Tuesday, November 5

Room E (2F)

13:30-16:40 MNC 2013 Technical Seminar in Japanese

Room F (2F)

17:00-19:00 Get Together Party

Wednesday, November 6

Room A (Royton Hall A, 3F)

6A-1: Plenary Session
Charipersons:  T. Kozawa (Osaka Univ.) and M. Nagase (Univ. of Tokushima)

9:30-9:50
Opening Remarks:  T. Meguro (Tokyo Univ. of Sci.)
Award Presentation:  T. Kozawa (Osaka Univ.) and T. Meguro (Tokyo Univ. of Sci.)
MNC 2012 Outstanding Paper, Most Impressive Presentation, Most Impressive Poster and Young Author’s Award Announcement from Committee: Y. Miyamoto (Tokyo Inst. of Technol.)

6A-1-1
9:50
Strategy and Dreams of the Future Lithography (Plenary)
J.J.H. Chen, TSMC, Taiwan

Lobby (in front of Royton Hall, 3F)

Coffee Break

6A-1-2
10:50
STT-MRAM and NV-Logic for Low Power Systems (Plenary)
T. Endoh, Tohoku Univ., Japan

6A-1-3
11:30
Metal Oxide Resistive Switching Memory (RRAM): Devices, Fabrication, and Self-Assembly Patterning for Random Logic and Memory Devices (SRAM, NAND, RRAM) (Plenary)

Announcement from Committee:

Y. Miimoto (Tokyo Univ. of Sci.)

Opening Remarks:  T. Meguro (Tokyo Univ. of Sci.)

Room B (Royton Hall B, 3F)

6B-2: Functional Nanodevices
Charipersons:  K. Nishiguchi (NTT)

13:30

6B-2-1
13:30
Atomically Thin MoS2: a Two Dimensional Semiconductor beyond Graphene (Invited)
A. Castellanos Gomez, Delft Univ. of Technol., The Netherland

6B-2-2
14:00
Study of Transparent Thin Film Transistors with Periodic Groove Channels Fabricated by Sol-Gel Process and Nano Imprint Technology

6B-2-3
14:20
Error Rate Analysis and Lifetime Estimation of Release Coated NIL Mold
M. Okada and J. Taniguchi, Tokyo Univ. of Sci., Japan

6B-2-4
14:40
Phtochronic Crystal Based on Plasticized PVC for Ion Sensing
S. Aki, T. Endo, K. Suyoshi and H. Hisamoto, Osaka Pref. Univ., Japan

Room C (Emerald Room A, 3F)

6C-2: Nano-Tool
Charipersons:  O. Kubo (Osaka Univ.)

13:30

6C-2-1
13:30
MEMS-in-TEM for Characterization of Materials at the Nanoscale (Invited)
T. Ishida 1 and H. Fujita 2, 1 Tokyo Inst. of Technol. and 2 Univ. of Tokyo, Japan

6C-2-2
14:00
Dynamic Characteristics Evaluation of Nanomechanical Resonators by the Application of Stroboscopic Scanning Electron Microscope
K. Nakano, S. Warisawa, S. Ishihara and R. Kometani, Univ. of Tokyo, Japan

6C-2-3
14:20
Reduced Thermal Conductivities of Si 1D Phononic Crystal and Nanowire
J. Maire and M. Nomura, Univ. of Tokushima, Japan

6C-2-4
14:40
Seebeck Coefficient of Co-doped Si Nanowires for High-sensitive Thermopile Infrared Photodetector
Y. Suzuki 1, F. Salleh 1,2, M. Shimomura 1, A. Ishida 1 and H. Ikeda 1,1 Shizuoka Univ. and 2 JSPS, Japan

Room D (Emerald Room B, 3F)

6D-2: Advanced Photolithography
Charipersons:  T. Sato (Toshiba) and J. Miyazaki (ASML)

13:30

6D-2-1
13:30
Performance and Volume Introduction of ASML’s NXE Platform (Invited)
J-W. van Horst 1, R. Peeters 1, S. Lok 1, M. van Noordenburg 1, N. Hamed 1, D. Smith 1, P. Kuerz 2, M. Lowisch 2, H. Keijer 1, D. Ockwell 1, J. Stoeldraijer 1, 1 ASML, The Netherlands and 2 Carl Zeiss, Germany

6D-2-2
14:00
EUV Scatterometry Microscope Observation Result of Phase Defects using Micro Coherent EUV Scatterometry Microscope
Y. Tanaka 1, T. Harada 1, T. Watanabe 1, Y. Usui 2 and H. Kinoshita 1, 1 Univ. of Hyogo and 2 EIDEC, Japan

6D-2-3
14:20
Extended Scalability with Self-Aligned Multiple Patterning
K. Oyama, S. Yamauchi, S. Natori, A. Hara, M. Yamato and H. Yaegashi, Tokyo Electron, Japan

6D-2-4
14:40
50-nm Resolution of Two-dimensional Patterning in Water by using Inverted-electron Beam Lithography
T. Hoshino, H. Miyazako, A. Nakayama, O. Fukayama and K. Mabuchi, Univ. of Tokyo, Japan

6D-2-5
14:40
Target Cell Collection Hemispheres for Size-selective Superparamagnetic Metal Defects using Micro Coherent EUV Scatterometry Microscope
K. Oyama, S. Yamauchi, S. Natori, A. Hara, M. Yamato and H. Yaegashi, Tokyo Electron, Japan
<table>
<thead>
<tr>
<th>Room A (Royton Hall A, 3F)</th>
<th>Room B (Royton Hall B, 3F)</th>
<th>Room C (Emerald Room A, 3F)</th>
<th>Room D (Emerald Room B, 3F)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6A-2: Author’s Interview</strong> 16:55-17:05</td>
<td><strong>6B-2-5</strong> 15:00 Dynamic Tuning SERS of Silver Interdigital Nanogratings under External Electric Field W.J. Sun, B.G. Quan, S.B. Tian, L. Li, Y.L. Li, J.J. Li and C.Z. Gu, Chinese Academy of Sci., China</td>
<td><strong>6C-2: Author’s Interview</strong> 15:00-15:10</td>
<td><strong>6D-2-5</strong> 15:10 Aerial Image Dependence on Extreme-ultraviolet Pellicle Support K.-H. Ko 1, G.-J. Kim 1, M. Yeung 2, E. Barouch 3 and H.-K. Oh 1, 1 Hanyang Univ., Korea, 2 Fastlitho and 3 Boston Univ., USA</td>
</tr>
<tr>
<td><strong>6A-3: Nanoimprint, Nanoprint and Rising Lithography II</strong></td>
<td><strong>6B-3-1</strong> 16:35 Patterning of InP by Nanoelectrode Lithography A. Yokoo 1, J. Chau 1, M. Fukuda 2 and M. Notomi 1, 1 NTT and 2 Hirosaki Univ., Japan</td>
<td><strong>6C-3: Nanoscale Memory</strong> Chairpersons: N. Banno (Leap) Y. Ishikawa (Nara Inst. of Sci. and Technol.)</td>
<td><strong>6D-3: Nanofabrication</strong> Chairpersons: T. Hasegawa (NIMS) A. Koinoh (Fukuoka Univ.)</td>
</tr>
<tr>
<td><strong>6A-3-1</strong> 16:35 Towards Waferscale Nanostructuring of Oxides using Step-and-Flash Imprint Lithography S.S. Dinachali 1, 2, J. Dumond 1, M.S.M. Saifullah 1, K.K. Anshah-Antwi 1, 2, R. Ganesan 3, E.S. Thian 2 and C. Ho 1, 2, 1 A*STAR and 2 Natl. Inst. of Singapore, Singapore and 3 Birla Inst. of Technol. &amp; Sci., India</td>
<td><strong>6B-3-1</strong> 16:55 Uniform Bipolar Switching, Large On/off Window, and Low Power in HfOx-based ReRAM with a Thin Barrier Layer S. Ban and O. Kim, POSTECH, Korea</td>
<td><strong>6C-3-1</strong> 16:35 Fabrication of Nonvolatile Memory Devices with Metal-oxide Quantum Dots on Sandwiched Graphene Monolayer between SiO2 Thin Films D.U. Lee 1, S.M. Sim 1, K.S. Lee 1, G. Oh 1, E.K. Kim 1 and H. Im 2, 1 Hanyang Univ. and 2 Dongguk Univ., Korea</td>
<td><strong>6D-3-1</strong> 16:35 Development of Electron Beam Lithography using Wafer-size nc-Si Surface Electron Emitter A. Kojima 1, 2, N. Ikegami 2, H. Ohyi 1, N. Koeshida 2 and M. Esashi 3, 1CREST, 2 Tokyo Univ. of Agr. &amp; Technol. and 3 Tohoku Univ., Japan</td>
</tr>
<tr>
<td><strong>6A-3-2</strong> 16:55 Towards Waferscale Nanostructuring of Oxides using Step-and-Flash Imprint Lithography S.S. Dinachali 1, 2, J. Dumond 1, M.S.M. Saifullah 1, K.K. Anshah-Antwi 1, 2, R. Ganesan 3, E.S. Thian 2 and C. Ho 1, 2, 1 A*STAR and 2 Natl. Inst. of Singapore, Singapore and 3 Birla Inst. of Technol. &amp; Sci., India</td>
<td><strong>6B-3-2</strong> 16:55 Fabrication of Nonvolatile Memory Devices with Metal-oxide Quantum Dots on Sandwiched Graphene Monolayer between SiO2 Thin Films D.U. Lee 1, S.M. Sim 1, K.S. Lee 1, G. Oh 1, E.K. Kim 1 and H. Im 2, 1 Hanyang Univ. and 2 Dongguk Univ., Korea</td>
<td><strong>6C-3-2</strong> 16:35 Electroforming-free Resistive Switching Characteristics of GdOx, TbOx and HoOx Nonvolatile Memory Devices C.-Y. Chen 1, C.-H. Lu 1, J.-L. Her 1, K. Koyama 2 and T.-M. Pan 1, 1 National Taiwan University and 2 National Taiwan Ocean University, Taiwan</td>
<td><strong>6D-3-2</strong> 16:45 Study on Conductive Filaments formed in ReRAM Devices through Temperature Dependence of Electrical Transport Properties Y. Hamada, D. Ito, S. Otsuka, T. Shimsu and S. Shingubara, Kansai Univ., Japan</td>
</tr>
<tr>
<td><strong>6A-3-4</strong> 16:15 Analysis of Template Releasing Process based on Fracture Mechanics T. Shiotsu 1, 2, S. Ooi 3, Y. Watanabe 3, T. Tochino 1, M. Yasuda 1, 2, H. Kawata 1, 2, T. Kobayashi 3 and Y. Hirai 1, 2, 1 Osaka Pref. Univ., 2JST-CREST and 3 Mechanical Design, Japan</td>
<td><strong>6B-3-4</strong> 16:35 Ultrafast-write-current Ultrafast-write-current Phase-change Memory Y. Yin and S. Hosaka, Gunma Univ., Japan</td>
<td><strong>6C-3-4</strong> 16:35 Miniaturization of Exposure Area for Electron Beam Lithography using Proximity Effect Correction toward Si Optical Circuits Y. Atsumi 1, N. Tatsuhiko 2, N. Nishiyama 1, Y. Miyamoto 1 and T. Ara 1, 1 Tokyo Inst. of Technol., Japan and 2 GeneSys, Germany</td>
<td><strong>6D-3-4</strong> 17:05 Effect of Confining Filaments on the Current – Voltage Characteristics of Resistive Change Memory by using Anodic Porous Alumina Y. Tanimoto 1, Y. Hamada 2, S. Otsuka 2, T. Shimsu 2, S. Shingubara 2, T. Watanabe 1, Y. Takano 1 and K. Takase 1, 1 Nihon Univ. and 2 Kansai Univ., Japan</td>
</tr>
<tr>
<td><strong>6A-3-5</strong> 16:35 Complex Nanoscale Structures by Nanoimprinting and Atomic Layer Deposition T. Haatainen, M. Kainlaini, S. Arpiainen, M. Markkanen, J. Maries, R.L. Purunen and J. Ahopelto, VTT Technical Res. Ctr. of Finland, Finland</td>
<td><strong>6B-3</strong> 16:55-17:05</td>
<td><strong>6C-3</strong> 16:55-17:05</td>
<td><strong>6D-3</strong> 17:25-17:35</td>
</tr>
</tbody>
</table>

