

# Journal of Materials Chemistry C

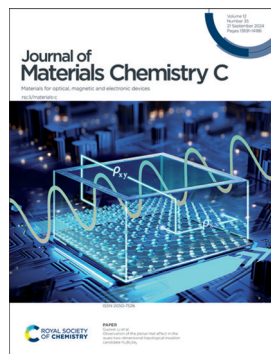
Materials for optical, magnetic and electronic devices

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## IN THIS ISSUE

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### Cover

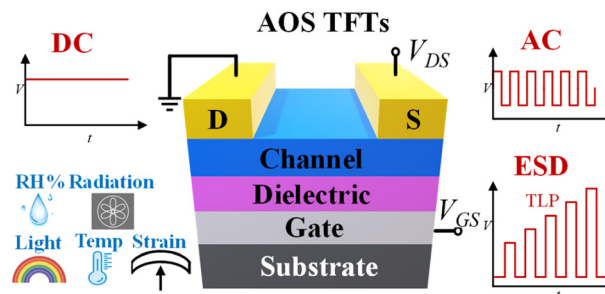
See Guowei Li *et al.*,  
pp. 13840-13846.  
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*J. Mater. Chem. C*,  
2024, 12, 13840.

## REVIEWS

13707

### Reliability issues of amorphous oxide semiconductor-based thin film transistors

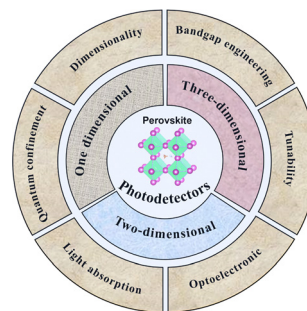
Yuxuan Shen, Meng Zhang, Siyuan He, Le Bian, Jiaxin Liu, Zhengyu Chen, Shuangmei Xue, Ye Zhou and Yan Yan\*



13727

### Developments in perovskite photodetectors: performance optimization and dimensional diversity

Saravanan Pandiaraj, Sikandar Aftab,\* Ganesh Koyyada, Hosameldin Helmy Hegazy and Jae Hong Kim\*



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# EES Solar

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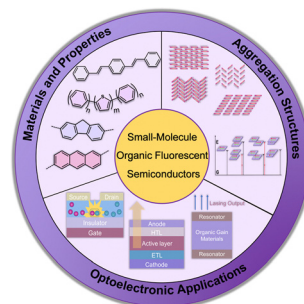
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## REVIEWS

13745

## Recent advances in small-molecule organic fluorescent semiconductors

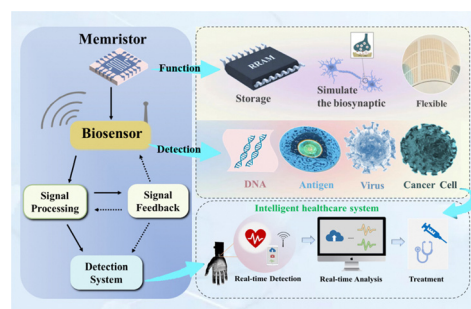
Lingxu Zhao, Jie Li,\* Liqiang Li and Wenping Hu



13762

## Biomedical applications of sensing devices with memristive behaviors

Yulong Yang, Bai Sun,\* Shuangso Mao, Jijia Qin, Yusheng Yang, Mingnan Liu, Zhaowei Rao, Wei Lin and Yong Zhao\*

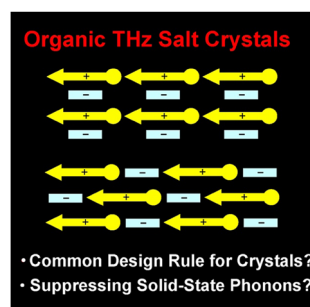


## PERSPECTIVE

13784

## Ionic organic terahertz crystals: a perspective on design and solid-state phonon absorption

O-Pil Kwon\* and Mojca Jazbinsek\*

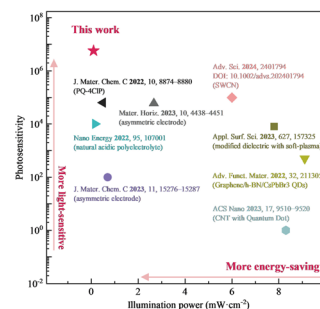
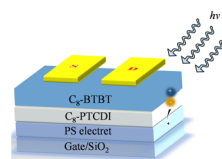


