Wednesday, September 30

1F Middle-Sized Hall A	1F Middle-Sized Hall B	1F 101	1F 102	1F 107a	1F 107b	1F 108a
A-6: Optical Sensing (9:00-10:00) Chairs: N. Iizuka (Toshiba) S. Nishikawa (Mitsubishi Electric)		**C-6: III-V Photovoltaics and Related Technologies** (9:00-10:00) Chairs: T. Hoshii (Univ. of Tokyo) T. Negami (Panasonic)	**D-6: Nanowire Synthesis and Properties I** (9:00-10:15) Chairs: M. Arita (Univ. of Tokyo) N. Fukata (NIMS)	**E-6: 3D / TSV** (9:00-10:30) Chairs: T. Fukushima (Tohoku Univ.) M. Takeyama (Kitami Inst. of Tech.)	**F-6: Advanced Memories and Circuits** (9:00-10:20) Chairs: I. Akita (Toyohashi Tech) Y. Mita (Univ. of Tokyo)	
9:00 A-6-1 (Invited) **Si and SiN Biophotonic Technology Platform, Applied to Biosensing, Spectroscopy, and Lens-Free Imaging** *W. Van Roy[1], P. Neutens[1], T. Claes[1], R. Jansen[1], A. Subramanian[2], K. Jans[1], R. Vos[1], J. O'Callaghan[1], D. Vercruysse[1], R. Stahl[1], V. Mukund[1], B. Du Bois[1], P. Helin[1], A. Stassen[1], S. Severi[1], D. Martens[2], P. Bienstman[2], P. Deshpande[1], R. Baets[2], A. Lambrechts[1], L. Lagae[1,3], X. Rottenberg[1] and P. Van Dorpe[1,3], [1]Imec, [2] Ghent Univ. and [3]KU Leuven (Belgium)*		**9:00 C-6-1 (Invited)** **Recent Results for Concentrator Photovoltaics in Japan** *M. Yamaguchi[1], T. Takamoto[2], K. Araki[3] and N. Kojima[1], [1]Toyota Tech. Inst., [2] Sharp Corp. and [3]Daido Steel Corp. (Japan)*	**9:00 D-6-1 (Invited)** **Nanowire Growth as a Means for the Monolithic Integration of III-V Compound Semiconductors on Si** *L. Geelhaar, Paul-Drude-Institut fuer Festkoerperelektronik (Germany)*	**9:00 E-6-1 (Invited)** **3D Interconnection of Single Micron Pitch by Hybrid Bonding Technology** *M. Nimura[1], M. Ohyama[1], S. Shoji[1], M. Tamura[2], T. Enomoto[2], A. Shigetou[3] and J. Mizuno[1], [1]Waseda Univ., [2]Nissan Chemical Indus. and [3]NIMS (Japan)*	**9:00 F-6-1** **39% tAC Improvement, 11% Energy Reduction, 32Kbit 1R/1W 2port SRAM using Two-stage Read Boost and Write-Boost after Read Sensing Scheme** *Y. Yamamoto[1], S. Moriwaki[1], A. Kawasumi[2], S. Miyano[3] and H. Shinohara[4], [1]Socionext Inc., [2] Toshiba Corp., [3] STARC and [4]Waseda Univ. (Japan)*	
9:30 A-6-2 **Stretchable Photonic Crystal Coupled-Nanobeam Lasers for Stretch Sensing** *C. Wang, T.W. Lu and P.T. Lee, NCTU (Taiwan)*		**9:30 C-6-2** **Terahertz Emission from Individual Subcells in a Triple Junction Solar Cell Excited by a Wavelength Tunable Pulsed Laser** *S. Hamauchi[1], Y. Sakai[1], T. Umegaki[1], A. Ito[2], H. Nakanishi[2], I. Kawayama[1], H. Murakami[1] and M. Tonouchi[1], [1]Osaka Univ. and [2]SCREEN Holdings Co., Ltd. (Japan)*	**9:30 D-6-2** **Bridging the Gap between the Nanometer-scale Bottom-up and Micrometer-scale Top-down Approaches for Site-defined InP/InAs Heterostructure Nanowires** *G. Zhang[1,2], M. Takiguchi[1,2], K. Tateno[1,2] and H. Gotoh[1], [1]NTT BRL and [2]NTT Nanophotonics Center (Japan)*	**9:30 E-6-2** **Evaluation of 2-D Local Stress Distribution in Stacked IC Chip Using Stress-Induced Retention Time Modulation of DRAM Cell Array** *S. Tanikawa, H. Hashiguchi, Y. Sugawara, H. Kino, T. Fukushima, M. Koyanagi and T. Tanaka, Tohoku Univ. (Japan)*	**9:20 F-6-2** **Pure CMOS One-Time Programmable Memories using a Combination of Gate-Ox Anti-fuse and Poly-Si Fuse** *M. Matsumoto, K. Tatsumura, K. Zaitsu and S. Yasuda, Toshiba Corp. (Japan)*	
