

Tuesday, November 4

Navis C (1F)

13:00-16:00 MNC 2014 Technical Seminar in Japanese

Seala Brasserie and Lounge (4F)

16:10-18:10 Get Together Party**Wednesday, November 5**

Room P (Argos A, 1F)

5P-1: Plenary Session (9:50-12:10)

Chairpersons: S. Akita (Osaka Pref. Univ.) and K. Nishiguchi (NTT)

9:30-9:50

Opening Remark: K. Ishibashi (RIKEN)

Award Presentation: S. Akita (Osaka Pref. Univ.) and K. Ishibashi (RIKEN)

MNC 2013 Outstanding Paper, Most Impressive Presentation, Most Impressive Poster and Young Author's Award

Announcement from Committee: T. Chikyow (NIMS)

5P-1-1**9:50-10:30**

Adding New Functionalities to Si CMOS IC's via Directed Self-Assembly of Nanomaterials (Plenary)

T. Mayer, Penn State Univ., USA

Lobby (1F)

Coffee Break

5P-1-2 10:50-11:40

Fabrication, Science, and Applications of Van der Waals Heterostructures (Plenary)

J. Hone, Columbia Univ., USA

5P-1-3 11:30-12:10

Nanotechnology to Develop "The Magic Bullet" for Targeted Cancer Therapy (Plenary)

K. Kataoka, Univ. of Tokyo, Japan

Lunch

Room A (Vega, 3F)

Room B (Rigel, 3F)

Room C (Chapel, 3F)

Room D (Boardroom, 3F)

5A-2: Electron and Ion Beam Technologies (13:30-15:10)H. Yamashita (NuflareTechnol.)
J. Yanagisawa (Univ. of Shiga Pref.)**5B-2: Inorganic Nanomaterials (13:30-15:20)**T. Chikyow (NIMS)
X.W. Zhao (Tokyo Univ. of Sci.)**5C-2: Nanofabrication I (13:30-15:00)**S. Shingubara (Kansai Univ.)
Y. Liu (AIST)**5D-2: Symp. B: Hybrid Nanosystem I (13:30-15:10)**K. Nishiguchi (NTT)
Y.-L. Chueh (Natl. Tsing-Hua Univ.)**5A-2-1****13:30**

Computational Study on Electron Beam Lithography (Invited)

M. Yasuda, Osaka Pref. Univ., Japan

5B-2-1**13:30**

Nanostructure Design of Functional Ceramics by Solution Processes (Invited)

N. Matsushita 1, K. Katsumata 1, M. Yoshimura 1,2 and K. Okada 1, 1 Tokyo Inst. of Technol., Japan and 2 Natl. Cheng Kung Univ., Taiwan

5C-2-1**13:30**

Fabrication of Nanogap Electrodes by Molecular Ruler Method (Invited)

H. Tanaka, Kyushu Inst. of Technol., Japan

5D-2-1**13:30**

Phonon Lasing (and Mode Cooling) in an Electromechanical Resonator (Invited)

I. Mahboob, K. Nishiguchi, A. Fujiwara and H. Yamaguchi, NTT, Japan

5A-2-2**14:00**

Advanced Nanoscale Analysis of Semiconductor Materials by TEM and SPM (Invited)

T. Soeda, T. Yamazaki and Y. Kotaka, Fujitsu Labs., Japan

5B-2-2**14:00**Determination of Seebeck Coefficient and Thermal Conductivity of Highly Resistive Sb₂Se₃ Single Nanowire

T.-Y. Ko and K.W. Sun, Natl. Chiao Tung Univ., Taiwan

5C-2-2**14:00**Fabrication of Gold Nanocup Array Templated by SiO₂ Nanorod Array as the 2nd Templates through Liquid Crystalline Block Copolymer Thin Films

N. Yamashita 1, H. Komiyama 2, K. Nagai 1, K. Kamata 2 and T. Iyoda 1, 1 Tokyo Inst. of Technol. and 2 JST-ERATO, Japan

5D-2-2**14:00**

Thermogravimetric Analysis with Sub-Femtogram Resolution Using Carbon Nanotube Resonator

F. Deno, K. Takei, T. Arie and S. Akita, Osaka Pref. Univ., Japan

5A-2-3**14:30**

Diffraction Based Coupler for Non-Demolition Quantum Electron Microscope in Free-Space

C.-S. Kim 1, Y. Yang 1, R. Hobbs 1, V. Manfrinato 1, K.K. Berggren 1 and P. Kruit 2, 1 MIT, USA and 2 TU Delft, The Netherlands

5B-2-3**14:20**

Pd Catalysed Arylation of Hydrogen Terminated Ge(111), Si(100) and Si Nanowires

A. Henriksson, T. Kobayashi, H. Maeda, M. Miyachi, Y. Yamanoi and H. Nishihara, Univ. of Tokyo, Japan

5C-2-3**14:20**

Light Absorption Enhancement of Amorphous Si by Plasmon Effects of Gold Nanoparticles

S. Suenaga 1, Y. Ishikawa 1, K. Ohdaira 2, M. Uenuma 1 and Y. Uraoka 1, 1 NAIST and 2 JAIST, Japan

5D-2-3**14:20**

All-Mechanical Bistable Memory in a Phonon Waveguide

D. Hatanaka, I. Mahboob, K. Onomitsu and H. Yamaguchi, NTT, Japan

5A-2-4**14:50**

Effect of Carbon Coimplantation with Different Energies on Boron Distribution in Silicon: Atom Probe Tomography Investigation

Y. Shimizu 1, H. Takamizawa 1, B. Han 1, K. Inoue 1, F. Yano 2, S. Kudo 3, A. Nishida 4 and Y. Nagai 1, 1 Tohoku Univ., 2 Tokyo City Univ., 3 Renesas Semiconductor and 4 Renesas Electronics, Japan

5B-2-4**14:40**

Conductive Polymer/Metal Composites for Interconnect of Flexible Devices

J. Kawakita, D. Gerlach, Y. Hashimoto, B. Horvath, T. Shuto and T. Chikyow, NIMS, Japan

5C-2-4**14:40**High Density formation of Fe-Silicide Nanodots on SiO₂ Induced by Remote H₂ Plasma

H. Zhang 1, K. Makihara 1, A. Ohta 1, M. Ikeda 2 and S. Miyazaki 1, 1 Nagoya Univ. and 2 Hiroshima Univ., Japan

5D-2-4**14:40**

Plasmon-Induced Photoexcitation of Molecules (Invited)

K. Murakoshi, Hokkaido Univ., Japan

	5B-2-5 15:00 Synthesis of Porous Gold Nanoshells through a Combination of Galvanic Replacement, Gold Deposition, and Silver Dealloying D. Wan and L. Wang, Natl. Tsing Hua Univ., Taiwan		
5A-2 Author's Interview: 15:10-15:20	5B-2 Author's Interview: 15:20-15:30	5C-2 Author's Interview: 15:00-15:10	5D-2 Author's Interview: 17:05-17:15
Lobby (3F)			
Coffee Break			
Room A (Vega, 3F)	Room B (Rigel, 3F)	Room C (Chapel, 3F)	Room D (Boardroom, 3F)
5A-3: Symp. A: Advanced Patterning I (15:25-16:55) T. Sato (Toshiba) G. Vandenberghe (IMEC)	5B-3: BioMEMS, Lab on a Chip I (15:30-17:20) T. Ichiki (Univ. of Tokyo) Y. Takamura (JAIST)	5C-3: Innovative Microdevices (15:25-17:05) S. Nagasawa (Shibaura Univ.) E. Iwase (Waseda Univ.)	5D-3: Symp. B: Hybrid Nanosystem II (15:25-17:05) S. Akita (Osaka Pref. Univ.) I. Mahboob (NTT)
5A-3-1 15:25 TBD (Invited) Y. Borodovsky, Intel, USA	5B-3-1 15:30 Biosensors for Cell Migration Control and Cell Detection (Invited) S.W. Pang, City Univ. of Hong Kong, Hong Kong	5C-3-1 15:25 Cross Talk Free and Noise Reduction on Wearable Line-of-Sight Detection System Using Micro-Fabricated Transparent Optical Sensors C.T.C. Cesar 1, K. Sampei 1, O. Miho 1, O. Masataka 1 and M. Norihisa 1,2, 1 Keio Univ. and 2 JST-PRESTO, Japan	5D-3-1 15:25 Low Dimensional Nanomaterials: Applications on Solar Cell and Solar Energy Storage (Invited) Y.-L. Chueh, Natl. Tsing-Hua Univ., Taiwan
5A-3-2 15:55 EUV Lithography, a study of its Impact on local CD Uniformity (Invited) C.-N. Ahn 1 and A.C. Chen 2, 1 ASML, Korea and 2 ASML, Taiwan	5B-3-2 16:00 Control of Crystal Habit of Proteins Using Microfluidic Chip M. Maeki 1,2,3, A.S. Pawate 4, K. Watanabe 5, M. Tokeshi 2, P.J.A. Kenis 4 and M. Miyazaki 1,3, 1 Kyushu Univ., 2 Hokkaido Univ., 3 AIST, Japan, 4 Univ. of Illinois, USA and 5 Saga Univ., Japan	5C-3-2 15:45 EEG Measurement Using Polymer-Based Dry Micro-Needle Electrode M. Arai 1, Y. Nishinaka 1, N. Miki 1,2, 1 Keio Univ. and 2 JST-PRESTO, Japan	5D-3-2 15:55 Tunnel Diode Composed of MoS ₂ /SiO ₂ /Si Heterojunction K. Nishiguchi 1, A. Castellanos-Gomez 2, H. Yamaguchi 1, A. Fujiwara 1, H.S.J. van der Zant 2 and G.A. Steele 2, 1 NTT, Japan and 2 UT Delft, The Netherlands
5A-3-3 16:25 LPP-EUV Source Technology for HVM Lithography (Invited) T. Saito, H. Nakarai, T. Abe, K.M. Nowak, Y. Kawasuji, H. Tanaka, Y. Watanabe, T. Hori, T. Kodama, Y. Shiraishi, T. Yanagida, G. Soumagne, T. Yamazaki, S. Okazaki and H. Mizoguchi, Gigaphoton, Japan	5B-3-3 16:20 A Hall Sensor LSI System to Measure the Swelling of Glucose Responsive Gel toward Transdermal Continuous Blood Sugar Monitoring R. Imi and Y. Murakami, Toyohashi Univ. of Technol., Japan	5C-3-3 16:05 Bottom Arranged Electrodes in an Electroactive Hydrogel Flexible Coloring Element for a High Fill-Factor K. Usuki 1, H. Onoe 2 and E. Iwase 1, 1 Waseda Univ. and 2 Keio Univ., Japan	5D-3-3 16:15 Graphene Electrodes for Transparent and Extremely Flexible Silicon Transistor H. Jang, W. Lee and J.-H. Ahn, Yonsei Univ., Korea
5A-3 Author's Interview: 16:55-17:05	5B-3-4 16:40 Hydrogen Silsesquioxane (HSQ)-Based Nanofluidics S. Punniyakoti, R. Sivakumarasamy, F. Vaurette and N. Clément, CNRS, France	5C-3-4 16:25 Micro Slip Velocimeter by Using Laser Doppler Effect N. Morita 1, Y. Hayashida 1, H. Nogami 1, E. Higurashi 2, T. Ito 3, P. Desmedt 1 and R. Sawada 1, 1 Kyushu Univ., 2 Univ. of Tokyo and 3 Kyushu Inst. of Technol., Japan	5D-3-4 16:35 Silicon Nanostructures for Photonics and Photovoltaics (Invited) F. Priolo, Univ. di Catania, Italy
	5B-3-5 17:00 High-resolution Microfabrication Process in Half-Pipe Substrate for 3D Photolithography Application K. Nikaido 1,2, M. Hayashi 1,2, Y. Zhang 1, M. Hayase 2, S. Matsumoto 1, T. Itoh 1 and R. Maeda 1, 1 AIST and 2 Tokyo Univ. of Sci., Japan	5C-3-5 16:45 Evaluation on Two-Port Junction Configuration of a Lamé-Mode Octagonal Microelectromechanical Systems Resonator Driven by a Low DC Bias Voltage K. Tsujishita, H. Tanigawa and K. Suzuki, Ritsumeikan Univ., Japan	5D-3 Author's Interview: 17:05-17:15
	5B-3 Author's Interview: 17:20-17:30	5C-3 Author's Interview: 17:05-17:15	
Room A (Vega, 3F)			
17:30-19:00 Happy Hour			