## COMMUNICATIONS

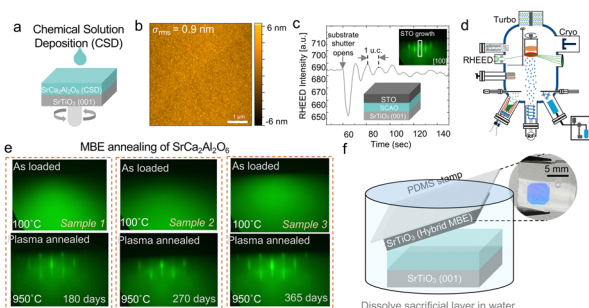
13797

## Boosting the charge injection of polymer electrets for light-stimulated artificial synaptic transistors

Dongfan Li, Runyi Hu, Yufeng Zhu, Yifei Lu, Kunzhi Hou, Jiamei Liu, Guanghao Lu and Laju Bu\*



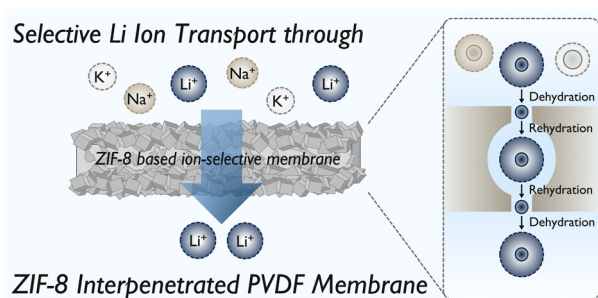
13809



### Epitaxially grown single-crystalline SrTiO<sub>3</sub> membranes using a solution-processed, amorphous SrCa<sub>2</sub>Al<sub>2</sub>O<sub>6</sub> sacrificial layer

Shivasheesh Varshney,\* Martí Ramis, Sooho Choo, Mariona Coll and Bharat Jalan\*

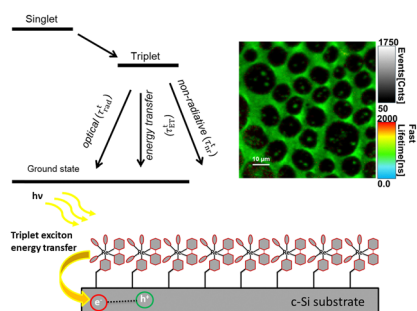
13816



### Selective Li ion transport *via* interpenetrated crystal growth on ZIF-8 seeded nanocomposite membranes

Benjamin Clayville, Ji Yong Choi, Christian Wagner, William Warren and Jihye Park\*

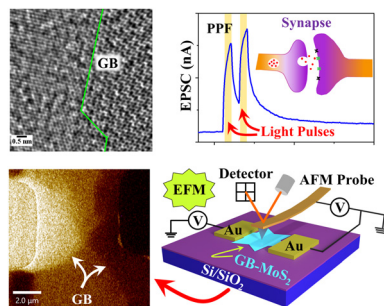
13822



### Efficient triplet exciton phosphorescence quenching from a rhenium monolayer on silicon

William H. Banks, Michael P. Coogan, Tom Markvart and Lefteris Danos\*

13827



### Grain boundary effect unveiled in monolayer MoS<sub>2</sub> for photonic neuromorphic applications

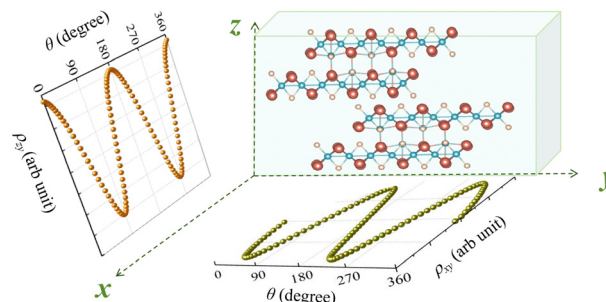
Navaneeth Krishnan K, Sandaap Sathyanarayana and Bikas C. Das\*



13840

### Observation of the planar Hall effect in the quasi-two-dimensional topological insulator candidate $\text{Ni}_3\text{Bi}_2\text{Se}_2$

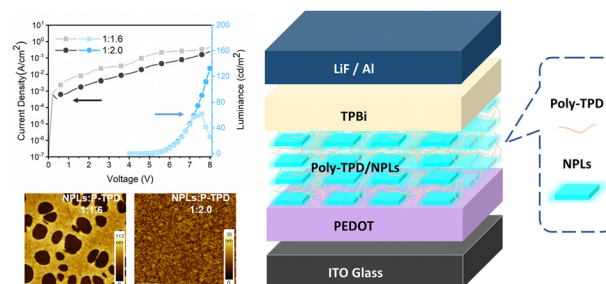
Yuzhe Ma, Wen Sun, Qiunan Xu, Xinming Wang, Aisha Aqeel and Guowei Li\*