9:45 A-6-3 **Gold Bowtie Aperture with Projected Pad Underneath and Its Capability in Optical Sensing** *P.Y. Chen, T.W. Lu and P.T. Lee, NCTU (Taiwan)*		**9:45 C-6-3** **Tandem Photovoltaic-photoelectrochemical Device for Solar Hydrogen Generation** *S. Kosar[1], Y. Pihosh[2], I. Turkevych[3,4], K. Mawatari[2], J. Uemura[2], Y. Kazoe[2], K. Makita[3], T. Sugaya[3], T. Matsui[3], D. Fujita[4], M. Tosa[4], Y.M. Struk[1], M. Kondo[3] and T. Kitamori[2], [1]Chernivtsi National Univ., [2] Univ. of Tokyo, [3] AIST and [4]NIMS (Ukraine)*	**9:45 D-6-3** **Structural and Magnetic Characterizations of Vertical Ferromagnetic MnAs/Semiconducting InAs Heterojunction Nanowires** *R. Kodaira, K. Kabamoto, S. Sakita and S. Hara, Hokkaido Univ. (Japan)*	**9:50 E-6-3** **Investigation of Low Temperature Cu Pillar Thermosonic Bonding for 3D Integration Applications** *S.L. Lu[1], Y.P. Huang[1], Y.S. Huang[1], Y.H. Tseng[2], M.F. Shu[2] and K.N. Chen[1], [1]NCTU and [2]ASE Group (Taiwan)*	**9:40 F-6-3** **Digitally Calibrated Dynamic Latched Comparator with Stochastic Offset Voltage Detection Technique for Low-Power ADCs** *T. Okazawa[1], T. Kawano[1], M. Ishida[1,2] and I. Akita[1], [1]Toyohashi Tech and [2]EIIRIS (Japan)*	
			10:00 D-6-4 **Effects of Polytypism on the Thermoelectric Properties of Si Nanowires: a Combination of Density Functional Theory and Boltzmann Transport Equation Calculations** *T. Komoda, T. Akiyama, K. Nakamura and T. Ito, Mie Univ. (Japan)*	**10:10 E-6-4** **Novel Integration of Ultra-thin Al_2O_3 with Low-k Dielectric as Bi-layer Liner for Capacitance Optimization and Stress Mitigation in Cu-TSV** *L. Zhang[1,2], H.Y. Li[1], Y. Shang[2], W. Yoo[3], H. Yu[2] and C.S. Tan[2], [1]Inst. of Microelectronics, A*STAR, [2]NTU and [3]WaferMasters, Inc. (Singapore)*	**10:00 F-6-4** **No Reattaching and 8 Directions Detectable Octagonal MOSFET Stress Sensor** *T. Harada, K. Kaiwa and Y. Yamazaki, Yamagata Univ. (Japan)*	

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2F 201	2F 202	2F Small Hall	2F 204	2F 206	2F 207	1F 108b
H-6: Quantum Optics (9:00-10:15) Chairs: T. Tanamoto (Toshiba) T. Nakaoka (Sophia Univ.)	**J-6: SiC MOS** (9:00-10:15) Chairs: D. Hisamoto (Hitachi) C.-F. Huang (National Tsing Hua Univ.)	**K-6: Physics** (9:00-10:00) Chairs: N. Mori (Osaka Univ.) M. Hane (Renesas Electronics)	**M-6: Oxide Devices** (9:00-10:00) Chairs: K. Maezawa (Univ. of Toyama) M. Kuzuhara (Univ. of Fukui)	**N-6: 2D Materials and Band Engineering** (9:00-10:10) Chairs: O. Nakatsuka (Nagoya Univ.) T. Aoyama (Toshiba)	**O-6: NAND Flash Device** (9:00-10:30) Chairs: K. Yamamoto (Toshiba) K. Hamada (Micron Memory Japan)	
