<table>
  <tr><th>Session</th><th>Time</th><th>Location</th></tr>
  <tr><td>17P: Plenary Session</td><td>9:30</td><td>Room P (3F)</td></tr>
  <tr><td>17A: DUV, EUV Lithography</td><td>13:30</td><td>Room A (3F)</td></tr>
  <tr><td>17B: Symposium B: Graphene Growth & Characterization</td><td>13:30</td><td>Room B (3F)</td></tr>
  <tr><td>17C: Nanoimprint, Nanoprint and Rising Lithography</td><td>13:30</td><td>Room C (3F)</td></tr>
  <tr><td>Lunch</td><td>-</td><td>-</td></tr>
  <tr><td>17A-2: Development Progress of LPP EUV Lithography Light Source</td><td>14:00</td><td>Room A (3F)</td></tr>
  <tr><td>17B-2: Structure and Electronic Properties of Epitaxial Graphene grown on SiC Studied by Surface Electron Microscopy</td><td>14:00</td><td>Room B (3F)</td></tr>
  <tr><td>17C-2: Unique Synthesis of High-Quality Graphene Films on Carbon Doped Metal Surfaces</td><td>14:00</td><td>Room C (3F)</td></tr>
  <tr><td>17A-2-2: Resolution Enhancement for beyond 22nm Node using EUV Exposure Tool</td><td>14:20</td><td>Room A (3F)</td></tr>
  <tr><td>17B-2-2: Uniqueness of Structural and Electronic Properties of Epitaxial Graphene</td><td>14:20</td><td>Room B (3F)</td></tr>
  <tr><td>17C-2-2: Fabrication of Large Area Graphene using Liquid Gallium and the Effect of Hydrogen</td><td>14:20</td><td>Room C (3F)</td></tr>
  <tr><td>17A-2-3: Actinic Phase Defect Detection for EUV Mask with Absorber Patterns</td><td>14:40</td><td>Room A (3F)</td></tr>
  <tr><td>17B-2-3: Fabrication of Large Area Graphene using Liquid Gallium and the Effect of Hydrogen</td><td>14:40</td><td>Room B (3F)</td></tr>
  <tr><td>17C-2-3: Nanoimprint using Side Chain Crystalline Polymer</td><td>14:40</td><td>Room C (3F)</td></tr>
  <tr><td>17A-2-4: Systematic Measurement Uncertainty of CD-SEM for 2x Node</td><td>15:00</td><td>Room A (3F)</td></tr>
  <tr><td>17B-2-4: Pressure-Free Solvent-Assisted Imprint Lithography</td><td>15:00</td><td>Room B (3F)</td></tr>
</table>

Coffee Break
17A-3: Bio MEMS Lab-on-a-chip
Chairpersons:
T. Ichiki (Univ. of Tokyo)
Y. Takamura (JAIST)

17A-3-1 15:40
Controlling Cellular Microenvironments with Microfluidics and Nanostructures (Invited)
N.I. Jeon
Soul National Univ., Korea

Change to
13:20-13:50, November 18 at Room C.

17A-3-2 16:10
Electrokinetic Analysis of Change in Hl 60 Cells' Surface during Granulocytic Differentiation by On-Chip Cell Electrophoresis
Univ. of Tokyo, Japan

17A-3-3 16:30
High Density Cell Culture using Micro 3D Scaffold with Capillary Bundle Structure
T. Omukai 1, A. Kinoshita 2, F. Komada 2 and Y. Usumi 1
1 Univ. of Hyogo and 2 Himeji Dokkyo Univ., Japan

17A-3-4 16:50
Fabrication of Hydrophilic PDMS Containing Silwet L-77 Microporous Structure and its Application to Portable Microfluidic Pump
W. Yang 1, Y.G. Nam 1, B.-K. Lee 2, T.H. Kwon 2 and D.S. Kim 1
1 Chung-Ang Univ. and 2 POSTECH, Korea

17A-3-5 17:10
The Elemental Analysis by Liquid Electrode Plasma using a Quartz Chip
A. Kitano 1, T. Yamamoto 2 and Y. Takamura 1
1 JAIST and 2 Micro Emission, Japan

17A-3-6 17:30
Label-Free Nanosensor Based on a Multilayer Interference Coupled with Localized Surface Plasmon Resonance
H.M. Hiep, H. Yoshikawa and E. Tamiya
Osaka Univ., Japan

17A-3: 17:50-18:05, Author's Interview

17B-3-3 16:30
Large-Scale, Uniform and Transferrable Graphene Films synthesized by Chemical Vapor Deposition
M. Xu, D. Fujita, J. Gao, E. Watanabe and N. Hanagata
NIMS, Japan

17B-3-4 16:50
Self-Assembly of Two-Dimensional Graphene Oxide on Silicon Substrates
R. Ishikawa, M. Bando, Y. Morimoto, S.Y. Park and A. Sandhu
Tokyo Inst. of Technol., Japan