Lobby (in front of Royton Hall, 3F)
### Thursday, November 7

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Room A (Royton Hall A, 3F)</th>
<th>Room B (Royton Hall B, 3F)</th>
<th>Room C (Emerald Room A, 3F)</th>
<th>Room D (Emerald Room B, 3F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-10:00</td>
<td>Room C</td>
<td>An Overview of the Computational Requirements for a Full Chip Patterning solution using Directed Self Assembly (Invited) K. Lai 1, M. Ozlem 2, J.W. Pitera 2, C-C. Liu 3, M. Guillorn 4, H. Tsai 4 and J. Cheng 4</td>
<td>7B-4-1 High-charge-sensitivity Radio-frequency Field-effect Transistor with Large and Tunable Readout Voltage K. Nishiguchi 1, F. Wang 1, K. Nishiguchi 2, A. Fujimura 2, G. Patriarche 1, D. Troadee 1, B. Legrand 1, G. Dambrine 1 and D. Theiron 1, 1 CNRS, France and 2 NTT, Japan</td>
<td>7C-4-1 Graphene: from Growth to Applications (Invited) P-W. Chi, National Tsing Hua Univ., Taiwan</td>
<td>7D-4-1 Novel Functionalities Caused by Mechanical Strain in SnO₂-based Materials (Invited) M. Sakurai 1, K. Liu 1,2 and M. Aono 1, 1 NIMS, Japan and 2 Chinese Academy of Sci., China</td>
</tr>
<tr>
<td>10:00-10:40</td>
<td>Room C</td>
<td>Fast, Simplified and Predictive Modeling of DSA (Invited) K. Yoshimoto, K. Fukawatase, Y. Hori and T. Taniguchi, Kyoto Univ., Japan</td>
<td>7B-4-2 Dual-gate Silicon Single-electron Transistor Threshold Voltage Mapping at Nanoscale with a Scanning Microwave Microscope N. Clément 1, F. Wang 1, K. Nishiguchi 2, A. Fujimura 2, G. Patriarche 1, D. Troadee 1, B. Legrand 1, G. Dambrine 1 and D. Theiron 1, 1 CNRS, France and 2 NTT, Japan</td>
<td>7C-4-2 Intercalation of Molecules into Multi-layer Graphene for LSI Interconnects H. Nakano, B. Zhou, D. Kondo, K. Hayashi, S. Nakahara, S. Sato and N. Yokoyama, AIST, Japan</td>
<td>7D-4-2 Fabrication and Characterization of Lateral MnAs Nanowires by Selective-area Metal-Organic Vapor Phase Epitaxy H. Kato 1, S. Sakita 1, M. Fischer 2 and S. Hara 1, 1 Hokkaido Univ., Japan and 2 Justus-Liebig Univ. Giessen, Germany</td>
</tr>
<tr>
<td>11:20-12:00</td>
<td>Room C</td>
<td>An Author’s Interview 12:15-12:25</td>
<td>7B-4-5 Study on Weak Biological Signal Detection利用Stochastic Resonance in a GaAs-based Nanowire FET Y. Imai, M. Sato, T. Tanaka and S. Kasai, Hokkaido Univ., Japan</td>
<td>7C-4-5 Improved Internal Quantum Efficiency of GaN-based Light Emitting Diodes using p-AlGaN Trench in Multi-quantum Well G. Kim 1, J. Kim 1, E. Park 1, D. Kang 2 and B.-G. Park 2, 1, 1 Seoul Natl. Univ. and 2 Samsung Electronics, Korea</td>
<td>7D-4-5 Fabrication of Zinc Oxide and Zinc Hydroxide Nanosheets and the Photoluminescent Properties of their Layered Materials Ö. Sağlam 1, Y. Matsuda 2, A. Shigeta 2 and Y. Matsumoto 2, 1 Technische Universität München, Germany, 2 Kumamoto Univ. and 3 JST-CREST, Japan</td>
</tr>
<tr>
<td>12:00-13:00</td>
<td>Room C</td>
<td>Coffee Break</td>
<td>7B-4-6 Improved Internal Quantum Efficiency of GaN-based Light Emitting Diodes using p-AlGaN Trench in Multi-quantum Well G. Kim 1, J. Kim 1, E. Park 1, D. Kang 2 and B.-G. Park 2, 1, 1 Seoul Natl. Univ. and 2 Samsung Electronics, Korea</td>
<td>7C-4-6 Author’s Interview 12:05-12:15</td>
<td>7D-4-6</td>
</tr>
</tbody>
</table>
Directed Self-Assembly of Liquid Crystaline Block Copolymer and Structural Transcription to Gold Nanorod Array
N. Yamashita, T. M. Komura 1, K. Nagai 1, T. Iyoda 1, K. Aida 2, Y. Tada 2 and H. Yoshida 1, 1 Tokyo Inst. of Technol. and 2 Hitachi, Japan

Importance of Spatial Arrangement of Cell Network Patterns for Precise and Stable Measurement of in Vitro Properties of Cells
F. Nomura, T. Hamada, A. Hattori, K. Matsuura, H. Terazono and K. Yasuda, Tokyo Medical and Dental Univ., Japan

Molecular- and Polymer-based Electronic Devices on Rigid and Flexible Substrates (Invited)
T. Lee, Seoul National Univ., Korea

Directed Self Assembly Materials for Sub 10nm Node
T. Sintprajim and S. Meansiri, Suranaree Univ. of Technol., Thailand

Structural Transcription to Gold Crystalline Block Copolymer and Directed Self-Assembly of Liquid Nanofibers for Energy Storage of Ni-NiO/carbon Composite
T. Gohara, T. Arie and S. Akita, Osaka Pref. Univ., Japan

Via Filling Methods with Metal/Polymer Composite for 3D-LSI
B. Horvath, J. Kawakita and T. Chikyow, NIMS, Japan

Platform for Low Noise Biosensors using Microwells Sealed with Lipid Bilayers
K. Kashimura, R. Forbes and K. Sumitomo, NTT, Japan

Numerical Investigation of Organic Thin-film Transistors using a Thermionic Field Emission Model
K. Noda 1, Y. Wada 1 and T. Toyabe 2, 1 Keio Univ. and 2 Toyo Univ., Japan

Pulse Radiolysis Study of Polystyrene-based Polymers with Adding Photocidal Generators (PAGs): Molecular Dynamics of Extreme-ultraviolet and Electron Beam Resist
T. Druzhinina 1, S. Wuister 1, E. van Wezel 2, Kochi Univ. and 3 Tokyo Inst. of Technol., Japan

Throughput Comparison of Multi-exposure and Multi-beam Laser Interference Lithography on Nano Patterned Sapphier Substrate Process
T. Lin, T. Huang, Y. Yang and C. Fu, Natl. Tsing Hua Univ., Taiwan

Microphase Separation of a Nematic Liquid Crystaline Block Copolymer Thin Film assisted by Small Nematic Liquid Crystaline Molecules
S. Kubo 1, S. Kobayashi 1, S. Hadano 1, M. Komura 3, T. Iyoda 3 and M. Nakagawa 1, 1 Tohoku Univ., 2 Kochi Univ. and 3 Tokyo Inst. of Technol., Japan

Chemical Reaction Analysis of PHS CA Resist System for EUVL using Soft X-ray Absorption Spectroscopy
K. Emura 1, T. Watanabe 1, M. Yamaguchi 1, H. Tanino 1, M. S. Shiono 2, Y. Haruyama 1, D. Muramatsu 1, K. Ohnori 2, K. Sato 2, T. Harada 1 and H. Kinoshita 1, 1 Hokkaido Univ. and 2 Osaka Univ., Japan