9:00 H-6-1 (Invited) **Quantum Communications with Semiconductor Devices** *R.M. Stevenson, Toshiba Research Europe (UK)*	**9:00 J-6-1 (Invited)** **Threshold-Voltage Instability in SiC MOSFETs** *A. Lelis, R. Green and D. Habersat, U.S. Army Res. Lab. (USA)*	**9:00 K-6-1** **Modeling of Nonlinear Thermal Resistance in FinFET** *B.K. Kompala[1], P. Kushwaha[1], S. Khandelwal[2], J.P. Duarte[2], A.S. Medury[2], C. Hu[2] and Y.S. Chauhan[1], [1]IIT Kanpur and [2]Univ. of California Berkeley (India)*	**9:00 M-6-1** **Improved Performance of α-IGZO Thin-Film Transistors with an Au/HfSiO/IGZO(O_2-rich) Schottky Source** *C.H. Hung[1], S.J. Wang[1], Y.H. Chen[1], C.H. Wu[2], C. Lin[1], P.Y. Liu[1], Y.C. Tu[1] and T.H. Lin[1], [1]NCKU and [2]Chung Hua Univ. (Taiwan)*	**9:00 N-6-1 (Invited)** **High Performance Electronics Based on Novel Two Dimensional Materials** *Y. Wu, Huazhong Univ. of Sci. and Tech. (China)*	**9:00 O-6-1 (Invited)** **Future Prospects of Data Storage Technologies: NAND Flash Memory and Storage Class Memory Hybrid System** *K. Takeuchi, Chuo Univ. (Japan)*	
9:30 H-6-2 **Electron Spin Coherence Time of Nitrogen-Vacancy Center in Diamond Improved by External Electric Field** *S. Kobayashi[1,2], H. Morishita[1], Y. Matsuzaki[3], S. Miwa[1], Y. Suzuki[1] and N. Mizuochi[1,2], [1]Osaka Univ., [2]JST-CREST and [3]NTT BRL (Japan)*	**9:30 J-6-2** **Threshold Voltage Instability in 4H-SiC MOSFETs with Nitrided Gate Oxide Revealed by Non-relaxation Method** *M. Sometani[1,2], D. Okamoto[2], S. Harada[2], H. Ishimori[2], S. Takasu[2], T. Hatakeyama[2], M. Takei[1,2], Y. Yonezawa[2], K. Fukuda[2] and H. Okumura[2], [1]Fuji Electric Co., Ltd. and [2]AIST (Japan)*	**9:20 K-6-2** **Ballistic and Quasi-ballistic Hole Transport Properties in Germanium Nanowire pMOSFETs Based on an Extended "Top of the Barrier" Model** *H. Tanaka, J. Suda and T. Kimoto, Kyoto Univ. (Japan)*	**9:15 M-6-2** **Correlation between Crystallinity and Formation of Oxygen Vacancies in IGZO - Comparison between Crystal and Amorphous Using First-Principles Calculations -** *T. Hiramatsu, M. Nakashima, E. Kikuchi, N. Ishihara, M. Tsubuku, K. Dairiki and S. Yamazaki, Semiconductor Energy Lab. Co., Ltd. (Japan)*	**9:30 N-6-2** **Two Dimensional Si-Based Semiconductor $Si_{1-Y}C_Y$: C Atom Induced Band Structure Modulation at Visible Region** *T. Mizuno[1], Y. Nagamine[1], U. Omata[1], Y. Suzuki[1], W. Urayama[1], T. Aoki[1] and T. Sameshima[2], [1]Kanagawa Univ. and [2]Tokyo Univ. of Agri. & Tech. (Japan)*	**9:30 O-6-2** **Effects of Cell V_{th} State and Number of Traps on Statistical Distribution of Random Telegraph Noise in Scaled NAND Flash Memory** *T. Tomita and K. Miyaji, Shinshu Univ. (Japan)*	
