

Journal of Semiconductors



Volume 37 Number 8 August 2016

INVITED REVIEW PAPERS

- 081001** **Research progress of Si-based germanium materials and devices** (9 pages)
Cheng Buwen, Li Cheng, Liu Zhi, and Xue Chunlai

SEMICONDUCTOR PHYSICS

- 082001** **The algorithm for the piezoresistance coefficients of p-type polysilicon** (5 pages)
Wang Jian and Chuai Rongyan

SEMICONDUCTOR MATERIALS

- 083001** **Fabrication of extremely thermal-stable GaN template on Mo substrate using double bonding and step annealing process** (4 pages)
Wang Qing, Liu Yang, Sun Yongjian, Tong Yuzhen, and Zhang Guoyi
- 083002** **Preparation and photocatalytic activities of 3D flower-like CuO nanostructures** (9 pages)
Fan Qingfei, Lan Qi, Zhang Meili, Fan Ximei, Zhou Zuowan, and Zhang Chaoliang
- 083003** **High haze textured surface B-doped ZnO-TCO films on wet-chemically etched glass substrates for thin film solar cells** (7 pages)
Chen Xinliang, Liu Jieming, Fang Jia, Chen Ze, Zhao Ying, and Zhang Xiaodan
- 083004** **Solvothermal synthesis of Bi₂O₃/BiVO₄ heterojunction with enhanced visible-light photocatalytic performances** (10 pages)
Wu Ying, Wang Jing, Huang Yunfang, Wei Yuelin, Sun Zhixian, Zheng Xuanqing, Zhang Chengkun, Zhou Ningling, Fan Leqing, and Wu Jihuai

SEMICONDUCTOR DEVICES

- 084001** **Development of 17 kV 4H-SiC PiN diode** (4 pages)
Huang Runhua, Tao Yonghong, Wang Ling, Chen Gang, Bai Song, Li Rui, Li Yun, and Zhao Zhifei
- 084002** **Design, fabrication and characterising of 100 W GaN HEMT for Ku-band application** (6 pages)
Ren Chunjiang, Zhong Shichang, Li Yuchao, Li Zhonghui, Kong Yuechan, and Chen Tangsheng
- 084003** **A novel high performance SemiSJ-CSTBT with p-pillar under the bottom of the trench gate** (5 pages)
Jia Yan, Chen Hong, Tan Ji, Lu Shuojin, and Zhu Yangjun
- 084004** **Application of the thermoelectric MEMS microwave power sensor in a power radiation monitoring system** (3 pages)
Gao Bo, Yang Jing, Jiang Si, and Wang Debo

(Continued on inside back cover)

- 084005 Investigation and solution of low yield problem for phase change memory with lateral fully-confined structure (4 pages)**
Zhou Yaling, Wang Xiaofeng, Fu Yingchun, Wang Xiaodong, and Yang Fuhua
- 084006 Ferroelectricity-modulated resistive switching in Pt/Si:HfO₂/HfO_{2-x}/Pt memory (5 pages)**
Jiang Ran, Du Xianghao, and Han Zuyin
- 084007 Influence of the thickness change of the wave-guide layers on the threshold current of GaAs-based laser diode (5 pages)**
Pang Yi, Li Xiang, and Zhao Baiqin

SEMICONDUCTOR INTEGRATED CIRCUITS

- 085001 A reconfigurable passive mixer for multimode multistandard receivers in 0.18 μm CMOS (8 pages)**
Fan Xiangning, Tao Jian, Bao Kuan, and Wang Zhigong
- 085002 50 MHz dual-mode buck DC-DC converter (5 pages)**
Zhang Zhang, Wang Xing, Yu Wencheng, Tan Ye, Yang Yizhong, and Xie Guangjun
- 085003 Computation of sensitivities of IC interconnect parasitic capacitances to the process variation with dual discrete geometric methods (7 pages)**
Gao Zhan, Ren Dan, Yan Shuai, Xu Xiaoyu, and Ren Zhuoxiang

SEMICONDUCTOR TECHNOLOGY

- 086001 Synergetic effect of chelating agent and nonionic surfactant for benzotriazole removal on post Cu-CMP cleaning (6 pages)**
Li Yanlei, Liu Yuling, Wang Chenwei, and Li Yue