Novel EUV Resist Materials based on Noria (Water-wheel Like Cyclic Oligomer) Derivatives with Pendent Ethoxy and Adamantyl Ester Groups
S. Matsubara 1, H. Kudo 1, T. Watanabe 2, K. Emura 2 and H. Kinoshita 2, 1 Kansai Univ. and 2 Univ. of Hyogo, Japan

Acid Generation Mechanism in Solid Poly(4-hydroxystyrrene) upon Exposure to Electron Beam
H. Yamamoto and T. Kozawa, Osaka Univ., Japan

In-situ Optical Microscopy of Initial Growth Stage of Carbon Nanocells
T. Gohara, T. Arie and S. Akita, Osaka Pref. Univ., Japan

Nanometrology of Sub-20 nm 2D Features from BCPs Self-assembly by NIL Technology
C. Simão 1, W. Khunsin 1, D. Tuchapsky 2, N. Kehagias 1, J. Amann 2, M. A. Morris 2, 3 and C. M. Sotomayor Torres 1, 4, 1 Inst. Catalan of Nanotechnology, Spain, 2 Univ. College Cork 3 Trinity College Dublin, Ireland and 4 Catalan Inst. of Res. and Advanced Studies, Spain

Placement Error of the Contact Hole Shrink by Directed Self-assembly of Block Copolymers
T. Drzhihinina 1, S. Wuister 1, E. van Wezel 2, Kochi Univ. and 3 Tokyo Inst. of Technol., Japan

Electronic Devices on Rigid and Flexible Substrates
T. Lee, Seoul National Univ., Korea

Contact Hole Shrink by Directed Self-assembly: Process Integration and Stability monitored on 300mm Pilot Line
I. Servin 1, R. Tiron 1, A. Garbhi 1, M. Angoud 1, X. Chevalier 2, X. Bossy 1, J. Belledent 1, P. Pimenta Barros 1, C. Navarro 2, G. Cunge 1, S. Barnola 1, M. Asai 3 and C. Pieczulewski 4, 1 CEA-LETI, 2 ARKEMA, France, 3 Dainippon Screen and 4 Sokudo, Japan

Simulation of Kinetics in High-density Ionization Extra-ultraviolet (EUV) Resist Process
K. Nishino 1, K. Okamoto 1, T. Kozawa 2, R. Fujiyoshi 1 and T. Sumiyoshi 1, 1 Hokkaido Univ. and 2 Osaka Univ., Japan

Nanocarbons
Chairpersons: M. Tanemura (Nagoya Inst. of Technol.) and S. Okada (Univ. of Tsukuba)

Fabrication and Characterization of Ni-NiO/carbon Composite Nanofibers for Energy Storage Applications
T. Srinthra and S. Meansiri, Suranaree Univ. of Technol., Thailand

In-situ Optical Microscopy of Initial Growth Stage of Carbon Nanocells
T. Gohara, T. Arie and S. Akita, Osaka Pref. Univ., Japan

Removal of Metallic in Carbon Nanotubes using Molecular Glass Thin Films
K. Otsuka, T. Inoue, S. Chisaki and S. Maruyama, Univ. of Tokyo, Japan

Energetics and Electronic Structures of C80 included within [n]Cyclacene Molecules
S. Kigure 1 and S. Okada 1, 2, 1 Univ. of Tsukuba and 2 JST-CREST, Japan

High-density Ionization
K. Nishino 1, K. Okamoto 1, T. Kozawa 2, R. Fujiyoshi 1 and T. Sumiyoshi 1, 1 Hokkaido Univ. and 2 Osaka Univ., Japan

Nanocarbons
Chairpersons: M. Tanemura (Nagoya Inst. of Technol.) and S. Okada (Univ. of Tsukuba)

Fabrication and Characterization of Ni-NiO/carbon Composite Nanofibers for Energy Storage Applications
T. Srinthra and S. Meansiri, Suranaree Univ. of Technol., Thailand

In-situ Optical Microscopy of Initial Growth Stage of Carbon Nanocells
T. Gohara, T. Arie and S. Akita, Osaka Pref. Univ., Japan

Removal of Metallic in Carbon Nanotubes using Molecular Glass Thin Films
K. Otsuka, T. Inoue, S. Chisaki and S. Maruyama, Univ. of Tokyo, Japan

Energetics and Electronic Structures of C80 included within [n]Cyclacene Molecules
S. Kigure 1 and S. Okada 1, 2, 1 Univ. of Tsukuba and 2 JST-CREST, Japan

7P-16: Low Temperature Synthesized Graphene by Surface Wave Plasma CVD as Effective Oxidation Barrier G. Kaila 1, O. Shimine 2, K. Wakita 2, M. Umeno 2 and M. Tanemura 1, 1 Nagoya Inst. of Technol. and 2 Chubu Univ., Japan

7P-17: Graphene Fabrication from Hydrocarbons by using Non-transferred Arc Plasma J.-J. Baek, T.-H. Kim, S. Choi and D.-W. Park, Inha Univ., Korea


7P-20: Growth of CdTe Structures on Graphene Y. Jung, G. Yang, S. Chan, D. Kim and J. Kim, Korea Univ., Korea

7P-21: Fabrication of Flexible Transparent Conductive Films with Graphene Nanosheets and Silver Nanowires P.H. Jian 1, M.J. Huang 1, N.W. Pu 2, Y.M. Liu 1 and M.D. Ger 1, 1 Natl. Defense Univ. and 2 Yuan Ze Univ., Taiwan

7P-22: Modification of Paraffin Phase Change Materials using Nanographite Additives C.W. Liao 1, C.H. Wu 1, G.N. Shi 1, N.W. Pu 2, Y.M. Liu 1 and M.D. Ger 1, 1 Natl. Defense Univ. and 2 Yuan Ze Univ., Taiwan

7P-23: Structural Dependence of Electronic Properties of Graphene Nanoribbons on an Electric Field A. Yamamaka 1 and S. Okada 1, 1 Univ. of Tsukuba and 2 JST-CREST, Japan

7P-24: Modulation of Carrier Mobility in Graphene Double Layer Structure by Dielectric Environment Effect K. Hosono and K. Wakabayashi, NIMS, Japan

7P-25: Two-dimensional sp² Carbon Network of Fused Pentagons: All Carbon Ferromagnetic Sheet M. Maruyama 1 and S. Okada 1, 1 Univ. of Tsukuba and 2 JST-CREST, Japan

7P-26: Nanodevices

Chairpersons: Y. Ishikawa (Nara Inst. of Sci. and Technol.) and N. Banno (Leap)  


7P-29: Highly CO Sensitivity of ZnO Tetrapods modified by TiO₂ Powder T. Santhaveesuk 1,2, K. Shimano 3, M. Yuasa 3, D. Wongtranapanish 2 and S. Chuopun 2, 1 Pibulsongkram Rajabhat Univ. and 2 Chiang Mai Univ., Thailand and 3 Kyushu Univ., Japan

7P-30: Highly ZnO Nanorod Arrays on Sn-doped ZnO Seed Layer by Simple Sonicated Sol-gel Immersion for Dye-sensitized Solar Cells I. Saudri, M.H. Mamat, N.D. Sidin, M.F. Malik and M. Rusop, Univ. Teknologi MARA, Malaysia

7P-31: A Study of Photoelectric Conversion Efficiency depending on Defect States of InAs Quantum Dot Solar Cell grown by Molecular Beam Epitaxy K.S. Lee 1, D.U. Lee 1, E.K. Kim 1 and W.L. Choi 2, 1 Hanyang Univ. and 2 KIST, Korea

7P-32: Novel Fabrication Technique of Amorphous Carbon Thin film from Palm Oil Precursor by Bias-assisted Pyrolysis-CVD for Amorphous Carbon Solar Cells A. Ishak, K. Dayana and M. Rusop, Univ. Teknologi MARA, Malaysia

7P-33: Novel Fabrication of Al₂O₃ for gate dielectrics in the Top-Gated Graphene Field Effect Transistors C.-J. Lai 1 and S.-C. Tseng 2, 1 Yuan Ze Univ. and 2 ITRI, Taiwan

7P-34: Enhanced Performance of 2D Graphene Nanoparticle in Dye-sensitized Solar Cells C.-H. Hsu 1, C.-C. Chen 1, C.-C. Lai 2, L.-G. Chen 1 and P.-S. Chan 1, 1 Natl. Tsing Hua Univ. of Taiwan and 2 Tech. Univ. of Chem. Tech., Taiwan

7P-35: Fabrication of Flexible Transparent Conductive Films with Graphene Nanosheets and Silver Nanowires P.H. Jian 1, M.J. Huang 1, N.W. Pu 2, Y.M. Liu 1 and M.D. Ger 1, 1 Natl. Defense Univ. and 2 Yuan Ze Univ., Taiwan


7P-40: Novel Fabrication Technique of Amorphous Carbon Thin film from Palm Oil Precursor by Bias-assisted Pyrolysis-CVD for Amorphous Carbon Solar Cells A. Ishak, K. Dayana and M. Rusop, Univ. Teknologi MARA, Malaysia

7P-41: Inorganic-organic CdSe/ZnS Quantum Dot-poly(Methyl Methacrylate) Composite-based Unipolar Resistive Switching Memory Y.-C. Chen 1, H.-C. Yu 1, Y.-K. Su 1,2, C.-Y. Huang 3, T.-H. Liu 1 and T.-H. Chang 1, 1 Natl. Cheng Kung Univ., 2 Kung Shan Univ. and 3 Natl. Taiwan Univ., Taiwan


TP-7-44 Study of Reliability Testing in GaN-based Blue Light-emitting Diodes by Doping TiO2 Nanoparticles in Encapsulation Silicone
P.-C. Chien 2, Y.-C. Kuo 2, J.-C. Lien 1, L. Su 1, C.-C. Lin 1, N. Hong 2, and H.-Y. Lin 1, National Chiao Tung University, Taiwan