9:45 H-6-3 **Photon Correlation Study of Background Suppressed Single InGaN Nanocolumns** *T. Yamamoto, M. Maekawa, Y. Imanishi, S. Ishizawa, T. Nakaoka and K. Kishino, Sophia Univ. (Japan)*	**9:45 J-6-3** **Effect of Nitridation for SiO_2/SiC Interface on Defects Properties near Conduction Band Edge** *W. Takeuchi[1], K. Yamamoto[2], M. Sakashita[1], T. Kanemura[2], O. Nakatsuka[1] and S. Zaima[1], [1]Nagoya Univ. and [2]DENSO Corp. (Japan)*	**9:40 K-6-3** **Experimental Study on Interface Region of Two-Dimensional Si Layers** *T. Mizuno[1], Y. Suzuki[1], R. Kikuchi[1], A. Suzuki[1], M. Yamanaka[1], Y. Nagamine[1], T. Aoki[1] and T. Maeda[2], [1]Kanagawa Univ. and [2]AIST (Japan)*	**9:30 M-6-3** **Ideal Deep-Subthreshold Characteristics in C-Axis Aligned Crystalline Oxide Semiconductor FET** *D. Matsubayashi, M. Tsubuku, T. Takeuchi, S. Matsuda, K. Ohshima, T. Tanaka, A. Shimomura, M. Sakakura, Y. Yamamoto and S. Yamazaki, Semiconductor Energy Lab. Co., Ltd. (Japan)*	**9:50 N-6-3** **Chemical Trend of Isoelectronic Traps in Si Tunnel FET; First-Principles Study** *S. Iizuka and T. Nakayama, Chiba Univ. (Japan)*	**9:50 O-6-3** **Improvement of Cell VT Distribution & Program Disturbance of NAND Flash Device by Using Tilt Implantation for Cell Junction Counter Doping** *D.Y. Kim, N.K. Kim, K.T. Lee, H.Y. Shim, S.K. Park, B.K. Kim, K.B. Lee, H.Y. Chang, K.O. Ahn and J.W. Kim, SK Hynix Inc. (Korea)*	
10:00 H-6-4 **Tolerance of Photon Entanglement in a Droplet Epitaxial Quantum Dot Grown on (111)A Surface** *H. Nakajima[1], X. Liu[2], N. Ha[2], R. Takemoto[1], H. Kurosawa[1], T. Mano[2], T. Kuroda[2], K. Sakoda[2], I. Suemune[1] and H. Kumano[1], [1]Hokkaido Univ. and [2]NIMS (Japan)*	**10:00 J-6-4** **Origin of Low Channel Mobility and Threshold Voltage Instability of SiC-MOSFETs** *H. Shiomi[1], H. Kitai[1], M. Tsujimura[1], Y. Kiuchi[1], D. Nakata[2], S. Ono[2], K. Kojima[1], K. Fukuda[1], K. Sakamoto[1], K. Yamasaki[2] and H. Okumura[1], [1]AIST and [2]New JRC (Japan)*		**9:45 M-6-4** **Trench Gate Process for 60-nm-Node C-Axis Aligned Crystalline In-Ga-Zn-O Field-Effect Transistors** *Y. Asami, A. Shimomura, Y. Okazaki, D. Matsubayashi, M. Tsubuku, M. Kurata, S. Okamoto, S. Sasagwa, T. Moriwaka, T. Kakehata, Y. Yakubo, K. Kato, Y. Yamamoto and S. Yamazaki, Semiconductor Energy Lab. Co., Ltd. (Japan)*		**10:10 O-6-4** **A New High Density FinFET OTP Technology** *P.C. Peng[1], Y.Z. Chen[1], H.W. Pan[1], W.Y. Hsiao[2], K.H. Chen[2], Y.H. Kuo[2], C.P. Lin[2], B.Z. Tien[2], T.S. Chang[2], Y.C. King[1] and C.J. Lin[1], [1]National Tsing Hua Univ. and [2]TSMC (Taiwan)*	

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1F Middle-Sized Hall A	1F Middle-Sized Hall B	1F 101	1F 102	1F 107a	1F 107b	1F 108a
A-7: III-V Devices and Related Technologies (10:45-12:30) Chairs: T. Isu (Tokushima Univ.) T. Shimizu (PETRA)		**C-7: Crystalline Silicon Photovoltaics** (10:45-12:30) Chairs: M. Isomura (Tokai Univ.) L.-S.Hong (TECRO in Japan)	**D-7: Nanowire Synthesis and Properties II** (10:45-12:30) Chairs: H. Tatsuoka (Shizuoka Univ.) A. Kikuchi (Sophia Univ.)	**E-7: Advanced Circuits and MEMS Integration** (10:45-12:35) Chairs: J. C. Guo (NCTU) M. Ueki (Renesas Electronics)	**F-7: Biosensors** (10:45-12:30) Chairs: C.-S. Lai (Chang Gung Univ.) T. Tanaka (Tohoku Univ.)	**G-7: Organic Devices II** (10:45-12:45) Chairs: K. Fujita (Kyushu Univ.) T. Shimada (Hokkaido Univ.)
