

Journal of Materials Chemistry C

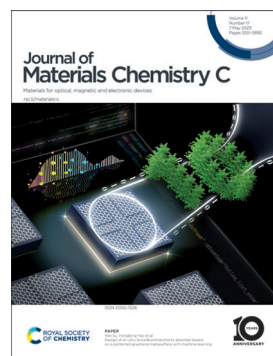
Materials for optical, magnetic and electronic devices

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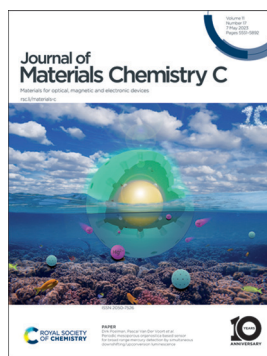
IN THIS ISSUE

ISSN 2050-7526 CODEN JMCCCX 11(17) 5551-5892 (2023)



Cover

See Wei Su, Hongbing Yao *et al.*, pp. 5625–5633. Image reproduced by permission of Wei Su from *J. Mater. Chem. C*, 2023, 11, 5625.



Inside cover

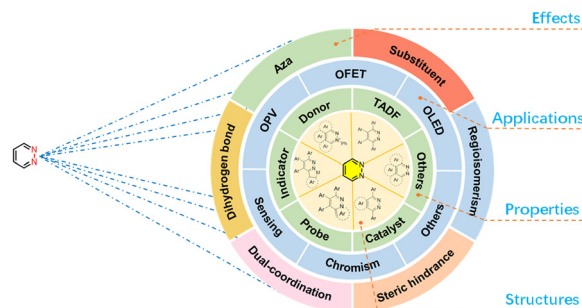
See Dirk Poelman, Pascal Van Der Voort *et al.*, pp. 5634–5645. Image reproduced by permission of Pascal Van Der Voort from *J. Mater. Chem. C*, 2023, 11, 5634.

REVIEWS

5563

Recent advances in versatile pyridazine-cored materials: principles, applications, and challenges

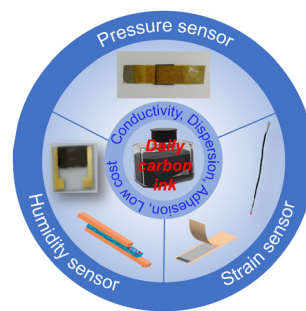
Jing Zhang, Yanze Jiang, Xiaojie Cheng, Yingjie Xie, Jianfeng Zhao* and Jiena Weng*



5585

Amorphous carbon material of daily carbon ink: emerging applications in pressure, strain, and humidity sensors

Zaihua Duan, Zhen Yuan, Yadong Jiang, Liu Yuan* and Huiling Tai*



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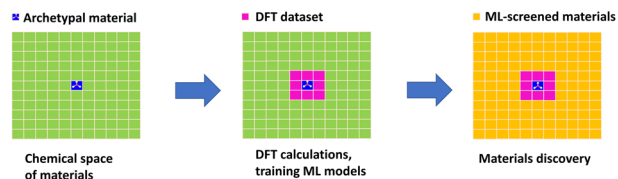


5601

Investigating magnetic van der Waals materials using data-driven approaches

Romakanta Bhattarai, Peter Minch and Trevor David Rhone*

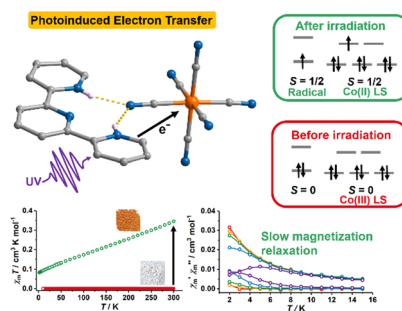
Data-driven studies of magnetic vdW materials



5611

Room temperature photochromism and photoinduced slow magnetic relaxation of cyanometallic supramolecular hybrid salts