TP-7-45 Fabrication Technology of Large-area OLEDS Lightings with Shadow Mask Patterning Technology

TP-7-46 Effects of Current Spreading in GaN-based Light-emitting Diodes using ITO Spreading Pillar
J.H. Kim 1, G. Kim 1, J.K. Song 2, D.H. Kang 2 and B.-G. Park 1, 1 Seoul Natl. Univ. and 2 Samsung, Korea

TP-7-47 Improve Performance of β-Ga2O3 Nanowire Field Emitter by UV Irradiation
Y.H. Lin, Y.L.Wu and S.J. Chang, Natl. Cheng Kung Univ., Taiwan

TP-7-48 Withdrawn

TP-7-121L Planar Junctionless Poly-si Thin-film Transistors with Single Gate and Double Gate

TP-7-122L Fabrication of the Field Emission Lamp and Morphology Transform Analysis of Carbon Nano-coils
K.J. Chung 1, C.C.Chiang 1, Y.M. Liu 1, M.J. Youh 1, N.W. Pu 3 and M.D. Ger 1, 1 National Defense Univ. 2 Hsing Wu College and 3 Yuan Ze Univ., Taiwan

Nanofabrication
Chairpersons: A. Kohno (Fukuoka Univ.) and T. Shimizu (Nihon Univ., Japan)

TP-7-49 Study on Collective Morphology Dependence of Optical Reflectance Properties for a High Density Array of Silicon Nanowires
T. Yamaguchi 1, T. Shimizu 1, Y. Morosawa 2, K. Takase 2 and S. Shingubara 1, 1 Kansai Univ. and 2 Nihon Univ., Japan

TP-7-50 Fabrication of Ultrahigh Density 10-nm-order sized C Nanodot Array as a Pattern-transfer Mask
M. Huda, J. Li, Y. Yin and S. Hosaka, Gunma Univ., Japan

TP-7-51 Withdrawn

TP-7-52 Effect of the Working Pressure on the Boron Trichloride based ICP-RIE of Lithium Niobate Substrate
M.-H. Shiao 1, C.-M. Chang 1,2, J. Su 1, P.-L. Chen 1, W.-J. Hsieh 2 and C.-N. Hsiao 1, 1 Natl. Applied Res. Labs. and 2 Natl. Taiwan Univ., Taiwan

TP-7-53 Large Area Fabrication of Umbrella-like Silicon Cone Arrays Decorated with Au Nanospheres for Surface Enhanced Raman Scattering
Z. Hu, B. Quan, Y. Li, J. Li and C. Gu, Chinese Academy of Sci., China

TP-7-54 Fabrication and Optical Properties of Organic-inorganic Nanohybrids based on Self-organizing Nature of Lead Halide-based Layered Perovskites
M. Era, K. Soda, Y. Shironita and K. Sakaguchi, Saga Univ., Japan

TP-7-55 Withdrawn

TP-7-56 The Fabrication of PSSiZnO Nanomaterials as Chemical Sensors for the Detection of Ethanol Solution using an Electrochemical Impedence Technique
F.S. Hsiai, K.Eswar, Z.N Atikah, A. Azlinda, M. Rusop and S. Abdullah, Univ. Teknologi MARA, Malaysia

TP-7-57 Large Area Fabrication of Umbrella-like Silicon Cone Arrays Decorated with Au Nanospheres for Surface Enhanced Raman Scattering
Z. Hu, B. Quan, Y. Li, J. Li and C. Gu, Chinese Academy of Sci., China

TP-7-58 Withdrawn

TP-7-59 XANES Analysis of CoO,Mn1-xFe2O4 Nanoparticles prepared by Hydrothermal Method
N. Winya 1, S. Maensit 2 and E. Swatstiang 1, 1 Khon Kaen Univ. and 2 Suranaree Univ., Thailand

TP-7-124L Aluminum Doping of 4H-SiC using Chemical Wet Laser Processing
D. Marui, A. Ikeda, K. Nishi, H. Hosaka, Gunma Univ., Japan

Inorganic Nanomaterials
Chairpersons: K. Terabe (NIMS) and X.W. Zhao (Tokyo Univ. of Sci.)

TP-7-60 Low Temperature Crystallization of TiO2 Thin Film by RF Magnetron Sputtering using Oxygen Radical
Y. Shimazu 1, T. Higuchi 1, T. Okumura 1, E. Sakai 2, H. Kumigasira 2, M. Okawa 1 and T. Saitoh 1, 1 Tokyo Univ. of Sci. and 2 KEK, Japan

TP-7-61 Synthesis of ZnO Nanoparticles in Aqueous Solution and their Antibacterial Activities
G. Zhang 1, H. Morikawa 1 and Y. Chen 2, 1 Shinshu Univ., Japan and 2 Soochow Univ., China

TP-7-62 Photocatalytic Efficiency of N/3SnO2 Co-doped TiO2 Thin Films coated on Glass Fibers
P. Kongsong, L. Sikong, S. Niyomwas and V. Rachapech, Prince of Songkla Univ., Thailand

TP-7-63 Effect of Synthesis Temperature of h-MoO3 on their Photochromic Effect of Synthesis Temperature
K.J. Chung 1, C.C.Chiang 1, Y.M. Liu 1, M.J. Youh 1, N.W. Pu 3 and M.D. Ger 1, 1 National Defense Univ. 2 Hsing Wu College and 3 Yuan Ze Univ., Taiwan

TP-7-64 Decolorization of Methylene Blue by Ag/SrSnO3 composites under Ultraviolet Radiation
P. Junploy, S. Thongtem and T. Thongtem, Chiang Mai Univ., Thailand

TP-7-65 Surface Modification of ZnO with Silver Particles and Its Photocatalytic Activity
T. Srvorakul 1, K. Thongimchong 1, C. Suwanchawalit 1, S. Buddee 2 and S. Wongnawa 2, 1 Silpakorn Univ. and 2 Prince of Songkla Univ., Thailand

TP-7-66 Synthesis, Characterization and Photocatalytic Property of Gd-doped ZnO Nanorods
O. Yayapao 1, S. Thongtem 1, T. Thongtem 1 and A. Phuruangrat 2, 1 Chiang Mai Univ. and 2 Prince of Songkla Univ., Thailand

TP-7-67 Phase Transformation of VO2 Nanoparticles assisted by Microwave Heating
P. Pheoempoon and L. Sikong, Prince of Songkla Univ., Thailand
**Nanoimprint, Nanoprint and Rising Lithography**

**Chairpersons:** Y. Hirai (Osaka Pref. Univ.) and H. Hiroshima (AIST)

**7P-7-91**
Enhancement of Out-coupling Efficiency with Nano Sized High Refractive Index Pattern
J.H. Choi, H.J. Choi and H Lee, Korea Univ., Korea

**7P-7-92**
Efficiency Enhancement of Organic Thin Film Solar Cells by using Electrodyes with Nanoimprinted Light Guiding Structures

**7P-7-93**
Nanoimprinting of Self-organized Atomic Scale Patterns of Minerals onto the Oxide Glass Surface
N. Inoue 1, R. Yamauchi 1, G. Tan 1, H. Og 2, M. Mita 2, N. Okuda 3, S. Kaneko 1, A. Matsuda 1 and M. Yoshimoto 1, 1 Tokyo Inst. of Technol., 2 Kyodo International, 3 SCIvax and 4 Kanagawa Industrial Technol. Ctr., Japan

**7P-7-94**
The High Speed Roll to Roll Thermal Nanoimprint for Unique Organic/Inorganic Hybrid Material Coated Plastic Film
K. Kumazawa, H. Shibata and H. Suzuki, Nippon Soda, Japan

**7P-7-95**
Investigation of Fluorinated Molecular and Polymer Additives Suitable for a Viscous Acrylate Monomer in UV Nanoimprinting
S. Ito 1 and M. Nakagawa 1,2, 1 Tohoku Univ. and 2 JST-CREST, Japan

**7P-7-96**
Study of the Resistance of Antisticking Layer on Repeated UV Nanoimprint (2)
S. Iyoshi 1, M. Okada 1,5,6, K. Kobayashi 3, S. Kaneko 3,5, T. Kataie 2, K. Tone 2, Y. Haruyama 1,5, M. Nakagawa 3,5, H. Hiroshima 4,5 and S. Matsui 1,5, 1 Univ. of Hyogo, 2 Meisyo Kiko, 3 Tohoku Univ., 4 AISt and 5 JST-CREST, Japan

**7P-7-97**
Development of Improved SOFC Electrolyte Sheet by Micro Imprinting Process for Layered Material
Y. Tanaka, F. Tsumori, Y. Xu, T. Osada and H. Miura, Kyushu Univ., Japan

**7P-7-98**
Comparison of Cavity Filling Behaviors in Ultraviolet Nanoimprint Lithography using Condensing Gases with Different Saturated Vapor Pressure
S.-W. Youn 1, 2, K. Suzuki 1, Q. Wang 1,2 and H. Hiroshima 1,2, 1 AISt and 2 JST-CREST, Japan

**7P-7-99**
HSQ Replica Mold with Release Property fabricated by Room Temperature Nanoimprinting
N. Sugano, M. Okada, Y. Haruyama and S. Matsui, Univ. of Hyogo, Japan

**7P-7-100**
XPS Analyses of Ultrathin UV Nanoimprint Resin added with Fluroine Additive
T. Oyama 1, M. Okada 1,3, S. Iiyoshi 1,3, Y. Haruyama 1,3, H. Miyake 1, H. Mitsu 2 and S. Matsui 1,3, 1 Univ. of Hyogo, 2 Daicel and 3 JST-CREST, Japan

**7P-7-101**
Fabrication of Double-sided Self-supporting Anti-reflection-structured Film by UV-NIL
N.B. Abu, T. Yusuf and J. Taniguchi, Tokyo Univ. of Sci., Japan