10:45 A-7-1 **Heterogeneous Quantum Dots/Silicon Photonics Wavelength Tunable Laser Diode** *T. Kita[1], N. Yamamoto[2], T. Kawanishi[2] and H. Yamada[1], [1]Tohoku Univ. and [2]NICT (Japan)*		**10:45 C-7-1** **Formation of Thermally Stable a-Si Passivation Films using Liquid Si** *C. Guo[1], K. Ohdaira[1], H. Takagishi[2] and T. Shimoda[1], [1]JAIST and [2]Fukushima Univ. (Japan)*	**10:45 D-7-1 (Invited)** **Self-assembled Functional Nanocomposites** *Y.H. CHU, NCTU (Taiwan)*	**10:45 E-7-1 (Invited)** **Manufacturing Technology of All-solid-state Thin-film Lithium Secondary Battery for Stand-alone MEMS/ Sensor Applications** *K Suu, ULVAC, Inc. (Japan)*	**10:45 F-7-1 (Invited)** **Ultrasensitive Sensors Using Enhanced Surface Plasmon Resonances in Capped Metallic Nanostructures** *K.L. Lee[1] and P.K. Wei[1,2], [1]Academia Sinica and [2]National Yang-Ming Univ. (Taiwan)*	**10:45 G-7-1 (Invited)** **Controlling Light at the Nano-Scale via Molecular Tunnel Junctions** *C.A. Nijhuis, NUS (Singapore)*
11:00 A-7-2 **Waveguide InGaAs Metal-semiconductor-metal Photodetector Monolithically Integrated with InP Grating Coupler on III-V CMOS Photonics Platform** *Y.P. Cheng[1, 2], Y. Ikku[1, 2], M. Takenaka[1, 2] and S. Takagi[1, 2], [1]Univ. of Tokyo and [2]JST-CREST (Japan)*		**11:00 C-7-2** **Investigation of Interface State Density and Fixed Charge of Sr_xSiO_{x+2} on the 2×1 Sr-reconstructed Si Substrate** *S. Taniwaki[1], Y. Hotta[1,3], H. Yoshida[1,3], K. Arafune[1,3], A. Ogura[2,3] and S. Satoh[1,3], [1]Univ. of Hyogo, [2]Meiji Univ. and [3]JST-CREST (Japan)*	**11:15 D-7-2** **Fabrication of Vertical Ge Nanowires on Amorphous Substrates by Combining Au-seeded Chemical-Vapor Deposition with Al-induced Crystallization** *M. Nakata[1], K. Toko[1], W. Jevasuwan[2], N. Fukata[2] and T. Suemasu[1], [1]Univ. of Tsukuba and [2]NIMS (Japan)*	**11:15 E-7-2** **Novel Gain-Controlled Sensor Circuits Designed by Multi-physics Simulation for CMOS-MEMS Accelerometer** *T. Konishi[1], D. Yamane[2,4], M. Takayasu[2,4], S. Dosho[2,4], N. Ishihara[2,4], K. Masu[2,4], H. Toshiyoshi[3,4] and K. Machida[1,2,4], [1]NTT AT, [2]Tokyo Tech, [3]Univ. of Tokyo and [4]JST-CREST (Japan)*	**11:15 F-7-2** **An Implantable Needle-like Shaped Device and Its Performance in Lensless Fluorescence Imaging of Biological Tissues** *H. Takehara, Y. Ohta, M. Motoyama, M. Haruta, T. Noda, K. Sasagawa, T. Tokuda and J. Ohta, NAIST (Japan)*	**11:15 G-7-2** **Detection of Mercury (II) Ion in Water using an Organic Field Effect Transistor with a Cysteine-functionalized Gold Electrode** *T. Minami, T. Minamiki and S. Tokito, Yamagata Univ. (Japan)*
11:15 A-7-3 **1.3 μm Photoluminescence from InAs/GaAs Quantum Dots on CMOS-compatible (001) Silicon by Metal-organic Chemical Vapor Deposition** *Y. Wan, Q. Li, Y. Geng and K.M. Lau, HKUST (China)*		**11:15 C-7-3** **Temperature-Dependent Minority Carrier Lifetime of Crystalline Silicon Wafers Passivated by High Quality Amorphous Silicon Oxide** *M. Inaba, S. Todoroki, K. Nakada and S. Miyajima, Tokyo Tech (Japan)*	**11:30 D-7-3** **Catalyst-free Growth of $In_xGa_{1-x}As$/InAs Coaxial Nanorod Heterostructures on Graphene Layers Using Molecular Beam Epitaxy** *Y. Tchoe, J. Jo, M. Kim and G.