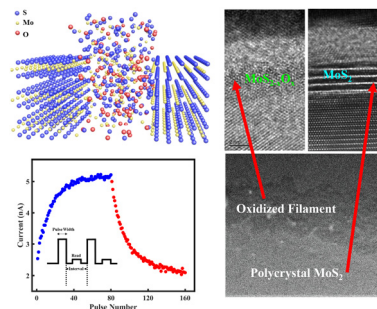
Guo-Zhang Huang, Peng-Xu Lu, Meng-Meng Zeng, Wei Deng, Kai-Ping Xie, Zhen-Xing Wang, Jun-Liang Liu, Yan-Cong Chen* and Ming-Liang Tong*



5616

A high linearity and energy-efficient artificial synaptic device based on scalable synthesized MoS₂

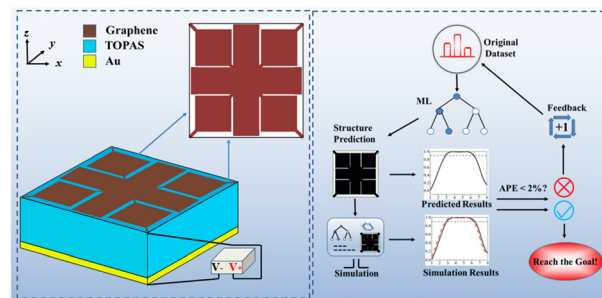
Yuxin Zhao, Yuanhao Jin,* Xing Wang, Jie Zhao, Sanming Wu, Mengjuan Li, Jiaping Wang, Shoushan Fan and Qunqing Li*



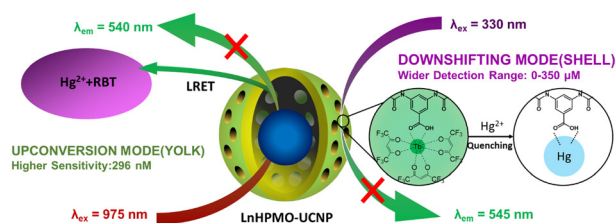
5625

Design of an ultra-broadband terahertz absorber based on a patterned graphene metasurface with machine learning

Zhipeng Ding, Wei Su,* Yinlong Luo, Lipengan Ye, Hong Wu and Hongbing Yao*



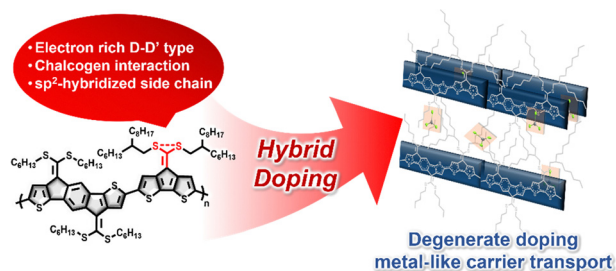
5634



Periodic mesoporous organosilica based sensor for broad range mercury detection by simultaneous downshifting/upconversion luminescence

Chunhui Liu, Anna M. Kaczmarek, Himanshu Sekhar Jena, Zetian Yang, Dirk Poelman* and Pascal Van Der Voort*

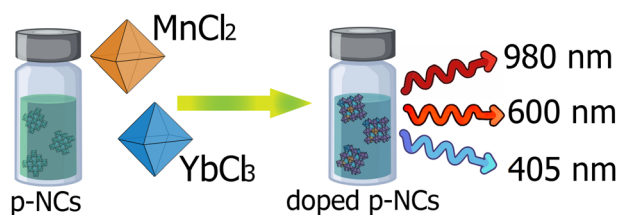
5646



A heavily doped D-D'-type polymer with metal-like carrier transport via hybrid doping

Ayushi Tripathi, Yoonjoo Lee, Changhwa Jung, Soohyun Kim, Soonyong Lee, Woojin Choi, Chaeyeon Park, Young Wan Kwon, Hyunjung Lee* and Han Young Woo*