BioMEMS, Lab on a Chip

**Chairpersons:** K. Furukawa (NTT) and T. Ichiki (Univ. of Tokyo)

**7P-7-102**
Highly Sensitive Analysis of Water-insoluble Nanoparticles and soluble Proteins in Liquid by Resonant Surface Acoustic Wave Modulation Measurement
K. Ogawa 1,3, T. Abe 1, Y. Seino 1, T. Torigoe 2, Y. Tada 3, K. Usugi 3, H. Fukuda 3, K. Sawada 3 and T. Iwasa 3, 1 Fine Crystal, 2 Sapporo Medical Univ. and 3 Muroran Inst. of Technol., Japan

**7P-7-103**
Development of a Microfluidic Device Forming Oxygent Gradient for Cellular Experiments
A. Sato, H. Uchida, A. Miyama 1 and K. Tsukada, Keio Univ., Japan

**7P-7-104**
Creating Uniform Amino-terminated Layer on Glass Surface using Water as Solvent
H. Kuramochi 1, S. Ueno 1, T. Fukuda 2, S.R. Kumal 2, A. Ono 2 and T. Ichiki 1, 1 JST-CREST and 2 Univ. of Tokyo, Japan

**7P-7-105**
Design and Simulation of a Single Optical Fiber Scanner with In-core Vibration Modal for Realizing Large Scanning Angle
B. Sun 1, Y. Feng 1, Z. Yang 2, Y. Zhang 2, T. Itoh 2, R. Maeda 2 and R. Sawada 1, 1 Kyushu Univ. and 2 AIST, Japan

**7P-7-106**
Fabrication of a Ring Structure at a Hole Aperture for Lipid Separation
T. Goto 1, Y. Harada 1, D. Cox 2, F. Kondo 1, A. Sato 1,2, S. Sato 1, S. Ueno 1,2, Y. Ishii 2, T. Kamiya 2, H. Tokita 3, G. Ayugase 1, H. Nishikawa 1, T. Sato 1,2, Y. Kuroda 1, C. Kataoka 2, A. Miyama 1 and K. Tsukada, Keio Univ., Japan

**7P-7-107**
Centrifugal Microfluidic Chip for Blood Separation
M. Ishizawa 1, T. Kunisada 1, K. Kuroda 1, C. Kataoka 2, A. Yamaguchi 1 and Y. Usutani 1, 1 Univ. of Hyogo and 2 Carubuncle Bioscience, Japan

**7P-7-108**
Development of Potable Urine Analyzer on Android for Pregnant-care Service
W.J. Jang 1, E.J. Jeong 1, S.J. Yoon 2, K.P. Nam 2, C.K. Kim 2, S.M. Kim 2 and C. Ihm 1, 1 Electronics and Telecommunications Res. Inst., 2 SmartCare and 3 Eulji Univ. Hospital, Korea

**7P-7-109**
Heterogeneously Integrated Laser Induced Fluorescence Detection Devices – Integration of an Excitation Source –

**7P-7-110**
Sensitive Detection of α-fetoprotein (AFP) with the Enhanced Fluorescence on the Plasmonic Chip
F. Kondo 1,2, H. Hirayama 3, Y. Aoki 3 and K. Tawa 1,2, 1 AISt, 2 Kwansei Gakuin Univ. and 3 Konica Minolta, Japan

**7P-7-111**
Rapid Compartmentalization of Microwell Arrays using a Microfluidic Device
T. Fukuda 1, S. Sato 1, S. Ueno 1, M. Biyani 1, T. Ichiki 1, 1 Univ. of Tokyo and 2 JST-CREST, Japan

**7P-7-112**
Effects of the Height of Pillar Arrays fabricated by Proton Beam Writing on the Trapping Capability of Bacteria by 3-D Dielectrophoresis
G. Ayugase 1, H. Nishikawa 1, T. Sato 2, Y. Ishi 2, T. Kaniya 2, H. Tokita 3 and S. Uchida 3, 1 Shibaura Inst. of Technol., 2 JAE and 3 Tokyo Metropolitan Univ., Japan

**7P-7-113**
A Lap-on-chip for Total Phosphorus Analysis
D.G. Jung 1, J.C. Choi 1, Y.C. Choi 1, S.H. Han 1, M.M. Hossain 1, W.I. Jang 2 and S.H. Kong 1, 1 Kyungpook Natl. Univ. and 2 Electronics and Telecommunications Res. Inst., Korea

**7P-7-114**
On-chip Ionization Source for Protein Coupled with Time of Flight Mass Spectrometry
K. Sugiyama, H. Harako, Y. Ukitaka and Y. Takamura, JAIST, Japan

Room A (Ryton Hall A, 3F)

18:30-20:30
Banquet
### Friday, November 8

<table>
<thead>
<tr>
<th>Room A (Royton Hall A, 3F)</th>
<th>Room B (Royton Hall B, 3F)</th>
<th>Room C (Emerald Room A, 3F)</th>
<th>Room D (Emerald Room B, 3F)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8A-8: Symposium B: Directed Nanostructure Science I</strong> Chairpersons: Y. Hirai (Osaka Pref. Univ.) M. Nakagawa (Tohoku Univ.)</td>
<td><strong>8B-8: Advanced Microdevices I</strong> Chairpersons: N. Miki (Keio Univ.) M. Sogawa (Niigata Univ.)</td>
<td><strong>8C-8: BioMEMS: Microfluidics</strong> Chairpersons: K. Tawa (AIST) M. Tokeshi (Hokkaido Univ.)</td>
<td><strong>8D-8: Inorganic Nanomaterials II</strong> Chairpersons: T. Higuchi (Tokyo Univ. of Sci.) K. Terabe (NIMS)</td>
</tr>
<tr>
<td>8A-8-1 9:00 Directed Self-assembly of Block Copolymers (Invited) M. Takenaka, Kyute Univ., Japan</td>
<td>8B-8-1 9:00 Integrated Silicon MEMS Technology and Novel Functional Sensor Devices (Invited) H. Takao, Kagawa Univ., Japan</td>
<td>8C-8-1 9:00 The Implementation of a Thermal Bubble Actuated Microfluidic Chip with Microvalve, Micropump and Micromixer C. Huang, W. Li and C. Tsou, Feng Chia Univ., Taiwan</td>
<td>8D-8-1 9:00 Surface Passivation of Germanium Nanowires using AlO3 and HfO2 deposited via Atomic Layer Deposition (ALD) Technique M. Simonullang, K. Usami, T. Kodera, Y. Kawano and S. Oda, Tokyo Inst. of Technol., Japan</td>
</tr>
<tr>
<td>8A-8-2 9:30 Single-nanodot Arrays and Single-nanohalf-pitch Lines Formed using PS-PDMS Self-assembly and Electron Beam Drawing (Invited) S. Hosaka, M. Huda, H. Zhang, T. Komori, Y. Yin, Gunma Univ., Japan</td>
<td>8B-8-2 9:30 Surfaces Virtually created by a MEMS Tactile Display Y. Kosemura 1, H. Ishikawa 1, J. Watanabe 1 and N. Miki 1, 1 Keio Univ. and 2 JST-PRESTO, Japan</td>
<td>8C-8-2 9:20 Anticoagulant Nano Porous Polyesothylene Sulfone Membrane Coated with Fluorinated Diamond-like Carbon for Dialysis Membrane I. Sanada 1, H. Ito 1, G.S. Prihandana 1, M. Noborisakia 1, Y. Kanno 2 and N. Miki 1, 1 Keio Univ. and 2 Tokyo Medical Univ., Japan</td>
<td>8D-8-2 9:20 Effect of Silver Metal on the Antibacterial Properties of the Titanium Dioxide Nanocomposite K. Ubonchonlakat 1, L. Sikong 2, 1 Prince of Songkla Univ. and 2 Synchrotron Light Res. Inst., Thailand</td>
</tr>
<tr>
<td>8A-8-3 10:00 Moiré Analysis of Block Copolymer Self-Assembly (Invited) S. Sakurai, H. Okinou, T. Harada, S. Sasaki and T. Ishikii, Kyoto Inst. of Technol., Japan</td>
<td>8B-8-3 10:00 Trajectory Control of Autorotating MEMS Falling Object H. Yamane and S. Nagasawa, Shibaura Inst. of Technol., Japan</td>
<td>8C-8-3 10:00 Ultimate Integration of a MEMS-based Lab-on-a-chip with Nanotransistor Biosensors R. Sivakumarasamy 1, K. Nishiguchi 2, A. Fujiiwa 2, D. Vaillame 1 and N. Clément 1, 1 CNRS, France and 2 NTT, Japan</td>
<td>8D-8-3 10:00 Sensitization Effect of Al-codoping on Nd-related Photoluminescence in TiO2 Matrix Y. Aizawa 1, T. Ohtsuki 1, S. Harako 1, S. Komuro 2, N. Hirose 3 and K. Zhao 4, 1 Tokyo Univ. of Sci., 2 Toyo Univ. and 3 JAE, Japan</td>
</tr>
</tbody>
</table>

| 8A-8: Author’s Interview 11:45-11:55 | 8B-8: Author’s Interview 11:45-11:55 | 8C-8: Author’s Interview 10:20-10:30 | 8D-8: Author’s Interview 11:55-12:05 |

**Lobby (in front of Royton Hall, 3F)**

**Coffee Break**
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:45-11:55</td>
<td>8A-9: Author’s Interview</td>
<td>11:45-11:55</td>
<td>Room-temperature Hermetic Sealing using Ultrasonic Bonding with Au Compliant Rim</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>R. Takigawa, K. Iwanabe, T. Shuto, T. Takao and T. Asano, Kyushu Univ., Japan</td>
</tr>
<tr>
<td>13:00-13:10</td>
<td>8B-9: Author’s Interview</td>
<td>13:00-13:10</td>
<td>Electroless Plated Nanogap (Invited)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y. Wakayama, NIMS, Japan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y. Takada and T. Yamamoto, Tokyo Univ. of Sci., Japan</td>
</tr>
<tr>
<td>14:30-14:40</td>
<td>8D-9: Author’s Interview</td>
<td>14:30-14:40</td>
<td>Improved Electrical Thermometry of Polycrystalline Silicon Nanowires with Defected Shell</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>K. Nakamura, Kyoto Univ., Japan and Egypt-Japan Univ. of Sci. and Technol., Egypt</td>
</tr>
</tbody>
</table>