17B-3-5 17:10-17:25, Author's Interview

17C-3-3 16:30
Growth Behavior of an Adsorbed Monolayer from a Benzophenone -Containing Trimethoxysilane Derivative on a Fused Silica Surface by Chemical Vapor Surface Modification
S. Kubo 1,2 and M. Nakagawa 1,2
1 Tohoku Univ. and 4 CREST-JST, Japan

17C-3-4 16:50
Fabrication of a Large Master Mold using Self-Assembled Particles for the Moth-Eye Antireflection Structures
T. Nakaniishi, T. Hiraoka, A. Fujimoto, T. Okino, S. Sugimura and K. Asakawa
Toshiba, Japan

17C-3-5 17:10
Development of Micro-Fabrication Technology of Thermal-Responsive Polymer using Photolithography and Nanoimprint Method
Y. Yokoyama 1,2, S. Yamamura 3, S. Fujiki 1, Y. Takamura 2 and E. Tamiya 4
1 Toyama Industrial Technol. Ctr., 2 JAIST, 3 AIST and 4 Osaka Univ., Japan

17C-2, 3: 17:30-17:45, Author's Interview

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Hokkaido Univ., RCIQE Lab. Tour
Date and Time: Nov. 17 (Tuesday) 18:20 - 20:00
Capacity: 30 persons
Reservation: on-site registration at registration desk
Round-trip by a pick-up bus
### Wednesday, November 18, 2009

