

Journal of Semiconductors

Volume 38 Number 11 November 2017



INVITED REVIEW PAPERS

111001 Field-effect transistor memories based on ferroelectric polymers (14 pages)

Yujia Zhang, Haiyang Wang, Lei Zhang, Xiaomeng Chen, Yu Guo, Huabin Sun, and Yun Li

SEMICONDUCTOR MATERIALS

113001 Optimization of SnS active layer thickness for solar cell application (7 pages)

Yashika Gupta and P. Arun

113002 The effect of AlN/AlGa_N superlattices on crystal and optical properties of AlGa_N epitaxial layers (4 pages)

Shuo Zhang, Yun Zhang, Xiang Chen, Yanan Guo, Jianchang Yan, Junxi Wang, and Jinmin Li

113003 Producing deep UV-LEDs in high-yield MOVPE by improving AlN crystal quality with sputtered AlN nucleation layer (5 pages)

Zejie Du, Ruifei Duan, Tongbo Wei, Shuo Zhang, Junxi Wang, Xiaoyan Yi, Yiping Zeng, Junxue Ran, Jinmin Li, and Boyu Dong

113004 Preparation of erbium ion-doped TiO₂ films and the study of their photocatalytic activity under simulated solar light (8 pages)

Hongfei Lin, Yujiao Huang, Shaoni Li, Chunhui Luan, Wei Huang, Xiaodong Wang, and Xianshe Feng

SEMICONDUCTOR DEVICES

114001 Electrical transport and current properties of rare-earth dysprosium Schottky electrode on p-type GaN at various annealing temperatures (9 pages)

G. Nagaraju, K. Ravindranatha Reddy, and V. Rajagopal Reddy

114002 Effect of optical illumination on DDR IMPATT diode at 36 GHz (7 pages)

Atanu Banerjee and M. Mitra

114003 High gain-bandwidth product Ge/Si tunneling avalanche photodiode with high-frequency tunneling effect (5 pages)

Wenzhou Wu, Buwen Cheng, Jun Zheng, Zhi Liu, Chuanbo Li, Yuhua Zuo and Chunlai Xue

(Continued on inside back cover)

- 114004 Performance improvement of c-Si solar cell by a combination of $\text{SiN}_x/\text{SiO}_x$ passivation and double P-diffusion gettering treatment** (6 pages)
Xiaoyu Chen, Youwen Zhao, Zhiyuan Dong, Guiying Shen, Yongbiao Bai, Jingming Liu, Hui Xie, and Jiangbian He
- 114005 1.06 μm high-power InGaAs/GaAsP quantum well lasers** (5 pages)
Haili Wang, Li Zhong, Jida Hou, Suping Liu, and Xiaoyu Ma
- 114006 Asymmetric quantum well broadband thyristor laser** (5 pages)
Zhen Liu, Jiaqi Wang, Hongyan Yu, Xuliang Zhou, Weixi Chen, Zhaosong Li, Wei Wang, Ying Ding, and Jiaoqing Pan
- 114007 Influence of band gap of p-type hydrogenated nanocrystalline silicon layer on the short-circuit current density in thin-film silicon solar cells** (5 pages)
Shuwei Zhang and Xiangbo Zeng
- 114008 Electro-magnetic interpretation of four-element torus** (5 pages)
Wei Wu and Ning Deng
- 114009 Multistage second-order microring-resonator filters with box-like spectral responses and relaxed fabrication tolerances** (5 pages)
Haiyang Zhao, Lei Zhang, Sizhu Shao, Jianfeng Ding, Xin Fu, and Lin Yang
- 114010 An improved single- π equivalent circuit model for on-chip inductors in GaAs process** (6 pages)
Hansheng Wang, Weiliang He, Minghui Zhang, and Lu Tang

SEMICONDUCTOR INTEGRATED CIRCUITS

- 115001 Design and implementation of a reconfigurable mixed-signal SoC based on field programmable analog arrays** (7 pages)
Lintao Liu, Yuhao Gao, and Jun Deng

SEMICONDUCTOR TECHNOLOGY

- 116001 Organic-inorganic Au/PVP/ZnO/Si/Al semiconductor heterojunction characteristics** (5 pages)
H. Mokhtari and M. Benhaliliba
- 116002 Effect of annealing temperature on Ti/Al/Ni/Au ohmic contacts on undoped AlN films** (4 pages)
Xuewei Li, Jicai Zhang, Maosong Sun, Binbin Ye, Jun Huang, Zhenyi Xu, Wenxiu Dong, Jianfeng Wang, and Ke Xu