**LUNCH**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:55-12:05</td>
<td>8A-10: Symposium B: Directed Nanostructure Science III</td>
<td>11:55-12:05</td>
<td>Advanced Microdevices II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Chairpersons: E. Iwase (Waseda Univ.), T. Sakata (NTT)</td>
</tr>
<tr>
<td>13:00-13:10</td>
<td>8A-10-1</td>
<td>13:00-13:10</td>
<td>Fabrication and characterization of Metallic Nanostructures with Single Nanometer-sized Gap</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>K. Ueno, Hokkaido Univ. and JST-PRESTO, Japan</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Invited)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y. Majima, Tokyo Inst. of Technol., JST-CREST, Japan and Sunchon Natl. Univ., Korea</td>
</tr>
<tr>
<td>14:00-14:10</td>
<td>8A-10-3</td>
<td>14:00-14:10</td>
<td>Improvement of Electrical Transport in Directed-assembled Polymeric Nanowires (Invited)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y. Wakayama, NIMS, Japan</td>
</tr>
<tr>
<td>14:10-14:20</td>
<td>8A-10-4</td>
<td>14:10-14:20</td>
<td>Fabrication of a Membrane Probe Card using Transparent Film for 3D-IC Testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>N. Watanabe 1, M. Suzuki 1, K. Kawano 2, M. Eto 2 and M. Aoyagi 1, AIST and 2 STK Technol., Japan</td>
</tr>
<tr>
<td>14:20-14:30</td>
<td>8A-10-5</td>
<td>14:20-14:30</td>
<td>High Rate Capability Superconductor Electrodes based on Holey Graphene Nanosheets</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Y.Y. Peng 1, P.C. Wang 1, J.N. Shi 1, N.W. Pu 2, C.H. Wu 1, W.M. Liu 1 and M.D. Ger 1, 1 Natl. Defense Univ. and 2 Yuan Ze Univ., Taiwan</td>
</tr>
</tbody>
</table>

**Coffee Break**
### Advanced Photolithography

**Chairpersons:** H. Kawai (Nikon) and T. Sato (Toshiba)

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>8P-11-1</td>
<td>Robust Scaling Capability Through Sa-Multiple-Patterning Process</td>
<td>H. Yaegashi, K. Oyama, S. Yamai, A. Hara, S. Natori and M. Yamato, Tokyo Electron, Japan</td>
</tr>
<tr>
<td>8P-11-3</td>
<td>Quadruple ArF i-Computational Lithography and 3D-TCAD for 1nm Node Fin-VRAM Design for Manufacturing</td>
<td>T. Kato, T. Fukuda, S. Ouchi, and M. Masahara, 1 &amp; 2 AIST, Japan</td>
</tr>
<tr>
<td>8P-11-4</td>
<td>Injection-locked ArF Excimer Laser for Multi-patterning Lithography</td>
<td>M. Igarashi, A. Kurosaki, T. Kumaizaki, H. Tashima, K. Kozaki, M. Matsumura and H. Mizoguchi, NIMSHOTON, Japan</td>
</tr>
</tbody>
</table>

### Electron and Ion Beam Technologies

**Chairpersons:** J. Yanagisawa (Univ. of Shiga Pref.) and J. Yamamoto (Hitachi)

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>8P-11-9</td>
<td>2Tbit/in² Dot Array Fabrication using 150kV-EB Mastering System</td>
<td>T. Ito, Y. Kojima, S. Nagai, S. Kodama and K. Yokota, Elionix, Japan</td>
</tr>
<tr>
<td>8P-11-10</td>
<td>Exposure Control Circuit Response Optimization Method for Improving Throughput of Electron Beam Lithography Considering Patterning Fidelity</td>
<td>S.-C. Huang, S.-Y. Chen, Y.-T. Shen, H.-P. Lie and K.-Y. Tsai, Natl. Taiwan Univ., Taiwan</td>
</tr>
</tbody>
</table>

### Nanocarbons

**Chairpersons:** H. Fukidome (Tohoku Univ.) and K. Maehashi (Osaka Univ.)

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>8P-11-15</td>
<td>Microwave Synthesis of Graphene/Fe₂O₃ Composites for improving the Capacity of Li-ion Batteries</td>
<td>C.H. Wu 1, Y.Y. Peng 1, G.N. Shi 1, Y.C. Chen 1, N.W. Pu 2, Y.M. Liu 1 and M.D. Ger 1, 1 Natl. Defense Univ., 2 Yuan Ze Univ., Taiwan</td>
</tr>
<tr>
<td>8P-11-16</td>
<td>Synthesis of Large Area and High Quality Graphene on Copper Foil using Waste Plastic as Carbon Source</td>
<td>S. Sharma, G. Kalita, R. Papon and M. Tanemura, Nagoya Inst. of Technol., Japan</td>
</tr>
</tbody>
</table>

### Poster Session I (14:40-16:40)

<table>
<thead>
<tr>
<th>Room P (Royton Hall B and C, 3F)</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>8P-11-1</td>
<td>Robust Scaling Capability Through Sa-Multiple-Patterning Process</td>
<td>H. Yaegashi, K. Oyama, S. Yamai, A. Hara, S. Natori and M. Yamato, Tokyo Electron, Japan</td>
</tr>
<tr>
<td>8P-11-3</td>
<td>Quadruple ArF i-Computational Lithography and 3D-TCAD for 1nm Node Fin-VRAM Design for Manufacturing</td>
<td>T. Kato, T. Fukuda, S. Ouchi, and M. Masahara, 1 &amp; 2 AIST, Japan</td>
</tr>
<tr>
<td>8P-11-4</td>
<td>Injection-locked ArF Excimer Laser for Multi-patterning Lithography</td>
<td>M. Igarashi, A. Kurosaki, T. Kumaizaki, H. Tashima, K. Kozaki, M. Matsumura and H. Mizoguchi, NIMSHOTON, Japan</td>
</tr>
<tr>
<td>8P-11-5</td>
<td>Shock Waves and Magnetic Rayleigh Taylor Instabilities in Z-pinch Gas Discharge Produced Plasma Extreme Ultraviolet Sources</td>
<td>B. Huang, T. Tomizuka, M. Watanabe and E. Hotta, Tokyo Inst. of Technol., Japan</td>
</tr>
<tr>
<td>8P-11-7</td>
<td>Removal of Micro Bubble Trapped on Resist Micro Pattern by Dipping into Low Surface Tension Developer</td>
<td>K. Takahashi 1, A. Takano 2 and A. Kawai 2, 1 Nissan Chemical Industries and 2 Nagaoka Univ. of Technol., Japan</td>
</tr>
<tr>
<td>8P-11-8</td>
<td>2Tbit/in² Dot Array Fabrication using 150kV-EB Mastering System</td>
<td>T. Ito, Y. Kojima, S. Nagai, S. Kodama and K. Yokota, Elionix, Japan</td>
</tr>
<tr>
<td>8P-11-9</td>
<td>The Phonon-sisted Events Significant for the Surface Patterning</td>
<td>T. Murakami, M. Nomura and S.T. Nakagawa, Okayama Univ. of Sci., Japan</td>
</tr>
<tr>
<td>8P-11-10</td>
<td>Exposure Control Circuit Response Optimization Method for Improving Throughput of Electron Beam Lithography Considering Patterning Fidelity</td>
<td>S.-C. Huang, S.-Y. Chen, Y.-T. Shen, H.-P. Lie and K.-Y. Tsai, Natl. Taiwan Univ., Taiwan</td>
</tr>
<tr>
<td>8P-11-11</td>
<td>The Structural and Magnetic Properties of NiFe/Fe₂O₃ Thin Films via Ion-beam Bombardment</td>
<td>C. Shu, X.-W. Lin 1, T.-C. Lan 1, C. Shue 1, Y.-H. Chen 2, T.-H. Wu 2, R. Desaultels 3 and J. van Lierop 3, 1 Natl. Chung Hsing Univ. and 2 Natl. Yunlin Univ. of Sci. and Technol., Taiwan and 3 Minolta Univ. of Manito, Canada</td>
</tr>
<tr>
<td>8P-11-12</td>
<td>Study on Formation Mechanism of Line Width Roughness (LWR) in Electron Beam Resist</td>
<td>T. Yamazaki, H. Yamamoto and T. Kozawa, Osaka Univ., Japan</td>
</tr>
<tr>
<td>8P-11-13</td>
<td>The Phonon-sisted Events Significant for the Surface Patterning</td>
<td>T. Murakami, M. Nomura and S.T. Nakagawa, Okayama Univ. of Sci., Japan</td>
</tr>
<tr>
<td>8P-11-14</td>
<td>Exposure Control Circuit Response Optimization Method for Improving Throughput of Electron Beam Lithography Considering Patterning Fidelity</td>
<td>S.-C. Huang, S.-Y. Chen, Y.-T. Shen, H.-P. Lie and K.-Y. Tsai, Natl. Taiwan Univ., Taiwan</td>
</tr>
<tr>
<td>8P-11-15</td>
<td>Microwave Synthesis of Graphene/Fe₂O₃ Composites for improving the Capacity of Lithium-ion Batteries</td>
<td>C.H. Wu 1, Y.Y. Peng 1, G.N. Shi 1, Y.C. Chen 1, N.W. Pu 2, Y.M. Liu 1 and M.D. Ger 1, 1 Natl. Defense Univ., 2 Yuan Ze Univ., Taiwan</td>
</tr>
<tr>
<td>8P-11-16</td>
<td>Synthesis of Large Area and High Quality Graphene on Copper Foil using Waste Plastic as Carbon Source</td>
<td>S. Sharma, G. Kalita, R. Papon and M. Tanemura, Nagoya Inst. of Technol., Japan</td>
</tr>
<tr>
<td>8P-11-17</td>
<td>Non-thermal and Reversible Oxidation of Graphene through UV/O₃ Treatment</td>
<td>Y. Mulyana 1, M. Horita 1,3, Y. Ishikawa 1,3, Y. Uraka 1,3, K. Miyake 1 and S. Koh 2, 1 Nairobi Inst. of Sci. and Technol., 2 Aoyama Technol., China and 3 JST-CREST, Japan</td>
</tr>
<tr>
<td>8P-11-18</td>
<td>Observation of Graphene using Magnetic Force Microscopy</td>
<td>K. Maruishi, F. Wakaya, S. Abo and M. Takai, Osaka Univ., Japan</td>
</tr>
<tr>
<td>8P-11-19</td>
<td>Graphene Point Contact as a Single-level System</td>
<td>H.-Y. Deng and K. Wakabayashi, NIMS, Japan</td>
</tr>
<tr>
<td>8P-11-20</td>
<td>Effects of UV Light on Electrochemical Wet Etching of Silicon Carbide for Suspended Graphene Fabrication</td>
<td>R.S. O 1,2, M. Takamura 1, K. Funakawa 1, M. Nagase 2 and H. Hibino 1, 1 NTT and 2 Univ. of Tokushima, Japan</td>
</tr>
<tr>
<td>8P-11-21</td>
<td>Structures and Electronic States of the Radicals adsorbed on Graphene</td>
<td>H. Tachikawa, Hokkaido Univ., Japan</td>
</tr>
<tr>
<td>8P-11-22</td>
<td>Dependence of Electronic Properties on Stacking in Double-layer Graphene Heterostructures</td>
<td>M. Ni 1,2 and K. Wakabayashi 1, 1 NIMS, Japan and 2 Hefei Univ. of Technol., China</td>
</tr>
<tr>
<td>8P-11-23</td>
<td>Ab-initio Study on Thermoelectric Power of GNT-thin Film</td>
<td>T. Kato 1, S. Usui 2 and T. Yamamoto 1, 1 Tokyo Univ. of Sci. and 2 Quantum Wise Japan, Japan</td>
</tr>
<tr>
<td>8P-11-26</td>
<td>Collective Properties of Graphene-based Graphene</td>
<td>D. Itoh 1, Y. Ohashi 2 and S. Okada 1, 1 Univ. of Tsukuba and 2 Keio Univ., Japan</td>
</tr>
</tbody>
</table>
**8P-11-27**
Electrochemical Properties of TiO₂/Marimo Carbon Composite as an Electrode Material for Lithium Secondary Batteries
K. Iwasawa 1, K. Miyoshi 1, M. Eguchi 1, M. Nishitani-Gamo 2, T. Ando 3, Ibaraki Univ., 2 Toyo Univ. and 3 NIMS, Japan