13847

### Blade-coated perovskite nanoplatelet polymer composites for sky-blue light-emitting diodes

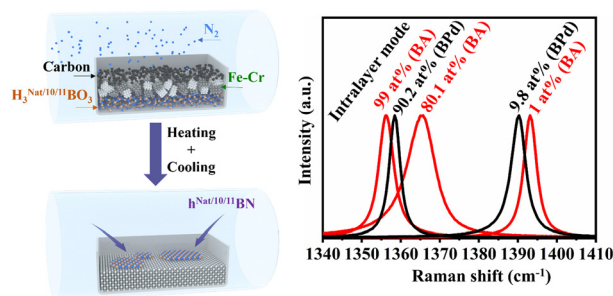
Jiale Chen, Jiaxiong Li, Georgian Nedelcu, Paul Hansch, Lorenzo Di Mario, Loredana Protesescu and Maria A. Loi\*



13854

### Low-cost growth of high-quality monoisotopic hexagonal boron nitride single crystals using a boric acid precursor

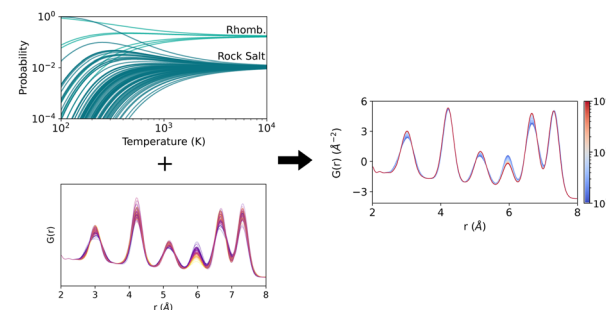
Ming Tian, Cui Ding, Hui Shi, Jun-peng Shu, Ruo-wang Chen, Md Al Shahriar Akash, Zhen-ning Hu, Nadia Afzal, Tao Lin and Neng Wan\*



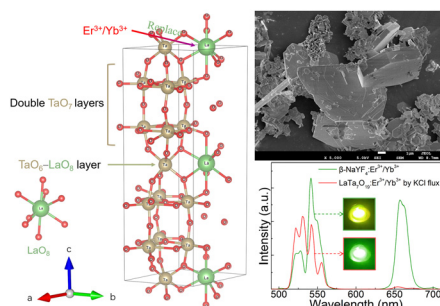
13863

### Resolving local ordering and structure in $\text{Mn}_x\text{Ge}_{1-x}\text{Te}$ alloys through thermodynamic ensembles of pair distribution functions

Vanessa Meschke, Andrew Novick, Jen Rogers, Claire Porter, Remco Chang, Thomas Proffen and Eric S. Toberer\*



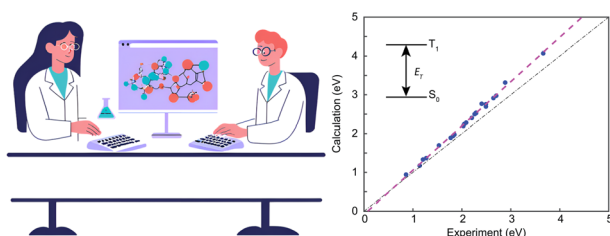
13875



### Molten salt synthesized $\text{LaTa}_7\text{O}_{19}:\text{Er}^{3+}/\text{Yb}^{3+}$ with superior upconversion luminescence using KCl flux

Xianglan Yan, Yongze Cao,\* Xuekai Wang, Jinsu Zhang, Sai Xu, Guojian Li and Baojiu Chen\*

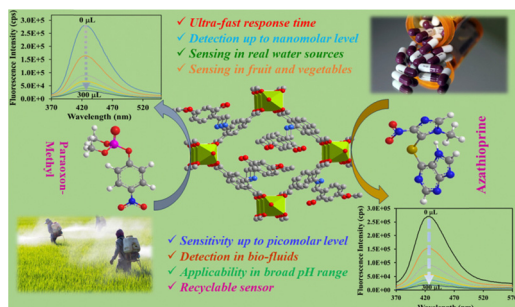
13884



### Accurate & cheap calculations of the lowest triplet state energy: an experimentalist's guide

Murad J. Y. Tayebjee,\* Kin Long Kelvin Lee and Timothy W. Schmidt

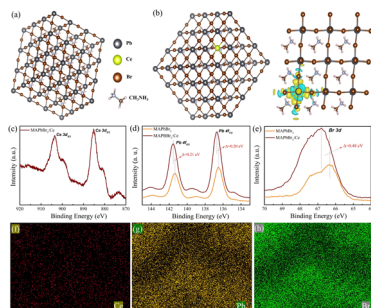
13892



### An aluminium-organic framework unveiling ultra-sensitive fluorometric detection of pesticide paraoxon-methyl and pharmaceutical drug azathioprine in fruits, vegetables, and wastewater