Thursday, November 6

Room A (Vega, 3F)	Room B (Rigel, 3F)	Room C (Chapel, 3F)	Room D (Boardroom, 3F)
6A-4: Advanced Photo-lithography (9:00-10:30) J. Miyazaki (ASML) K. Oyama (Tokyo Electron)	6B-4: Nanostructure Engineered Devices (9:00-10:30) Y. Chen (Fudan Univ.) T. Maemoto (Osaka Inst. of Technol.)	6C-4: Process and Characterization I (9:00-10:30) N. Miki (Keio Univ.) T. Ando (Ritsumeikan Univ.)	6D-4: Graphene Application (9:00-10:30) M. Tanemura (Nagoya Inst. of Technol.) S. Okada (Univ. of Tsukuba)
6A-4-1 9:00 Enabling Advanced Multi-Patterning Applications (Invited) H. Yaegashi, K. Oyama, S. Yamauchi, A. Hara, S. Natori and M. Yamato, Tokyo Electron, Japan	6B-4-1 9:00 III-V/Ge Channel MOS Device Technologies in Nano CMOS Era (Invited) S. Takagi 1 and M. Takenaka 2, 1 Univ. of Tokyo and 2 JST-CREST, Japan	6C-4-1 9:00 Integrated Micro Fabrication Process for Non-Si Based MEMS (Invited) S. Hata, Nagoya Univ., Japan	6D-4-1 9:00 TBD (Invited) T. Lee, Yonsei Univ., Korea
6A-4-2 9:30 Pattern Fidelity Control in Multiple Patterning Using Etching Photoresist Smoothing and Hardening M. Yamato, A. Hara, S. Natori, N. Okabe, S. Yamauchi, K. Oyama and H. Yaegashi, Tokyo Electron, Japan	6B-4-2 9:30 Multiple Negative Differential Resistance Devices with Ultra-High Peak-to-Valley Current Ratio for Practical Multi-Valued Logic and Memory Applications S. Shin and K.R. Kim, Ulsan Natl. Inst. of Sci. and Technol., Korea	6C-4-2 9:30 Fabrication of Self-Propagating Exothermic Microparticles Using Injection Molding and Electroless Plating Techniques K. Inoue 1, T. Fujito 1, K. Fujita 2, Y. Kuroda 2, K. Takane 2 and T. Namazu 1, 1 Univ. of Hyogo and 2 Gauss, Japan	6D-4-2 9:30 Graphene-FET-Based Gas-Sensor Properties Depending on Substrate Surface Conditions M. Nakamura, Y. Kanai, Y. Ohno, K. Maehashi, K. Inoue and K. Matsumoto, Osaka Univ., Japan
6A-4-3 9:50 Improvement of Wavelength Stability in an ArF Excimer Laser for Multiple-Patterning Immersion Lithography H. Miyamoto, T. Kumazaki, A. Kurosu, T. Ohta, H. Tsushima, K. Kakizaki, T. Matsunaga and H. Mizoguchi, Gigaphoton, Japan	6B-4-3 9:50 Violation of Equipartition of Energy in Thermal Noise of a Small DRAM K. Nishiguchi and A. Fujiwara, NTT, Japan	6C-4-3 9:50 Design and Fabrication of a Self-Healing Metal Wire Using an Electric Field Trapping of Gold Nanoparticles T. Koshi and E. Iwase, Waseda Univ., Japan	6D-4-3 9:50 Characterization of Graphene/Metal Interface and Its Modification by Insertion of Thin Nano-Carbon Layer K. Katakura, Y. Ito, H. Tomori, Y. Ootuka and A. Kanda, Univ. of Tsukuba, Japan
6A-4-4 10:10 Imaging Result of Small Phase Defects Using Micro Coherent EUV Scatterometry Microscope T. Harada 1, Y. Tanaka 1, T. Watanabe 1, T. Amano 2 and H. Kinoshita 1, 1 Univ. of Hyogo and 2 EIDEC, Japan	6B-4-4 10:10 Gate-All-Around Poly-Si Nanowire Junctionless Thin-film-transistors with Multiple Channels C.-T. Tso, T.-Y. Liu and J.-T. Sheu, Natl. Chiao-Tung Univ., Taiwan	6C-4-4 10:10 Fabrication of a MOSFET Using Full Minimal Fab Line S. Khumpuang 1,2, F. Imura 2, H. Asano 2 and S. Hara 1,2, 1 AIST and 2 Minimal Fab Res. Association, Japan	6D-4-4 10:10 Optimization of 3D Interconnects Composed of Graphene and Vertically Aligned CNTs for the Future LSI Interconnects D. Kondo 1,2, H. Nakano 1, B. Zhou 1, A. I 1, K. Hayashi 1,2, M. Takahashi 1, S. Sato 1,2 and N. Yokoyama 1,2, 1 AIST and 2 Fujitsu Labs., Japan
6A-4 Author's Interview: 10:30-10:40	6B-4 Author's Interview: 12:10-12:20	6C-4 Author's Interview: 12:15-12:25	6D-4 Author's Interview: 12:15-12:25
Lobby (3F)			
Coffee Break			
Room A (Vega, 3F)	Room B (Rigel, 3F)	Room C (Chapel, 3F)	Room D (Boardroom, 3F)
6A-5: Symp. A: Advanced Patterning II (10:45-12:15) H. Yamashita (Nuflare Technol.) J. Yanagisawa (Univ. of Shiga Pref.)	6B-5: Optoelectric Devices and Materials (10:40-12:10) Y. Ishikawa (Nara Inst. of Sci. and Technol.) S. Takagi (Univ. of Tokyo)	6C-5: Process and Characterization II (10:35-12:15) T. Namazu (Univ. of Hyogo) T. Sakata (NTT)	6D-5: Nanocarbon Property (10:35-12:15) S. Akita (Osaka Pref. Univ.) M. Nagase (Univ. of Tokushima)
6A-5-1 10:45 TBD (Invited) B. Lin, TSMC, Taiwan	6B-5-1 10:40 Recent Progress on Quantum Dot Intermediate Band Solar Cells (Invited) Y. Okada, Univ. of Tokyo, Japan	6C-5-1 10:35 Tensile Testing in Vacuum with Concentrated Infrared Light Heating for Single Crystal Silicon Mechanical Characterization at High Temperature A. Uesugi, Y. Hirai, T. Tsuchiya and O. Tabata, Kyoto Univ., Japan	6D-5-1 10:35 Improvement of Electrical Performance in the Reduced Graphene Oxide Films toward Sensor Applications R. Negishi 1, M. Matsuzaki 1, M. Akabori 2, S. Yamada 2 and Y. Kobayashi 1, 1 Osaka Univ. and 2 JAIST, Japan
6A-5-2 11:15 High-Aspect-Ratio Micro-Fabrication by Proton Beam Writing (Invited) H. Nishikawa 1, Y. Ishii 2 and T. Kamiya 2, 1 Shibaura Inst. Technol. and 2 JAEA, Japan	6B-5-2 11:10 Hybrid Approach to UV Active Pixel Sensor: Integration of GaN Photodetector and Si-MOSFET Circuit C.-J. Lee, C.-H. Won, M. Bae, J.-H. Lee, J.-K. Shin and S.-H. Hahm, Kyungpook Natl. Univ., Korea	6C-5-2 10:55 Softening of Metal Under Ultrasonic Application Observed in Bonding of Au Compliant Microbump K. Iwanabe, T. Shuto, R. Takigawa and T. Asano, Kyushu Univ., Japan	6D-5-2 10:55 A GaN MSM UV Sensor Using Graphene Electrodes H.-G. Cha 1, C.-J. Lee 1, Y.-S. Koo 1, S.-B. Kang 1, S.-K. Hong 2 and B.-J. Cho 2, J.H. Lee 1 and S.-H. Hahm 1, 1 Kyungpook Natl. Univ. and 2 KAIST, Korea

6A-5-3 11:45 Fabrication of High Resolution Seamless Roller Mold using Fast EB Lithography (rEBL) for R2R Process (<i>Invited</i>) M. Abe 1, T. Kitada 1, N. Ito 1, M. Ataka 2, T. Kishiro 2 and S. Matsui 3, 1 Asahi Kasei, 2 Holon and 3 Univ. of Hyogo, Japan	6B-5-3 11:30 Improved Ultraviolet Sensitivity of Photodiode Composed of p-NiO/n-ZnO-NWs by Thermal Annealing Treatment on ZnO-NWs Y.-R. Li, C.-Y. Wan, C.-T. Chang, Y.-C. Huang, C.-H. Chou, K.-Y. Wang and H.-C. Cheng, Natl. Chiao Tung Univ., Taiwan	6C-5-3 11:15 Fatigue Phenomenon of PMMA Under Cyclic Stress Using Electrostatic Com-Drive Actuator S. Shibata 1, S. Amaya 2, S. Sugiyama 1 and T. Ando 1, 1 Ritsumeikan Univ. and 2 Towa, Japan	6D-5-3 11:15 Energetics and Electronic Structure of Graphene Nanoribbons under an Electric Field A. Yamanaka 1 and S. Okada 1,2, 1 Univ. of Tsukuba and 2 JST-CREST, Japan
6A-5 Author's Interview: 12:15-12:25	6B-5-4 11:50 Optical Properties of ZnTe/ZnMgTe Multiple Quantum Wells for Optoelectronic Device Applications T. Tanaka 1,2, H. Ohshita 1, K. Saito 1, Q. Guo 1 and M. Nishio 1, 1 Saga Univ. and 2 JST-PRESTO, Japan	6C-5-4 11:35 Two Dimensionally Arrayed Piezoelectric Squeeze Mode Inkjet Head for High Viscosity Ink Ejection R. Kashu, N. Sasagawa, Y. Nakamura, H. Osawa, S. Wang, T. Suzuki, T. Nakakubo, Y. Kodera and A. Saito, Canon, Japan	6D-5-4 11:35 Large Area Synthesis of Hexagonal Boron Nitride (hBN) on Cu Foil by Atmospheric Pressure Chemical Vapor Deposition (APCVD) S. Sharma, G. Kalita and M. Tanemura, Nagoya Inst. of Technol., Japan
	6B-5 Author's Interview: 12:10-12:25	6C-5-5 11:55 A MEMS Energy Harvesting Device for Integrated CMOS-MEMS Technology T. Matsushima 1, T. Konishi 1, D. Yamane 2, H. Toshiyoshi 3, K. Masu 2 and K. Machida 1,2, 1 NTT-AT, 2 Tokyo Inst. of Technol. and 3 Univ. of Tokyo, Japan	6D-5-5 11:55 Water Encapsulation in a Single-Walled Carbon Nanotube S. Chiashi 1,2, T. Hanashima 1, R. Mitobe 1, K. Nagatsu 1, T. Yamamoto 1 and Y. Homma 1, 1 Tokyo Univ. of Sci. and 2 Univ. of Tokyo, Japan
		6C-4 Author's Interview: 12:15-12:25	6D-5 Author's Interview: 12:15-12:25
<i>Lunch</i>			
Room A (Vega, 3F)	Room B (Rigel, 3F)	Room C (Chapel, 3F)	Room D (Boardroom, 3F)
6A-6: Nanofabrication II (13:40-15:30) K. Makihara (Nagoya Univ.) T. Shinada (AIST)	6B-6: Inorganic Nanomaterials (13:40-15:20) T. Ohno (Tohoku Univ.) T. Higuchi (Tokyo Univ. of Sci.)	6C-6: Nano Tool (13:20-15:30) O. Kubo (Osaka Univ.) T. Hoshino (Univ. of Tokyo)	6D-6: BioMEMS, Lab on a Chip II (13:20-15:30) M. Tokeshi (Hokkaido Univ.) Y. Murakami (Toyohashi Univ. of Technol.)
6A-6-1 13:40 Microwave Anneal Processing for Future CMOS (<i>Invited</i>) Y.-J. Lee 1, S.-S. Chuang 2, T.-C. Cho 2, P.-J. Sung 1,2, F.-K. Hsueh 1,2, T.-S. Chao 2 and T.-Y. Tseng 2, 1 Natl. Nano Device Labs. and 2 Natl. Chiao-Tung Univ., Taiwan	6B-6-1 13:40 Photoluminescence and Local Structure Analyses of Nd-Doped TiO ₂ with Al Co-Doping Y. Aizawa 1, Y. Yanagida 1, S. Komuro 2, N. Hirao 3 and X. Zhao 1, 1 Tokyo Univ. of Sci., 2 Toyo Univ. and 3 JAEA, Japan	6C-6-1 13:20 Micro/Nanomechanical Systems As a Sensing Tool (<i>Invited</i>) T. Ono, Tohoku Univ., Japan	6D-6-1 13:20 Microfluidic Technologies for Cell and Tissue Analyses (<i>Invited</i>) T. Fujii, Univ. of Tokyo, Japan
6A-6-2 14:10 Fabrication, Characterization, and Electrochemical Properties of Electrospun Ag-Mn _x O _y /CNFs Composite Nanofibers T. Sinprachim and S. Maensiri, Suranaree Univ. of Technol., Thailand	6B-6-2 14:00 Visible Light Detection Using GLAD TiO ₂ Nanowire Arrays P. Chinnamuthu 1,2, A. Mondal 1, J.C. Dhar 1 and N.K. Singh 1, 1 Natl. Inst. of Technol. Agartala, India and 2 NIMS, Japan	6C-6-2 13:50 Study of Viscous Deformation of SiO ₂ by Nanoscale Tensile Test under In-Situ Observation Y. Takayama 1, T. Ishida 2, T. Sato 1, L. Jalabert 1 and H. Fujita 1, 1 Univ. of Tokyo and 2 Tokyo Inst. of Technol., Japan	6D-6-2 13:50 Multicolor Fluorescence Microscopic Imaging of Tumor Cells Enhanced with the Plasmonic Chip K. Tawa, C. Sasakawa, I. Shibata, S. Yamamura and M. Kataoka, AIST, Japan
6A-6-3 14:30 Hydrogen Injection Effect on the Current – Voltage Characteristics of Resistive Change Memory with Nano Peak Structure Y. Tanimoto 1, S. Otsuka 2, T. Shimizu 2, S. Shingubara 2 and K. Takase 1, 1 Nihon Univ. and 2 Kansai Univ., Japan	6B-6-3 14:20 Selective-Area Metal-Organic Vapor Phase Epitaxy of Hetero-Junction Nanowires between Ferromagnetic MnAs and Semiconducting InAs R. Kodaira, H. Fujimagari, H. Kato, S. Sakita and S. Hara, Hokkaido Univ., Japan	6C-6-3 14:10 Development of Compact 4 Probe AFM/KFM for Investigation of Electrical Property in Nanoscale Y. Shingaya 1, D. Miao 2, J. Xu 1, R. Creasey 1, M. Aono 1 and T. Nakayama 1,2, 1 NIMS and 2 Univ. of Tsukuba, Japan	6D-6-3 14:10 Improvement of Pneumatic Micropump for High Performance LEP-OES Elemental Analyzer with Preconcentrator D.V. Khoai 1, T. Yamamoto 2 and Y. Takamura 1, 1 JAIST and 2 Micro Emission, Japan
6A-6-4 14:50 Fabrication of GaAs/AlAs Micro-Pillar Cavities Including Low-density InAs Quantum Dots and Their Photoluminescence Properties H. Yamashita, Y. Takahashi and K. Yamaguchi, Univ. of Electro-Communications, Japan	6B-6-4 14:40 Optical Properties of Organic/Inorganic Hybrid Passivation Layer for Flexible OLEDs Lighting Films J.H. Lee and B.H. Choi, Korea Inst. of Technol., Korea	6C-6-4 14:30 Highly Sensitive Thermal Microsensor with pn Junction for Thermal Measurements of a Single Cell T. Yamada, N. Inomata and T. Ono, Tohoku Univ., Japan	6D-6-4 14:30 Hollow MEMS Plate Resonators for Mass Sensing in Liquid with Sub-ppm Frequency Stability in Air C. Berthet, C. Hadji, F. Baléras, M. Cochet, B. Icard and V. Agache, CEA Léti, France

