

## Special Issue on Towards High Performance Ga<sub>2</sub>O<sub>3</sub> Electronics: Power Devices and DUV Optoelectronic Devices ( II )

Guest editors: Shibing Long, Genquan Han, Yuhao Zhang, Yibo Wang, and Zhongming Wei

### ■ COMMENTS AND OPINIONS

#### 070301 Vertical $\beta$ -Ga<sub>2</sub>O<sub>3</sub> power electronics

[4 pages] Guangwei Xu, Feihong Wu, Qi Liu, Zhao Han, Weibing Hao, Jinbo Zhou, Xuanze Zhou, Shu Yang, and Shibing Long

### ■ EDITORIAL

#### 070101 Preface to Special Issue on Towards High Performance Ga<sub>2</sub>O<sub>3</sub> Electronics: Power Devices and DUV Optoelectronic Devices ( II )

[3 pages] Shibing Long, Genquan Han, Yuhao Zhang, Yibo Wang, and Zhongming Wei

### ■ REVIEWS

#### 071801 Anisotropic optical and electric properties of $\beta$ -gallium oxide

[15 pages] Yonghui Zhang and Fei Xing

### ■ ARTICLES

#### 072801 Tunneling via surface dislocation in W/ $\beta$ -Ga<sub>2</sub>O<sub>3</sub> Schottky barrier diodes

[5 pages] Madani Labeled, Ji Young Min, Amina Ben Slim, Nouredine Sengouga, Chowdam Venkata Prasad, Sinsu Kyoung, and You Seung Rim

#### 072802 2.83-kV double-layered NiO/ $\beta$ -Ga<sub>2</sub>O<sub>3</sub> vertical p-n heterojunction diode with a power figure-of-merit of 5.98 GW/cm<sup>2</sup>

[4 pages] Tingting Han, Yuangang Wang, Yuanjie Lv, Shaobo Dun, Hongyu Liu, Aimin Bu, and Zhihong Feng

#### 072803 Experimental investigation on the instability for NiO/ $\beta$ -Ga<sub>2</sub>O<sub>3</sub> heterojunction-gate FETs under negative bias stress

[5 pages] Zhuolin Jiang, Xiangnan Li, Xuanze Zhou, Yuxi Wei, Jie Wei, Guangwei Xu, Shibing Long, and Xiaorong Luo

#### 072804 A large-area multi-finger $\beta$ -Ga<sub>2</sub>O<sub>3</sub> MOSFET and its self-heating effect

[4 pages] Xuanze Zhou, Guangwei Xu, and Shibing Long

#### 072805 Large-area $\beta$ -Ga<sub>2</sub>O<sub>3</sub> Schottky barrier diode and its application in DC–DC converters

[4 pages] Wei Guo, Zhao Han, Xiaolong Zhao, Guangwei Xu, and Shibing Long

#### 072806 Surface plasmon assisted high-performance photodetectors based on hybrid TiO<sub>2</sub>@GaO<sub>x</sub>N<sub>y</sub>-Ag heterostructure

[9 pages] Jiajia Tao, Guang Zeng, Xiaoxi Li, Yang Gu, Wenjun Liu, David Wei Zhang, and Hongliang Lu

- 072807 **Self-healing wearable self-powered deep ultraviolet photodetectors based on Ga<sub>2</sub>O<sub>3</sub>**  
[6 pages] Chao Wu, Huaile He, Haizheng Hu, Aiping Liu, Shunli Wang, Daoyou Guo, and Fengmin Wu
- 074101 **Amorphous gallium oxide homojunction-based optoelectronic synapse for multi-functional signal processing**  
[9 pages] Rongliang Li, Yonghui Lin, Yang Li, Song Gao, Wenjing Yue, Hao Kan, Chunwei Zhang, and Guozhen Shen