Arindam Sarma, Subhrajyoti Ghosh and Shyam Biswas\*

13904



### Fine control of Ce doped $\text{CH}_3\text{NH}_3\text{PbBr}_3$ to modulate photoluminescence and carrier characteristics for application in photoconductive photodetectors

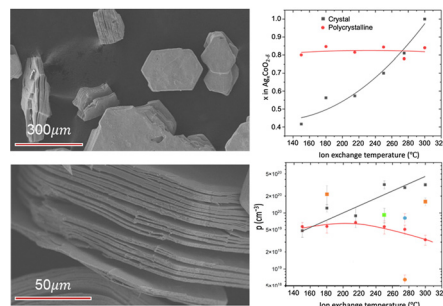
Xuyang Liu, Chao Shi, Dongxu Guang, Lijuan Yao, Bobo Li,\* Xuan Fang,\* Mingxia Qiu,\* Dan Wu and Peigang Han



13915

### Tunability of transport properties in semi-exfoliated $\text{Ag}_x\text{CoO}_{2-\delta}$ ( $0.4 < x < 1$ ) crystals

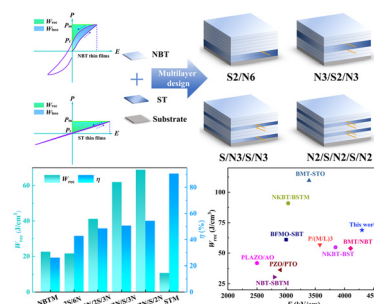
Marc Kamel, Hatem M. Titi, Mohamad Ataya, Antranik Jonderian, Kirk H. Bevan\* and Eric McCalla\*



13927

### Improved energy storage performance of NBTM/STM multilayer films *via* designing the stacking order

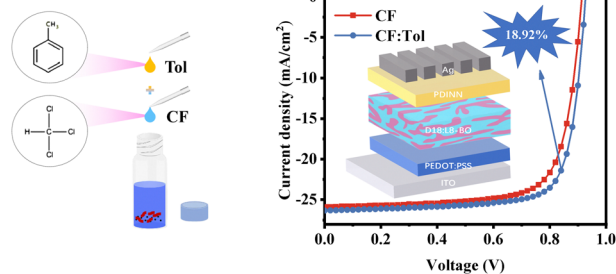
Qingguo Chi, Bo Dong, Chao Yin,\* Xue Zhang, Shimin Sun, Changhai Zhang, Yongquan Zhang, Yue Zhang and Tiandong Zhang\*



13936

### Achieving 18.92% efficiency of non-fullerene organic solar cells with active layer morphology optimization by regulating solvent evaporation dynamics

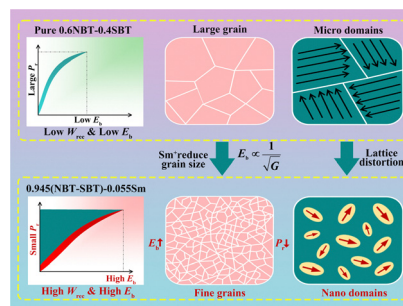
Mandi Li, Fenghua Zhang, Xiong Li,\* Dan Wang, Yang Liu, Denghui Xu, Jia Zhao, Yaohui Zhu and Jun Zhou



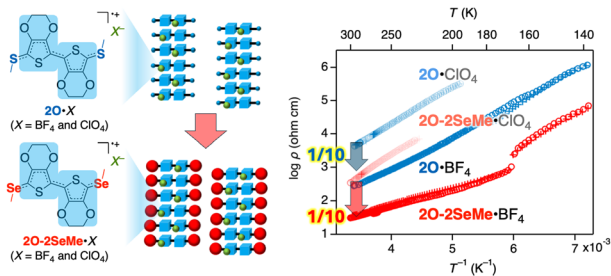
13946

### High energy density of Sm-doped $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ - $\text{Sr}_{0.7}\text{Bi}_{0.2}\text{TiO}_3$ relaxor ferroelectric ceramics

Zhiqing Li, Bing Xie,\* Mohsin Ali Marwat, Fei Xue,\* Zhiyong Liu, Kun Guo, Pu Mao, Huajie Luo\* and Haibo Zhang



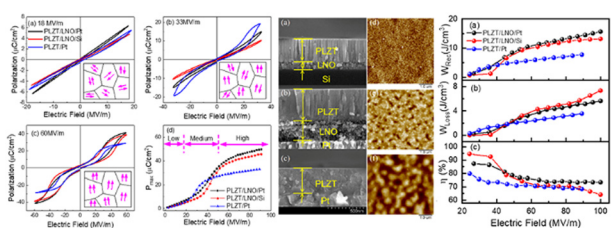
13956



### Higher conductivity in doped ethylenedioxythiophene (EDOT) dimers with chalcogen-substituted end groups

Kota Onozuka, Tomoko Fujino,\* Tatsuya Miyamoto, Takashi Yamakawa, Hiroshi Okamoto, Hiroshi Akiba, Osamu Yamamuro, Eiichi Kayahara, Shigeru Yamago, Hiroshi Oike and Hatsumi Mori\*