6A-6-5 15:10 Impact of Post-Oxidation Annealing of Si Nanowire on Its Ni Silicidation Rate S. Hashimoto 1, H. Kosugiyama 1, K. Takei 1, J. Sun 1, R. Imai 2, H. Tokutake 2, M. Tomita 2, A. Ogura 2, T. Matsukawa 3, M. Masahara 3 and T. Watanabe 1, 1 Waseda Univ., 2 Meiji Univ. and 3 AIST, Japan	6B-6-5 15:00 First-Principles Simulation on Diameter Dependence of Piezoproperties in Zinc Oxide Nanowires K. Nakamura 1,2, 1 Kyoto Univ., Japan and 2 Egypt-Japan Univ. of Sci. and Technol., Egypt	6C-6-5 14:50 Contraction and Condensation of Protein Molecule by Electrically-Induced Bubbles for Crystallization S. Takasawa 1, H. Kamegawa 1, S. Hosoda 1 and Y. Yamanishi 1,2, 1 Shibaura Inst. of Technol. and 2 JST-PRESTO, Japan	6D-6-5 14:50 Micropore Channel Based Simultaneous Electrical and Optical Detection H. Yasaki 1, T. Yasui 1, S. Rahong 1, T. Yanagida 2, N. Kaji 1, M. Kanai 2, K. Nagashima 2, T. Kawai 2 and Y. Baba 1, 1 Nagoya Univ. and 2 Osaka Univ., Japan
6A-6 Author's Interview: 15:30-15:40	6B-6 Author's Interview: 15:20-15:30	6C-6 Author's Interview: 15:30-15:40	6D-6 Author's Interview: 15:30-15:40
Lobby (3F)			
Coffee Break			
Room P (Argos A, 1F)			
6P-7: 15:40-17:40 POSTER SESSION I			
Advanced Photolithography			
Chairpersons: J. Miyazaki (ASML) and K. Oyama (Tokyo Electron)			
6P-7-1 Waveguide Effect in High-NA EUV Lithography: the Key to Extending EUV Lithography to The 4-nm Node M. Yeung 1 and E. Barouch 2, 1 Fastlitho and 2 Boston Univ., USA	6P-7-2 The Suggestion of Half-Tone Phase-Shift Mask for High-NA Extreme Ultraviolet Lithography S. Hong, J.U. Lee, S.M. Lee, J.H. Kim, J.S. Kim, H.M. Song and J. Ahn, Hanyang Univ., Korea	6P-7-3 Pattern Defect Observation Result Using Coherent EUV Scatterometry Microscope with High-Harmonic-Generation EUV Source T. Fujino 1, Y. Tanaka 1, T. Harada 1, Y. Nagata 2, T. Watanabe 1 and H. Kinoshita 1, 1 Univ. of Hyogo and 2 RIKEN, Japan	6P-7-4 Advanced Excimer Laser Technologies Enable Green Semiconductor Manufacturing Y. Yoo, H. Fukuda, Y. Minegishi, N. Hisanaga and T. Enami, Gigaphoton, Japan
6P-7-5 Shift-Mask Method for Sub-100 nm Nanowire with I-Line Lithography C.-H. Chou, I.-C. Lee, C.-L. Wang, P.-Y. Yang, W.-S. Chang, C.-Y. Liao and H.-C. Cheng, Natl. Chiao Tung Univ., Taiwan			
Electron and Ion Beam Technologies			
Chairpersons: H. Yamashita (NufflareTechnol.) and J. Yanagisawa (Univ. of Shiga Pref.)			
6P-7-6 Renovation of Three-Dimensional Electron Beam Lithography System for Improvement of Positioning Accuracy and Reduction of Turnaround Time K. Yamazaki and H. Yamaguchi, NTT, Japan	6P-7-7 Elastic Effect in Resist Shrinkage Induced by Electron-Beam Irradiation T. Ohashi 1, S. Hotta 1, A. Yamaguchi 1, J. Tanaka 1 and H. Kawada 2, 1 Hitachi and 2 Hitachi High-Technologies, Japan	6P-7-8 Design and Optimization of an Electron-Optical System with a Ball-Tip Emission Source for Multiple-Electron-Beam-Direct-Write Lithography H.-P. Lee, S.-Y. Chen, C.-H. Liu, S.-Y. Ma, Y.-Y. Yang and K.-Y. Tsai, Natl. Taiwan Univ., Taiwan	6P-7-9 Molecular Dynamics Study on Proximity Effects in Electron Beam Lithography K. Michishita, H. Hitomi, M. Yasuda, H. Kawata and Y. Hirai, Osaka Pref. Univ., Japan
6P-7-10 Control of Size and Shape of Nano-Porous Structure Formed on Ge (110) Surface by High-Energy Focused Ga Ion Beam Irradiation M. Yamada and J. Yanagisawa, Univ. of Shiga Pref., Japan	6P-7-11 Asymmetric Y-Shape Field Plates with Short Foot in PMMA/Copolymer Bilayer for GaN Based HEMTs by 3D Electron Beam Lithography J. Shao 1, J. Liu 1, S. Zhang 1, N. Taksatorn 2, W. Lu 3 and Y. Chen 1, 1 Fudan Univ., China, 2 GenlSys, Germany and 3 Ohio State Univ., USA	6P-7-12 Functional Pattern Formation on I-Line Resist Film by Hybrid Lithography Utilizing Electron Beam and I-Line Optical Sources H. Nakano and A. Kawai, Nagaoka Univ. of Technol., Japan	6P-7-13 Focused Ion Beam Milling Cultured Cells and Exposing the Cross Section P.-K. Lin 1,2,3, M.-J. Sui 2,3, H.-M. Chen 1 and C.-H. Kuan 1, 1 Natl. Taiwan Univ., 2 Natl. Yang Ming Univ. and 3 Taipei Veterans General Hospital, Taiwan
Nanocarbons			
Chairpersons: K. Hirahara (Osaka Univ.) and S. Okada (Univ. of Tsukuba)			
6P-7-14 Electron Transport in Graphene FETs with Small Spatial Variation of One-Dimensional Local Strain H. Tomori, R. Hiraide, H. Tanaka, K. Katakura, Y. Itou, Y. Ootuka and A. Kanda, Univ. of Tsukuba, Japan	6P-7-15 Preparation & Electrochemical Characteristic of Pd-Decorated Graphene J.D. Kim and H.C. Choi, Chonnam Natl. Univ., Korea	6P-7-16 Design of High-strength Recyclable Graphene Oxide-Based Porous Composite for the Removal of Dyes C. Jiao, J. Xiong, J. Tao, Y. Chen and H. Lin, Soochow Univ., China	6P-7-17 Decoration of Graphene Sheets with Gold Nanoparticles and Its Use for Efficient Surface-Enhanced Raman Scattering Platform J.U. Lee, W. Lee and J.-H. Byun, KIMS, Korea

<p>6P-7-18 Laser Micromachining of Screen-Printed Multilayer Graphene for Electrode Structures C.-F. Chang 1, T.-L. Chang 1, Y.-W. Lee 2, S.-F. Tseng 3 and H.-C. Huang 1, 1 Natl. Taiwan Normal Univ., 2 Natl. Defense Univ. and 3 Natl. Applied Res. Labs., Taiwan</p>	<p>6P-7-19 Printed SWCNT Thin-Film CMOS Inverters Based on Ion-gel Chemical Doping Y. Wada 1, R. Inukai 1, T. Fujimoto 1, H. Hamahata1, S. Matsuzaki 1, K. Yanagi 2 and T. Takenobu 1, 1 Waseda Univ. and 2 Tokyo Metropolitan Univ., Japan</p>	<p>6P-7-20 Threshold Voltage Variation for Charge Accumulation in CNT Due to the Monatomic Defect Arrangement Y. Ishiyama and S. Okada, Univ. of Tsukuba, Japan</p>	<p>6P-7-21 Tuning of Thermoelectric Properties of Semiconducting Single Wall Carbon Nanotube Networks by Electric Double Layers Techniques Using Ionic Liquid K. Yanagi, S. Kanda, Y. Oshima, Y. Kitamura, H. Kawai, Y. Nakai and Y. Maniwa, Tokyo Metropolitan Univ., Japan</p>
<p>6P-7-22 Improvement of Liquid Crystallinity of Giant Graphene Oxide Solution by Fluorine Functionalization K.E. Lee, J.U. Lee and W. Lee, KIMS, Korea</p>	<p>6P-7-23 AFM Local Anodic Oxidation and Theoretical Decomposition Voltages of Few/Multi Layer Graphene K. Uki, M. Kato, M. Nishimura and X. Zhao, Tokyo Univ. of Sci., Japan</p>	<p>6P-7-24 Structures and Electronic States of the Radicals Adsorbed on Graphene H. Tachikawa, Hokkaido Univ., Japan</p>	<p>6P-7-25 Electrical Detection of Lectin Using Glycan-Modified Graphene Field-Effect Transistors for Highly Sensitive Influenza Virus Sensor T. Oe 1, Y. Kanai 1, Y. Ohno 1, K. Maehashi 1, K. Inoue 1, K. Matsumoto 1, Y. Watanabe 1, T. Kawahara 2, Y. Suzuki 2 and S. Nakakita 3, 1 Osaka Univ, 2 Chubu Univ. and 3 Kagawa Univ., Japan</p>
<p>6P-7-26 Development of New Simulation Method for Thermoelectric Responses and Its Application to Nanocarbon Materials Y. Takada 1 and T. Yamamoto 2, 1 Aoyama Gakuin Univ. and 2 Tokyo Univ. of Sci., Japan</p>	<p>6P-7-27 Fabricated Flexible Sensors for Monitoring Compartment Syndrome Z.-W. Liu, F.-Y. Chang, L.-C. Chen and P.-T. Teng, Taiwan Univ. of Sci. and Technol., Taiwan</p>	<p>6P-7-28 Nano-Saturn : Theoretical Design of New C₆₀ Inclusion Compounds S. Kigure 1 and S. Okada 1,2, 1 Univ. of Tsukuba and 2 JST-CREST, Japan</p>	<p>6P-7-29 Geometric and Electronic Structures of Polymerized C₃₂ Fullerene M. Maruyama 1 and S. Okada 1,2, 1 Univ. of Tsukuba and 2 JST-CREST, Japan</p>
<p>6P-7-30 Polydopamine-Based Carbon Coating on Cu Particles for Oxidation-Resistive Cu Ink W. Lee and J.U. Lee, KIMS, Korea</p>			
Nanofabrication			
Chairpersons: K. Takase (Nihon Univ.) and Y. Liu (AIST)			
<p>6P-7-31 Silk Fibroin Silver Nanoparticles Hybrid Functional Cotton Fabric: Fabrication and Its Property S. Chen, C. Li, H. Lin and Y. Chen, Soochow Univ., China</p>	<p>6P-7-32 Routes to Probe Phonon Confinement Effect in a Single Non-Polar α-Plane ZnO Nanowire P.-H. Shih, S.S. Gaikwad and S.Y. Wu, Natl. Dong Hwa Univ., Taiwan</p>	<p>6P-7-33 Atomic Layer Deposition with Rotary Reactor for Fabrication of Core@Shell Nano-Composites S. Seong, Y.C. Jung, T. Lee, I.-S. Park and J. Ahn, Hanyang Univ., Korea</p>	<p>6P-7-34 Dry Etching of 4H-SiC Using Ar/F₂ Plasma A. Matsutani and F. Koyama, Tokyo Inst. of Technol., Japan</p>
<p>6P-7-35 Greatly Improved Colossal Dielectric Properties of Mg-Doped La_{1.7}Sr_{0.3}NiO₄ Ceramics Fabricated by Using Nanocrystalline Powders K. Meeporn 1, T. Yamwong 2 and P. Thongbai 1, 1 Khon Kaen Univ., 2 MTEC, Thailand</p>	<p>6P-7-36 Effect of Seed Layers on Structure of Self-organized Ag Nanodots on MgO Substrates M. Kamiko 1, R. Suenaga 2, J.-W. Koo 3, K. Nose 1, K. Kyuno 2, Y. Mitsuda 1 and J.-G. Ha 3, 1 Univ. of Tokyo, 2 Shibaura Inst. of Technol., Japan and 3 Kwangwoon Univ., Korea</p>	<p>6P-7-37 Synthesis and Engineering of Graphene Oxide @ Silk Fibers Composites with Enhanced UVioresistant Properties J. Song 1,2, S. Xu 1, T. Chen 2, L. Li 2, Y. Tamada 1 and H. Morikawa 1, 1 Shinshu Univ., Japan and 2 Jiangsu Univ., China</p>	<p>6P-7-38 Seed/Catalyst-Free Growth of Zinc Oxide on Graphene by Thermal Evaporation: Effects of Substrate Inclination Angles and Graphene Thicknesses N.F. Ahmad 1, K.Yasui 2 and A.M. Hashim 1, 1 Univ. Teknologi Malaysia and 2 Nagaoka Univ. of Technol., Japan</p>
<p>6P-7-39 Effect of Cations Distribution on Magnetic Properties of Co_{1-x}Ni_xFe₂O₄ Nanoparticles Investigated by EXAFS Analysis U. Wongpratad 1, S. Maensiri 2 and E. Swatsitang 1, 1 Khon Kaen Univ. and 2 Suranaree Univ., Thailand</p>	<p>6P-7-40 Linearly Growth of Multi Wall Carbon Nanorod and It's Focused Ion Beam Processing S. Arai, K. Chujo, S. Kurumi, K.-I. Mastuda and K. Suzuki, Nihon Univ., Japan</p>	<p>6P-7-41 Effect of Thickness and Sputtering Pressure on the Structural and Optical Properties of ZnO Films Deposited by Sputtering Method L.M. Li, A. Manie, F.L. Shain, S. Salleh and A. Alias, Univ. Malaysia Sabah, Malaysia</p>	
Inorganic Nanomaterials			
Chairpersons: X.W. Zhao (Tokyo Univ. of Sci.) and T. Ohno (Tohoku Univ.)			
<p>6P-7-42 Effect of Hydrolysis and Dopant Concentration on the Characterization of Titanium-Doped Zinc Aluminate Nanocrystals M.-T. Tsai, B.-J. Lin and C.-W. Chen, Natl. Formosa Univ., Taiwan</p>	<p>6P-7-43 Fabrication and Magneto-optical Properties of Perpendicular Magnetic CoPt Nanostructures Formed by Surface Agglomeration of Ag H. Yamane 1, K. Takeda 2 and M. Kobayashi 2, 1 Akita Industrial Technol. Ctr. and 2 Chiba Inst. of Technol., Japan</p>	<p>6P-7-44 HBP-NH₂ Coated TiO₂ NPs: Preparation, Characterization, and Their Enhanced Photocatalytic Activities W. Zhang 1, H. Lin 1, S. Xu 2, Y. Chen 1, C. Jiao 1, J. Xiong 1 and D. Zhang 1, 1 Soochow Univ., China and 2 Shinshu Univ., Japan</p>	<p>6P-7-45 Electronic Structure and Oxygen Ion Conductivity of As-Deposited Ce_{0.90}Sm_{0.10}O_{2-δ} Thin Film Prepared by RF Magnetron Sputtering S. Yamaguchi 1, T. Higuchi 1, M. Kobayashi 2, K. Horiba 2 and H. Kumigashira 2, 1 Tokyo Univ. of Sci. and 2 KEK, Japan</p>