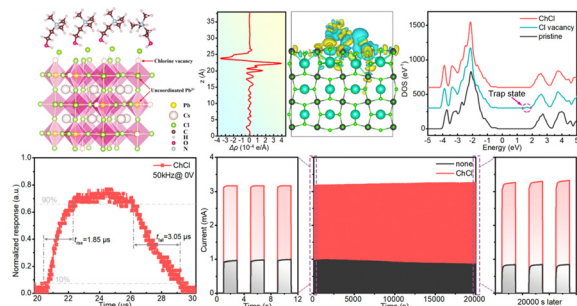
5657



Anion-assisted Yb³⁺ and Mn²⁺ doping of 0D and 2D lead halide perovskite nanostructures

Danila A. Tatarinov, Anastasiia V. Sokolova, Ivan D. Skurlov, Denis V. Danilov, Aleksandra V. Koroleva, Natalya K. Kuzmenko, Yuliya A. Timkina, Mikhail A. Baranov, Evgeniy V. Zhizhin, Anton N. Tsympkin and Aleksandr P. Litvin*

5667



Ultrafast self-powered CsPbCl₃ ultraviolet photodetectors with choline chloride for surface passivation and charge transport regulation

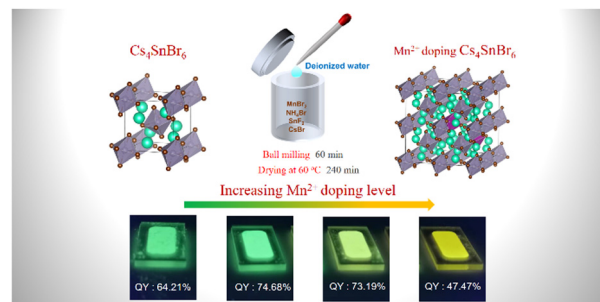
Shulan Jiang, Zeliang Hou, Xin Zheng, Qian Wu, Xiaoqi Yang, Wuqiong Cai, Ying Yi, Siyi Cheng, Guojun Wen and Xingyue Liu*



5680

Manipulating the sublattice distortion induced by Mn²⁺ doping for boosting the emission characteristics of self-trapped excitons in Cs₄SnBr₆

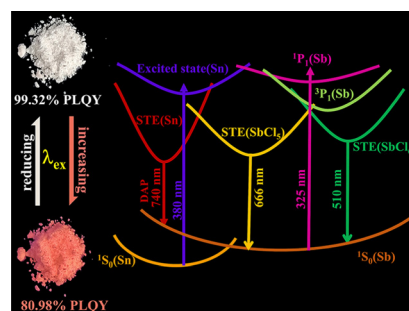
Zhenxu Lin, Anyang Wang, Rui Huang,* Haixia Wu, Jie Song, Zewen Lin, Dejian Hou, Zhaofu Zhang, Yuzheng Guo* and Sheng Lan*



5688

Antimony doped tin(IV) hybrid metal halides with high-efficiency tunable emission, WLED and information encryption

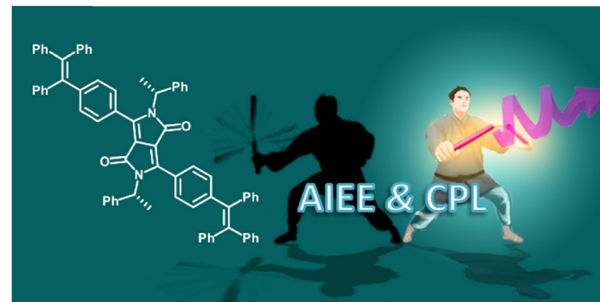
Wenchao Lin, Qilin Wei, Tao Huang, Xianfu Meng, Ye Tian, Hui Peng* and Bingsuo Zou*



5701

Chiral diketopyrrolopyrrole dyes showing light emission in solid and aggregate states