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<th>Room A (3F)</th>
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<tr>
<td><strong>18A-4: Symposium A: Computational Lithography I</strong>&lt;br&gt;Chairpersons:&lt;br&gt;S. Nagahara (NEC Electronics)&lt;br&gt;A. Neureuther (Univ. of CA, Berkeley)</td>
<td><strong>18B-4: Nanomaterials I</strong>&lt;br&gt;Chairpersons:&lt;br&gt;T. Ishida (AIST)&lt;br&gt;T. Miyazawa (Univ. of Tokyo)</td>
<td><strong>18C-4: Microsystem I</strong>&lt;br&gt;Chairpersons:&lt;br&gt;K. Suzuki (Ritsumeikan Univ.)&lt;br&gt;D.F. Wang (Ibaraki Univ.)</td>
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<td><strong>18A-4-1 9:00</strong>&lt;br&gt;Dr. Hiroshi Ito Tribute&lt;br&gt;Osaka Univ., Japan</td>
<td><strong>18B-4-1 9:00</strong>&lt;br&gt;Semiconductor Quantum Dots in Metallic Nanostructures (Invited)&lt;br&gt;L. Suemune 1, Y. Idutsu 1, M. Takada 1, D. Kato 1, S. Ida 1, J.-H. Huh 1, H. Sasakura 1,2 and H. Kuman 1,2&lt;br&gt;1 Hokkaido Univ. and CREST-JST, Japan</td>
<td><strong>18C-4-1 9:00</strong>&lt;br&gt;SU-8 Cantilevers with Integrated Wheatstone Bridge as a Strain Sensor&lt;br&gt;J.-H. Ahn and D.-W. Lee&lt;br&gt;Chonnam Natl. Univ., Korea</td>
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<td><strong>18A-4-2 9:20</strong>&lt;br&gt;Lowering of Lithography k1 by Computational Scaling Technology (Invited)&lt;br&gt;K. Lai 1, T. Farrell 1 and D. Gill 2&lt;br&gt;1 IBM Semiconductor and 2 IBM Res., USA</td>
<td><strong>18B-4-2 9:30</strong>&lt;br&gt;Growth and Characterization of Telecommunication-Wavelength Quantum Dots using Bi as a Surfactant&lt;br&gt;H. Okamoto 1, T. Tawara 2, H. Gotoh 2, H. Kamada 2 and T. Sogawa 2&lt;br&gt;1 Hiroasaki Univ. and 2 NTT, Japan</td>
<td><strong>18C-4-2 9:20</strong>&lt;br&gt;MEMS-Based Event-Driven On/off Thermometer for Digital Sensing with Ultra-Low Power Consumption&lt;br&gt;Y. Zhang, J. Lu, T. Itoh and R. Maeda&lt;br&gt;AIST, Japan</td>
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<td><strong>18A-4-4 10:20</strong>&lt;br&gt;The Fundamental Study of the Mask 3D Effect on the Advanced Phase Shifting Masks for the Next Generation Lithography&lt;br&gt;T. Yuito, A. Misaka and M. Sasago&lt;br&gt;Panasonic, Japan</td>
<td><strong>18B-4-4 10:10</strong>&lt;br&gt;Tungsten Oxide Nanostructures: Synthesis, Characterization and Modification&lt;br&gt;S. Jeon and K. Yong&lt;br&gt;POSTECH, Korea</td>
<td><strong>18C-4-4 10:00</strong>&lt;br&gt;Fabricating MEMS Probe Card Compatible with CMOS-MEMS Process&lt;br&gt;K.-Y. Lee, J.-T. Huang, H.-J. Hsu, R.-G. Wu and T.-C. Tsai&lt;br&gt;Natl. Taipe Univ. of Technol., Taiwan</td>
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<tr>
<td><strong>18A-5: Symposium A: Computational Lithography II</strong>&lt;br&gt;Chairpersons:&lt;br&gt;T. Sato (Toshiba)&lt;br&gt;K. Lai (IBM)</td>
<td><strong>18B-5: Nanomaterials II</strong>&lt;br&gt;Chairpersons:&lt;br&gt;T. Ishida (AIST)&lt;br&gt;T. Miyazawa (Univ. of Tokyo)</td>
<td><strong>18C-5: Microsystem II</strong>&lt;br&gt;Chairpersons:&lt;br&gt;T. Ikehara (AIST),&lt;br&gt;H. Takao (Toyoohashi Univ. of Technol.)</td>
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<td><strong>18A-5-1 11:00</strong>&lt;br&gt;Optical lithography extension by Computational Lithography (Invited)&lt;br&gt;T. Takigawa&lt;br&gt;Brion Technol., Japan</td>
<td><strong>18B-5-1 11:00</strong>&lt;br&gt;Design of Photo-controllable Magnetic Materials (Invited)&lt;br&gt;Y. Einaga&lt;br&gt;Koito Univ., Japan</td>
<td><strong>18C-5-1 11:00</strong>&lt;br&gt;Fabrication of Disk-Type MEMS Resonators with Dry-Etched 150 nm-Wide Capacitive Gap&lt;br&gt;S. Murakami 1, M. Konno 1, T. Ikehara 1, R. Maeda 1 and T. Mihara 2&lt;br&gt;1 AIST and 2 Olympus, Japan</td>
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<td><strong>18A-5-2 11:30</strong>&lt;br&gt;A Study of Source &amp; Mask Optimization for Future Optical Lithography (Invited)&lt;br&gt;T. Matsuyama, T. Nakashima, R. Matsu&lt;br&gt;Nikon, Japan</td>
<td><strong>18B-5-2 11:30</strong>&lt;br&gt;Electron-Phonon Interaction in Nitrogen Doped ZnO Nanoparticles&lt;br&gt;K. Senthilkumar 1, H. Okamoto 1, M. Tokunaga 1, O. Senthilkumar 1, B. Urban 2, A. Neogi 2 and Y. Fujita 1&lt;br&gt;1 Shimane Univ. and 2 Univ. of North Texas, USA</td>
<td><strong>18C-5-2 11:20</strong>&lt;br&gt;Characterization on Four-Points-Pinned Ring-Shaped Silicon MEMS Resonator&lt;br&gt;T. Oka, H. Tanigawa and K. Suzuki&lt;br&gt;Ritsumeikan Univ., Japan</td>
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<td><strong>18A-5-3 12:00</strong>&lt;br&gt;Full-Chip Layout Optimization for Process Margin Enhancement using Model-Based Hot-Spot Fixing System&lt;br&gt;S. Kobayashi 1, S. Kyoh 1, T. Kotani 1, Y. Takekawa 1, S. Inoue 1 and K. Nakamae 2&lt;br&gt;1 Toshiba and 2 Osaka Univ., Japan</td>
<td><strong>18B-5-3 11:40</strong>&lt;br&gt;Ferromagnetic Ni Doped ZnO Nanocrystalline Thin Films Reveals Magnetic Anisotropy&lt;br&gt;M. Subramanian, F.-Y. Ran, M. Tanemura, T. Hihara, T. Soga and T. Jimbo&lt;br&gt;Nagoya Inst. of Technol., Japan</td>
<td><strong>18C-5-3 11:40</strong>&lt;br&gt;A Vertical Mirror Monolithically fabricated on a Rotary Comb-Drive Actuator for Variable Optical Attenuation&lt;br&gt;L.-M. Chang 1, R. Chen 1 and M.T.-K. Hou 2&lt;br&gt;1 Natl. Tsing Hua Univ. and 2 Natl. United Univ., Taiwan</td>
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Room D1 and Room D2 (2F)

Coffee Break

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18A-5-4 12:20
OPC on a Single Desktop: A GPU-Based OPC and OPV Tool for Fabs and Designers
I. Torunoglu and A. Karakas
Gauda, U.S.A.

18B-5-4 12:10
Superhydrophobic ZnO Surface: Chemical Modification and Effects of UV Irradiation
G. Kwak, M. Seol, Y. Tak and K. Yong
POSTECH, Korea

18B-5-5 12:30
Effects of Crystal Structure and Nitrogen Doping on Photoelectric Properties of TiO2 Films grown by Atomic Layer Deposition
W.J. Lee and M.H. Hon
Natl. Cheng Kung Univ., Taiwan

18C-5-4 12:00
Fabrication of Variable-Reflection Photonic Crystal MEMS Filters using Subwavelength Grating-Embedded Substrates
Y. Kanamori, S. Haida and K. Hane
Tohoku Univ., Japan

18C-5-5 12:20
Development of Roll Micromold System (RMS) via Deep X-Ray Lithography and Metal Electroforming Processes
B.-K. Lee and T.H. Kwon
POSTECH, Korea

18C-4, 5, 12:40-12:55, Author's Interview
Lunch

18A-6: Symposium A: Computational Lithography III
Chairpersons:
T. Chijimatsu (Fujitsu)
T. Takigawa (Brion Technol.)

