Journal of Semiconductors

Volume 35 Number 2 February 2014

INVITED PAPERS

021001 Solid State Physics View of Liquid State Chemistry II. Electrical Capacitance of Pure and Impure Water (19 pages) Jie Binbin and Sah Chihtang

SEMICONDUCTOR MATERIALS

- **023001** Substrate temperature effects on the structural and photoelectric properties of ZnS:In films (4 pages) Li Wenjian, Chen Jinhuo, Cheng Shuying, and Wang Yongshun
- **023002 Optimizing structure for constructing a highly efficient inverted top-emitting organic light-emitting diode with stable electroluminescent spectra** (4 pages) Zhang Xiaowen, Xu Jiwen, Wang Hua, Wei Bin, Zeng Huarong, Jiang Xueyin, and Zhang Zhilin

SEMICONDUCTOR DEVICES

- 024001Temperature dependent $I_{DS}-V_{GS}$ characteristics of an N-channel Si tunneling field-effect transistor with
a germanium source on Si(110) substrate (4 pages)
Liu Yan, Yan Jing, Wang Hongjuan, and Han Genquan
- **024002** Effects of wet-ROA on shallow interface traps of n-type 4H-SiC MOS capacitors (4 pages) Zhu Qiaozhi and Wang Dejun
- 024003 A PD-SOI based DTI-LOCOS combined cross isolation technique for minimizing TID radiation induced leakage in high density memory (6 pages) Qiao Fengying, Pan Liyang, Wu Dong, Liu Lifang, and Xu Jun
- **024004** A novel SOI high-voltage SJ-pLDMOS based on self-adaptive charge balance (5 pages) Wu Lijuan, Zhang Wentong, Zhang Bo, and Li Zhaoji
- **024005** A novel NLDMOS with a high ballast resistance for ESD protection (4 pages) Fan Hang and Zhang Bo
- **024006** The total dose effects on the 1/*f* noise of deep submicron CMOS transistors (6 pages) Hu Rongbin, Wang Yuxin, and Lu Wu
- 024007 Experimental and theoretical study of an improved breakdown voltage SOI LDMOS with a reduced cell pitch (5 pages) Luo Xiaorong, Wang Xiaowei, Hu Gangyi, Fan Yuanhang, Zhou Kun, Luo Yinchun, Fan Ye, Zhang Zhengyuan, Mei Yong, and Zhang Bo
- 024008 The negative differential resistance characteristics of an RC-IGBT and its equivalent circuit model (5 pages)

Zhang Wenliang, Zhu Yangjun, Lu Shuojin, and Tian Xiaoli

024009 Correlation between dark current RTS noise and defects for AlGaInP multiple-quantum-well laser diode (5 pages)

Liu Yu'an and Lou Wenlang

- 024010 Effects of the p-AlInGaN/GaN superlattices' structure on the performance of blue LEDs (4 pages) Liu Na, Yi Xiaoyan, Liang Meng, Guo Enqing, Feng Xiangxu, Si Zhao, Ji Xiaoli, Wei Xuecheng, Lu Hongxi, Liu Zhiqiang, Zhang Ning, Wang Junxi, and Li Jinmin 024011 Effects of defect states on the performance of CuInGaSe₂ solar cells (6 pages) Wan Fucheng, Tang Fuling, Xue Hongtao, Lu Wenjiang, Feng Yudong, and Rui Zhiyuan 024012 1.3- μ m 1 × 4 MMI coupler based on shallow-etched InP ridge waveguides (4 pages) Guo Fei, Lu Dan, Zhang Ruikang, Wang Baojun, Zhang Xilin, and Ji Chen 024013 A dynamic range extension scheme applied to a TDI CMOS image sensor (6 pages) Xu Chao, Yao Suving, Xu Jiangtao, Gao Zhiyuan, and Han Ligiang SEMICONDUCTOR INTEGRATED CIRCUITS 025001 Dual-band RF receiver for GPS-L1 and compass-B1 in a 55-nm CMOS (10 pages) Li Songting, Li Jiancheng, Gu Xiaochen, and Zhuang Zhaowen 025002 A power-efficient 12-bit analog-to-digital converter with a novel constant-resistance CMOS input sampling switch (10 pages) Jing Xin, Zhuang Yiqi, Tang Hualian, Dai Li, Du Yongqian, Zhang Li, and Duan Hongbo 025003 A 130 nm CMOS low-power SAR ADC for wide-band communication systems (8 pages) Bian Chenghao, Yan Jun, Shi Yin, and Sun Ling 025004 Process variation robust current-mode on-chip interconnect signaling scheme (6 pages) Wang Xinsheng, Hu Yizhe, and Yu Mingyan 025005 An effective timing characterization method for an accuracy-proved VLSI standard cell library (5 pages) Jiang Jianhua, Liang Man, Wang Lei, and Zhou Yumei SEMICONDUCTOR TECHNOLOGY A multi coding technique to reduce transition activity in VLSI circuits (6 pages) 026001 N. Vithyalakshmi and M. Rajaram 026002 Alkaline barrier slurry applied in TSV chemical mechanical planarization (4 pages) Ma Suohui, Wang Shengli, Liu Yuling, Wang Chenwei, and Yang Yan 026003 Electrochemical investigation of copper chemical mechanical planarization in alkaline slurry without an inhibitor (6 pages) Wang Aochen, Wang Shengli, Liu Yuling, and Li Yan
- **026004** Effects of rapid thermal annealing on ohmic contact of AlGaN/GaN HEMTs (4 pages) Zhu Yanxu, Cao Weiwei, Fan Yuyu, Deng Ye, and Xu Chen
- **026005** A new weakly alkaline slurry for copper planarization at a reduced down pressure (4 pages) Chen Rui, Kang Jin, Liu Yuling, Wang Chenwei, Cai Ting, and Li Xin
- **026006** An improved shape shifting method of critical area extraction (8 pages) Zhu Jiaojiao, Luo Xiaohua, Chen Lisheng, Ye Yi, and Yan Xiaolang