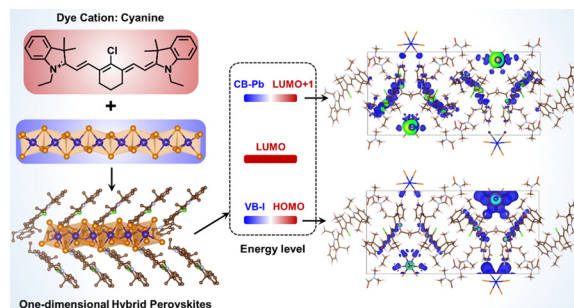
Maurizio Mastropasqua Talamo,* Thomas Cauchy, Flavia Pop,* Francesco Zinna, Lorenzo Di Bari and Narcis Avarvari*



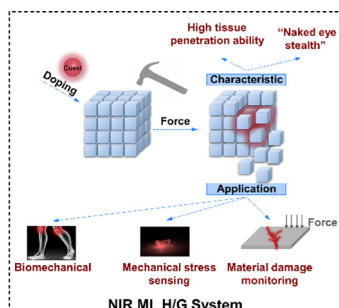
5714

Impact of organic–inorganic wavefunction delocalization on the electronic and optical properties of one-dimensional hybrid perovskites

Xiaojuan Ni, Sadisha Nanayakkara, Hong Li* and Jean-Luc Brédas*



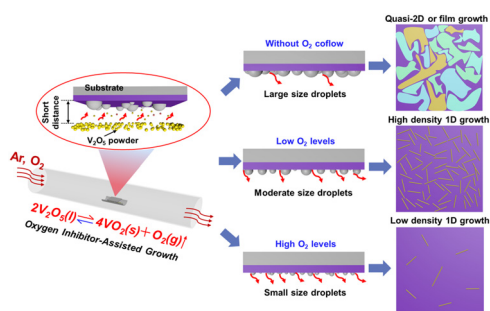
5725



Realizing near-infrared mechanophosphorescence from an organic host/guest system

Fei Hao, Hailan Wang, Donghai Yu, Zhenwei Liu, Tiantian Zhang, Mingyao Shen and Tao Yu*

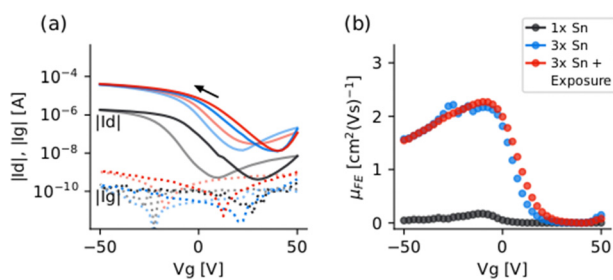
5731



Synthesis, metal–insulator transition, and photo-response characteristics of VO₂ nanobeams *via* an oxygen inhibitor-assisted vapor transport method

Xitao Guo,* Yupei Hu, Xin Liu, Zainab Zafar, Weiping Zhou, Xingyu Liu, Lin Feng, Jijun Zou and Haiyan Nan*

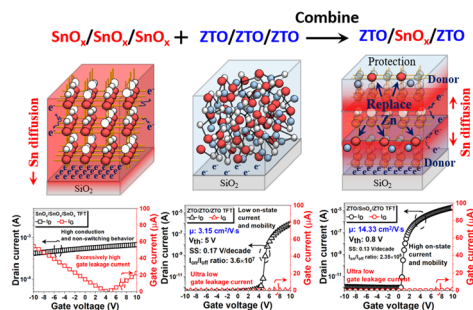
5740



Multi-pulse atomic layer deposition of p-type SnO thin films: growth processes and the effect on TFT performance

Daisy E. Gomersall,* Kham M. Niang, James D. Parish, Zhuotong Sun, Andrew L. Johnson, Judith L. MacManus-Driscoll and Andrew J. Flewitt

5750



Performance improvement of a sol–gel ZTO-based TFT due to an interfacial SnO_x dopant layer

