Editorial

This is a special issue on 10th Korean Conference on Semiconductors(KCS 2003) held at Seoul, Feb. 27-28, 2003. Among 480 outstanding papers presented at the Conference, 8 papers have been solicited out of 28 best papers from 13 technical committees for this special issue of JSTS. First paper, authored by I. H. Kang et al., addresses breakdown voltage characteristics of InGaP/InGaAs/GaAs p-HEMT with an oxidized GaAs gate. The next paper deals with novel CMOS transistor fabrication technique using damascene gat with local channel implantation, authored by J.D Choi et al. The third paper points out the correlation with STI materials with data retention time in 512 Mb DDR with 90 nm design rule, authored by S.H. Shin et al.. The fourth paper authored by Y. K. Park et al., demonstrates MIS capacitor process integration for 90 nm DRAM technology using diamond-shaped OCS with 1.8 um stack height and Al2O3/HfO2 high-k materials. The fifth paper addresses the improvement of reset operation of CCD image sensor using a charge trapping of MOS transistor, authored by S.S. Park et al.. The sixth paper authored by W.Y. Uhm treats the design and fabrication of high conversion gain Q-band active sub-harmonic mixers for a receiver of millimeter wave wireless communication systems. The seventh paper discusses the direct evidence of the incorporation of high concentration of oxygen into undoped AlGaN layers for the AlGaN/GaN heterostuctures using scanning photoemission microscopy, authored by H.W. Jang et al.. The last paper authored by J. I. Kim et al., describes novel low-power high-speed flip-flop called dual edge-triggered NAND keeper flip-flop (DETNKFF) to achieve substantial power reduction and minimize the data-to-output latency.

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