**8P-11-28**
Effect of Electron Beam Irradiation on Raman Spectra and Transport Properties in Graphene
H. Tomori, R. Hirai, H. Tanaka, Y. Ito, K. Katakura, Y. Ootuka and A. Kanda, Univ. of Tsukuba, Japan

**8P-11-29**
Effect of Hydrogen Edge Passivation on BC₃ Ribbons
S. Dutta and K. Wakabayashi, NIMS, Japan

**8P-11-30**
The Nitrogen Post Treatment to Improve the Field Emission Property of the Cabon Nano-coil Cathode Wire
G.F. Io, J.C. Jiang 1, K.J. Chung 1, W.K. Huang 1, K. Cheng 1, Y.M. Liu 1, M.D. Ger 1 and N.W. Pu 2, 1 Natl. Defense Univ. and 2 Yuan Ze Univ., Taiwan

### Nanodevices

**8P-11-31**
Rapid Prototyping of Electrodes with Patterned and Aligned Multi-walled CNT for Flexible Thin Films
C.-Y. Chou, T.-L. Chang, C.-R. Yang and Y.-C. Lan, Natl. Taiwan Normal Univ., Taiwan

**8P-11-32**
Novel Tri-State Latch based on Negative Differential Resistance Devices with Single Peak for Extendable Multi-valued Logic and Memory
S. Shin and K.R. Kim, Ulsan Natl. Inst. of Sci. and Technol., Korea

**8P-11-33**
Long-term Reliability of High Performance on a-IGZO TFTs without Passivation Layer by using Microwave Irradiation
H.-H. Hwang 1, H.-M. An 2 and W.-J. Cho 1, 1 Kwangwoon Univ. and 2 Osaka Collage, Korea

**8P-11-34**
Evaluation of Soft Error in Silicon-on-insulator Static Random Access Memory using High-energy Heavy-Ion Probes
M. Hazama 1, S. Abo 1, F. Wakyaka 1, T. Makino 2, S. Onoda 2, T. Oshihira 2, T. Iwamatsu 3, H. Oda 3 and M. Takai 1, 1 Osaka Univ., 2 JAESA and 3 Renesas Electronics, Japan

### Nanofabrication

**8P-11-35**
Novel Design of Standard Termary Inverter and Its Noise Margin Analysis based on Controllable Off-leakage Currents in 32nm CMOS Technology

**8P-11-36**
Possibility and Design of Resonant Terahertz Emitters based on Nanoscale Strained Silicon Plasma Wave Transistors with Enhanced Mobility

**8P-11-37**
Tunneling Field-effect Transistor with Si/SiGe Material for High Current Drivability
H.W. Kim 1, S.W. Kim 1, M.-C. Sun 1, J.H. Kim 1, E. Park 1 and B.G. Park 1, Seoul Natl. Univ. and 2 Samsung Electronics, Korea

**8P-11-38**
The Effect of Spacer Dielectrics on Performance of Ge-based Tunneling FETS
Y.J. Yoon 1, G.M. Yoo 1, S. Cho 2 and I.M. Kang 1, 1 Kyungpook Natl. Univ. and 2 Gachon Univ., Korea

**8P-11-39**
Physical Modeling and Analysis for Performance Enhancement of Plasmonic THz Detector based on Silicon Field-effect Transistor with Ultra-thin Gate Dielectric

**8P-11-40**
Analysis of Electron Transfer among Quantum Dots in Two-dimensional Quantum Dot Network
H. Fujino and T. Oya, Yokohama Natl. Univ., Japan

**8P-11-41**
Electrical and Reliability Characteristics of Sm₂O₃ and Sm₀.₅T₁₀.₅O₂ Gate Dielectrics in InGaZnO Thin-film Transistors
C.-H. Chen 1, F.-H. Chen 1, Y.-S. Shen 1, J.-L. Her 1, K. Koyama 2, and T.-M. Pan 1, 1 Chang Gung Univ., Korea and 2 Kagoshima Univ., Japan

**8P-11-42**
Study of Vₚ, Fluctuation Induced Source/Drain Extension Doping of Tri-gate Transistor using 3D Device Simulation
T. Tsutsumi, J. Lee and K. Tomizawa, Meiji Univ., Japan

**8P-11-43**
Active Dopant Profiling using Scanning Probe at Ultra-shallow as Implanted Si activated by Combination of Spike Lamp and Laser Annealing
H. Osae 1, S. Abo 1, F. Wakyaka 1, T. Iwamatsu 2, H. Oda 2 and M. Takai 1, 1 Osaka Univ. and 2 Renesas Electronics, Japan

**8P-11-44**
Ultra-thin 4.5nm Nickel Silicide Film by Two-step Low Temperature Microwave Anneal
C.-T. Wu 1, Y.-J. Lee 1, J.-H. K. Hsieh 1, P.-J. Sung 1, T.-C. Cho 3, M.I. Current 4 and T.-S. Chao 1, 1 NARL, 2 Natl. Chung Hsing Univ. and 3 Natl. Chiao Tung Univ., Taiwan and 4 Current Scientific, USA

**8P-11-45**
Preliminary Analysis of Channel Electron Scattered from Drain Region of Silicon Decanano Diode at Low Drain Voltage using NEGF Method
T. Tsutsumi and K. Tomizawa, Meiji Univ., Japan

**8P-11-46**
Deformable Silicone Grating fabricated with a Photo-imprinted Polymer Mold
T. Ishihara 1, I. Yamada 1, J. Nishii 2 and M. Saito 3, 1 Univ. of Shiga Pref., 2 Hokkaido Univ. and 3 Ryukoku Univ., Japan

**8P-11-47**
Active Water Harvesting to Enhance Self-cleaning Property using Biomimetic Functional Surface Structure
C.-Y. Yang, C.-Y. Sung, Natl. Tsing Hua Univ., Taiwan

**8P-11-48**
Nanoscale Energy and Optical Analysis using Cathodoluminescence in the TEM
A. Maigne and D.J. Stowe, Gatan, USA

**8P-11-49**
Non-ohmic and Electrical Properties of CaCu₅Ti₄O₁₂ Ceramics prepared by an Aloe Vera Solution Method
E. Swatsitang 1 and T. Putjuso 2, 1 Khon Kaen Univ. and 2 Rajamangala Univ. of Technol., Thailand

### Nanofabrication

**8P-11-50**
Enhanced Light Output of Vertical GaN-based LEDs with Surface Roughened by Refractive-index-matched Si₃N₄/GaN Nanowire Arrays

**8P-11-51**
In-plane Oblique Pulsed-laser Deposition for Growth of Metal Oxide Nanostructures with Laterally Modulated Profiles
K. Fujimura, T. Kushizaki, Y. Fujimura, K. Okada, A.N. Hattori and H. Tanaka, Osaka Univ., Japan

**8P-11-52**
Light Intensity and Temperature Dependence of Field Emission Current from a p-type Si Emitter milled by Gallium Focused Ion Beam
T. Yoshimoto 1 and T. Iwata 2, 1 Toyo Univ. and 2 Mie Univ., Japan