18B-6: Nanomaterials III
Chairpersons:
T. Yoshinobu (Tohoku Univ.)
Y. Tajima (Riken)

18A-6-1 14:00
Modeling of Mask and Wafer Side Scattering Effects in Advanced Optical and EUV-Lithography (Invited)
A. Erdmann, F. Shao, P. Evanschitzky, T. Fubner and Z. Rahimi
Fraunhofer, Germany

18B-6-1 13:50
Growth and Characterization of InGaN/GaN-Based Nano-Parasols
T. Kouro1.2, K. Kishino1,2 H. Hata 1 and A. Kikuchi 1,2
1 Sophia Univ. and 3 CREST-JST, Japan

18B-6-2 14:10
Use of Physics-Based Resist Models to Predict Real-World Lithographic Effects (Invited)
M.D. Smith, S. Robertson, J. Biafore, T. Graves, and S. Kapasi
KLA-Tencor, USA

18B-6-3 15:00
The Role of Physical Lithography Simulation in Manufacturing Flows (Invited)
W. Demmerle
Synopsys, Germany

18A-4, 5, 6: 15:30-15:45, Author's Interview

18A-6-1 13:50
Sorting and Functional Analysis of Single Biomolecules by Micro- and Nano-Devices (Invited)
T. Funatsu
Univ. of Tokyo, Japan

18B-6-2 14:20
Alignment of Size-Homogeneous Ge Dots on Si (001) Substrate with Two-Dimension Hole Array
T. Chen, Y. Shi, G. Gao and J. Pan
Peking Univ., China

18B-6-3 14:30
Synthesis of Highly Vertically Aligned Carbon Nanotube Forest on Fe/Al Catalyzed Substrate for Yarning Application
B.H. Choi, H.N. Yoo, Y.B. Kim and J.H. Lee
Korea Inst. of Industrial Technol., Korea

18B-6-4 14:50
Raman Scattering of Single-Walled Carbon Nanotubes in Early Growth Stages using Laser-Irradiated Chemical Vapor Deposition
T. Tsuji, K. Inoue, Y. Ohno, K. Maehashi and K. Matsumoto
Osaka Univ., Japan

18B-6-5 15:10
First-Principles Simulation on Thickness Dependence of Piezoresistance Effect in Silicon Nanosheets
K. Nakamura, T. Toriyama and S. Sugiyama
Ritsumeikan Univ., Japan

18A-6-2 14:30
Use of Physics-Based Resist Models to Predict Real-World Lithographic Effects (Invited)
M.D. Smith, S. Robertson, J. Biafore, T. Graves, and S. Kapasi
KLA-Tencor, USA

18B-6-6 15:40
Mechanical Resonance of Cantilevered Carbon Nanotubes in Liquid
S. Sawano 1, T. Arie 1,2 and S. Akita 1,2
1 Osaka Pref. Univ. and 2 Natl. Nano Device Labs., Taiwan

Room D1 and D2 (2F)
Poster Session I (16:00-18:00)

18D-7-1 Structural Optimization of Single Grating Diffraction for Use in EUV Interferometric Lithography
M. Saib 1, C. Constancias 2, P. Michallon 2, B. Dalzotto 2 and M. Besacier 1
1 CNRS-LTM Grenoble and 2 CEA Grenoble, France

18D-7-2 Current Research Status of EUV Source in China
C. Zhang, P. Lu, Y. Zhao and Q. Wang
Harbin Inst. of Technol., China

18D-7-3 Holistic Optimization for Lithography at Ion Implant Layers
T. Ojima, M. Asano, M. Takahashi, Y. Seino and S. Mimotogi
Toshiba, Japan

- 4 -
18D-7-4 Development of the Extreme Ultraviolet Interference Lithography System N. Nakagami, Y. Fukushina, Y. Kamaji, T. Iguchi, Y. Yamaguchi, M. Tada, T. Harada, T. Watanabe and H. Kinoshita Univ. of Hyogo, Japan

18D-7-5 Withdrawn Resist Evaluation using EUV Interference Lithography T. Fukushina, N. Sakagami, T. Kimura, Y. Kamaji, T. Iguchi, Y. Yamaguchi, M. Tada, T. Harada, T. Watanabe and H. Kinoshita Univ. of Hyogo, Japan

18D-7-6 Imaging Performance Advancement of an Extreme Ultraviolet Microscope T. Takase, Y. Kamaji, N. Sakagami, T. Iguchi, M. Tada, Y. Yamaguchi, Y. Fukushina, T. Harada, T. Watanabe and H. Kinoshita Univ. of Hyogo, Japan

18D-7-7 A GPU-Based Source-Mask Optimization Solution I. Torunoglu and A. Karakas Gauda, USA

