## Journal of Semiconductors

Volume 35 Number 7 July 2014

## SEMICONDUCTOR PHYSICS

072001	First principle studies of structural, elastic, electronic and optical properties of Zn-chalcogenides under pressure (9 pages)
	Muhammad Bilal, M. Shafiq, Iftikhar Ahmad, and Imad Khan
072002	<b>Optical transmission in thin films of vanadium compounds</b> (5 pages) Kh. S. Karimov, M. Mahroof-Tahir, M. Saleem, N. Ahmad, and A. Rashid
072003	Improved adhesion and interface ohmic contact on n-type 4H-SiC substrate by using Ni/Ti/Ni (4 pages) Han Linchao, Shen Huajun, Liu Kean, Wang Yiyu, Tang Yidan, Bai Yun, Xu Hengyu, Wu Yudong, and Liu Xinyu
	SEMICONDUCTOR MATERIALS
073001	Effect of band gap energy on the electrical conductivity in doped ZnO thin film (4 pages) Said Benramache, Okba Belahssen, and Hachemi Ben Temam
073002	Epitaxy of GaAs thin film with low defect density and smooth surface on Si substrate (5 pages) Zhou Xuliang, Pan Jiaoqing, Liang Renrong, Wang Jing, and Wang Wei
073003	Field electron emission from structure-controlled one-dimensional CuO arrays synthesized by wet chemical process (4 pages) Hu Liqin, Zhang Dian, Hu Hailong, and Guo Tailiang
073004	Strain effects on band structure of wurtzite ZnO: a GGA $+ U$ study (5 pages) Qiao Liping, Chai Changchun, Yang Yintang, Yu Xinhai, and Shi Chunlei
	SEMICONDUCTOR DEVICES
074001	<b>Analog performance of double gate junctionless tunnel field effect transistor</b> (5 pages) M. W. Akram and Bahniman Ghosh
074002	An optimized junctionless GAA MOSFET design based on multi-objective computation for high-performance ultra-low power devices (6 pages) T. Bendib, F. Djeffal, and M. Meguellati
074003	Novel reverse conducting insulated gate bipolar transistor with anti-parallel MOS controlled thyristor (4 pages) Zhu Liheng and Chen Xingbi
074004	Hot-carrier effects on irradiated deep submicron NMOSFET (4 pages) Cui Jiangwei, Zheng Qiwen, Yu Xuefeng, Cong Zhongchao, Zhou Hang, Guo Qi, Wen Lin, Wei Ying, and Ren Diyuan
074005	<b>Development of 10 kV 4H-SiC JBS diode with FGR termination</b> (4 pages) Huang Runhua, Tao Yonghong, Cao Pengfei, Wang Ling, Chen Gang, Bai Song, Li Rui, Li Yun, and Zhao Zhifei

(Continued on inside back cover)

074006	Self-aligned graphene field-effect transistors on SiC (0001) substrates with self-oxidized gate dielectric (5 pages)
	Li Jia, Yu Cui, Wang Li, Liu Qingbin, He Zezhao, Cai Shujun, and Feng Zhihong
074007	Electric field optimized LDMOST using multiple decrescent and reverse charge regions (4 pages) Cheng Jianbing, Xia Xiaojuan, Jian Tong, Guo Yufeng, Yu Shujuan, and Yang Hao
074008	A novel symmetrical split-gate structure for 2-bit per cell flash memory (4 pages) Fang Liang, Kong Weiran, Gu Jing, Zhang Bo, and Zou Shichang
074009	A high-speed avalanche photodiode (5 pages) Li Bin, Yang Xiaohong, Yin Weihong, Lü Qianqian, Cui Rong, and Han Qin
074010	Analysis of coupling between nanotaper SiGe-SOI waveguide and fiber (6 pages) Feng Song and Gao Yong
074011	<b>Double junction photodiode for X-ray CMOS sensor IC</b> (6 pages) Xu Chaoqun, Sun Ying, Han Yan, and Zhu Dazhong
074012	<b>Pinch-off voltage modeling for CMOS image pixels with a pinned photodiode structure</b> (7 pages) Cao Chen, Zhang Bing, Wu Longsheng, Li Xin, and Wang Junfeng
074013	GaN-based high-voltage light-emitting diodes with backside reflector (5 pages) Huang Huamao, Wang Hong, Huang Xiaosheng, and Hu Jinyong
074014	<b>Analysis of reliability factors of MEMS disk resonator under the strong inertial impact</b> <i>(5 pages)</i> Dong Linxi, Yu Quan, Bao Jinyan, and Tao Jiaping
074015	<b>Ceramic thermal wind sensor based on advanced direct chip attach package</b> (5 pages) Zhou Lin, Qin Ming, Chen Shengqi, and Chen Bei
	SEMICONDUCTOR INTEGRATED CIRCUITS
075001	<b>MOSFET-like CNFET based logic gate library for low-power application: a comparative study</b> <i>(13 pages)</i> P. A. Gowri Sankar and K. Udhayakumar
075002	A 3.01–3.82 GHz CMOS LC voltage-controlled oscillator with 6.29% VCO-gain variation for WLAN applications (7 pages) Liu Xiaolong, Zhang Lei, Zhang Li, Wang Yan, and Yu Zhiping
075003	A $\Delta\Sigma$ fractional- <i>N</i> frequency synthesizer for FM tuner using low noise filter and quantization noise suppression technique (7 pages) Chen Mingyi, Chu Xiaoji,Yu Peng, Yan Jun, and Shi Yin
075004	A broadband regenerative frequency divider in InGaP/GaAs HBT technology (4 pages) Zhang Jincan, Zhang Yuming, Lü Hongliang, Zhang Yimen, Liu Min, Zhong Yinghui, and Shi Zheng
075005	A single channel, 6-bit 230-MS/s asynchronous SAR ADC based on 2 bits/stage (6 pages) Han Xue, Wei Qi, Yang Huazhong, and Wang Hui
075006	A 14-bit 100-MS/s 85.2-dB SFDR pipelined ADC without calibration (6 pages) Zhao Nan, Luo Hua, Wei Qi, and Yang Huazhong
075007	A novel sourceline voltage compensation circuit for embedded NOR flash memory (5 pages) Zhang Shengbo, Yang Guangjun, Hu Jian, and Xiao Jun
075008	A sub-milliwatt audio-processing platform for digital hearing aids (5 pages) Yuan Jia, Chen Liming, Yu Zenghui, and Hei Yong