

## RESEARCH HIGHLIGHTS

090201 **Perovskite nanocrystals for light-emitting diodes**

[5 pages] Xinyi Mei, Lixiu Zhang, Xiaoliang Zhang, and Liming Ding

090202 **COF-based electrochromic materials and devices**

[4 pages] Yunye Wang, Zuo Xiao, Shanxin Xiong, and Liming Ding

## REVIEWS

093101 **Hyperdoped silicon: Processing, properties, and devices**

[15 pages] Zhouyu Tong, Mingxuan Bu, Yiqiang Zhang, Deren Yang, and Xiaodong Pi

## ARTICLES

092201 **Defect passivation with potassium trifluoroborate for efficient spray-coated perovskite solar cells in air**

[7 pages] Chen Gao, Hui Wang, Pang Wang, Jinlong Cai, Yuandong Sun, Cong Yu, Teng Li, Xiaoshuai Zhang, Dan Liu, and Tao Wang

092301 **Strict non-blocking four-port optical router for mesh photonic network-on-chip**

[5 pages] Yuhao Xia, Shanglin Yang, Jiaqi Niu, Xin Fu, and Lin Yang

092302 **Organic bulk heterojunction enabled with nanocapsules of hydrate vanadium pentoxide layer for high responsivity self-powered photodetector**

[8 pages] Hemraj Dahiya, Anupam Agrawal, Ganesh D. Sharma, and Abhishek Kumar Singh

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[7 pages] Xiaofei Liao, Dixian Zhao, and Xiaohu You

092501 **Large unsaturated magnetoresistance of 2D magnetic semiconductor Fe-SnS<sub>2</sub> homojunction**

[6 pages] Jingzhi Fang, Huading Song, Bo Li, Ziqi Zhou, Juehan Yang, Benchuan Lin, Zhimin Liao, and Zhongming Wei

092601 **RF characterization of InP double heterojunction bipolar transistors on a flexible substrate under bending conditions**

[4 pages] Lishu Wu, Jiayun Dai, Yuechan Kong, Tangsheng Chen, and Tong Zhang

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[6 pages] Yabao Zhang, Jun Zheng, Peipei Ma, Xueyi Zheng, Zhi Liu, Yuhua Zuo, Chuanbo Li, and Buwen Cheng

092802 **Electrical and optical properties of hydrogen plasma treated  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> thin films**

[7 pages] Qian Jiang, Junhua Meng, Yiming Shi, Zhigang Yin, Jingren Chen, Jing Zhang, Jinliang Wu, and Xingwang Zhang

092803 **Ni/Pd-based ohmic contacts to p-GaN through p-InGaN/p<sup>+</sup>-GaN contacting layers**

[6 pages] Minglong Zhang, Masao Ikeda, Siyi Huang, Jianping Liu, Jianjun Zhu, Shuming Zhang, and Hui Yang