18D-7-8 Critical Dimension Measurement of an EUV Mask Imaging by a Coherent EUV Scattering Microscope at NeuSUBARU T. Harada 1,2, J. Kishimoto 1,2, T. Watanabe 1,2 and H. Kinoshita 1,2 1 Univ. of Hyogo and 2 CREST-JST, Japan

18D-7-9 Effects of Fresnel Zone Plate Fabrication Errors on Focusing Performances T.-H. Pei, K.-Y. Tsai and J.-H. Li Natl. Taiwan Univ., Taiwan

18D-7-10 A Study of Flare Variation in Extreme Ultraviolet Lithography for Sub-22nm Line and Space Pattern J. Lee, G. Song and O. Kim POSTECH, Korea


18D-7-12 Vibration Isolation of a Full Electron Beam Projection Lithography System F.C. Wang, M.F. Hong and J.Y. Yen Natl. Taiwan Univ., Taiwan

18D-7-13 Manufacturability Analysis of a MEMS-Based Electron-Optical System Design for Direct-Write Lithography S.-Y. Chen 1, S.-C. Chen 1, H.-H. Chen 1, T.-H. Pei 1, K.-Y. Tsai 1 and H.-H. Pan 2 1 Natl. Taiwan Univ. and 2 ITRI, Taiwan


18D-7-15 High Resolution Electron Beam Direct Write on ZEP520 at 5 KeV F.-M. Wang 1, S. Ono 2, H.-H. Su 1, K.-Y. Tsai 1 and C.-H. Kuan 1 1 Natl. Taiwan Univ., Taiwan and 2 Elionix, Japan

18D-7-16 Design and Fabrication of Multi-Aperture Plate for Multi Ion Beam Patterning System Y. Choi, T.-G. Kim, J. Han, B.-K. Min, Y.-J. Kim and S. Lee Yonsei Univ., Korea

18D-7-17 Maskless Formation of Patterned Gallium Nitride Layer on Low-Energy Ga-Ion-Implanted Silicon Nitride Surface by Metal-Organic Chemical Vapor Deposition K. Ishizumi 1, J. Kikkawa 1, Y. Nakamura 1, A. Sakai 1 and J. Yanagisawa 2 1 Osaka Univ. and 2 Univ. of Shiga Pref., Japan

18D-7-18 Ion Track Nanolithography for Nanotemplate Fabrication using Thick Cross-Linked PMMA 950 Photore sist E. Kousharentz 1, J. Kuleshova 1, S. Leong 1, N.M. Tudor 1, D. O’Connell 2, J. Pike 2, S.P. Beeby 1, I. Nandhakumar 1 and N.M. White 1 1 Univ. of Southampton, UK and 2 Tandyll Natl. Inst., Ireland

18D-7-19 Relationship between Normalized Image Log Slope (NILS) and Chemical Gradient in Chemically Amplified Extreme Ultraviolet Resists – Effect of Secondary Electron Migration T. Kozawa 1,2 and S. Tagawa 1,2 1 Osaka Univ. and 2 CREST-JST, Japan

18D-7-20 Development of New Negative-Tone Molecular Resists based on Alklyphenyl Calixarene for EUVL H. Hayashi 1, M. Echigo 1, H. Oizumi 2 and T. Itami 2 1 Mitsubishi Gas Chemical Company and 2 Selete, Japan

18D-7-21 Development of Positive-Tone Molecular EUV Resist based on “Noria” Derivatives H. Oizumi 1, T. Itami 1, H. Kudo 2, Y. Suyama 2 and T. Nishikubo 2 1 Selete and 2 Kanagawa Univ., Japan

18D-7-22 Sensitivity Enhanced Electron-Beam Lithography on HSQ H. Ohki and Y. Ono JEOL, Japan

18D-7-23 Study of Acid-Leaving Groups of Positive-Working Molecular Resists for High Resolution A. Yamada, S. Hattori, S. Saito and K. Asakawa Toshiba, Japan

18D-7-24 Molecular Resists based on Fullere ne Derivativ K. Tanaka 1, K. Kawakami 2 and N. Harada 2 1 Mitsubishi Chemical and 2 Mitsubishi Chemical Group Sci. and Technol. Res., Japan

18D-7-25 Studies of the Acid Generator for RLS Tradeoff Improvement in EUV Photore sist Y. Utsui 1, Y. Komuro 1, M. Irie 1, K. Matsuzawa 1, H. Hada 1, T. Haga 1, and S. Ogawa 2 1 Tokyo Ohka Kogyo and 2 Iwate Univ., Japan

18D-7-26 Photo-Acid Generator Sans Chromophore for EUV Resistors K.S. Mayya 1, Y. Kang 2, T. Yasue 1, S.-H. Oh 1, S.-W. Choi 1 and C.-H. Park 1 1 Samsung Electronics and 2 Kyunghee Univ., Korea

18D-7-27 Short-Lived Intermediates of Fluorinated Benzene Derivatives Generated upon Exposure to Ionizing Radiation S. Higashino 1, K.Okamoto 2,3, A. Saeki 1,3, T. Kozawa 1,3 and S. Tagawa 1,3 1 Osaka Univ., 2 Hokkaido Univ. and 3 CREST-JST, Japan