<p>6P-7-46 Electrical Characteristic of All-Solid-State Electric-Double-Layer Transistor Achieved by Yttria-Stabilized Zirconia Proton Conductor and SrTiO₃ Single Crystal M. Ochi 1,2, T. Tsuchiya 1, K. Kobayashi 1, T. Higuchi 2 and K. Terabe 1, 1 NIMS and 2 Tokyo Univ. of Sci., Japan</p>	<p>6P-7-47 Heat Generation Properties in AC Magnetic Field for Fine MgAl_xFe_{2-x}O₄ Ferrite Powder Prepared by Beads Milling K. Naganuma 1, H. Hirazawa 1, H. Aono 2, T. Naohara 2, T. Maehara 2 and Y. Watanabe 2, 1 Niihama College and 2 Ehime Univ., Japan</p>	<p>6P-7-48 Mg-Doped CaCu₃Ti₄O₁₂ Nanocrystalline Powders Prepared by a Modified Sol-Gel Method: Preparation, Characterization, and Their Giant Dielectric Response J. Boonlakhorn and P. Thongbai, Khon Kaen Univ., Thailand</p>	<p>6P-7-49 Mn²⁺ and Oxygen Vacancy-Induced Room Temperature Ferromagnetism in Magnetron Sputtering Prepared ZnO: Mn Thin Films Y. Zhang, J. Okamoto, N. Nasu and X. Zhao, Tokyo Univ. of Sci., Japan</p>
<p>6P-7-50 Comparison of Insulation Characterization of Al₂O₃ Film Made by Atomic Layer Deposition Y. Nozaki, T. Sekiguchi, A. Hiraiwa and H. Kawarada, Waseda Univ., Japan</p>	<p>6P-7-51 Raman Study of Strain in Semiconductor Nanostructures H. Rho 1 and J.-G. Park 2, 1 Chonbuk Natl. Univ. and 2 KIST, Korea</p>	<p>6P-7-52 Heteroepitaxial Growth of Nonpolar ZnO Thin Film on Si Substrate Using MnS Buffer Layer T. Nakamura 1, N. Nguyen 1, T. Nagata 1, K. Takahashi 2, S.-G. Ri 2, K. Ishibashi 2, S. Suzuki 2 and T. Chikyow 1, 1 NIMS and 2 COMET, Japan</p>	<p>6P-7-53 Dielectric Nanowire-Polymer Composite Layers for Flexible Capacitive Pressure Sensors G.-W. Hsieh, Y.-S. Chen, S.-P. Chen and P.-Y. Tseng, Natl. Chiao Tung Univ., Taiwan</p>
<p>6P-7-54 Influence of Deposition Temperature on the ZrO₂ Thin Films by Electrostatic Spray Deposition Using a Zirconatane Precursor and Alcohol Sensing Properties G. Pongchan 1,2, M. Panapoy 1,2 and B. Ksapabutr 1,2, 1 Silpakorn Univ. and 2 Chulalongkorn Univ., Thailand</p>	<p>6P-7-55 Synthesis and Optical Properties of β-Ga₂O₃ Nanorods by a Simple and Cost Effective Route Using Egg White Solution S. Phumying 1, S. Labauyai 2, W. Chareonboon 2 and S. Maensiri 1, 1 Suranaree Univ. of Technol. and 2 Khon Kaen Univ., Thailand</p>		
BioMEMS, Lab on a Chip			
Chairpersons: M. Tokeshi (Hokkaido Univ.) and H. Hisamoto (Osaka Pref. Univ.)			
<p>6P-7-56 Immuno-Wall Devices - Structural Optimization of Immuno-Pillar Device for Simplifying Washing and Measurement Procedures T. Kasama 1,2, Y. Hasegawa 2,3, H. Kondo 2,3, T. Ozawa 2,3, N. Kaji 1,2, M. Tokeshi 2,4 and Y. Baba 1,2,5, 1 Nagoya Univ., 2 The Priority Res. Project, 3 Hamamatsu Photonics, 4 Hokkaido Univ. and 5 AIST, Japan</p>	<p>6P-7-57 Systematic Study of Amino-Termination of Glass Surfaces Using Water Solvent H. Kuramochi, A. Ono, S. Ueno and T. Ichiki, Univ. of Tokyo, Japan</p>	<p>6P-7-58 Programmable Graphene Biosensor S. Arpiainen 1, M. Soikkeli 1, K. Kurppa 1, M. Kainlahti 1, D. Gunnarsson 1, J.J. Joensuu 1, P. Laaksonen 2, M. Prunnila 1, M.B. Linder 2 and J. Ahopelto 1, 1 VTT Technical Res. Ctr. of Finland and 2 Aalto Univ., Finland</p>	<p>6P-7-59 Control the Formation of Micro-Droplets with Homogenous Size in On-Chip Microfluidics System: A Pressure-Controlled Approach M. Girault 1, A. Hattori 1, H. Kim 1, S. Kawada 2, K. Matsuura 1, M. Odaka 1, H. Terazono 1,2 and K. Yasuda 1,2, 1 Kanagawa Academy of Sci. and Technol. and 2 Tokyo Medical and Dental Univ., Japan</p>
<p>6P-7-60 Indium-Tin Oxide Based Chip for Optical and Electrochemical Characterization of Protein-Cell Interaction Y.H. Choi 1, J. Min 2 and S. Cho 1, 1 Gachon Univ. and 2 Chung-Ang Univ., Korea</p>	<p>6P-7-61 Zero Dimensional Ion-Sensitive Field-Effect Transistors R. Sivakumarasamy 1, K. Nishiguchi 2, A. Fujiwara 2, D. Vuillaume 1 and N. Clément 1, 1 IEMN-CNRS, France and 2 NTT, Japan</p>	<p>6P-7-62 Dual Side Simultaneous Photolithography for Cylindrical Substrate by Using Space Division Type Exposure D. Kubota and S. Nagasawa, Sibaura Inst. of Technol., Japan</p>	<p>6P-7-63 Development of the Shape-Memory Polymer Microvalve Integratable into Plastic-Based Microfluidic Devices C. Jiang 1, K. Uto 2, M. Ebara 2, T. Aoyagi 2 and T. Ichiki 1, 1 Univ. of Tokyo and 2 NIMS, Japan</p>
<p>6P-7-64 An Extended-Gate AlGaIn/GaN High Electron Mobility Transistor-Type Biosensor for Detection of Protein Molecules H.H. Lee, S. Kim, C.-H. Won, J.-H. Lee, P. Choi and J.-K. Shin, Kyungpook Natl. Univ., Korea</p>	<p>6P-7-65 Optical and Electrical Characterization of Effect of Hydrogen Peroxide on Cell Behaviors Using Indium Tin Oxide Based Cell Chip Y.H. Choi 1, J.-C. Pyun 2, J. Kim 1 and S. Cho 1, 1 Gachon Univ. and 2 Yonsei Univ., Korea</p>	<p>6P-7-66 High-Throughput Nano-droplet Array Polymerase Chain Reaction System with Fast and Homogeneous Temperature Control for 24/96/384 Sample Plate K. Matsuura 1, H. Terazono 2, H. Kim 1, A. Hattori 1, F. Nomura 2 and K. Yasuda 1,2, 1 Kanagawa Academy of Sci. and Technol. and 2 Tokyo Medical and Dental Univ., Japan</p>	<p>6P-7-67 Immuno-Wall Devices for Easy-to-Use and Highly Sensitive Detection of Disease Markers N. Nishiwaki 1,3, T. Kasama 2,3, A. Ishida 1, H. Tani 1, Y. Baba 2,3 and M. Tokeshi 1,3, 1 Hokkaido Univ., 2 Nagoya Univ. and 3 The Priority Res. Project, Japan</p>
<p>6P-7-68 Development of the Algorithm for Recognition and Identification of Target Cells Using Imaging Biomarkers for On-Chip Multi-Imaging Cell Sorter M. Odaka 1, H. Kim 1, M. Girault 1, A. Hattori 1, H. Terazono 1,2, K. Matsuura 1 and K. Yasuda 1,2, 1 Kanagawa Academy of Sci. and Technol. and 2 Tokyo Medical and Dental Univ., Japan</p>	<p>6P-7-69 Silver-Film Thickness Dependence of the Fluorescence Enhancement Factor under the Back-Side Irradiation for a Plasmonic Chip T. Nakayama 1,2, K. Kintaka 1 and K. Tawa 1,2, 1 AIST and 2 Kwansai Gakuin Univ., Japan</p>	<p>6P-7-70 Development of a Microchip-Based Fluorescence Polarization Immunoassay System for Quantitative Analysis of Drugs K. Aoki 1, K. Oleg 2, A. Ishida 1, H. Tani 1, S. Eremin 2 and M. Tokeshi 1, 1 Hokkaido Univ., Japan and 2 M. V. Lomonosov Moscow State Univ., Russia</p>	<p>6P-7-71 The Effect of Cross-shaped Microchannel Design on the Microparticle Manipulation with Thermal Bubble Actuation W. Li and C. Tsou, Feng Chia Univ., Taiwan</p>