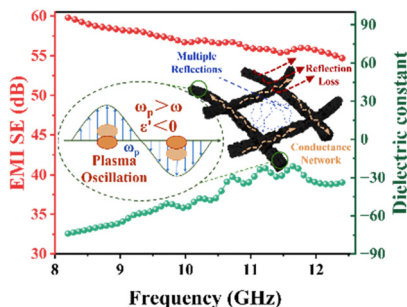
13966



### Improvement of the energy storage performance of antiferroelectric Pb,La(Zr,Ti)O<sub>3</sub> thin films by the LaNiO<sub>3</sub> buffer layer on the metal electrode

Zixin Cao, Yawei Li,\* Liyan Shang,\* Kai Jiang, Liangqing Zhu and Zhigao Hu

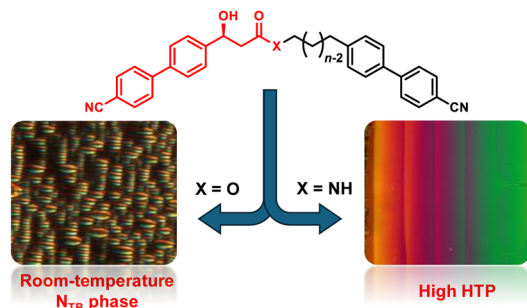
13974



### Negative permittivity enhanced reflection and adsorption of electromagnetic waves from carbon fiber felt/carbon nanotubes

Jingyu Bi, Zhihao Sun, Zihao Guo, Shaoyao Tian, Guangshen Li and Lei Qian\*

13985



### Chiral cyanobiphenyl dimers – significance of the linking group for mesomorphic properties and helical induction

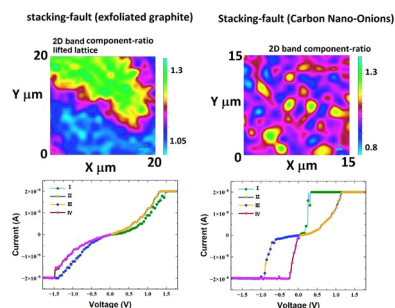
Antonija Ožegović, Jordan Hobbs, Richard Mandle, Andreja Lesac and Anamarija Knežević\*



13994

### Memristive effects within stacking faults consisting of locally coexisting rhombohedral and Bernal lattices in exfoliated graphite and multilayered carbon nano-onion

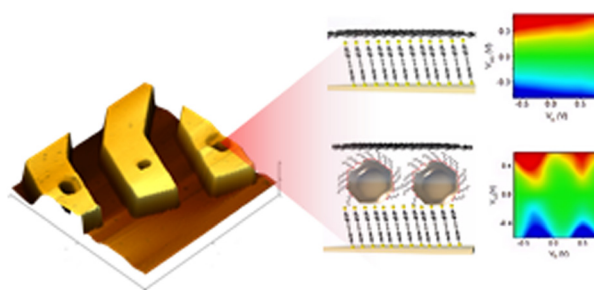
Hansong Wu, Li Lei, Shanling Wang, Hong Zhang\* and Filippo S. Boi\*



14004

### Tuning the electrical conductance of oligo(phenylene-ethynylene) derivatives-PbS quantum-dot bilayers

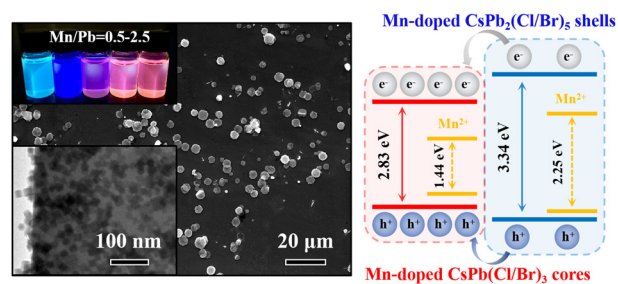
Ali Ismael,\* Xintai Wang,\* Alaa Al-Jobory, Shanglong Ning, Turki Alotaibi, Bashayr Alanazi, Hanan Althobaiti, Junsheng Wang, Naixu Wei, Christopher J. B. Ford\* and Colin J. Lambert\*



14013

### Environmentally stable Mn-doped CsPbX<sub>3</sub>@CsPb<sub>2</sub>X<sub>5</sub> core-shell materials with efficient energy transfer

