Tuesday, September 25

Opening & Plenary Session (Main Hall)

Opening Session
Chair : T. Oomori, Mitsubishi Electric Corp.

9:30 Welcome Address
K. Kyuma, Mitsubishi Electric Corp.

9:40 Welcome Address
M. Konagai, The Japan Society of Applied Physics

Non-Technical Plenary Session

9:45 PL-1-1
“Future Prospects of Semiconductor Industry” T. Nomakuchi, AIST

SSDM Award/Paper Award Presentation
Chair : S. Miyazaki, Nagoya Univ.

10:45 PL-2-1
“It is a small world” A. Steegen, IMEC, Belgium

11:30 PL-2-2
“One-step Further of Wide Band-gap Semiconductor SiC” H. Matsunami, Kyoto Univ.

12:20-13:30 Lunch
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<th>12:20-13:30 Lunch</th>
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### Technical Plenary Session

**Chair**: T. Oomori, Mitsubishi Electric Corp.

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<td><strong>G-1</strong>: Optical and Electrical Properties in Nano Materials (Area 9)</td>
<td><strong>H-1</strong>: Compound Solar Cells (Area 15)</td>
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<td><strong>I-1</strong>: Nitrides (Area 8)</td>
<td><strong>J-1</strong>: Image Sensor (Area 5)</td>
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<td><strong>K-1</strong>: High-k MOS (Area 1)</td>
<td><strong>L-1</strong>: Si Power Devices (Area 14)</td>
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<td><strong>M-1</strong>: OTFT(1):Fabrication and Novel Structures (Area 10)</td>
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<td>(13:30-15:15) Chairs: H. Utsui (Tokyo Univ. of Agriculture and Technology)</td>
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### Laboratories and Workshops

**13:00 G-1-1**
Multielectron generation and recombination in semiconductor nanostructures Y. Kanemitsu, Kyoto Univ. (Japan)

**13:30 H-1-1**
Defects in Electron-Irradiated and Hydrogenated GaAs Grown by Chemical Beam Epitaxy R. Bouzazi, N. Kojima, Y. Ohba and M. Yamasaki, Tohoku Technological Inst. (Japan)

**13:30 I-1-1**

**14:00 J-1-2**

**14:00 J-1-1**
Advanced Radiation Image Sensors with SOI Technology Y. Arai, High Energy Accelerator Research Organization (Japan)

**14:00 L-1-2**
Future role of power semiconductors: From “Silicon vs. WBG” to “Silicon and WBG” I. Omura, Kyushu Inst. of Tech. (Japan)

**14:00 M-1-2**
Simple Pask-coating for High-Performance Polymer Thin-Film Transistors M. Ikawa, H. Matsumoto, Y. Shimazawa, Y. Takeuchi, T. Yamada and T. Hasegawa, FLEC AIST (Japan)

**14:00 M-1-1**
Electrodeposited and Patterned Polymer Thin Films and Devices R. C. Advincula, Case Western Reserve Univ. (USA)

**13:00 G-1**
Disorder-Induced Enhancement of Avalanche Multiplication in a Silicon Nanodot Array M. Morita, F. Takahashi, and A. Matsumoto, Osaka Univ. (Japan)

**13:45 H-1-2**

**14:00 J-1-2**

**14:00 L-1-1**
Advanced Radiation Image Sensors with SOI Technology Y. Arai, High Energy Accelerator Research Organization (Japan)

**14:00 M-1-2**
Real Time Failure Imaging of Power Semiconductors under Power Stress using Scanning Acoustic Tomography A. Watanabe and I. Omura, Kyushu Inst. of Tech. (Japan)

**14:00 M-1-1**
Electrodeposited and Patterned Polymer Thin Films and Devices R. C. Advincula, Case Western Reserve Univ. (USA)
Tuesday, September 25

**Coffee Break**
Communications and  
by directed self-assembly approach using radical 
assisting Y. Nakajima, Y. Morigasa, T. Kimura, H. Iosh-  
ki, T. Sugawara and Y. Jiang, ’Univ. of Electo-Communications and ‘Shincom Co. Ltd. (Japan)  
17:10 A-2-2 Theoretical analysis method of vertical coupling optical I/O interface with mirrors M. Nari, T. Kita, Y. Tanashi and H. Yamada, To- hoku Univ. (Japan)  
Banquet/Young Researcher Award (IF, Swan & Garden, Kyoto International Conference Center)
Tuesday, September 25

1F G: Single Electron Devices (Area 11)
1F H: Crystalline Silicon Solar Cells (Area 15)
2F I: Growth and Characterization of Group IV Related Materials (Area 8)
2F J: CMOS MEMS Modeling & Bio-medical Applications (Area 5&11)
K-2: Future Interconnects (Area 2)
1F L: SiC Processing and Characterization Technology (Area 14)
M-2: OTFT(2): Materials and Characterization (Area 10)

15:55 G-2-2
Placement of Single Ge Quantum Dot along with Self-aligned Electrodes for Effective Single Hole Tunneling
J. H. Chen, K. H. Chen, M. T. Tsai and P. W. Li, National Central Univ. (Taiwan)