6P-7-72 High-Contrast Fluorescence Imaging on a Plasmonic Chip with the Transmitted Light Fluorescence Microscope T. Fujita 1,2, C. Hosokawa 1, J. Nishii 3, N. Kakinuma 4, M. Oike 4 and K. Tawa 1,2, 1 AIST, 2 Kwansai Gakuin Univ., 3 Hokkaido Univ. and 4 Seiko Giken, Japan	6P-7-73 Surface Plasmon-Enhanced Optical Tweezers of Cell Surface Molecules on Neurons K. Miyauchi 1,2, K. Tawa 1,2, S.N. Kudoh 2, T. Taguchi 3 and C. Hosokawa 1,2, 1 AIST, 2 Kwansai Gakuin Univ. and 3 NICT, Japan	6P-7-74 Sorting of Multiple-Size Cells Using Spiral Microchannels A. Thanomsridetchai 1, D. Ketpun 1, A. Pimpin 1, W. Srituravanich 1, P. Piyaviriyakul 1, A. Sailasuta 1, W. Jeamsaksiri 2, W. Sripumkhai 2, J. Jantawong 2 and J. Supadech 2, 1 Chulalongkorn Univ. and 2 TMEC, Thailand	6P-7-75 Development of Robust and Easy-to-Fabricate Micro-Free-Flow Electrophoresis Device R. Kubota, M. Kobayashi, T. Sakai and T. Ichiki, Univ. of Tokyo, Japan
6P-7-76 Electrophysiological Impedance Spectrum Analysis of Cardiomyocytes Using On-Chip Multimicroelectrode Impedance Analyzer F. Nomura, K. Matsuura, A. Hattori, H. Kurotobi, H. Terazono and K. Yasuda, Tokyo Medical and Dental Univ., Japan	6P-7-77 Evaluating Barrier Property of Cell Membrane via Ammonia Diffusion Using pH Sensor Y. Imaizumi, T. Goda, A. Matsumoto and Y. Miyahara, Tokyo Medical and Dental Univ., Japan	6P-7-78 Optical Perturbation into Neuronal Cells by a Focused Laser Beam C. Hosokawa 1, N. Takeda 1,2, S.N. Kudoh 2 and T. Taguchi 3, 1 AIST, 2 Kwansai Gakuin Univ. and 3 NICT, Japan	
Microsystem Technology and MEMS			
Chairpersons: N. Miki (Keio Univ.) and T. Namazu (Univ. of Hyogo)			
6P-7-79 A Study on Notched Long-Period Fiber Grating Sensor Fabricated by ICP Dry Etching Process for Glucose Concentration Measurement J.-W. Wu, C.C. Chiang and J.-Y. Hu, Natl. Kaohsiung Univ. of Applied Sci., Taiwan	6P-7-80 Fabrication of a MOSFET Using Minimal and Mega Fab Hybrid Process S. Khumpuang 1,2, M. Nagao 1, T. Matsukawa 1, K. Endo 1, M. Masahara 1 and S. Hara 1,2, 1 AIST and 2 Minimal Fab Res. Association, Japan	6P-7-81 Optimization of Ferrofluid Motion on Glass Substrate for the Optical Mirror Applications S. Yu and K.-S. Yun, Sogang Univ., Korea	6P-7-82 Fabrication of a Paper-Based Pressure Sensor by a Patterning Method Using Water Mask N. Jiranusornkul, S. Kraduangdej, N. Niltawach, K. Punpattanakul, C. Ratanasumawong, A. Pimpin and W. Srituravanich, Chulalongkorn Univ., Thailand
6P-7-83 Novel Technique for PDMS Micro Patterning Using Dry Etching and Photolithography H.W. Kim, D.G. Jung, Y.C. Choi, S.J. Bang and S.H. Kong, Kyungpook Natl. Univ., Korea	6P-7-84 Multi-Pole Magnetic Gratings for High-Resolution Positioning Systems Z.-H. Xu 1, B.-H. Tseng 2, C. Chang 2, S.-C. Wang 3, T.-S. Chin 2 and C.-K. Sung 1, 1 Natl. Tsing Hua Univ., 2 Feng Chia Univ. and 3 Natl. United Univ., Taiwan	6P-7-85 A Piezoelectric Energy Harvesting Device Using Shell Structure for Mechanical Frequency-Up Conversion S. Song, M. Jang, S. Kim and K.-S. Yun, Sogang Univ., Korea	6P-7-86 Design, Fabrication and Implementation of Fluidic Control Platform for Flip-chip LED Packages C.-H. Huang 1, Y.-W. Lee 2, T.-L. Chang 1, C.-F. Chang 1 and J.-M. Miao 3, 1 Natl. Taiwan Normal Univ., 2 Natl. Defense Univ. and 3 Natl. Pingtung Univ. of Sci. and Technol., Taiwan
6P-7-87 Toward Large Deflection of Light Beam by Using Wide Bandwidth Surface Acoustic Wave H.S. Choi, T.Y. Lee and K.K. Lee, Ajou Univ., Korea	6P-7-88 Enhanced Photoresponse of Terahertz Wave Detector Based on Asymmetric Silicon MOSFETs with Antenna Impedance Matching M.W. Ryu 1, K.S. Kim 1, K. Park 1, J.-R. Yang 2, S.-T. Han 2 and K.R. Kim 1, 1 UNIST and 2 KERI, Korea	6P-7-89 Withdrawn Performances and Limitations of a Room Temperature and Ambient Pressure HF Vapor Process in The Release Etch of MEMS and NEMS Devices O. Pollet 1, R. Segaud 1, M. Silva Bortolini de Castro 1,2, C. Ladner 1 and F.de Crecy 1, 1 Univ. Grenoble Alpes, 2 CEA-LETI, France and 3 Centro Tecnológico do Exército, Brazil	6P-7-90 Direct Patterning of Cu Microstructures Using Femtosecond Laser Induced CuO Nanoparticle Reduction M. Mizoshiri, S. Arakane and S. Hata, Nagoya Univ., Japan
6P-7-91 Expanded Cavity Size of Room-Temperature Hermetic Sealing Using Au Compliant Rim for Microsystem Packaging R. Takigawa, H. Kawano, Y. Aoki, T. Shuto, K. Iwanabe and T. Asano, Kyushu Univ., Japan	6P-7-92 Development of Actuation System for Artificial Cilia with Magnetic Elastomer A. Saijou, F. Tsumori, Y. Xu, T. Osada and H. Miura, Kyushu Univ., Japan	6P-7-93 Thermal Resistance Analysis of Solder Joints Fabricated by Self-Propagating Exothermic Reaction S. Miyake 1, S. Kanetsuki 1, K. Morino 1, J. Kuroishi 2 and T. Namazu 2, 1 Kobelco Res. Inst. and 2 Univ. of Hyogo, Japan	6P-7-94 Fabrication of MEMS Chamber for SEM Observation Under Controlled Temperature Condition K. Tani and T. Ando, Ritsumeikan Univ., Japan
6P-7-95 Evaluation on Single-Crystal Silicon Cantilever-Type p-n Diode Actuators K. Kanaya, Y. Nakai, H. Tanigawa and K. Suzuki, Ritsumeikan Univ., Japan	6P-7-96 Readability of Two Dimensional Code Marks Printed Using Matrix Arrays of Light Emitting Diodes and Squared Optical Fibers J. Watanabe, K. Kato, J. Iwasaki and T. Horiuchi, Tokyo Denki Univ., Japan	6P-7-97 Formation of Electric and Electronic Circuits in Thermoplastic Resin Substrate by Laser-Assisted Micro Powder Jet Implantation K. Suzuki 1, T. Takahashi 1, D. Katoh 1, R. Watanabe 1, S. Kameya 1, K. Miura 2, T. Yuzawa 3 and T. Kuriyagawa 4, 1 Sendai Natl. College of Technol., 2 Miura Sensor Res., 3 G.E.S and 4 Tohoku Univ., Japan	6P-7-98 Analysis of DC and RF Performances on Current Aperture Vertical Electron Transistor (CAVET) with Multi-Aperture Structure H.S. Kang 1, Y.J. Kim 1, S.Y. Kim 1, J.H. Seo 1, Y.J. Yoon 1, J.-H. Lee 1, S. Cho 2 and I.M. Kang 1, 1 Kyungpook Natl. Univ. and 2 Gachon Univ., Korea
6P-7-99 Deformation Analysis and Fabrication of Awl-Shaped Serpentine Microspring H.-M. Chou 1, M.-J. Lin 2 and R. Chen 1, 1 Natl. Tsing Hua Univ. and 2 Feng Chia Univ., Taiwan	6P-7-100 Measurement Method for Output Force of Inclined Ciliary Self-Oscillating Gel Using a Micro Cantilever T. Kogure, R. Okada, S. Maeda and S. Nagasawa, Shibaura Inst. of Technol., Japan		
Room			
18:00-20:00 Banquet			

Friday, November 7

Room A (Vega, 3F)	Room B (Rigel, 3F)	Room C (Chapel, 3F)	Room D (Boardroom, 3F)
7A-8: Symp. A: Advanced Patterning III (9:00-10:00) S. Nagahara (Tokyo Electron) K. Yoshimoto (Kyoto Univ.)	7B-8: Organic Nanomaterials (9:00-10:20) H. Kasai (Tohoku Univ.) Y. Masuhara (Yamagata Univ.)	7C-8: Nanofabrication III (9:00-10:20) K. Takase (Nihon Univ.) R. Hasunuma (Tsukuba Univ.)	7D-8: Nanotube Application (9:00-10:30) D. Kondo (Fujitsu Labs.) S. Chiashi (Univ. of Tokyo)
7A-8-1 9:00 A Foundry View of Where Lithography is Going (Invited) H. Levinson, Globalfoundries, USA	7B-8-1 9:00 Solution Processed Nano-Columnar Structure for Efficient Small Molecule Organic Solar Cells H. Tanaka, M. Oiki and E. Nakamura, Univ. of Tokyo, Japan	7C-8-1 09:00 Femtosecond Laser Fabrication of Hybrid Plasmonic Nanostructures H. Nishiyama and Y. Ohzeki, Yamagata Univ., Japan	7D-8-1 9:00 Optimization of Vertical Carbon Nanotube Interconnects Using the Direct Electrical Comparison of Integration Steps (Invited) M.H. van der Veen, IMEC, Belgium
7A-8-2 9:30 Advanced Patterning as Key Scaling Enabler (Invited) G. Vandenberghe, D.D. Simone and R. Gronheid, IMEC, Belgium	7B-8-2 9:20 Strongly Enhanced Dielectric Permittivity in Three-Phase Nanocomposite of CaCu ₃ Ti ₄ O ₁₂ -Carbon Nanotubes/Polyvinylidene Fluoride Films W. Tuichai 1, T. Yamwong 2, S. Danwittayakul 2 and P. Thongbai 1, 1 Khon Kaen Univ. and 2 MTEC, Thailand	7C-8-2 9:20 Nitridation of Si Surface at the Bottom of Submicron Trench Using Nitrogen Neutral Beam Y. Hara, T. Shimizu and S. Shingubara, Kansai Univ., Japan	7D-8-2 9:30 Printed Top-Gate Carbon Nanotube Thin-Film Transistors with Small Hysteresis M. Maeda, K. Higuchi, S. Kishimoto and Y. Ohno, Nagoya Univ., Japan
7A-8 Author's Interview: 11:45-11:55	7B-8-3 9:40 Evaluation of Anti-Cancer Activities and Hydrolysis Behavior of Drug Nanoparticles Y. Ikuta, Y. Koseki, T. Onodera, H. Oikawa and H. Kasai, Tohoku Univ., Japan	7C-8-3 9:40 Growth of Zinc Oxide Nanostructures on Graphene/Glass by Electrochemical Deposition N.A. Hambali 1, H. Yahaya 1, M.R. Mahmood 1, T. Terasako 2 and A.M. Hashim 1, 1 UT Malaysia and 2 Ehime Univ., Japan	7D-8-3 9:50 Improvement in the Photovoltaic Performance of Carbon Nanotube-Based Solar Cells Using Metal Oxide Layers F. Wang 1, D. Kozawa 1, Y. Miyauchi 1,2, S. Mouri 1, Y. Ohno 3 and K. Matsuda 1, 1 Kyoto Univ., 2 JST-PRESTO and 3 Nagoya Univ., Japan
	7B-8-4 10:00 A Composite Urea Biosensor Based on Urease Immobilized on Tetracyanoquinodimethane-Tetrathiafulvalene/Polyaniline-Carbon Nanofiber Film G. Das, N.s. Nguyen, T.T. Pham and H.H. Yoon, Gachon Univ., Korea	7C-8-4 10:00 Development of Anti-Infrared Moth-Eye Nanostructure by Using Roll-to-Roll Technology C.-H. Liu, Z.-H. Xu, C.-K. Sung and C.-Y. Lo, Natl. Tsing Hua Univ., Taiwan	7D-8-4 10:10 Memory Operation of Carbon Nanotube Single-Electron Transistors with Charge Storage Structure K. Seike, Y. Kanai, Y. Ohno, K. Maehashi, K. Inoue and K. Matsumoto, Osaka Univ., Japan
	7B-8 Author's Interview: 10:20-10:30	7C-8 Author's Interview: 10:20-10:30	7D-8 Author's Interview: 12:05-12:15
Lobby (3F)			
Coffee Break			
Room A (Vega, 3F)	Room B (Rigel, 3F)	Room C (Chapel, 3F)	Room D (Boardroom, 3F)
7A-9: Symp. A: Advanced Patterning IV (10:15-11:45) T. Azuma (EIDEC) T. Hirayama (Tokyo Ohka)	7B-9: Nanoimprint, Nanoprint and Rising Lithography I (10:45-11:55) A. Yokoo (NTT) T. Makela (VTT Printed and Hybrid Functionalities)	7C-9: Nanoscale Memory (10:45-12:05) N. Banno (Leap) T. Yanagida (Osaka Univ.)	7D-9: Transition Metal Dichalcogenides (10:45-12:05) H. Ago (Kyushu Univ.) K. Maehashi (Osaka Univ.)
7A-9-1 10:15 300mm Wafer Performance of a Coordinated Line Epitaxy (COOL) Process Using Directed Self-Assembly (Invited) Y. Seino, Y. Kasahara, H. Sato, H. Kanai, K. Kobayashi, S. Minegishi, K. Miyagi, N. Kihara, K. Koderia, T. Tobana, N. Hirayanagi, T. Fujiwara, Y. Kawamozon and T. Azuma, EIDEC, Japan	7B-9-1 10:45 Nanoimprint Lithography As a Directed Self-Assembly Tool: Approaches and Nanometrology (Invited) C. Simao 1, N. Kehagias 1, D. Turchapsky 2, W. Khunsin 1, A. Amann 2, M.A. Morris 2,3, and C.M. Sotomayor Torres 1,4, 1 ICN2, Spain, 2 UCC, 3 TCD, Ireland and 4 ICREA, Spain	7C-9-1 10:45 Al/AlO _x /SiC _x O _y /SiC/n-Si Structured Resistive Nonvolatile Memory Formed by Autoxidation of Al K. Kida, T. Tsukamoto and Y. Suda, Tokyo Univ. of Agriculture and Technol., Japan	7D-9-1 10:45 Nonlinear Optical Properties of Monolayer Transition Metal Dichalcogenides S. Konabe and S. Okada, Univ. of Tsukuba, Japan
7A-9-2 10:45 Carbohydrate-Based Block Copolymer Thin Films for Opto- and Bio-Electronic Devices (Invited) R. Borsali, CERMAV-CNRS & Grenoble Univ., France;	7B-9-2 11:15 Formation of Inorganic Polarizer on The Whole 6-inch Wafer by Photon-IL R. Washiya and A. Miyauchi, Hitachi, Japan	7C-9-2 11:05 Unipolar Resistive Switching Behaviors in Al/GeSe/Pt Structure and Improvement of Resistive Switching Uniformity Using Ag Nanoparticles J.-H. Kim, K.-H. Nam, W.-J. Cho and H.-B. Chung, Kwangwoon Univ., Korea	7D-9-2 11:05 Solution Processed Self Assembled Molybdenum Disulfide Wire and their Electrical Property S.-K. Lee, J. Singh, K. Rana and J.-H. Ahn, Yonsei Univ., Korea