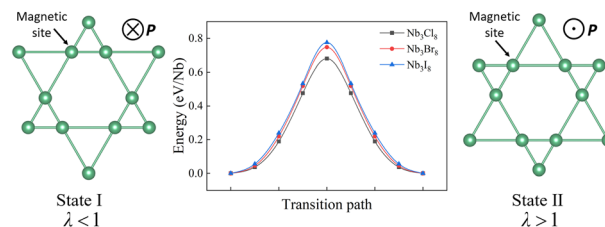
Wun-Ciang Jhang, Pin-Han Chen, Chih-Chieh Hsu* and Umakanta Nanda



5762

Enabling triferroics coupling in breathing kagome lattice Nb_3X_8 ($\text{X} = \text{Cl}, \text{Br}, \text{I}$) monolayers

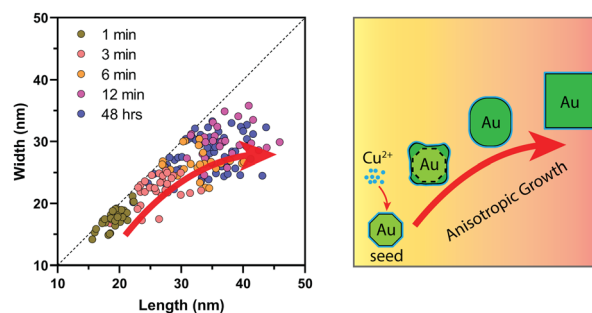
Yulin Feng and Qing Yang*



5770

Copper assisted symmetry and size control of gold nanobars

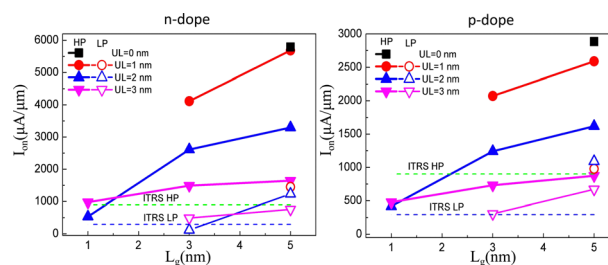
Weilun Li, Wenming Tong, Joanne Etheridge* and Alison M. Funston*



5779

Performance limit of one-dimensional SbSI nanowire transistors

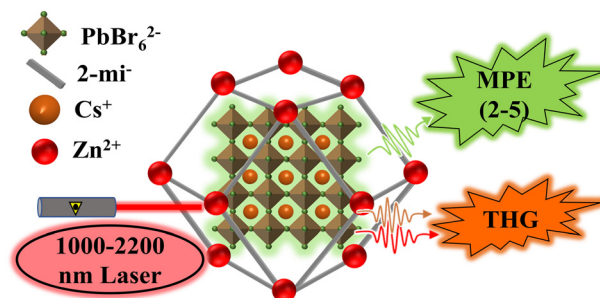
Xingyi Tan,* Qiang Li and Dahua Ren



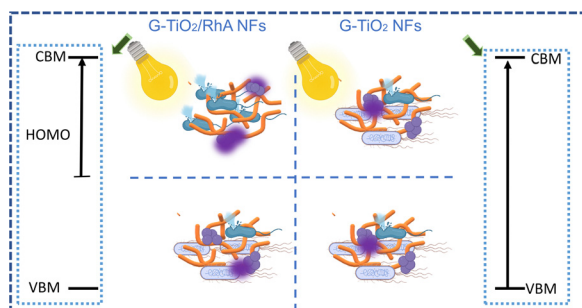
5788

Near-infrared multiphoton absorption and third harmonic generation with CsPbBr_3 quantum dots embedded in micro-particles of metal-organic frameworks

Qingxin Fan, Zhe Yan, Hao Zhou, Yige Yao, Zhenkun Wang, Yunan Gao, Yilin Wang, Shunbin Lu,* Min Liu* and Wei Ji