**8P-11-53**
Formation of Nanohole for Positioning of Colloidal Quantum Dot
T. Sakai 1, A. Hirota 1, S. Nakashima 1,2 and K. Mukai 1, 1 Yokohama Natl. Univ. and 2 Riken Advanced Res. Inst., Japan
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Institution(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8P-11-54 Selective Growth of Ag Nanostuctures on FIB-induced Amorphous Silicon</td>
<td>E. Nakamura, M. Nishi, H. Itasaka, T. Matsuoka, Y. Shimotsuura, K. Miura and K. Hirao</td>
<td>Kyoto Univ., Japan</td>
</tr>
<tr>
<td>8P-11-55 High Performance of Electrical Characteristic on Solution ITO Thin Film Transistors by Microwave Irradiation with a Low Thermal Budget</td>
<td>J.-H. Kuo, K.-S. Kim, H.-M. An, W. Re-Cho, J. Kwangwuo and 2 Osan College, Korea</td>
<td></td>
</tr>
<tr>
<td>8P-11-56 Seedless Growth of High-density Zinc Oxide Nanorods on Multilayer Graphene by Electrochemical Deposition</td>
<td>N.S.A. Aziz 1, T. Nishiyama 2, N.I. Rusli 3, M.R. Mahmood 4, K. Yasui 2 and A.M. Hashim 5, 1 Univ. Teknologi Malaysia, Malaysia, 2 Nagaoa Univ. of Technol., Japan, 3 Univ. Malaysia Perlis and 4 Universiti Teknologi MARA, Malaysia</td>
<td></td>
</tr>
<tr>
<td>8P-11-57 Dense Packing of Colloidal Quantum Dots on Patterned Substrate</td>
<td>Y. Shimizu 1, I. Morimoto 1, S. Nakashima 1, 2 and K. Mukai 1, 1 Yokohama Nat. Univ. and 2 Riken Advanced Res. Inst., Japan</td>
<td></td>
</tr>
<tr>
<td>8P-11-58 Low Temperature Conformal Formation of Silicon Carbide on the Surface of Nanostuctures</td>
<td>A. Fathah, Y. Nakayama and Y. Yonetani, Osaka Univ., Japan</td>
<td></td>
</tr>
<tr>
<td>8P-11-59 Preparation and Properties of Al2O3/SiC Nanocomposites using SiC Nanoparticles Synthesized by Mechnochemical Method</td>
<td>C. Dokbua 1, Y. Hasegawa 2 and T. Yamwong 2, 1Kohn Kaen Univ. and 2 Natl. Metal and Materials Technol. Ctr., Thailand</td>
<td></td>
</tr>
<tr>
<td>8P-11-60 Fabrication of Corrugated Microfiber Bragg Gratings by Two-beam Interference Lithography Method</td>
<td>Y.-C. Lin and L.A. Wang, Natl. Taiwan Univ., Taiwan</td>
<td></td>
</tr>
</tbody>
</table>

**Inorganic Nanomaterials**

Chairpersons: X.W. Zhao (Tokyo Univ. of Sci.) and K. Terabe (NIMS)

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Institution(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8P-11-61 Withdrawn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8P-11-62 Fabrication of V2O3 Thin Film by RF Magnetron Sputtering using Oxygen Radical and V-metal</td>
<td>M. Subramanian, Z. Zulkifli, M. Nagaoka and S. Tanemura, Gachon Univ., Korea</td>
<td></td>
</tr>
<tr>
<td>8P-11-64 Fabrication of Corrugated Microfiber Bragg Gratings by Two-beam Interference Lithography Method</td>
<td>J.-G. Gu 1, K.-S. Kim 1, H.-M. An, 2 and E.K. Yoon 2, Kim, Hanyang Univ., Korea</td>
<td></td>
</tr>
<tr>
<td>8P-11-66 One Step Synthesis of Pt-Co and Pt-CeTiO2 Catalysts by Flame Spray Pyrolisis for Hydrogenation of 3-Nitrostyrene</td>
<td>T. Takami 1, J.-G. Cheng 2, J.-S. Kim 1, 2 and J.-H. Lin 1, 1 Hokkaido Univ. and 2 KEK, Japan</td>
<td></td>
</tr>
<tr>
<td>8P-11-67 Withdrawn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8P-11-71 Nanosize Effect on the Thermoelectric Properties</td>
<td>T. Takami 1, J.-G. Cheng 2, J.-S. Zhou 3 and J.B. Goodenough 3, 1 Osaka Univ., Japan, 2 Chinese Academy of Sci., China and 3 Univ. of Texas at Austin, USA</td>
<td></td>
</tr>
<tr>
<td>8P-11-72 Deposition of Ti-Si-C Thin Films onto Silicon and Stainless Steel Substrates by Magnetron Sputtering using Elemental Targets</td>
<td>T. Sonoda, S. Nakao and M. Ikeyama, AIST, Japan</td>
<td></td>
</tr>
<tr>
<td>8P-11-74 Ferromagnetic Analysis of ZnO (Core)/crystalline Carbon (Shell)</td>
<td>S. M. Subramanian, Z. Zulkifli, M. Tanemura and T. Hihara, Nagoya Inst. of Technol., Japan</td>
<td></td>
</tr>
<tr>
<td>8P-11-75 Optical and Electrical Properties of GaN Thin Films deposited on the Graphene and Sapphire Substrates by Magnetron Sputtering</td>
<td>S. M. Sim, D.J. Lee, G. O. and E.K. Kim, Hanyang Univ., Korea</td>
<td></td>
</tr>
<tr>
<td>8P-11-76 A Simple Aloe Vera Plant-extracted Solution Hydrothermal Method</td>
<td>C. Phumying 1, S. Labuayai 1, E. Swatsitang 1, V. Amornkitbamrung 1 and S. Maehara 2, 1 Kohn Kaen Univ. and 2 Suranaree Univ. of Technol., Thailand</td>
<td></td>
</tr>
<tr>
<td>8P-11-78 Synthesis of ZnSe Nanocrystals in Apoferritin Cavity</td>
<td>S. Li and S. J. Park, Gachon Univ., Korea</td>
<td></td>
</tr>
<tr>
<td>8P-11-79 Optical and Thermal Study of Synthesized SnS Nanomaterials M.D. Chaudhary 1 and S.H. Chaki 1, Sardar Patel University, India</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8P-11-80 Preparation of WO3 Nanorods by a Hydrothermal Method for Electrochromic Device</td>
<td>C.-H. Lu 1, M. H. Hon 1, C.-Y. Kuan 1 and I.-C. Leu 2, 1 Natl. Cheng Kung Univ. and 2 Natl. Univ. of Tainan, Taiwan</td>
<td></td>
</tr>
<tr>
<td>8P-11-81 In situ Observation of Negative Electron Affinity Surfaces during Photoelectron Emission by Surface Photo-Absorption Method</td>
<td>K. Hayase, K. Suzuki, Y. Inagaki, R. Chiba, S. Midokikawa, H. Iijima, and T. Meguro, Tokyo University of Science, Japan</td>
<td></td>
</tr>
<tr>
<td>8P-11-108</td>
<td>Actuation of Magnetic Particles on Array of Magnetic Elements</td>
<td>F. Tsumori, T. Abe, S. Seki and K. Nagasawa, Kyushu Univ., Japan</td>
</tr>
<tr>
<td>8P-11-109</td>
<td>Influence of Bonded Area Size on Cracking in Reactive Soldering with Al/Ni Multilayer Films</td>
<td>S. Ito, T. Monikaku, S. Inoue and T. Namazu, 1 Univ. of Hyogo and 2 JST-PRESTO, Japan</td>
</tr>
<tr>
<td>8P-11-110</td>
<td>Fabrication of Convex Si Microstructures with 45° Mirror Plane for Application of Microfluidic Channels</td>
<td>Y. Koide, D. Teramoto, S. Konishi and T. Ando, Ritsumeikan Univ., Japan</td>
</tr>
<tr>
<td>8P-11-111</td>
<td>Structure Control of Carbon Nanotubes Electrode for High-Power Glucose Fuel Cell</td>
<td>Y. Bamba, T. Shimizu and M. Yang, Tokyo Metropolitan Univ., Japan</td>
</tr>
<tr>
<td>8P-11-112</td>
<td>Vacuum-controlled Wafer-level Packaging for Micromechanical Devices</td>
<td>S.J. Kang, Y.S. Moon and S.Y. Choi, Kyungpook Natl. Univ. and 2 Samsung Electronics., Korea</td>
</tr>
<tr>
<td>8P-11-113</td>
<td>Improvement of Microbolometer Responsivity by Down Scaling</td>
<td>A. Tiwari, H. Satoh, M. Aoki, M. Takeda, N. Hiromoto and H. Inokawa, Shizuoka Univ., Japan</td>
</tr>
<tr>
<td>8P-11-116</td>
<td>Fabrication of Electroforming Long Period Fiber Grating</td>
<td>C.-C. Chang, J.-C. Chao and C.-Y. Ho, Natl. Kaohsiung Univ. of Applied Sci., Taiwan</td>
</tr>
<tr>
<td>8P-11-117</td>
<td>A Novel Micro-machined Mesh Grid for a Triode-type Carbon Nanotube Field Emitter</td>
<td>K.J. Lee, N.T. Hong, M. Jo, S. Lee and S.S. Yang, Ajou Univ., Korea</td>
</tr>
<tr>
<td>8P-11-127L</td>
<td>Micro Pattern Fabrication of Perfluorosulfonic Acid (PFSA) Film by CF4 RIE Process</td>
<td>Y. Sakurai, D. Tanaka, S. Ohata and A. Kawai, Nagaoka Univ. of Technol., Japan</td>
</tr>
<tr>
<td>8P-11-129L</td>
<td>Chip-less Wireless Neural Probes based on One-port SAW Delay Line and Neural Firing-dependent Capacitors</td>
<td>I.K. Jung and K. Lee, Ajou Univ., Korea</td>
</tr>
</tbody>
</table>