7A-9-3 11:15 DSA Process Modeling and Application of ILT Mask Synthesis for Cooptimizing Design Rules and DSA Process Characteristics (Invited) T. Dam, W. Stanton, H.-J. Stock, W. Demmerle and D. Yim, Synopsys, USA	7B-9-3 11:35 Resonance-Tuned Substrates Produced by Nanoimprint Method for Highly Efficient Fluorescence Sensing M. Iwanaga, B. Choi, H.T. Miyazaki, Y. Sugimoto and K. Sakoda, NIMS, Japan	7C-9-3 11:25 Oxygen Sensing Behaviors of Horizontal WO _x RRAM Structures Y.-C. Lan 1, H.-C. Han 2, C.-C. Chen 3, T.-L. Chang 1 and C.-H. Huang, 1 Natl. Taiwan Normal Univ., 2 Academia Sinica and 3 NARL, Taiwan	7D-9-3 11:25 Flexible Transistor and Inverter of Large-Area WSe ₂ Thin Film K. Funahashi 1, J. Pu 1, L.-J. Li 2, Y. Iwasa 3,4 and T. Takenobu 1, 1 Waseda Univ., Japan 2 Academia Sinica, Taiwan, 3 Univ. of Tokyo and 4 RIKEN, Japan
7A-9 Author's Interview: 11:45-11:55	7B-9 Author's Interview: 11:55-12:05	7C-9-4 11:45 Bias Induced Cu Ion Migration Behavior in Resistive Change Memory Structure Observed by Hard X-Ray Photoelectron Spectroscopy T. Nagata, Y. Yamashita, H. Yoshikawa, M. Imura, S. Oh, K. Kobashi and T. Chikyow, NIMS, Japan	7D-9-4 11:45 Investigation of Electrical Characteristics on Top-Gate MoS ₂ MOSFETs with High-k Al ₂ O ₃ Dielectric N. Ninomiya 1,2, T. Mori 2, N. Uchida 2, E. Watanabe 3, D. Tsuya 3, S. Moriyama 3, M. Tanaka 1 and A. Ando 2, 1 Yokohama Natl. Univ., 2 AIST and 3 NIMS, Japan
<i>Lunch</i>			
Room A (Vega, 3F)	Room B (Rigel, 3F)	Room C (Chapel, 3F)	Room D (Boardroom, 3F)
7A-10: Resist and Directed Self-Assembly (13:00-14:30) K. Okamoto (Hokkaido Univ.) K. Yoshimoto (Kyoto Univ.)	7B-10: Nanoimprint, Nanoprint and Rising Lithography II (13:00-14:30) C.M. Sotomayor Torres (ICN2) J. Taniguchi (Tokyo Univ. of Sci.)	7C-10: Sensing Devices (13:10-14:30) T. Yanagida (Osaka Univ.) K. Nishiguchi (NTT)	7D-10: Inorganic Nanomaterials III (13:10-14:30) K. Terabe (NIMS) K. Kobayashi (NIMS)
7A-10-1 13:00 New Process and Material Proposal for Next Generation Lithography (Invited) R. Sakamoto, S. Shigaki and Y. Sakaida, Nissan Chemical, Japan	7B-10-1 13:00 Nanometer to Micrometer Scale Patterning by Thermal Roll to Roll NIL (Invited) T. Makela, VTT Printed and Hybrid Functionalities, Finland	7C-10-1 13:10 Long-Term Stability of Gate-All-Around Nanowire Transistors in pH Sensing R.-Z. Lin, L.-C. Chiang and J.-T. Sheu, Natl. Chiao-Tung Univ., Taiwan	7D-10-1 13:10 Surface Electronic Structure of Ti _{1-x} Fe _x O _{2-δ} Thin Film with Oxygen Vacancies K. Usui 1, S. Yamaguchi 1, E. Sakai 2, H. Kumigashira 2 and T. Higuchi 1, 1 Tokyo Univ. of Sci. and 2 KEK, Japan
7A-10-2 13:30 Radiation Chemistry of Fluorinated Polymers for Extreme Ultraviolet Resist N. Nomura 1, K. Okamoto 1, H. Yamamoto 2, T. Kozawa 2, R. Fujiyoshi 1 and K. Umegaki 1, 1 Hokkaido Univ. and 2 Osaka Univ., Japan	7B-10-2 13:30 Computational Study of Mold Side Wall Quality on De-Molding Process in Nanoimprint Lithography T. Tochino, K. Shimomukai, K. Uemura, M. Yasuda, H. Kawata and Y. Hirai, Osaka Pref. Univ., Japan	7C-10-2 13:30 Passive and Wireless SAW-Based Carbon Dioxide Sensor Using a Graphene Sensitive Film C. Fu 1, S. Yang 1, S. Zhang 2, W. Yang 2 and K. Lee 1, Ajou Univ. and 2 Dongguk Univ., Korea	7D-10-2 13:30 Room Temperature Synthesis of Bi ₄ Ge ₃ O ₁₂ Compound in Aqueous Solution K. Kobayashi 1,2, T. Ikeda 3, S. Mihara 4, K. Hirai 4, T. Akashi 4 and Y. Sakka 1, 1 NIMS, 2 Tokyo Univ. of Sci., 3 AIST and 4 Hosei Univ., Japan
7A-10-3 13:50 Effects of Thermal Fluctuations and Block Copolymers Compositions on Defects in Directed Self-assembly Contact Hole Shrink Process K. Fukawatase 1, K. Yoshimoto 1, Y. Naka 2, S. Maeda 2, S. Tanaka 2, S. Morita 2, H. Aoyama 2 and S. Mimotogi 2, 1 Kyoto Univ. and 2 Toshiba, Japan	7B-10-3 13:50 Surface Patterned Ceramic Sheet with Micro Channels by Combined Process of Laser Beam Machining and Imprinting S. Hunt, F. Tsumori, Y. Xu, T. Osada and H. Miura, Kyushu Univ., Japan	7C-10-3 13:50 Characteristics of Self-Heated Si Nanodevices with Selective Pt Deposition as Hydrogen Sensors H.H. Sang, J.-T. Huang and J.-T. Sheu, Natl. Chiao Tung Univ., Taiwan	7D-10-3 13:50 Combinatorial Synthesis of BaTiO ₃ -Bi(Mg _{2/3} Nb _{1/3})O ₃ Thin-Films for High-temperature Capacitors S. Kumaragurubaran 1, T. Nagata 1, K. Takahashi 2, S.-G. Ri 2, Y. Tsunekawa 2, S. Suzuki 2 and T. Chikyow 1, 1 NIMS and 2 COMET, Japan
7A-10-4 14:10 Metal Incorporation in Block Copolymer Templates M. Kreuzer 1, C.D. Simão 1 and C.M. Sotomayor Torres 1,2, 1 ICN2 and 2 ICREA, Spain	7B-10-4 14:10 Roller-type UV Imprint Lithography to Fabricate Patterned Sapphire Substrate W.-C. Lin, N.-W. Chang and S.-Y. Yang, Natl. Taiwan Univ., Taiwan	7C-10-4 14:10 Sialic Acid-Sensitive Bio-Transistor Based on Phenylboronic Acid-Functionalized Polymeric Layer T. Arai 1, Y. Maejima 2, T. Goda 1, A. Matsumoto 1, H. Otsuka 2 and Y. Miyahara 1, 1 Tokyo Medical and Dental Univ. and 2 Tokyo Univ. of Sci., Japan	7D-10-4 14:10 Synthesis and Electrochemical Properties of Co-Doped BiFeO ₃ Nanopowders for High Performance Supercapacitors J. Khajonrit, S. Phumying and S. Maensiri, Suranaree Univ. of Technol., Thailand
7A-10 Author's Interview: 14:30-14:40	7B-10 Author's Interview: 14:30-14:40	7A-10 Author's Interview: 14:30-14:40	7D-10 Author's Interview: 14:30-14:40

Room P (Argos A, 1F)			
7P-11: 14:40-16:40 POSTER SESSION II			
Symposium B "Hybrid Nanosystem"			
Chairpersons: S. Akita (Osaka Pref. Univ.) and K. Nishiguchi (NTT)			
7P-11-1 Graphene Field Effect Transistor with Persistent Photocurrent S. Ishida, Y. Anno, K. Takei, T. Arie and S. Akita, Osaka Pref. Univ., Japan	7P-11-2 Pressure Gauge Consisting of Suspended Single-Walled Carbon Nanotube Y. Wada 1,2, Y. Fujita 1, K. Takei 1, T. Arie 1 and S. Akita 1, 1 Osaka Pref. Univ. and 2 Okano Works, Japan		
Resist and Directed Self-Assembly			
Chairpersons: S. Nagahara (Tokyo Electron) and T. Azuma (EIDEC)			
7P-11-3 Long-Range Ordering of Hexagonally Self-Assembled Dot Pattern of PMMA- <i>b</i> -PMAPOSS on Controlled Brushed Layer N. Sasao, R. Yamamoto and A. Kikitsu, Toshiba, Japan	7P-11-4 Inhomogeneity of PAGs in Methacrylate-Type EUV Resist Film Studied by Molecular-Dynamics Simulations M. Toriumi and T. Itani, EIDEC, Japan	7P-11-5 Study on Dissolution Behavior of Chemically Amplified Resists for Extreme Ultraviolet Lithography M. Mitsuyasu, H. Yamamoto and T. Kozawa, Osaka Univ., Japan	7P-11-6 Development of New Polyphenol Compound Applied to the Negative-Tone Molecular Resists for EB/EUVL and Spin-on Carbon Hardmask K. Okada, T. Sato, T. Makinoshima and M. Echigo, Mitsubishi Gas Chemical., Japan
7P-11-7 Design Space for "Peanut" Shaped Guiding Patterns for DSA 193i Grapho-Epitaxy Application: a Simulation Study A. Fouquet, J. Belledent, S. Bérard-Berger, L. Perraud, A. Gharbi and R. Tiron, CEA-LETI, France	7P-11-8 Chemical Guide Pattern Fabricated by Thermal Nanoimprinting Using One Terminal Functionalized PS and PS- <i>r</i> -PMMA Polymers H. Wakaba, M. Okada, S. Iyoshi, Y. Haruyama and S. Matsui, Univ. of Hyogo, Japan		
Nanocarbons			
Chairpersons: S. Okada (Univ. of Tsukuba) and S. Chiashi (Univ. of Tokyo)			
7P-11-9 Strength Controllable Graphene Oxide Amphiprotic Aerogels as Highly Efficient Carrier for Anionic and Cationic Azo Molecules J. Xiong 1, C. Jiao 1, S. Xu 2, J. Tao 1, D. Zhang 1, H. Lin 1 and Y. Chen 1, 1 Soochow Univ., China and 2 Shinshu Univ., Japan	7P-11-10 High Aspect Ratio Graphene Nanoribbon Patterned Using Hydrogen-Silsesquioxane Semi-Soft Mask J. Sun 1, T. Iwasaki 1, M. Muruganathan 1 and H. Mizuta 1,2, 1 JAIST, Japan and 2 Univ. of Southampton, UK	7P-11-11 Investigation of the Benefit of MWCNT Forests for Electrical Contacts H. Liu 1, A.P. Lewis 2, M.P. Down 2, L. Jiang 2 and J.W. McBride 1,2, 1 Univ. of Southampton Malaysian Campus and 2 Univ. of Southampton, UK	7P-11-12 Vertically-Aligned Carbon Nanotube Growth From Langmuir-Blodgett Deposited Fe or Fe ₃ O ₄ Nanoparticles with Palmitic Acid K. Nakamura, N. Kuriyama, S. Takagiwa and M. Kushida, Chiba Univ., Japan
7P-11-13 X-Ray Source Using CNT Field Emitter with Side-Gate Electrode S. Okawaki, S. Abo, F. Wakaya, M. Abe and M. Takai, Osaka Univ., Japan	7P-11-14 Sol-Gel Based Metal Interconnector Improved by Carbon Nanotubes (CNTs) in Through Silicon Via (TSV) Structure B.M. Sung 1, R.A. Lemelemu 1, D.G. Jung 1, W.I. Jang 2 and S.H. Kong 1, 1 Kyungpook Natl. Univ. and 2 Electronics and Telecomm. Res. Inst., Korea	7P-11-15 "Laminated" Ion-Gel Film as High Capacitance Insulator for Carbon-Nanotube Transistor T. Fujimoto 1, R. Shimizu 1, Y. Takagi 1, Y. Wada 1, K. Yanagi 2 and T. Takenobu 1, 1 Waseda Univ. and 2 Tokyo Metropolitan Univ., Japan	7P-11-16 Controlling the Number of Layers of CVD Graphene Using Binary Metal Films Y. Takesaki 1, M. Tsuji 1 and H. Ago 1,2, 1 Kyushu Univ. and 2 JST-PRESTO, Japan
7P-11-17 Enhanced Spin-Orbit Interaction in the Hydrogenated Epitaxial Graphene on Silicon Carbide K. Konishi, T. Miyamoto, K. Yon and T. Sato, Hokkaido Univ., Japan	7P-11-18 Synthesis of Transfer-free Graphene for Direct Device Integration G. Kalita, T. Sugiura, S. Sharma, R. Hirano, M.E. Ayhan, S.M. Shinde and M. Tanemura, Nagoya Inst. of Technol., Japan	7P-11-19 The Study of Corrosion in Graphene-Coated Copper Single- and Polycrystals I. Wlasny 1, P. Dabrowski 2, M. Rogala 1, P. J. Kowalczyk 1, I. Pasternak 2, W. Strupinski 2, J. M. Baranowski 2 and Z. Klusek 1, 1 Univ. of Lodz and 2 Inst. of Electronic Materials Technol., Poland	7P-11-20 TiO ₂ /Marimo Carbon Composite as an Electrode Material for Lithium Secondary Batteries K. Miyoshi 1, K. Iwasawa 1, K. Baba 1, H. Ota 2, M. Nishitani-Gamo 2, T. Ando 3 and M. Eguchi 1, 1 Ibaraki Univ., 2 Toyo Univ. and 3 NIMS, Japan
7P-11-21 Formation of Heterojunction Diodes Comprising Nitrogen-Doped Ultrananocrystalline Diamond/Amorphous Carbon and P-Type Silicon and their Photodetection A. Zkria 1,2, H. Gima 1 and T. Yoshitake 1, 1 Kyushu Univ., Japan and 2 Aswan Univ., Egypt	7P-11-22 Spin-State Tuning of Decamethyl C ₆₀ by an Electric Field K. Narita and S. Okada, Univ. of Tsukuba, Japan	7P-11-23 Facile Self-Assembly of Functional Ag Nanoparticles onto Calcium Alginate Fibers for Water Sterilization S.J. Xu 1, F. Zhang 2,3 and H. Morikawa 1, 1 Shinshu Univ., Japan 2 Shazhou Inst. of Technol. and 3 Zhangjiagang Nellnano Technol., China	7P-11-24 First-Principles Study on the Contact Problem of 10 nm Graphene Channel Devices H. Jippo 1,2, S. Okada 2 and M. Ohfuchi 1, 1 Fujitsu Labs. and 2 Univ. of Tsukuba, Japan
7P-11-25 Growth Dynamics of Single-Layer Graphene on Epitaxial Cu Surfaces Y. Ohta 1, S. Mizuno 1, M. Tsuji 1, H. Hibino 2 and H. Ago 1,3, 1 Kyushu Univ., 2 NTT and 3 JST-PRESTO, Japan			