-C. Yi, Seoul National Univ. (Korea)*	**11:35 E-7-3** **Zeolite-trench-embedded Micro Cantilevers for CMOS Strain-gauge Integrated Gas Sensors** *S. Inoue[1], R. Setoguchi[1], M. Denoual[2], S. Mintova[2] and Y. Mita[1], [1]Univ. of Tokyo and [2]Normandie Univ. (Japan)*	**11:30 F-7-3** **In situ Monitoring of Extracellular Matrix Based on Chondrocytes Behavior using Biologically-coupled Field Effect Transistor** *H. Satake[1], A. Saito[1], T. Kajisa[2], S. Mizuno[3] and T. Sakata[1], [1]Univ. of Tokyo, [2]PROVIGATE Inc. and [3]Harvard Medical School (Japan)*	**11:30 G-7-3** **Highly Flexible Complementary Inverter with Pentacence/a-IGZO Hybrid Thin Film Transistors** *Z. Pei, H.C. Lai and B.J. Tzeng, National Chung Hsing Univ. (Taiwan)*
11:30 A-7-4 **Optical and Electronic Properties of Ga(N,As,P) Quantum Wells on Silicon for Laser Application** *S. Gies, S. Karrenberg, M. Zimprich, T. Wegele, C. Kruska, A. Beyer, W. Stolz, K. Volz and W. Heimbrodt, Philipps Univ. Marburg (Germany)*		**11:30 C-7-4** **Investigation of New Stacking Surface Passivation Structures with Interfacial Tuning Layers on p-type Crystalline Silicon for Solar Cell Applications** *N. Ikeno[1, 4], T. Katsumata[1, 2], H. Yoshida[3, 5], K. Arafune[3, 5], S. Satoh[3, 5], T. Chikyow[2] and A. Ogura[1, 5], [1]Meiji Univ., [2]NIMS, [3]Univ. of Hyogo, [4]JSPS Research Fellow and [5]JST-CREST (Japan)*	**11:45 D-7-4** **Two Different Mechanisms for Au-free Growth of InAsSb Nanowires on Si Substrate** *W.N. Du[1], X.G. Yang[1], H.Y. Pan[2], X.Y. Wang[1], X.H. Ji[1], Z.G. Wang[1], H.Q. Xu[2] and T. Yang[1], [1]Chinese Academy of Sciences and [2]Peking Univ. (China)*	**11:55 E-7-4** **S-Parameter Characterization and Lumped-Element Modelling of mm-Wave Single-Drift IMPATT Diode** *W. Zhang[1], Y. Yamamoto[2], M. Oehme[1], K. Matthies[1], B. Tillack[2, 3], E. Kasper[1] and J. Schulze[1], [1]Univ. of Stuttgart, [2]IHP Microeletronics and [3]TU Berlin (Germany)*	**11:45 F-7-4** **Robust and High Sensitive Myoelectric Signal Detection utilizing Stochastic Resonance with Carbon Nanotube Composite Paper-based Surface Electrodes** *K. Shirata[1], S. Kasai[1], T. Oya[2], Y. Hagiwara[3], S. Kaeriyama[3] and H. Nakamura[3], [1]Hokkaido Univ., [2]Yokohama National Univ. and [3]STARC (Japan)*	**11:45 G-7-4** **Anodization Patterning for Organic Electronic Circuits with Low Operation Voltage** *T. Yokota[1,2], T. Sekitani[2,3] and T. Someya[1,2], [1]Univ. of Tokyo, [2]JST-ERATO and [3]Osaka Univ. (Japan)*
11:45 A-7-5 **The Influence of III-V on Insulator Structure on Quantum Well Intermixing** *S. Takashima[1,2], Y. Ikku[1,2], M. Takenaka[1,2] and S. Takagi[1,2], [1]Univ. of Tokyo and [2]JST-CREST (Japan)*		**11:45 C-7-5** **Catalytic Doping of Phosphorus and Boron Atoms onto Hydrogenated Amorphous Silicon Films** *J. Seto[1,2], K. Ohdaira[1,2] and H. Matsumura[1,2], [1]JAIST and [2]JST-CREST (Japan)*	**12:00 D-7-5** **Formation of Self-aligned Pore Arrays on n-GaN Substrates by Photo-assisted Electrochemical Etching Process** *Y. Kumazaki, T. Sato and Z. Yatabe, Hokkaido Univ. (Japan)*	**12:15 E-7-5** **Analysis and Reduction of Leakage Current of 2kV Monolithic Isolator with Wide Trench Spiral Isolation Structure** *Y. Takeuchi, R. Kuroda and S. Sugawa, Tohoku Univ. (Japan)*	**12:00 F-7-5** **Respiratory Sensor Measuring Capacitance Constructed Across Skin** *M. Terasawa, S. Kumagai and M. Sasaki, Toyota Tech. Inst. (Japan)*	**12:00 G-7-5** **Pseudo-CMOS Gain Enhancement by Post-Annealing Organic Circuits on Ultrathin Plastic Substrates** *A. Reuveny[1,2], T. Yokota[1,2], S. Lee[1,2], R. Shidachi[1,2], T. Sekitani[1,2,3] and T. Someya[1,2], [1]Univ. of Tokyo, [2]JST-ERATO and [3]Osaka Univ. (Japan)*

