

Technical Seminar

“Solid State Device Research and Development Activities in Tsukuba Science City “

September 23, Room 102

Admission: Free

As the 40th anniversary of SSDM, we would like to invite you to a free technical seminar on September 23. Tsukuba-city is known to be one of the science cities in Japan. University of Tsukuba, many national institutes and semiconductor consortiums are located in the city. In this seminar, researchers from university of Tsukuba, national institutes and leading-edge consortiums will introduce their research activities and recent topics.

Official Language: ENGLISH

Program

- 12:20-12:30 **Opening Remark** Tohru Mogami, *Selete*
- 12:30-12:50 **Basic R&D in Univ. of Tsukuba: “3D Monte Carlo Simulations of Nano-scale Devices: Impact of Coulomb Interaction on Device Characteristics”**
Nobuyuki Sano, Tadayoshi Uechi and Takayuki Fukui, *Institute of Applied Physics, Univ. of Tsukuba*
- 12:50-13:10 **Basic R&D in Univ. of Tsukuba: “Characterization of Point Defects in Device Materials by means of Positron Annihilation”**
Akira Uedono, *Institute of Applied Physics, Univ. of Tsukuba*
- 13:10-13:30 **Space Electronics R&D in ISAS/JAXA: “Radiation Damage - Soft Error, Defect Generation”**
Kazuyuki Hirose, *Institute of Space and Astronautical Science (ISAS), JAXA*
- 13:30-13:50 **Coffee Break**
- 13:50-14:10 **Nanoelectronics R&D in AIST: “Current Development Status of New Memory Devices in AIST”**
Seigo Kanemaru, *Nanoelectronics Research Institute, AIST*
- 14:10-14:30 **Photonics R&D in AIST: “Photonic Technology: a Basis of Future Information Society”**
Kenji Torizuka, *Photonic Research Institute, AIST*
- 14:30-14:50 **Electric Materials R&D in NIMS: “High Throughput Synthesis and Characterization for New Materials Discovery and its Application to Design Gate Stack Materials”**
Toyohiro Chikyow¹, Takahiro Nagata¹, Naoto Umezawa¹, Michiko Yoshitake¹, Takashi Sekiguchi¹, Kenji Ohmori², Keisaku Yamada², Kenji Shiraishi³, Kikuo Yamabe³, Tetsuya Hasegawa⁴ and Hideomi Koinuma⁴, ¹*Advanced Electronic Materials Center, NIMS*, ²*Waseda Univ.*, ³*Univ. of Tsukuba*, ⁴*Univ. of Tokyo*
- 14:50-15:10 **FEOL R&D in NIMS: “Imaging of Leakage Sites in High-k Gate Electrode by using Electron-beam-induced Current Technique”**
Takashi Sekiguchi, Jun Chen, Masami Takase, Naoki Fukata and Toyohiro Chikyow, *Advanced Electronic Materials Center, NIMS*
- 15:10-15:30 **Coffee Break**
- 15:30-15:50 **FEOL R&D in Selete with High-k NET: “High-k/Metal-gate Technology for Advanced CMOS”**
Yasuo Nara¹, Kikuo Yamabe², Seiichi Miyazaki³, Kenji Shiraishi², Toyohiro Chikyow⁴, Heiji Watanabe⁵ and Keisaku Yamada⁶, ¹*Selete*, ²*Univ. of Tsukuba*, ³*Hiroshima Univ.*, ⁴*NIMS*, ⁵*Osaka Univ.*, ⁶*Waseda Univ.*
- 15:50-16:10 **BEOL R&D in Selete: “A Multilevel Copper/Low-k Interconnect Technology”**
Seiichi Kondo, *Selete*
- 16:10-16:30 **Lithography R&D in Selete: ” EUV Technology; Progress and Challenges”**
Hiroaki Oizumi, *Selete*
- 16:30-16:50 **MIRAI R&D in AIST and ASET: ”Ultra-scaled CMOS Technology”**
Toshihiko Kanayama, *Nanodevice Innovative Research Center, AIST*
- 16:50-17:10 **MIRAI R&D in Selete: “Nano Silicon Integration”**
Tohru Mogami, *Selete*
- 17:10 **Closing Remarks**
- 17:40 **Continue to the special talk by Prof. Simon Sze in Convention Hall 300**