18D-7-28 Preparation of Multilayer Thin Films for Application to Dye-Sensitized Solar Cells H. Chang, Y.-L. Chen and M.-J. Kao Natl. Taiwan Univ. of Technol., Taiwan


Electron- and Ion-Beam Lithography

18D-7-143L Analysis of a Resist Surface Deformation by Electron Beam Irradiation Y. Akiha 1 and M. Kotera 1,2 1 Osaka Inst. of Technol. and 2 Nanomaterials Rese arch, Res., Japan

18D-7-20 Study of Acid-Leaving Groups of Positive-Working Molecular Resists for High Resolution A. Yamada, S. Hattori, S. Saito and K. Asakawa Toshiba, Japan

18D-7-21 Development of Positive-Tone Molecular EUV Resist based on “Noria” Derivatives H. Oizumi 1, T. Itami 1, H. Kudo 2, Y. Suyama 2 and T. Nishikubo 2 1 Selete and 2 Kanagawa Univ., Japan

18D-7-24 Molecular Resists based on Fullere ne Derivativ K. Tanaka 1, K. Kawakami 2 and N. Harada 2 1 Mitsubishi Chemical and 2 Mitsubishi Chemical Group Sci. and Technol. Res., Japan

18D-7-25 Studies of the Acid Generator for RLS Tradeoff Improvement in EUV Photore sist Y. Utsui 1, Y. Komuro 1, M. Irie 1, K. Matsuzawa 1, H. Hada 1, T. Haga 1, and S. Ogawa 2 1 Tokyo Ohka Kogyo and 2 Iwate Univ., Japan

18D-7-26 Photo-Acid Generator Sans Chromophore for EUV Resistors K.S. Mayya 1, Y. Kang 2, T. Yasue 1, S.-H. Oh 1, S.-W. Choi 1 and C.-H. Park 1 1 Samsung Electronics and 2 Kyunghee Univ., Korea


18D-7-28 Preparation of Multilayer Thin Films for Application to Dye-Sensitized Solar Cells H. Chang, Y.-L. Chen and M.-J. Kao Natl. Taiwan Univ. of Technol., Taiwan

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<td>18D-7-76 Preparation of CdS with Reverse Micelle and Photo-Degradation of Toxic Organic</td>
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Microsystem Technology and MEMS

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<td>Direct Writing of Resist Patterns Using an Air-Pressure Dispenser with a Wire Nozzle</td>
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<td>18D-7-139</td>
<td>Fabrication of a Microlens Array Based on Quartz Wet Etching and its Application in Photolithography</td>
<td>M. Nam, H. Oh, G. Kim, K. Lee and S. Yang</td>
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<td>18D-7-142</td>
<td>Fabrication Process of Flexible and Transparent Microelectrode Arrays for in vivo Sensing</td>
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<td>18D-7-143</td>
<td>Large-Scale RNA Microarray Printing using a Femtoliter-Scale Microwell Array Plate as a Template</td>
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<td>Univ. of Tokyo and 2 CREST-IST, Japan</td>
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<td>18D-7-144</td>
<td>Fabrication of Well-Ordered Wrinkling ZnO Microstructures by PMMA Templates</td>
<td>J.C. Lee 1, M.H. Hon 1, I.C. Lee 2 and H.Y. Lin 1</td>
<td>Natl. Cheng Kung Univ. and 2 Natl. Univ. of Taiwan, Taiwan</td>
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<td>18D-7-145</td>
<td>Fabrication of a Micro Hole-Array for Hollow Cathode Discharges</td>
<td>G. Kim, K. Kim, K. Choi and S.S. Yang</td>
<td>Ajou Univ., Korea</td>
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18:15-20:15 Banquet
Namba Award Ceremony
Thursday, November 19, 2009

Room A (3F)  Room B (3F)  Room C (3F)

19A-8: Nano-Carbon Devices  19B-8: Nanofabrication I  19C-8: Electron & Ion Beam Lithography
Chairpersons:
Y. Ohno (Nagoya Univ.), K. Maeshashi (Osaka Univ.)
Chairpersons:
T. Hasegawa (NIMS)  A. Kohno (Fukouka Univ.)
Chairpersons:
H. Yamashita (HOYA)  J. Yanagisawa (Univ. of Shiga Pref.)