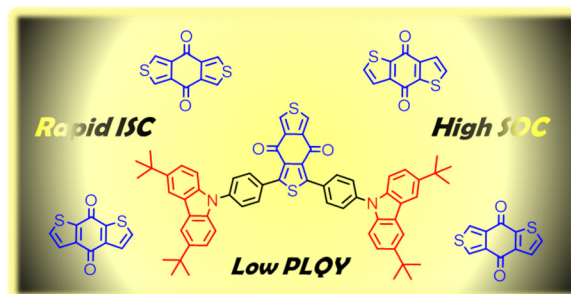
Chen Zhang, Luxia Xu, Minqiang Wang,\* Zheyuan Da, Jindou Shi, Junnan Wang, Qing Yao, Jinshou Tian, Nikolai V. Gaponenko and Youlong Xu



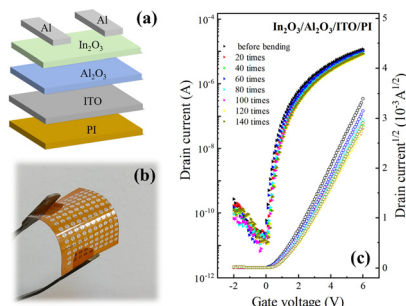
14021

### Elucidating the non-radiative losses encountered in intramolecular charge transfer compounds with benzodithiophene-4,8-dione acceptors

Stephanie Montanaro, Alexander J. Gillett, Patrick Kimber, Dong Xing, Sascha Feldmann, Emrys W. Evans, Stefan Warrington, Felix Plasser, Richard H. Friend\* and Iain A. Wright\*



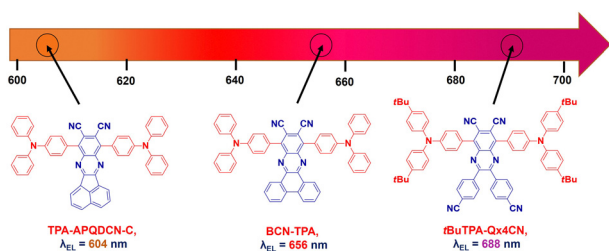
14031



### Flexible metal oxide thin-film transistors produced by a nanofiber-to-film process

Danna Zhang, Guangtan Miao, Guoxia Liu\* and Fukai Shan\*

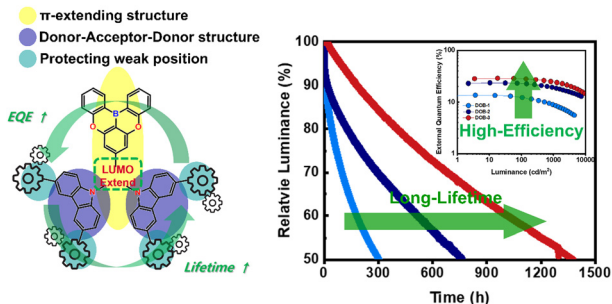
14037



### Highly efficient deep-red to near-infrared thermally activated delayed fluorescence organic light-emitting diodes using a 2,3-bis(4-cyanophenyl)quinoxaline-6,7-dicarbonitrile acceptor

Shantaram Kothavale, Kiun Cheong, Seung Chan Kim, Seong-Jun Yoon\* and Jun Yeob Lee\*

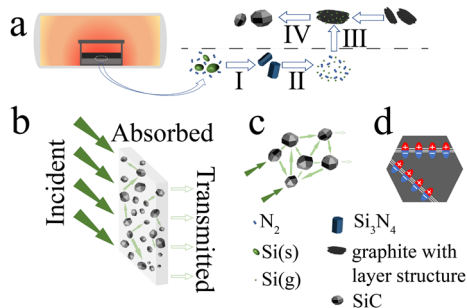
14045



### Thermally activated delayed fluorescence emitters with a LUMO-extended boron-containing acceptor for high-efficiency and long-lifetime blue OLEDs

Jeong-Yeol Yoo, Seung Wan Kang, Tae Hoon Ha and Chil Won Lee\*

14054



### Size-dependent electromagnetic wave absorption of 3C-SiC particles

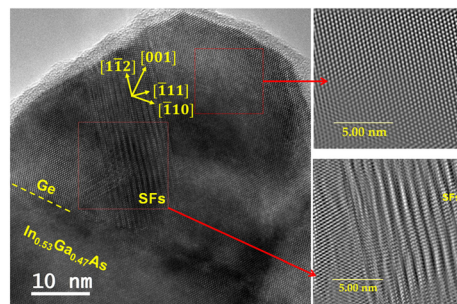
Hairui Zhao, Wentao Liu, Jingxiang Liu, Zongyi Shao and Zhijiang Wang\*



