The Highly Notable Papers of SSDM2007

Among all the high quality papers to be presented at SSDM2007, the Program Committee particularly selected the twelve papers listed below as “The Highly Notable Papers of SSDM2007” and released the list to the media on 29th August 2007.

1. Advanced Gate Stack/Si Processing Science
“nMOSFET Reliability Improvement attributed to the Interfacial Dipole formed by La Incorporation in HfO2”, C. Y. Kang et al., SEMATECH, USA
2. Characterization and Materials Engineering for Interconnect Integration
“A Small Area, 3-Dimentional On-Chip Inductors for High-Speed Signal Processing under Low Power Supply Voltage”, K. Hijioka et al., NEC Corp., Japan
3. CMOS Device/Device Physics
"Strained N-channel FinFETs with High-stress Nickel Silicide-Carbon Contacts and Integration with FUSI Metal Gate Technology", Tsung-Yang Liow et al. , National Univ. of Singapore/ Inst. of Microelectronics, Singapore
4. Advanced Memory Technology
“Two-Dimentional Electron Gas Switching in an Ultra Thin Epitaxial ZnO Layer on a Ferroelectric Gate Structure”, Y. Kaneko et al. , Matsushita Electric Industrial Co., Ltd., Japan
5. Advanced Circuits and Systems
“A 0.49-6.50GHz Wideband LC-VCO with High-IRR in a 180 nm CMOS Technology”, Y. Kobayashi et al. , Tokyo Tech., Japan
6. Compound Semiconductor Circuits, Electron Devices and Devices Physics
“A 7.6-ps Pulse Generator Using 0.13-μm InP-based HEMTs for Ultra Wide-Band Impulse Radio Systems”, Y. Nakasha et al. , Fujitsu Ltd., Japan
7. Photonic Devices and Device Physics
“First Demonstration of Electrically Driven 1.55 μm Single-Photon Generator”, T. Miyazawa et al. , Univ. of Tokyo, Japan
8. Advanced Material Synthesis and Crystal Growth Technology
"Demonstration of Holes in Strained Ge Quantum Wells with Much Higher Drift Mobility and Density Than That of Electrons in Strained Si Channels”, Maksym Myronov et al., Musashi Inst. of Tech., Japan
9. Physics and Applications of Novel Functional Materials and Devices
“Decoherence of nuclear spins in a GaAs quantum well probed by a submicron scale all-electrical NMR device”, T. Ota et al. , NTT Corp. / SORST-JST, Japan
10. Organic Materials Science, Device Physics and Applications
“Highly Reliable Bottom-Contact Pentacene TFTs with a Poly(chloroxylylene)Layer Selectively Grown on a Gate-Insulator”, R. Yasuda et al. , Sony Corp., Japan
11. Micro/Nano Electromechanical and Bio-Systems (Devices)
"Floating Gate MOS Capacitor with High Density Nanodots Array Produced by Protein Suparmolecule”, K. Yamada et al., Matsushita Electric Industrial Co., Ltd. / NAIST, Japan
12. Applications of Nanotubes and Nanowires
“CMOS Compatible Si-Nanowire Inverter Logic Gate for Low Power Applications”, N. Singh et al. , Inst. of Microelectronics, Singapore