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2F 201	2F 202	2F Small Hall	2F 204	2F 206	2F 207	1F 108b
H-7: Quantum Devices (10:45-12:30) Chairs: A. Oiwa (Osaka Univ.) T. Nakaoka (Sophia Univ.)		**K-7: Characterization II** (10:45-12:05) Chairs: N. Sugii (Hitachi) T.-S. Chao (NCTU)	**M-7: III-V Materials & Devices** (10:45-12:30) Chairs: N. Hara (Fujitsu Labs.) T. Suzuki (JAIST)		**O-7: ReRAM 2** (10:45-12:05) Chairs: K. Kinoshita (Tottori Univ.) H. Hwang (POSTECH)	
10:45 H-7-1 **Determination of Phonon Decay-rate in p-type Si under Fano Resonance by Measurements of Coherent Phonons with Femto-second Laser Pulses** *K. Kato, K. Oguri, H. Sanada, T. Tawara, T. Sogawa and H. Gotoh, NTT BRL (Japan)*		**10:45 K-7-1** **Reliability of Improved CAAC-IGZO FET Satisfying NOSRAM Performance** *T. Murakawa, K. Ohshima, M. Tsubuku, D. Shimada, N. Kamata, T. Tanaka, A. Shimomura, M. Sakakura, Y. Yamamoto and S. Yamazaki, Semiconductor Energy Lab. Co. Ltd. (Japan)*	**10:45 M-7-1 (Invited)** **THz Devices Based on 2D Electron Systems** *H.G. Xing, R. Yan, B. Song, J. Encomendero and D. Jena, Cornell Univ. (USA)*		**10:45 O-7-1** **Low Power Switching of Si-doped Ta_2O_5 ReRAM for High Density Memory Application** *B.Y. Kim, K.J. Lee, S.O. Chung, S.G. Kim and H.S. Kim, SK Hynix Inc. (Korea)*	
11:00 H-7-2 **Dynamic creation of a topologically-ordered Hamiltonian using spin-pulse control in the Heisenberg model** *T. Tanamoto[1], K. Ono[2], Y.X. Liu[2,3] and F. Nori[2,4], [1]Toshiba Corp., [2] RIKEN, [3] Tsinghua Univ. and [4]Univ. of Michigan (Japan)*		**11:05 K-7-2** **Degradation Investigation of High-k/Metal Gate nMOSFETs by 3D KMC with Multiple Traps Interactions** *Y. Li, H. Jiang, Z.Y. Lun, Y.J. Wang, P. Huang, H. Hao, G. Du, X. Zhang and X.Y. Liu, Peking Univ. (China)*	**11:15 M-7-2** **Electrical Characteristics of Au/Ni Schottky Diodes on Cleaved m-Plane Surfaces of Free-Standing n-GaN Substrates** *M. Naganawa[1], T. Aoki[1], T. Mishima[2] and K. Shiojima[1], [1]Univ. of Fukui and [2]Hosei Univ. (Japan)*		**11:05 O-7-2** **Interface Engineered HfO_2-Based 3D Vertical Resistive Random Access Memory with Forming-Free Operation** *B. Hudec[1], I.T. Wang[1], W.L. Lai[1], C.C. Zhang[1], T.H. Hou[1], P. Jancovic[2], K. Frohlich[2], M. Micusik[2] and M. Omastova[2], [1]NCTU and [2]Slovak Academy of Sciences (Taiwan)*	
11:15 H-7-3 (Late News) **Withdrawn**		**11:25 K-7-3** **Estimation of Soft Error Tolerance According to the Thickness of Buried Oxide and Body Bias 28-nm and 65-nm in FD-SOI Processes by a Monte-Carlo Simulation** *K. Zhang, J. Yamaguchi, S. Kanda, J. Furuta and K. Kobayashi, Kyoto Inst. of Tech. (Japan)*	**11:30 M-7-3** **Net Acceptor Type Trap Density in Semi-insulating GaN Layers** *T. Tanaka, N. Ito, M. Akutsu, K. Chikamatsu, S. Takado and K. Nakahara, ROHM Co., Ltd. (Japan)*		**11:25 O-7-3** **Investigation of Carbon Nanotube Memory Cell Array Program Characteristics** *S.Y. Ning[1], T.O. Iwasaki[1], E. Yanagizawa[1], S. Hachiya[1], G. Rosendale[2], M. Manning[2], D. Viviani[2], T. Rueckes[2] and K. Takeuchi[1], [1]Chuo Univ. and [2]Nantero Inc. (Japan)*	