19A-8-1  9:00  19B-8-1  9:00  19C-8-1  9:00
GHz Graphene G transistor for RF Application (Invited)  Toward Nanoscale Functional PDMS by Embedding Vertical Au/SiO2/Au Nanosheets for Wettability Enhancement  Projection Charged Particle Nanolithography and Nanopatterning (Invited)
NTT, Japan  Univ. of Tokyo, Japan  IMS Nanofabrication, Austria

19A-8-2  9:30  19B-8-2  9:20  19C-8-2  9:30
Importance of Graphene/Metal Contact for High-Performance Graphene FET  Functional Thin Film Fabrication by Nanoinkjet Printing Method based on AFM  Electron Beam Recorder for Patterned Magnetic Media Mastering
K. Nagashio, T. Nishimura, K. Kita and A. Toriumi  Kyoto Univ., Japan  R. Kometani, S. Warisawa and S. Ishihara
NTT, Japan  Meiji Univ. and 2 NIMS, Japan  CEA/LETI, France

19A-8-3  9:50  19B-8-3  9:40  19C-8-3  9:50
Ambipolar Behavior in Epitaxial Graphene Based FETs on Si Substrate  Fabrication of Pt Nanocrystallline Field Emitter for Electron-Wave Interference by Beam-Induced Deposition  Proximity Effect Correction for Three Dimensional e-Beam Lithography
R. Ola-Cav 1, H.-C. Kang 1, H. Karasawa 1, Y. Miyamoto 1, H. Handa 1, H. Fukidome 1,2, T. Suemitsu 1,2, M. Suemitsu 1,2 and T. Osaji 1,2  K. Murakami, T. Matsu, F. Waka and M. Takai  N. Belic 1, N. Unal 1, D. Ritter 1, U. Hofmann 1 and D. Mahalu 2
1 Tohoku Univ. and 2 CREST-JST, Japan  Osaka Univ., Japan 1 GenSyls, Germany and 2 Weizmann Institute of Sci. in Rehovot-Israel, Israel

19A-8-4  10:10  19B-8-4  10:00  19C-8-4  10:10
Logic Gates based on Carbon Nanotube Field-Effect Transistors with SiNx Passivation Films  Evaluation of interfacial Layer for Restraint of Fermi Level Pinning  An Electron Field Emitter assisted by Electric Field Enhancement of Plasmon Resonance
Osaka Univ., Japan  1 Meiji Univ. and 2 NIMS, Japan  Tokyo Univ. of Agriculture and Technol., of Sci. in Rehovot-Israel, Israel

19A-8-5  10:30  19B-8-5  10:20  19C-8-5  10:30
Control of Carrier Type for High-Performance Carbon Nanotube Fets by Fixed Charges Incorporated in Gate Insulator  A Nano Thermometer based on a Single Sb-Se Nanorod  Non-Chemically Amplified Negative Resist for EUV Lithography (Invited)
Y. Ohno, N. Moriyama, T. Kitamura, S. Kishimoto and T. Mizutani  T.Y. Fan 1, K.W. Sun 1 and C.W. Liu 2  M. Endo (Osaka Univ.)  H. Oizumi (Selete)
Nagoya Univ., Japan  Natl. Chiao Tung Univ. and 2 Natl. Dong Hwa Univ., Taiwan  Osaka Pref. Univ., Japan

Room C1 and Room C2 (2F)

Coffee Break

Room D1 and Room D2 (2F)

Chairpersons:
K. Nishiguchi (NIT)  N. Banno (NEC)  H. Ozumi (Seleete)
Chairpersons:
M. Masahara (AIST)  K. Takase (Nihon Univ.)  M. Endo (Osaka Univ.)
Chairpersons:
H. Oizumi (Selete)

19A-9-1  11:10  19B-9-1  11:00  19C-9-1  11:10
Observation of Electron Quantum-Interferences in a Chemically Synthesized SiNx Passivation Films  Development of Nanogap Switching Devices for Memories (Invited)  Non-Chemically Amplified Negative Resist for EUV Lithography
F. Kutsuna 1, S. Huang 1, N. Fukuta 3,4 and K. Ishibashi 1  M. Ono 1, S. Furuta 1, Y. Masuda 1, T. Sumiya 1, T. Takahashi 1, H. Suga 2, M. Horikawa 2, T. Shimizu 2, and Y. Nitoh 2  N. Belic 1, N. Unal 1, D. Ritter 1, U. Hofmann 1 and D. Mahalu 2
1 RIKEN, 2 Tokyo Univ. of Sci., 3 NIMS and 4 PRESTO-JST, Japan  1 Meiji Univ. and 2 NIMS, Japan  Tokyo Univ. of Agriculture and Technol., of Sci. in Rehovot-Israel, Israel

19A-9-2  11:30  19B-9-2  11:30  19C-9-2  11:40
A Comparison of Corner Effect in Gate-All-Around and Triple-Gate Multiple-Nanowire SONOS Thin-Film Transistors  Stacked Nanowire Gate all Around (GAA) and Phi (Φ) Field Effect Transistors Fabrication  Dynamics of Radical Cation of Protected Poly(4-Hydroxystyrene)s for EUV and Electron Beam Resist
1 Natl. Chiao Tung Univ. and 2 Natl. Dong Hwa Univ., Taiwan  CEA/LETI, France  1 Hokkaido Univ., 2 CREST-JST and 3 Osaka Univ., Japan