14062

### Mapping the Ge/InAl(Ga)As interfacial electronic structure and strain relief mechanism in germanium quantum dots

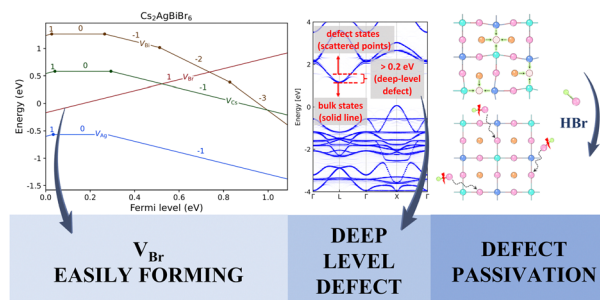
Mantu K. Hudait,\* S. Bhattacharya, S. Karthikeyan, J. Zhao, R. J. Bodnar, B. A. Magill and G. A. Khodaparast



14074

### Improving the performance of lead-free Cs<sub>2</sub>AgBiBr<sub>6</sub> double perovskite solar cells by passivating Br vacancies

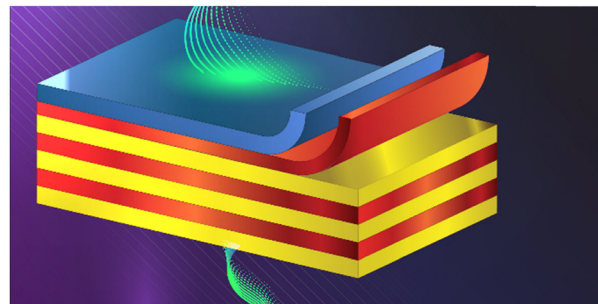
Junjie Chen, Xingyu Ma, Li Gong,\* Conghua Zhou, Jianlin Chen, Yangfan Lu, Maojun Zhou, Haiping He\* and Zhizhen Ye\*



14085

### Angle-tunable polymeric photonic diode with 1D-photonic crystal for enhanced light control

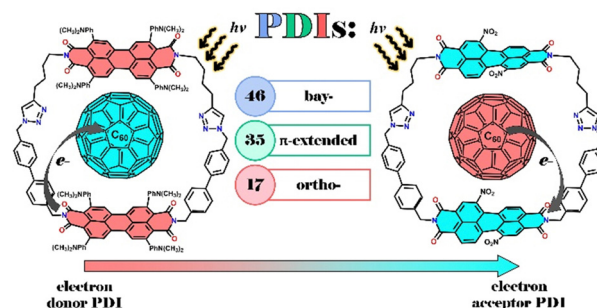
Jaismon Francis, Nikhil Puthiya Purayil, Chandrasekharan Keloth and C. S. Suchand Sangeeth\*



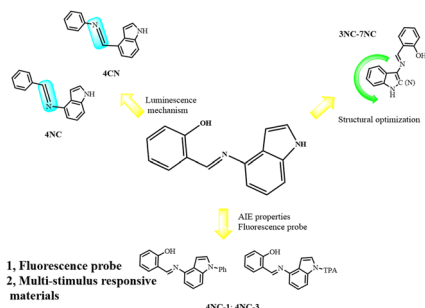
14096

### Rational design of perylene diimide macrocycles with diverse electron transfer properties in complexes with fullerene

Anton. J. Stasyuk\*



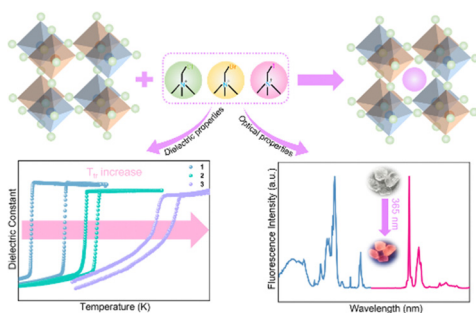
14110



### Indole and indazole derivatives containing salicylaldehyde as fluorescence materials for multi-stimuli response through assembling AIEgen in multiple states

Haoran Hu, Lei Shi, Tongtong Jing, Chong Zhang, Chao Gao, Chengguo Sun, Yang Du and Bingcheng Hu\*

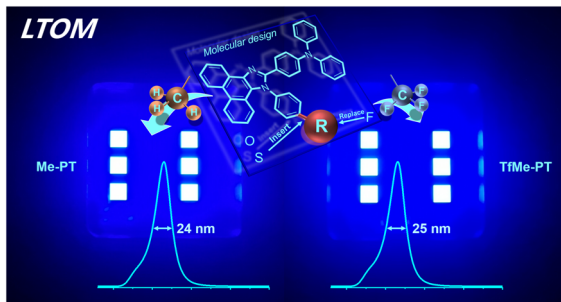
14122



### A series of bimetallic ammonium RbEu nitrates exhibiting switchable dielectric constant and photoluminescence properties

Hua-Kai Li, Li-Ping Wang, Zong-Ze Cui, Qi Xu, Liang-Liang Zou, Na Wang, Le-Ping Miao, Heng-Yun Ye\* and Chao Shi\*

