

Journal of Semiconductors

Volume 31 Number 10 October 2010

SEMICONDUCTOR PHYSICS

- 102001 Dose-rate dependence of optically stimulated luminescence signal (4 pages)**
Wei Pingqiang, Chen Zhaoyang, Fan Yanwei, Sun Yurun, and Zhao Yun

SEMICONDUCTOR MATERIALS

- 103001 Electrical and optical properties of deep ultraviolet transparent conductive Ga₂O₃/ITO films by magnetron sputtering (5 pages)**
Liu Jianjun, Yan Jinliang, Shi Liang, and Li Ting
- 103002 Photoelectric conversion characteristics of ZnO/SiC/Si heterojunctions (4 pages)**
Wu Xiaopeng, Chen Xiaoqing, Sun Lijie, Mao Shun, and Fu Zhuxi
- 103003 Theoretical investigation of efficiency of a p-a-SiC:H/i-a-Si:H/n- μ c-Si solar cell (5 pages)**
Deng Qingwen, Wang Xiaoliang, Xiao Hongling, Ma Zeyu, Zhang Xiaobin, Hou Qifeng, Li Jinmin, and Wang Zhanguo

SEMICONDUCTOR DEVICES

- 104001 Nanoscale strained-Si MOSFET physics and modeling approaches: a review (5 pages)**
Amit Chaudhry, J. N. Roy, and Garima Joshi
- 104002 Multi-bias capacitance voltage characteristic of AlGaIn/GaN HEMT (4 pages)**
Pu Yan, Wang Liang, Yuan Tingting, Ouyang Sihua, Pang Lei, Liu Guoguo, Luo Weijun, and Liu Xinyu
- 104003 Design consideration of the thermal and electro stability of multi-finger HBTs based on different device structures (4 pages)**
Chen Yanhu, Shen Huajun, Liu Xinyu, Xu Hui, Li Ling, and Li Huijun
- 104004 MEXTRAM model based SiGe HBT large-signal modeling (6 pages)**
Han Bo, Li Shoulin, Cheng Jiali, Yin Qiuyan, and Gao Jianjun
- 104005 Structure optimization of a uni-traveling-carrier photodiode with introduction of a hydro-dynamic model (5 pages)**
Li Guoyu, Zhang Yejin, Li Xiaojian, and Tian Lilin
- 104006 Theoretical analysis of enhanced light output from a GaN light emitting diode with an embedded photonic crystal (4 pages)**
Wen Feng, Liu Deming, and Huang Lirong
- 104007 Thermal analysis of the cavity facet for an 808 nm semiconductor laser by using near-field scanning optical microscopy (5 pages)**
Rao Lan, Song Guofeng, and Chen Lianghui
- 104008 A novel modified charge pumping method for trapped charge characterization in nanometer-scale devices (5 pages)**
Zhu Peng, Pan Liyang, Gu Haiming, Qiao Fengying, Deng Ning, and Xu Jun
- 104009 Novel multi-bit non-uniform channel charge trapping memory device with virtual-source NAND flash array (5 pages)**
Gu Haiming, Pan Liyang, Zhu Peng, Wu Dong, Zhang Zhigang, and Xu Jun

(Continued on inside back cover)

104010 A compressed wide period-tunable grating working at low voltage (6 pages)
Liu Xiang, Li Tie, Ming Anjie, and Wang Yuelin

104011 MEMS magnetic field sensor based on silicon bridge structure (6 pages)
Du Guangtao, Chen Xiangdong, Lin Qibin, Li Hui, and Guo Huihui

SEMICONDUCTOR INTEGRATED CIRCUITS

105001 A low-voltage sense amplifier for high-performance embedded flash memory (5 pages)
Liu Jiang, Wang Xueqiang, Wang Qin, Wu Dong, Zhang Zhigang, Pan Liyang, and Liu Ming

105002 Short locking time and low jitter phase-locked loop based on slope charge pump control (7 pages)
Guo Zhongjie, Liu Youbao, Wu Longsheng, Wang Xihu, and Tang Wei

105003 A direct-conversion WLAN transceiver baseband with DC offset compensation and carrier leakage reduction (6 pages)
Yuan Fang, Yan Jun, Ma Heping, Shi Yin, and Dai Fa Foster

105004 Design of an analog front-end for ambulatory biopotential measurement systems (7 pages)
Wang Jiazhen, Xu Jun, Zheng Lirong, and Ren Junyan

105005 8.64–11.62 GHz CMOS VCO and divider in a zero-IF 802.11a/b/g WLAN and Bluetooth application (5 pages)
Sun Yu, Mei Niansong, Lu Bo, Huang Yumei, and Hong Zhiliang

105006 A 12-bit current steering DAC with 2-dimensional gradient-error tolerant switching scheme (6 pages)
Chen Hao, Liu Liyuan, Li Dongmei, Zhang Chun, and Wang Zhihua

105007 A novel 2.2 Gbps LVDS driver circuit design based on 0.35 μm CMOS (5 pages)
Cai Hua and Li Ping

105008 A design method for process design kit based on an SMIC 65 nm process (6 pages)
Luo Haiyan, Chen Lan, and Yin Minghui

105009 A 10-bit 200-kS/s SAR ADC IP core for a touch screen SoC (5 pages)
Tong Xingyuan, Yang Yintang, Zhu Zhangming, and Sheng Wenfang

SEMICONDUCTOR TECHNOLOGY

106001 Supercritical carbon dioxide process for releasing stuck cantilever beams (4 pages)
Hui Yu, Gao Chaoqun, Wang Lei, and Jing Yupeng

106002 Texturization of mono-crystalline silicon solar cells in TMAH without the addition of surfactant (5 pages)
Ou Weiyong, Zhang Yao, Li Hailing, Zhao Lei, Zhou Chunlan, Diao Hongwei, Liu Min, Lu Weiming, Zhang Jun, and Wang Wenjing

106003 Dummy fill effect on CMP planarity (4 pages)
Zhou Junxiong, Chen Lan, Ruan Wenbiao, Li Zhigang, Shen Weixiang, and Ye Tianchun

106004 A new cleaning process for the metallic contaminants on a post-CMP wafer's surface (4 pages)
Gao Baohong, Liu Yuling, Wang Chenwei, Zhu Yadong, Wang Shengli, Zhou Qiang, and Tan Baimei