11:30 H-7-4 **Controlled Photon Emission of Colloidal PbS Quantum Dot by Using Photonic Dot Made of Optical Polymer and Silicon** *T. Nozaka and K. Mukai, Yokohama National Univ. (Japan)*		**11:45 K-7-4** **Impact of Hole Shape on Program Vt Distribution in Gate-All-Around 3D Flash Memory** *C.H. Cheng, C.W. Lee, K.W. Wu, S.H. Ku, N.K. Zous, L. Liu, S.W. Huang, Y.W. Chang, I.J. Huang, A. Suzuki, T.C. Lu, W.P. Lu and K.C. Chen, Macronix Int'l. Co. Ltd. (Taiwan)*	**11:45 M-7-4** **GaAs/$In_{0.2}Ga_{0.8}As$ Fin-Array-Esaki Tunnel Diodes Fabricated on (001) Silicon by Aspect Ratio Trapping** *Q. Li, Y. Han and K.M. Lau, HKUST (China)*		**11:45 O-7-4** **A 1.0 V Operation, 65% Faster Set/Reset Voltage (3V) Generator for 3D-integrated ReRAM and NAND Flash Hybrid Solid-State Drive** *M. Tanaka, S. Hachiya, T. Ishii, S.Y. Ning and K. Takeuchi, Chuo Univ. (Japan)*	
11:45 H-7-5 (Late News) **Characterization and Topological Properties of Bi2Se3 Thin Film Grown by using Physical Vapor Deposition** *Y.C. Lin, Y.S. Chen, C.C. Lee, J.K. Wu, H.Y. Lee and Y.H. Chang, National Taiwan Univ. (Taiwan)*			**12:00 M-7-5** **The Effects of AlN Passivation Layer to Metal Work-Function and Band Alignment of Metal Oxide Semiconductor Devices** *H.B. Do, Q.H. Luc, M.T.H. Ha, S.H. Huynh, Y.C. Lin and E.Y. Chang, NCTU (Taiwan)*			

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1F Middle-Sized Hall A	1F Middle-Sized Hall B	1F 101	1F 102	1F 107a	1F 107b	1F 108a
A-7: III-V Devices and Related Technologies		**C-7: Crystalline Silicon Photovoltaics**	**D-7: Nanowire Synthesis and Properties II**		**F-7: Biosensors**	**G-7: Organic Devices II**
12:00 A-7-6 **Fabrication of Two-Color Surface Emitting Device of a Coupled Cavity Structure with InAs QDs Formed by Wafer-Bonding** *H. Ota, C. Harayama, T. Maekawa, X.M. Lu, N. Kumagai, T. Kitada and T. Isu, Tokushima Univ. (Japan)*		**12:00 C-7-6** **Activation of Silicon Implanted with Phosphorus and Boron Atoms by Microwave Rapid Annealing** *S. Kimura, M. Hasumi, K. Ota and T. Sameshima, Tokyo Univ. of Agri. & Tech. (Japan)*	**12:15 D-7-6** **X-ray Diffraction Study of Evolution of Polytypes in Au-assisted GaAs Nanowires** *M. Takahasi[1,2], M. Kozu[1,2] and T. Sasaki[1], [1]JAEA and [2]Univ. of Hyogo (Japan)*		**12:15 F-7-6** **Monitoring of Hydroxyapatite Crystal Formation using Field Effect Transistor** *T. Kajisa[1] and T. Sakata[2], [1]PROVIGATE Inc. and [2]Univ. of Tokyo (Japan)*	**12:15 G-7-6 (Invited)** **Organic-Assisted Oriented Attachment of Silver Nanosheets** *S. Ekgasit and P. Jangtawee, Chulalongkorn Univ. (Thailand)*
12:15 A-7-7 **Demonstration of Two-Wavelength Lasing in a GaAsP Ring/Fabry-Perot Composite Cavity Semiconductor Laser** *A.K. Saha and T. Suhara, Osaka Univ. (Japan)*		**12:15 C-7-7** **Combination Accelerating Test for Crystalline Si Photovoltaic Modules** *A. Masuda[1], C. Yamamoto[1], N. Uchiyama[1], K. Ueno[2] and T. Yamazaki[2]. [1]AIST and [2]Choshu Industry Co., Ltd. (Japan)*				

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2F 201	2F 202	2F Small Hall	2F 204	2F 206	2F 207	1F 108b
H-7: Quantum Devices			**M-7: III-V Materials & Devices**			
12:00 H-7-6 (Invited) Ultraclean Carbon Nanotube Quantum Dots Coupled to Superconducting Impedance Matching Circuits *M. Jung[1], T. Hasler[1], V. Ranjan[1], G. Puebla Hellmann[1,2], A. Wallraff[2] and C. Schonenberger[1], [1]Univ. of Basel and [2]ETH Zurich (Switzerland)*			**12:15 M-7-6 Withdrawn**			