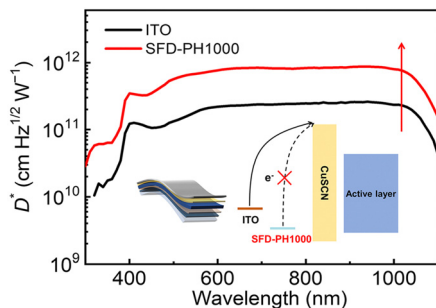
14129



### Hybridized local and charge-transfer excited states of blue OLEDs based on phenanthroimidazole derivatives with a narrow FWHM of 24 nm

Xiao Song, Shengbo Zhu,\* Yongliang Liu, Tongyue Shi, Lei Yang, Yuan He, Xiaoling Niu, Zhongchen Yang, Jinhu Yuan and Zhen Feng\*

14139



### Flexible near-infrared organic photodetectors based on a high work function anode

Jun Ma, Jiahui Wang, Junli Hu\* and Yichun Liu

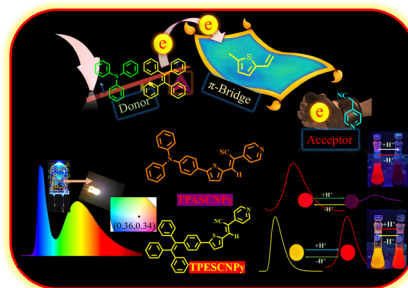


## PAPERS

14148

### Aggregation induced emission (AIE) based donor– $\pi$ –acceptor fluorophores: an approach to fabricate acidochromic sensors and white light emitting diodes

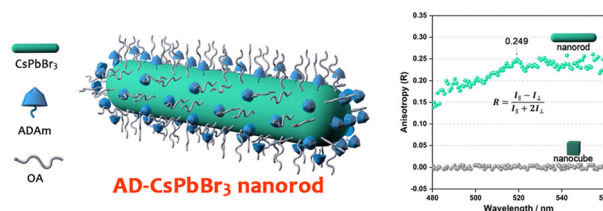
Snigdhamayee Rana, Sivakumar Vaidyanathan\* and Sabita Patel\*



14165

### Adamantyl ligand-induced one-dimensional CsPbBr<sub>3</sub> perovskite nanocrystal formation: mechanism and anisotropic photoluminescence

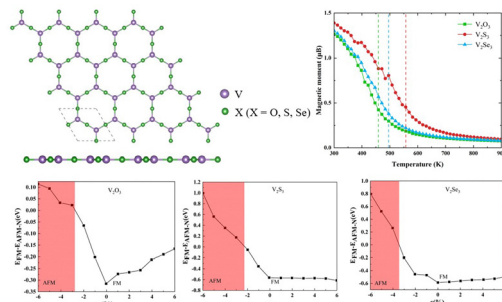
Bo-Yi Deng, Hong-Fei Li, Zi-Hao Liao, Zi-Rong Zhou and Feng Wang\*



14172

### Two-dimensional honeycomb-kagome V<sub>2</sub>X<sub>3</sub> (X = O, S, Se) with half-metallicity, high Curie temperature, and large magnetic anisotropic energy

Sai Ma, Xiangyan Bo, Lei Fu, Xiaoyu Liu, Suen Wang, Mengxian Lan, Shasha Li, Tian Huang,\* Feng Li\* and Yong Pu\*



## EXPRESSION

14180

### Expression of Concern: Low energy loss (0.42 eV) and efficiency over 15% enabled by non-fullerene acceptors containing *N*-bis(trifluoromethyl)phenylbenzotriazole as the core in binary solar cells

María Privado, Beatriz Donoso, Kanupriya Khandelwal, Rahul Singhal, Fernando G. Guijarro, Ángel Díaz-Ortiz, Pilar Prieto,\* Pilar de la Cruz,\* Ganesh D. Sharma\* and Fernando Langa\*



## CORRECTIONS

14181

**Correction: Laser assisted photocatalytic reduction of metal ions by graphene oxide**

Sherif Moussa, Garrett Atkinson, M. SamyEl-Shall,\* Ahmed Shehata, Khaled M. AbouZeid and Mona B. Mohamed

14183

**Correction: Construction of energy transfer channels from  $[\text{SbCl}_6]^{3-}$  to  $\text{Ln}^{3+}$  ( $\text{Ln}^{3+} = \text{Ho}^{3+}, \text{Er}^{3+}$ ) in  $\text{Cs}_2\text{NaGdCl}_6$  for advanced anti-counterfeiting materials**

Yanyang Li, Huimin Du, Yue Ma, Meifang Liu, Jian Zou, Shentang Wang, Jun Yang,\* Shanshan Hu\* and Jun Lin\*