19A-9-3  11:50  19B-9-3  11:50  19C-9-3  12:00
Single-Electron Stochastic Resonance using Si Nano-Wire Transistors  Connection of Polyydiacetylene Nanowires to a Single Functional Molecule via Covalent Bonds  High-Sensitivity Fluorine-Polymer Based Resists for EUV Lithography
K. Nishiguchi, S. Miyamoto and A. Fujiwara  Y. Okawa 1, S. K. Mandal 1, T. Hasegawa 1, S. Tsukamoto 2, C. Hu 1, Y. Tateyama 1,3, J. P. Hill 1, K. Arita 1 and M. Aono 1  H. J. Santillan 1, T. Yamashita 2, M. Morita 2, Y. Tanaka 2 and T. Itani 1
NTT, Japan  1 NIMS, Japan, 2 Hokkaido Univ., 3 Osaka Univ.  1 Seleete and 2 Daikin Industries, Japan

- 10 -
19A-9-4  12:10  Analysis on Voltage-Transfer Characteristics In GaAs-Based Three-Branch Nanowire Junctions controlled by Schottky Wrap Gates  D. Nakata 1, H. Shibata 1, Y. Shiratori1 and S. Kasaiz 1, 2 1 Hokkaido Univ. and 2 PRESTO-JST, Japan

19B-9-4  12:10  Influence of Initial Internal Stress on Ion-Induced Bending (IBB) Effect T. Yoshida, M. Nagao and S. Kanemaru AIST, Japan

19C-9-4  12:20  Study on Radiation Chemistry of Fluoronaphthalene for Extreme Ultraviolet Resists  S. Ikeda 1,2, K. Okamoto 1,2, H. Yamaamoto 1,2, A. Saeki 1,2, T. Kozawa 1,2 and S. Tagawa 1,2 1 Osaka Univ. and 2 CREST-JST, Japan

19A-9-5  12:30  GaAs/AlGaAs Core-Multishell Nanowire-Based Light-Emitting Diode Arrays on Si Substrate K. Tomikawa, T. Tanaka, J. Motohisa, S. Harai, K. Hiruma and T. Fukui Hokkaido Univ., Japan

19B-9-5  12:30  Removal of Surface Oxide Layer from Silicon Nanocrystals by HF Vapor Etching Y. Nakamine 1,2, T. Kodera 1,2, K. Uchida 1,2 and S. Oda 1,2 1 Tokyo Inst. of Technol. and 2 SORST-JST, Japan

19C-9-5  12:40  Simulation Studies on Relationship between Resolution, Line Edge Roughness, and Sensitivity in Chemically Amplified Resists of Electron Beam Lithography A. Saeki 1,2, T. Kozawa 1,2 and S. Tagawa 1,2 1 Osaka Univ. and 2 CREST-JST, Japan

Lunch

Poster Session II (14:10-16:10) : Room D1 and Room D2 (2F)

Poster Session II (14:10-18:10)

Nanodevices

19D-10-1  Unique Short-Channel Characteristics in Sub-100 nm MOSFETs with Inversion-Layer Source/Drain V. Singh, H. Inokawa and H. Satoh Shizuoka Univ., Japan

19D-10-2  Preliminary Study of Backscattering Phenomenon from Drain Region in Silicon Nanodiode using NEGF Approach T. Tsutsumi and K. Tomizawa Meiji Univ., Japan

19D-10-3  The Influence of Source/Drain Extension Region Profile and Spacer Length on Device Performance of Tri-Gate Body-Tied FinFETs K. Inoue and K. Matsumoto Osaka Univ., Japan


19D-10-5  Structural Properties and Electrical Characteristics of High-k Sm2TiO5 Gate Dielectrics T.-M. Pan, K.-M. Chen, L.-C. Yen and S.-H. Su Chang Gung Univ., Taiwan

19D-10-6  High Frequency, Real-Time Current Measurements of a Silicon Nanowire Field-Effect-Transistor H.T. Kim 1, Y.K. Kim 1, M.G. Kang 1, D.J. Lee 1, M.S. Choi 1, J.H. Ahn 1, Y.S. Yu 3, J.S. Hwang 1, D. Ahn 4, D. Whang 2 and S.W. Hwang 1 1 Korea Univ., 2 Sungkyunkwan Univ., 3 Univ. of Seoul and 4 Hankyong Natl. Univ., Korea

19D-10-7  Fabrication and High Frequency Characterization of Si Nanowire Transistor by Dielectrophoresis Alignment M.G. Kang 1, J.H. Ahn 1, J.H. Lee 2, D.H. Hwang 1, H.T. Kim 1, D.J. Lee 1, M.S. Choi 1, J.S. Rieh 1, D.M. Whang 2, f M.H. Son 3, D Ahn 3, Y.S. Yu 4 and S.W. Hwang 1 1 Korea Univ., 2 Sungkyunkwan Univ., 3 Univ. of Seoul and 4 Hankyong Natl. Univ., Korea


19D-10-10  Resistance Switching in a SiC Nanowire/ Au Nanoparticle Network Y. Mori, H. Kohno and S. Takeda Osaka Univ., Japan

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1 Univ. of Hyogo, 2 Nagaoka Univ. of Technol. and 3 JSPS, Japan

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