Nanodevices			
Chairpersons: Y. Ishikawa (Nara Inst. of Sci. and Technol.) and T. Tanaka (Saga Univ.)			
7P-11-26 Resistive Switching Characteristics of Manganese Oxide Nanoparticles with Hexagonal Shape Q. Hu, M. Park, T.-S. Lee, T.-S. Yoon, Y.J. Choi and C.J. Kang, Myongji Univ., Korea	7P-11-27 One-Selector and One-resistor Behavior of a Niobium Oxynitride and Niobium Nitride Bilayer for Resistive Random Access Memory Applications M.J. Kim, H.-D. Kim, J. Park, D.Y. Kang, K.H. Kim and T.G. Kim, Korea Univ., Korea	7P-11-28 Self-Rectifying Resistive Switching Characteristics of $\text{Si}_3\text{N}_4/\text{AlN}$ Bilayer Device J.Y. Kwon, H.-D. Kim, J.H. Park, D.S. Jeon and T.G. Kim, Korea Univ., Korea	7P-11-29 Temperature Dependence of The Threshold Voltage Bi-1,4-Dithiolbenzen Molecular Wire A. Boudjella 1,2, 1 Bircham InterNatl. Univ. Madrid, Spain and Al Khawarizmi Internatl. College, UAE
7P-11-30 Electrical and Optical Properties of Double Layered Oxide Quantum Dots Embedded in ZnO Layer for Memory Device Application D.U. Lee, D. Qiu, K.S. Lee, G. Oh and E.K. Kim, Hanyang Univ., Korea	7P-11-31 The Temperature Dependence of Ag_2Se Thin Film's Resistive Switching T.-S. Lee, H.-K. Lee, N.-J. Lee, T.-S. Yoon, Y.-J. Choi and C.-J. Kang, Myongji Univ., Korea	7P-11-32 Porous Silicon Electrodes for High Performance Supercapacitors K. Grigoros, J. Keskinen, S. Laakso, E. Yli-Rantala, H. Välimäki, P. Kauranen, M. Prunnila and J. Ahopelto, VTT Technical Res. Ctr. of Finland, Finland	7P-11-33 Characteristics of a Flexible Plastic-Based Lithium-Ion Battery K. Yang, K. Cho and S. Kim, Korea Univ., Korea
7P-11-34 Withdrawn Study on Detection of Response between <i>Drosophila</i> LUSH Odorant Binding Protein and Ethanol Using FET Based Biosensor I. K. Lee, S. W. Moon, C. M. Im and W. J. Cho, Kwangwoon Univ., Korea	7P-11-35 Structural Properties and Sensing Characteristics of High-k Eu_2O_3 Electrolyte-Insulator-Semiconductor pH Sensors T.-M. Pan 1, C.-W. Wang 1, C.-Y. Tan 1, W.-H. Chiu 1 and L. Chi 2, 1 Chang Gung Univ., Taiwan and 2 Westfälische Wilhelms-Univ. Münster, Germany	7P-11-36 Tunable Plasmonic Structures on Multi-Photon Polymerized 3D Micro-Springs H. Nishiyama, Y. Abe, T. Ichimura, Y. Ohzeki and Y. Saito, Yamagata Univ., Japan	7P-11-37 Optimization of Extended-Gate Field-Effect Transistors as Sensors C.-W. Chen and J.-T. Sheu, Natl. Chiao Tung Univ., Taiwan
7P-11-38 Multiple Silicon Nanowire with Glucose Oxidase Modification for Glucose Concentration Measurement C.-C. Hsu, K.-H. Chu, C.-T. Meng, Y.-R. Lo and C.-C. Cheng, Yuan Ze Univ., Taiwan	7P-11-39 A pH Sensor Using Extended-Gate FRTs with TiO_2 Nanowires S.-P. Chang, S.-J. Chang and T.-Y. Tsai, Natl. Cheng Kung Univ., Taiwan	7P-11-40 Enhancement of Dye-Sensitized Solar Cell Efficiency by Fabricating Hollow Structure with Light Scattering Effect S.-W. Ryu, H.-J. Choi, C.-H. Kim, S. Choo, S.-J. Park and H. Lee, Korea Univ., Korea	7P-11-41 Optimization of Hybrid Blue Organic Light-Emitting Diodes Based on Singlet and Triplet Exciton Diffusion Length S.E. Lee 1, H.W. Lee 1, J.W. Lee 1, Y. Sun 1, K.M. Hwang 1, S.N. Park 2, S.S. Yoon 2 and Y.K. Kim 1, 1 Hongik Univ. and 2 Sungkyunkwan Univ., Korea
7P-11-42 Improved Resistive Switching Characteristics of NiN-Based ReRAM with Oxygen Doping D.S. Jeon, H.-D. Kim, J.H. Park, J.Y. Kwon and T.G. Kim, Korea Univ., Japan	7P-11-43 Characterization of N-Doped GeTe Films and their Applications to High-Performance Nano Phase-Change Memory Y. Yin and S. Hosaka, Gunma Univ., Japan	7P-11-44 $\text{Ge}_1\text{Sb}_4\text{Te}_7$ Ultra-Multi-Level Phase-Change Memory Y. Yin, S. Iwashita and S. Hosaka, Gunma Univ., Japan	7P-11-45 TCAD Based Simulations on Trap-Induced V_t Variation of p-GaN SB-MOSFETs S.-H. Doh, W.-J. Park, S.-B. Kang, C.-J. Lee and S.-H. Hahm, Kyungpook Natl. Univ., Korea
7P-11-46 Fabrication of Double Quantum Dots in Multi-Wall Carbon Nanotubes Using Ar Atom Beam Irradiation H. Tomizawa 1,2, T. Yamaguchi 1, S. Akita 3 and K. Ishibashi 1,2,4, 1 RIKEN, 2 Tokyo Univ. of Sci., 3 Osaka Pref. Univ. and 4 RIKEN CEMS, Japan	7P-11-47 Effect of Low-Temperature Si Buffer Thickness on Sensitivity of $\text{Si}_{1-x}\text{Ge}_x$ Nanowire Y.-L. Lai 1, K.-M. Chang 2, C.-F. Chen 2, C.-H. Lai 3, P.-S. Kuo 2, T.-Y. Chang 2, Y.-M. Chen 2, A.J.-W. Whang 1, H.-L. Lai 1,3, H.-Y. Chen 4, S.-Y. Wang 5 and I.-J. Hsieh 3, 1 Natl. Taiwan Univ. of Sci. and Technol., 2 Natl. Chiao-Tung Univ., 3 Chung Hua Univ., 4 Huaan Univ. and 5 I-Shou Univ., Taiwan	7P-11-48 Investigation of Gate-Induced Drain Leakage Suppression by Fringing Field in High-k/Metal Gate CMOS Technology E. Jang, J. W. Jung, S. Shin and K.R. Kim, Ulsan Natl. Inst. of Sci. and Technol., Korea	7P-11-49 Normally-Off AlGaIn/GaN HEMT Using Digital Etching Technique R. Yamanaka 1, T. Kanazawa 1, E. Yagyu 2 and Y. Miyamoto 1, 1 Tokyo Inst. of Technol. and 2 Mitsubishi Electric, Japan
7P-11-50 Enhancement of Angular Color Uniformity in White LEDs Packaging by Dispensing Sedimentation P.-C. Wang 1, C.-L. Lin 2, Y.-K. Su 1,2, G.-S. Huang 2, B.-R. Chen 2 and W.-S. Wang 2, 1 Natl. Cheng Kung Univ. and 2 Kun-Shan Univ., Taiwan	7P-11-51 Study on the Sensitivity of Surface Enhanced Raman Spectroscopy Using Three-Dimensional Silver and Gold Nanostructure R. Hara, R. Takahashi, T. Fukuoka, A. Yamaguchi and Y. Utsumi, Univ. of Hyogo, Japan	7P-11-52 Enhanced Efficiency of Silicon Solar Cells by Antireflective Nanoparticle Arrays D. Wan 1, H.-L. Chen 2, L. Wang 1, T.-C. Tseng 2, C.-Y. Fang 2, Y.-S. Lai 3 and F.-Y. Yeh 4, 1 Natl. Tsing Hua Univ., 2 Natl. Taiwan Univ., 3 Natl. Nano Device Lab. and 4 ITRI, Taiwan	7P-11-53 Withdrawn Effects of Lead-Frame Materials in Performance of Blue LEDs Package by SiO_2-Doped Silicone Layer and Silicone Lens W. S. Wang 1, C. L. Lin 1, B. R. Chen 1, P. C. Wang 2 and Y. K. Su 1,2, 1 Kun-Shan Univ. and 2 Natl. Cheng Kung Univ., Taiwan
7P-11-54 Enhancement of Light Extraction Efficiency of OLEDs Using Si_3N_4 -Based Optical Scattering Layer S.-J. Park, Y.-D. Kim and H. Lee, Korea Univ., Korea	7P-11-55 Structural Properties and Electrical Characteristics of High-k Gd_2O_3 and GdTiO_3 α -InGaZnO Thin-Film Transistors T.-M. Pan 1, C.-H. Chen 1, H.-J. Wang 1, J.-L. Her 1 and K. Koyama 2, 1 Chang Gung Univ., Taiwan and 2 Kagoshima Univ., Japan	7P-11-56 Extended Design Window of Resonant Plasma-Wave Transistor for Terahertz Emitter by Considering Degenerate Carrier Velocity Model with Fermi-Dirac Distribution J.Y. Park, S.-H. Kim, J.M. Seong and K.R. Kim, Ulsan Natl. Inst. of Sci. and Technol., Korea	7P-11-57 Structural Parameter Dependence of Directed Current In GaAs Nanowire-Based Electron Brownian Ratchet Device Y. Abe, T. Tanaka and S. Kasai, Hokkaido Univ., Japan