15:55 G-2-2
Impact of Ion Srurion on Epitaxial Growth of Ge Layers on Si(111) Substrates
S. Kikuchi, T. Asoo, Y. Shimura, N. Tsuda, O. Nakanishi and S. Zaima, Graduate School of Eng., Nagoya Univ. (Japan)

15:55 H-2-2
Symmetric TE-Like Slow-Light Modes
M. Nara, T. Kita, Y. Tanushi and H. Yamada, Tohoku Univ. (Japan)

15:55 H-2-2
Monocrystalline Si Solar Cells with Selective Emitter Structure Formed by Ion Shower Doping Technique

15:55 H-2-2
Adoption of 2D-nanorods Arrays with Stacked ITO Film to Enhance Optical Absorption for Photovoltaic Applications
Y. C. Tao, L. W. She, C. M. Cheng, Y. C. Chen and T. J. Lee, National Taiwan Normal Univ. (Taiwan)

15:55 H-2-2
Leading Wave Crystalization from Fast Moving Molten Zone Formed by Micro-Thermal Plasma-Assisted Irradiation to Amorphous Silicon Films
S. Hayashi, Y. Fuyita, T. Kikumaru, K. Seki, M. Iida, H. Hasunuma and S. Hirogaki, Hiroshima Univ. (Japan)

15:55 H-2-2
Conditioned and Characteristic of Crystalline Germanium Solar Cells with the Double Heterostructure
T. Kaneko and K. Kanoda, National Inst. of Advanced Indus. Sci. and Tech. (Japan)

15:55 H-2-2
Low-temperature Crystalization of a-Si, a-Ge and a-Si:Ge, Films by Soft X-ray Irradiation
A. Heya, S. Kini, N. MATSUI, K. KANDA, S. MIYAMOTO, S. AMANO, T. Mochizuki, K. TAKO, T. SAIDO and M. MIYAZ, Unit of Hyogo, LASTI and Kyushu Univ. (Japan)

15:50 J-2-4
A Se-channel Neural Recording Chip for Brain Machine Interface
T. Ishida, H. Ando, M. Ochi, Y. Maruoka, A. Kitada, and C. I. M. Beenakker, Delft Univ. of Tech. and National Inst. of Stand. and Tech. (The Netherlands)

15:50 K-2-4
Integrating Carbon Nanotubes as Vias in a Monolithic 3DIC Process

16:00 L-2-5
Phosphorus Doping of 4H-SiC by Krf Eximer Laser Irradiation in Phosphoric Solution
A. Ikeda, K. Nishii, H. Henone and T. Asoo, Kyushu Univ. (Japan)

16:00 L-2-5
Limiting Factor Analysis of Device Operation of Organic Thin Film Transistors by Field-Induced Electron Spin Resonance
H. Maeno, D. Komatsu, E. Tsukahara, M. Iwao, I. Osuka, T. Abe, K. Takimori, S. Tokita and T. Hashigoe, VLEEC, AIST, ROKL, Yamagata Univ., 5SCAS and Hiroshima Univ. (Japan)

16:00 M-2-2
Influence of the First-Layered Grain Size on Bias-stress Effect in Pentacene-based Thin Film Transistors
W. Zhang, D. X. Li and C. Fang, National Center for NanoSci. and Tech. (National Center for NanoSci., China)

16:25 M-2-3
Mobility Limit Factors in Pentacene Thin-Film Transistors with Parylene-C Dielectric Layers
K. Fuchida, T. Suzuki, D. Komaki and S. Tokita, Yamagata Univ. (Japan)

16:40 M-2-4
Dual Function of Charge Sensor: Charge Sensing and Cutting
T. Kambayashi, T. Kodera and S. Odai, Toyko Tech. of Tech., Univ. of Tokyo and FRESTO-JST (Japan)

16:40 M-2-4
Growth of Dense Vertical and Horizontal Grain, Multi-layer Graphene
Y. Tanahashi, W. Takahashi, M. Ishii and H. Okada, NTT Advanced Tech. Corp., Univ. of Tokyo and JST-CREST (Japan)

16:40 M-2-4
Nanowire Arrays in Selective-area Metalorganic Deposition of Diameter and Pitch of InGaAs Nanowires for Advanced Logic and Memory Applications

16:40 M-2-4
Phenol-capped Electron Trapping by Individual Donor in Lateral Nanowire p-n Junction
S. Purushottami, A. Uddin, A. Morara, T. Mizuno and M. Tabo, Shizuoka Univ. (Japan)

16:40 M-2-4

16:45 H-2-2
Post-Annealing Effects on Characteristics of Crystalline Germanium Solar Cells with the Double Heterostructure
T. Kaneko and K. Kanoda, National Inst. of Advanced Indus. Sci. and Tech. (Japan)

16:45 H-2-2
Point Defect Reduction and Carrier Lifetime Improvement of Si- and C-face 4H-SiC Epilayers
M. Sato, H. Nakano, M. Takahashi, T. Muro, T. Takakura, S. Saito, M. Nishi and N. Yokoyama, JZST/JNC, JAMSTEC and Tohoku Univ. (Japan)

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