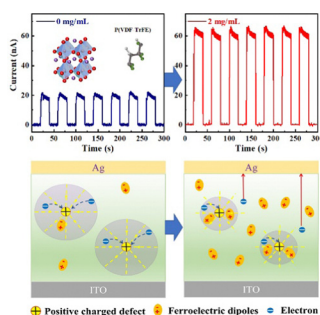
5796



Photon-driven bactericidal performance of surface-modified TiO₂ nanofibers

Mina Shahriari-Khalaji, Fatemeh Zabihi,* Addie Bahi, Dušan Sredojević, Jovan M. Nedeljković,* Daniel K. Macharia, Matteo Ciprian, Shengyuan Yang* and Frank Ko

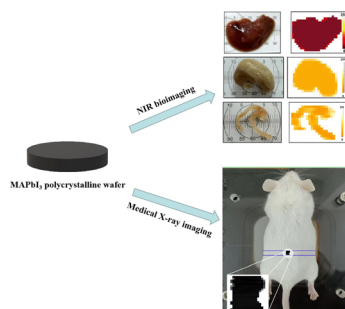
5806



The effect of permanent electric dipoles on the stability and photoelectric properties of MAPbI₃ films

Liufang Chen, Zhihang Zhang, Wenjing Zhai, Guangyuan Li, Lin Huang, Xinyu Li, Wenhao Zheng, Lin. Lin, Xiaohui Zhou, Zhibo Yan* and Jun-Ming Liu

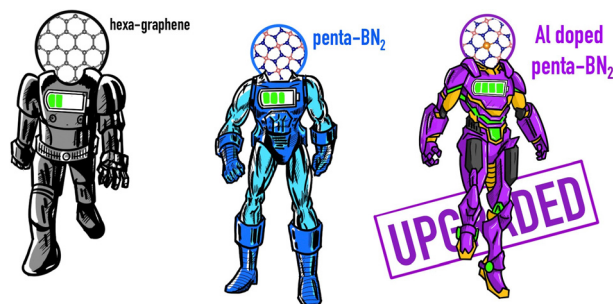
5815



Hot-pressed CH₃NH₃PbI₃ polycrystalline wafers for near-infrared bioimaging and medical X-ray imaging

Ji Yu, Yanmei Qu, Yufu Deng, Dechuan Meng, Ning Tian,* Lin Li,* Jie Zheng, Yongtao Huang, Yinxian Luo and Wenzhu Tan

5825



Enabling enhanced lithium storage capacity of two-dimensional pentagonal BN₂ by aluminum doping

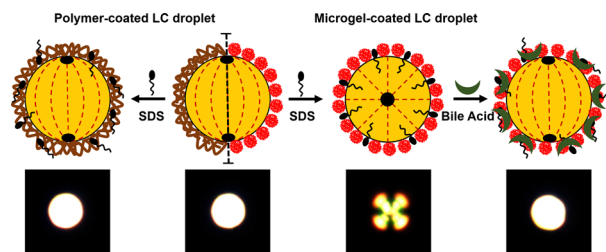
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5831

Ultra-stable liquid crystal droplets coated by sustainable plant-based materials for optical sensing of chemical and biological analytes

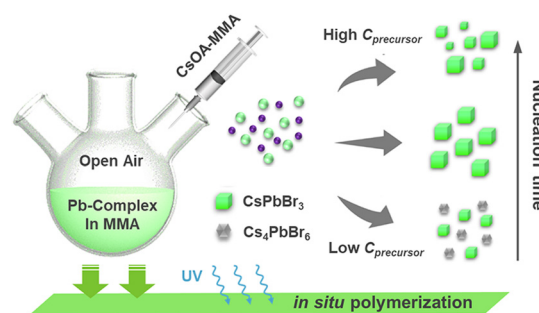
Shikha Aery, Adele Parry, Andrea Araiza-Calahorra, Stephen D. Evans, Helen F. Gleeson, Abhijit Dan* and Anwesha Sarkar*



5846

One-pot synthesis of CsPbBr₃ nanocrystals in methyl methacrylate: a kinetic study, *in situ* polymerization, and backlighting applications