Nanofabrication			
Chairpersons: R. Hasunuma (Tsukuba Univ.) and S. Shingubara (Kansai Univ.)			
7P-11-58 One-Pot Hydrothermal Synthesis, Characterization, and Electrochemical Properties of rGO/MnFe ₂ O ₄ Nanocomposite I. Kotutha 1, E. Sawatsitang 2, W. Meewassana 1 and S. Maensiri 1, 1 Suranaree Univ. of Technol. and 2 Khon Kaen Univ., Thailand	7P-11-59 Structure, Optical and Magnetic Properties of Thermally Decomposed Ni-Doped ZnO Nanorods K. Noipa, S. Rujirawat, R. Yimnirun, V. Promarak and S. Maensiri, Suranaree Univ. of Technol., Thailand	7P-11-60 Effect of Annealing on the Structure and Dielectric Properties of SrTi _(1-x) Mn _x O ₃ Ceramics Prepared by Hydrothermal Method A. Karaphun 1, T. Putjuso 2 and E. Swatsitang 1,3, 1 Khon Kaen Univ., 2 Rajamangala Univ. of Technol. and 3 Nanotec-KKU Ctr. of Excellence on Advanced Nanomaterials for Energy Production and Storage, Thailand	7P-11-61 Oxide Thickness Dependence of Resistive Switching Characteristics for Ni/HfO ₂ /Pt ReRAM Device D. Ito, S. Otsuka, Y. Hamada, T. Shimizu and S. Shingubara, Kansai Univ., Japan
7P-11-62 Progress in Determination Method of Ultrathin Si-Based Oxide Bandgaps From Analysis of Energy Loss Signals for Photoelectrons A. Ohta 1, K. Makihara 1, H. Murakami 2 and S. Miyazaki 1, 1 Nagoya Univ. and 2 Hiroshima Univ., Japan	7P-11-63 Effect of Ge Substitution on The Optical and Magnetic Properties of CuFeO ₂ Delafossite Oxide L. Naka-in, T. Kamwanna, P. Srepusharawoot, S. Pinitsoontorn and V. Amornkitbamrung, Khon Kaen Univ., Thailand	7P-11-64 Zinc Nanoparticle Production by Reducing Zinc Oxide Using Plasma In-Liquid Method N. Amaliyah 1,2, S. Mukasa 1, H. Toyota 1, T. Kitamae 1 and S. Nomura 1, 1 Ehime Univ., Japan and 2 Hasanuddin Univ., Indonesia	7P-11-65 Synthesis of FePt Nanoparticles by Pulsed Plasma in Liquid Z. Kelgenbaeva 1, L. Chen 2, E. Omurzak 1, H. Yoshiasa 1, H. Okudera 3, C. Iwamoto 1, S. Hayami 1 and T. Mashimo 1, 1 Kumamoto Univ., Japan, 2 Sichuan Univ., China and 3 Kanazawa Univ., Japan
7P-11-66 Hyperbranched Polymer Functional Cotton Fabric for its in Situ Deposition of Silver Nanoparticles D. Zhang, C. Jiao, J. Xiong, H. Lin and Y. Chen, Soochow Univ., China	7P-11-67 Enhancement of Wiggling During Amorphous Carbon Etching Due to HBr Gas Addition N. Kofuji 1, H. Ishimura 2, H. Kobayashi 2 and S. Une 2, 1 Hitachi and 2 Hitachi High-Technol., Japan		
Inorganic Nanomaterials			
Chairpersons: K. Terabe (NIMS) and T. Higuchi (Tokyo Univ. of Sci.)			
7P-11-68 CPP Junctions Fabricated From Fe ₃ Si/FeSi ₂ Artificial Lattices by FIB K. Sakai 1,2, Y. Asai 1, Y. Noda 1, K. Ishibashi 1, K. Takeda 3 and T. Yoshitake 1, 1 Kyushu Univ., 2 Kurume Natl. College of Technol. and 3 Fukuoka Inst. of Technol., Japan	7P-11-69 Formation of 1D Unique Chain Structures via Media Effect D. Kim, E. Kim and O.-S. Jung, Pusan Natl. Univ., Korea	7P-11-70 Structures and their Properties of Trimetallic Zinc(II) Complexes B.J. Kim, H. Lee and O.-S. Jung, Pusan Natl. Univ., Korea	7P-11-71 Synthesis, Crystal Structures, and Photoluminescence Properties of Silver(I) Complexes of Carbazole-Containing Ligand J.G. Kim and O.-S. Jung, Pusan Natl. Univ., Korea
7P-11-72 Host-Guest Chemistry of Nanosized Suprachannel Structure H. Kim, M. Park and O.-S. Jung, Pusan Natl. Univ., Korea	7P-11-73 Characteristics of Tunable Photoluminescence from Dye-Doped Nanoporous Silicon C.-H. Hu, C.-Y. Lee, S.-L. Cheng and V.K.S. Hsiao, Natl. Chi Nan Univ., Taiwan	7P-11-74 Crystallization and Properties of Copper (II) Complexes According to Solvate Molecules Y. Cho and O.-S. Jung, Pusan Natl. Univ., Korea	7P-11-75 Film Structures of β -AlN Thin Films Grown on Sapphire (0001) by Pulsed Laser Deposition T. Yoshida 1,2, Y. Ueda 1, A. Tominaga 1, T. Okajima 3 and T. Yoshitake 1, 1 Kyushu Univ., 2 Kurume Natl. College of Technol. and 3 Saga Light Source, Japan
7P-11-76 Preparation of Ti-Si-C Thin Films by Magnetron Sputtering Using Elemental Targets Under Negative Substrate Bias Voltages T. Sonoda, S. Nakao and M. Ikeyama, AIST, Japan	7P-11-77 Effects of Carbon Doping to n-Type β -FeSi ₂ on Electric Properties of n-Type β -FeSi ₂ /p-Type Si Heterojunction Diodes M. Takahara, S. Funasaki, T.M. Mostafa, R. Baba, N. Promros, M. Shaban, A. Tominaga and T. Yoshitake, Kyushu Univ., Japan	7P-11-78 Carbon Nanotube Supported g-C ₃ N ₄ Electrocatalyst for Oxygen Reduction Reaction in Acidic Media H. Lim, J. Ahn, H.N. Lee and H.-J. Kim, Korea Inst. of Industrial Technol., Korea	7P-11-79 Nearly Monodisperse Magnetite Colloidal Nanoclusters with Remarkable Magnetic Properties P. Tipsawat, K. Chokprasombat and S. Maensiri, Suranaree Univ. of Technol., Thailand
7P-11-80 The Study of SnCl ₂ Doped in Dye Sensitized Solar Cell Effect P. Suksaengrat, S. Saekoa, S. Mitrawong, W. Jarebboon and S. Pimanpang, Khon Kaen Univ., Thailand			
Organic Nanomaterials			
Chairpersons: H. Kasai (Tohoku Univ.) and Y. Masuhara (Yamagata Univ.)			
7P-11-81 Formation of Stacking Faults of Naphtacene Crystal Obtained by Physical Vapor Transport Technique S. Jo 1, S. Suzuki 2 and M. Yoshimura 2, Aichi Gakuin Univ. and 2 Toyota Technol. Inst., Japan	7P-11-82 Evaluation the Pore Size Distribution of Nanoporous Organosilicate Thin Films by X-Ray Reflectometry Techniques Y.-S. Chien, Y.-S. Yeh, Y.-S. Chen, J. Leu and W.-E. Fu, ITRI, Taiwan	7P-11-83 Investigation of Size Controlling Factor of C ₆₀ Nanocrystals in Recipitation Method K. Shito, N. Ito and A. Masuhara, Yamagata Univ., Japan	7P-11-84 Preparation and Characterization of TPP/chitosan Nanoparticles as a Drug Delivery System H.-C. Yang, Kun Shan Univ., Taiwan

<p>7P-11-85 Biocompatible Nanocomposite: Ultrahigh Broadband Absorption and White-Light-Induced Collective Heating Effects of <i>B. mori</i> Silk/Gold Nanoparticles Thin Films D. Wan 1, S.H. Tsao 1, C.-C. Yu 2, K.-T. Lin 2 and H.-L. Chen 2, 1 Natl. Tsing-Hua Univ. and 2 Natl. Taiwan Univ., Taiwan</p>	<p>7P-11-86 Dielectric Properties of Polyvinylidene Fluoride - $\text{Na}_{1/3}\text{Ca}_{1/3}\text{Bi}_{1/3}\text{Cu}_3\text{Ti}_4\text{O}_{12}$ /Ni-nanoparticles and Multiwall Carbon-Nanotubes P. Kum-onsa and P. Thongbai, Khon Kaen Univ., Thailand</p>	<p>7P-11-87 Electroluminescent Properties of Bis-Anthracenylphenylenes End-capped with Naphthalene Groups J.J. Kim 1, S.N. Park 1, S.E. Lee 2, H.W. Lee 2, Y.K. Kim 2 and S.S. Yoon 1, 1 Sungkyunkwan Univ. and 2 Hongik Univ., Korea</p>	<p>7P-11-88 Synergistic Effect of TiCl_4-ZnO Treated TiO_2 Nanotubes in Dye-Sensitized Solar Cell J.-S. Lee, K.-H. Kim and H.-W. Choi, Gachon Univ., Korea</p>
<p>7P-11-89 Novel Blue Emitters Based on Anthracene Derivatives with Naphthalene and Phenylquinoline Moieties for OLEDs S.N. Park 1, S.B. Lee 1, C.W. Kim 1, H.W. Lee 2, Y.K. Kim 2 and S.S. Yoon 1, 1 Sungkyunkwan Univ. and 2 Hongik Univ., Korea</p>			
NanoTool			
Chairpersons: R. Kometani (Univ. of Tokyo) and K. Sugano (Kobe Univ.)			
<p>7P-11-90 Highly-sensitive Surface-enhanced Raman Spectroscopy with Directionally-Arrayed Gold Nanoparticle Dimers K. Sugano 1, D. Matsui 2, T. Tsuchiya 2 and O. Tabata 2, 1 Kobe Univ. and 2 Kyoto Univ., Japan</p>	<p>7P-11-91 700°C-High-Vacuum-Annealing Effect on Mechanical Reliability of Ga Implanted Si Nanowires T. Fujii 1,2, K. Kosugi 3, R. Kometani 3, K. Sudoh 4, M. Naito 5, S. Inoue 1 and T. Namazu 1, 1 Univ. of Hyogo, 2 JSPS, 3 Univ. of Tokyo, 4 Osaka Univ. and 5 Konan Univ., Japan</p>	<p>7P-11-92 Welding Bi-Metal Microwires by Joule Heating T. Sunagawa and H. Tohmyoh, Tohoku Univ., Japan</p>	<p>7P-11-93 Measurement of Intracellular Strain Energy Distributions by Using Inverted-Electron Beam Lithography T. Hoshino, H. Miyazako, A. Wagatsuma and K. Mabuchi, Univ. of Tokyo, Japan</p>
<p>7P-11-94 Validity of Pt-Blue Staining on FIB/SEM Observation of Human Mitotic Chromosome K. Kaneyoshi 1, S. Fukuda 1, A. Dwiranti 1, Y. Nakao 1, J. Kato 2, Y. Otsuka 2, H. Takata 1, S. Uchiyama 1, S. Ogawa 3 and K. Fukui 1, 1 Osaka Univ., 2 Toray Res. Ctr. and 3 AIST, Japan</p>	<p>7P-11-95 Homogeneous Ultra-Long Overhang Nanostructure Fabrication by Feedback Control of Blanking Time on Focused-Ion-Beam Chemical Vapor Deposition R. Kometani and T. Aonuma, Univ. of Tokyo, Japan</p>	<p>7P-11-96 The Relationship between Fabrication and Resonant Properties of Nanomechanical Resonator Fabricated by FIB/EB Dual Beam Lithography Y. Miyata, S. Warisawa, S. Ishihara, E. Maeda and R. Kometani, Univ. of Tokyo, Japan</p>	<p>7P-11-97 Scanning Tunneling Spectroscopy Study of Graphene Nanoribbons Formed on Highly Oriented Pyrolytic Graphite O. Kubo, Y. Sugiyama, R. Omura, M. Shigehara, H. Tabata, N. Mori and M. Katayama, Osaka Univ., Japan</p>
<p>7P-11-98 A Facile Approach to Prepare Pt-Si Nanoball Modified Tip Apex for Scanning Kelvin Probe Microscopy C.-T. Lin 1, M.-N. Chang 1,2, Y.-W. Chen 2, S.-H. Tung 2, J. Su 1, C.-T. Wu 1, C.-N. Hsiao 1 and M.-H. Shiao 1, 1 NARL and 2 Natl. Chung Hsing Univ., Taiwan</p>	<p>7P-11-99 Measurement of Magnetic Nanodot Arrays Using Scanning Near-Field Polarization Microscope T. Jin 1, R. Takahashi 1, Y. Yin 1, S. Hosaka 1 and T. Miura 2, 1 Gunma Univ. and 2 Unisoku, Japan</p>	<p>7P-11-100 Triple-Walled Gold Structures with Nano-Gaps for Non-Resonance Surface Enhanced Raman Scattering of Rhodamine 6G Molecules T. Baba 1, Y. Lee 1, A. Ueno 1, R. Takigawa 2, J.-J. Delaunay 1, R. Kometani 1 and E. Maeda 1, 1 Univ. of Tokyo and 2 Kyushu Univ., Japan</p>	
Nanoimprint, Nanoprint and Rising Lithography			
Chairpersons: R. Washiya (Hitachi) and H. Hiroshima (AIST)			
<p>7P-11-101 Relationship between Aspect-Ratio and Narrowing of Reflowed Photoresist Structures H. Mekar, AIST, Japan</p>	<p>7P-11-102 Highly Efficient PEDOT:PSS/Si Hybrid Solar Cell with Periodic Nanopyramids Fabricated by UV-Curing Nanoimprint Lithography P.-J. Ku, J.-Y. Chen and K.W. Sun, Natl. Chiao Tung Univ., Taiwan</p>	<p>7P-11-103 Evaluation of the Fluorinated Antisticking Layer by Using Photoemission and NEXAFS Spectroscopies Y. Haruyama 1, M. Okada 1, Y. Nakai 1, T. Ishida 2 and S. Matsui 1, 1 Univ. of Hyogo and 2 AIST, Japan</p>	<p>7P-11-104 Fabrication of Zirconia Micro- and Nanopatterns for Roll-to-Roll UV Imprint Lithography Stamps S. Choo, H.-J. Choi, S. Ryu, S.-J. Park and H. Lee, Korea Univ., Korea</p>
<p>7P-11-105 Thermal Imprinting for Aluminum Alloy Using Ni-W Electroformed Mold M. Yasui 1, S. Kaneko 1, M. Takahashi 2, T. Sano 3, Y. Hirabayashi 1, T. Ozawa 1 and R. Maeda 2, 1 Kanagawa Industrial Technol. Ctr., 2 AIST and 3 LEAP, Japan</p>	<p>7P-11-106 Lifetime Amelioration of ARS Replica Molds by Means of Half-Filling UV-NIL N.A.T. Yusof 1,2, T. Hayashi 1 and J. Taniguchi 1, 1 Tokyo Univ. of Sci., Japan and 2 Univ. of Malaysia Pahang, Malaysia</p>	<p>7P-11-107 Precise Nanoimprint Processes Optimized by Surface Energy Model Y. Kunii and A. Kawai, Nagoya Univ. of Technol., Japan</p>	<p>7P-11-108 Reverse Tone UV Nanoimprint Lithography with Fluorescent UV-Curable Resin T. Uehara, S. Kubo and M. Nakagawa, Tohoku Univ., Japan</p>
<p>7P-11-109 Patterning of ITO Layer of GaN-Based LED by Photolithography of Nano Patterned Resist Sheet O. Yamazaki, T. Katsumata, N. Shirokura and F. Yamaguchi, Asahi Kasei, Japan</p>	<p>7P-11-110 Aspect Ratio Enhancement Process by Using Bi-Layer Resist K. Shimomukai, H. Kawata, M. Yasuda and Y. Hirai, Osaka Pref. Univ., Japan</p>	<p>7P-11-111 3D HSQ Structure Fabrication by Reversal RT-Nanoimprint Using PDMS Mold N. Sugano, M. Okada, Y. Haruyama and S. Matsui, Univ. of Hyogo, Japan</p>	<p>7P-11-112 Surface Force Measurement of Ultraviolet Nanoimprint Lithography Materials J. Taniguchi 1, M. Hasegawa 2, H. Amemiya 2 and H. Kobayashi 2, 1 Tokyo Univ. of Sci. and 2 ELIONIX, Japan</p>