b>17:25 G-5-2</b> <b>A 0.1-V 13-GHz Transformer-Based Quadrature VCO with a Capacitor Coupling Technique in 90nm CMOS</b> <i>T. Kamimura, S. Lee, S. Tanoi, H. Ito, N. Ishihara and K. Masu, Tokyo Tech (Japan)</i></p>		<p><b>17:20 I-5-2</b> <b>Strong suppression of scattering loss in Er<sub>0.4</sub>Y<sub>1.6</sub>SiO<sub>3</sub> crystalline waveguides</b> <i>T. Nakajima<sup>1</sup>, T. Shinagawa<sup>1</sup>, T. Sugawara<sup>2</sup>, Y. Jiang<sup>2</sup>, T. Kimura<sup>1</sup> and H. Isshiki<sup>1</sup>, <sup>1</sup>Univ. of Electro-Communications and <sup>2</sup>Shincron Co., Ltd. (Japan)</i></p>	<p><b>17:20 J-5-2</b> <b>Mechanical idler generation</b> <i>I. Mahboob, Q. Wilmart, K. Nishiguchi, A. Fujiwara and H. Yamaguchi, NTT Basic Res. Labs. (Japan)</i></p>				
<p><b>17:45 G-5-3</b> <b>1.2-17.6 GHz Ring-VCO-Based PLL with Injection Locking in 65 nm CMOS</b> <i>S. Lee, H. Ito, S. Amakawa, S. Tanoi, N. Ishihara and K. Masu, Tokyo Tech (Japan)</i></p>		<p><b>17:35 I-5-3</b> <b>Er<sub>2</sub>Y<sub>2-x</sub>SiO<sub>3</sub> compact waveguide slotted into Si photonic crystal</b> <i>T. Sato, T. Nakajima, T. Kimura and H. Isshiki, Univ. of Electro-Communications (Japan)</i></p>	<p><b>17:35 J-5-3</b> <b>Theory of Resonant Tunneling through a Donor State</b> <i>N. Mori<sup>1</sup>, A. Patané<sup>2</sup> and L. Eaves<sup>2</sup>, <sup>1</sup>Osaka Univ. and <sup>2</sup>Univ. of Nottingham (Japan)</i></p>				
<p><b>18:05 G-5-4 (Late News)</b> <b>A novel approach of Cap-sharing to reduce the big loop filter capacitance in semi-digital PLL</b> <i>P. Sareen, M. Dietl and K. Dewan, Texas Instruments (Germany)</i></p>		<p><b>17:50 I-5-4</b> <b>Energy levels and interaction between Er<sup>3+</sup>-ions located at the two crystallographic sites of Er<sub>2</sub>O<sub>3</sub> grown on Si(111)</b> <i>H. Omi and T. Tawara, NTT Basic Res. Labs. (Japan)</i></p>	<p><b>17:50 J-5-4</b> <b>Tri-Gate Poly-Si TFTs Fabricated by CW Laser Lateral Crystallization for Improvement of Electron Transport Properties</b> <i>S. Fujii, Y. Kawasaki, S. Kuroki and K. Kotani, Tohoku Univ. (Japan)</i></p>				
			<p><b>18:05 J-5-5</b> <b>Bottom Electrode Modification of ZrO<sub>2</sub>-Based RRAM Device with Au Nanodots</b> <i>D. Y. Lee, I. C. Yao and T. Y. Tseng, National Chiao Tung Univ. (Taiwan)</i></p>				

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