

## ■ INVITED PAPERS

- 111001 **Studies of Water VI. One-Band, Two-Band and Three-Band, Trappy, Protonic, Semiconductor Lattice Models for Pure Liquid Water**

[7 pages] Binbin Jie, Tianhui Jie, and Chihtang Sah

## ■ SEMICONDUCTOR PHYSICS

- 112001 **Spin-dependent tunneling of light and heavy holes with electric and magnetic fields**

[5 pages] L. Bruno Chandrasekar, M. Karunakaran, and K. Gnanasekar

## ■ SEMICONDUCTOR MATERIALS

- 113001 **Electrical properties of Si/Si bonded wafers based on an amorphous Ge interlayer**

[6 pages] Shaoming Lin, Shaoying Ke, Yujie Ye, Donglin Huang, Jinyong Wu, Songyan Chen, Cheng Li, Jianyuan Wang, and Wei Huang

- 113002 **Implementation of slow and smooth etching of GaN by inductively coupled plasma**

[6 pages] Xilin Li, Ping Ma, Xiaoli Ji, Tongbo Wei, Xiaoyu Tan, Junxi Wang, and Jinmin Li

## ■ SEMICONDUCTOR DEVICES

- 114001 **Impact of design and process variation on the fabrication of SiC diodes**

[6 pages] Y. K. Sharma, Huaping Jiang, Changwei Zheng, Xiaoping Dai, Yangang Wang, and I. Deviny

- 114002 **Modulation of drain current as a function of energies substrate for InP HEMT devices**

[5 pages] S. Derrouiche, B. Bouazza, and C. Sayah

- 114003 **InAs-based interband cascade lasers at 4.0  $\mu\text{m}$  operating at room temperature**

[4 pages] Tian Yu, Shuman Liu, Jinchuan Zhang, Bo Xu, Lijun Wang, Junqi Liu, Ning Zhuo, Shenqiang Zhai, Xiaoling Ye, Yonghai Chen, Fengqi Liu, and Zhanguo Wang

- 114004 **The developing condition analysis of semiconductor laser frequency stabilization technology**

[7 pages] Yijun Yao, Canwen Zou, Haiyang Yu, Jinjin Guo, Yaming Li, and Jianguo Liu

- 114005 **Performance improvement of light-emitting diodes with double superlattices confinement layer**

[4 pages] Cheng Cheng, Yan Lei, Zhiqiang Liu, Miao He, Zhi Li, Xiaoyan Yi, Junxi Wang, Jinmin Li, and Deping Xiong

- 114006 **Impact of damping on high speed 850 nm VCSEL performance**

[4 pages] Shuai Hu, Xiaoying He, Yan He, Jiale Su, Chong Li, Anqi Hu, and Xia Guo

- 114007 **Investigation of the on-state behaviors of the variation of lateral width LDMOS device by simulation**

[7 pages] Panpan Tang, Ying Wang, Xiongfei Meng, and Sufen Cui

- 114008 **Memory characteristics of microcavity dielectric barrier discharge**

[6 pages] Yanzhou Sun, Xiaoqian Liu, Dati Su, and Huibin Yang

■ **SEMICONDUCTOR INTEGRATED CIRCUITS**

115001 **Berger code based concurrent online self-testing of embedded processors**

[6 pages] G. Prasad Acharya and M. Asha Rani

115002 **A sample and hold circuit for pipelined ADC**

[5 pages] Yutong Zhang, Bei Chen, and Heping Ma

115003 **4-port digital isolator based on on-chip transformer**

[4 pages] Feng Zhang, Ting Zhao, Chunyu Ma, and Dongfang Pan