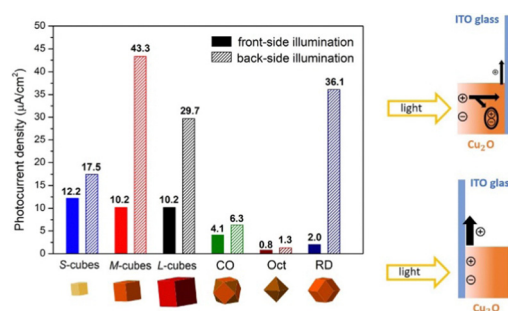
Shuangshuang Shi, Hao Lv, Yingchao Ge, Yingying Wang, Shu Xu* and Chong Geng*



5857

Size- and facet-dependent photoelectrochemical properties of Cu₂O crystals

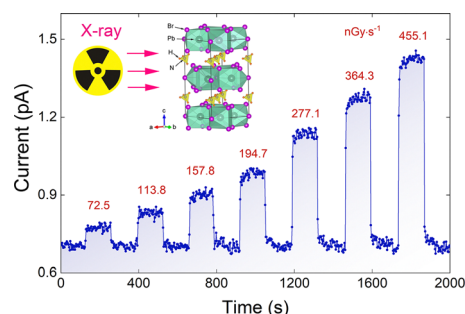
Hsueh-Heng Ma and Michael H. Huang*



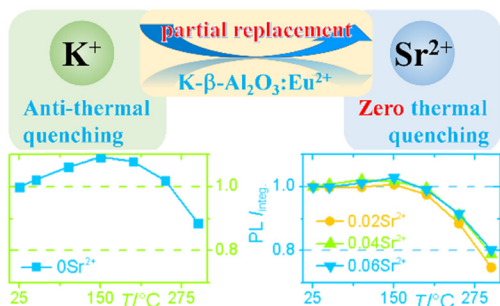
5867

Crystal growth, transport behavior and X-ray detection of non-perovskite-phase NH₄Pb₂Br₅

Ning Li, Chaofan Zhang, Zheyin Chen, Xin Liu and Bin-Bin Zhang*



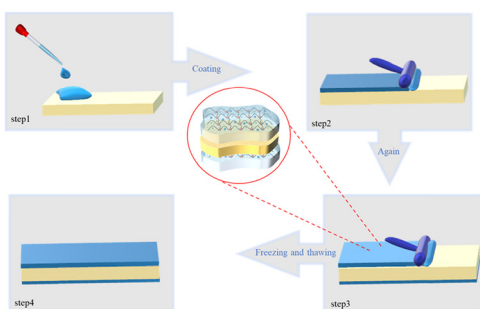
5874



Regulating anti-thermal quenching to zero thermal quenching for highly efficient blue-emitting Eu^{2+} -doped K-beta-alumina phosphors

Yuhang Kuang, Yunjia Li, Borui Chen, Shujuan Zhao, Mengfang Chen, Shixun Lian and Jilin Zhang*

5882



A wearable alternating current electroluminescent device based on imidazole chloride ionogel films with high conductivity, stretchability and transmittance

Gongman Zhang, Yang Guo, Yongzheng Fang, Yaoqing Chu and Zhifu Liu*

5890

Correction: Tunable optical properties of transition metal dichalcogenide nanoparticles synthesized by femtosecond laser ablation and fragmentation

Anton S. Chernikov, Gleb I. Tselikov, Mikhail Yu. Gubin,* Alexander V. Shesterikov, Kirill S. Khorkov, Alexander V. Syuy, Georgy A. Ermolaev, Ivan S. Kazantsev, Roman I. Romanov, Andrey M. Markeev, Anton A. Popov, Gleb V. Tikhonowski, Olesya O. Kapitanova, Dmitry A. Kochuev, Andrey Yu. Leksin, Daniil I. Tselikov, Aleksey V. Arsenin, Andrei V. Kabashin, Valentyn S. Volkov and Alexei V. Prokhorov

