

Journal of Materials Chemistry C

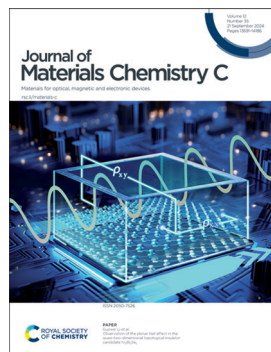
Materials for optical, magnetic and electronic devices

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IN THIS ISSUE

ISSN 2050-7526 CODEN JMCCCX 12(35) 13691-14186 (2024)



Cover

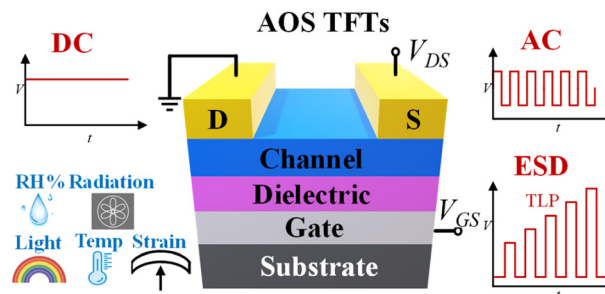
See Guowei Li *et al.*,
pp. 13840-13846.
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J. Mater. Chem. C,
2024, 12, 13840.

REVIEWS

13707

Reliability issues of amorphous oxide semiconductor-based thin film transistors

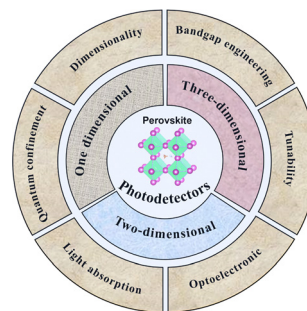
Yuxuan Shen, Meng Zhang, Siyuan He, Le Bian, Jiaxin Liu, Zhengyu Chen, Shuangmei Xue, Ye Zhou and Yan Yan*



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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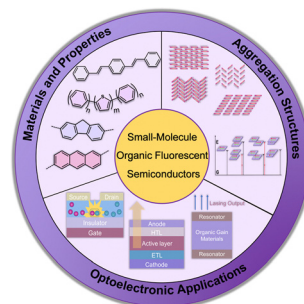
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REVIEWS

13745

Recent advances in small-molecule organic fluorescent semiconductors

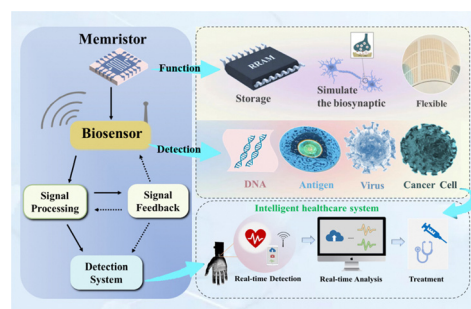
Lingxu Zhao, Jie Li,* Liqiang Li and Wenping Hu



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*

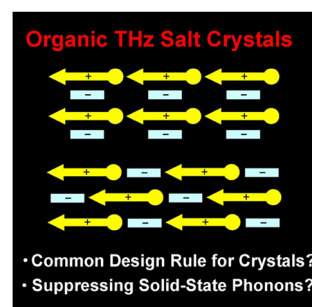


PERSPECTIVE

13784

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

O-Pil Kwon* and Mojca Jazbinsek*

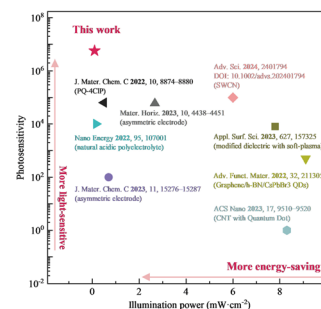
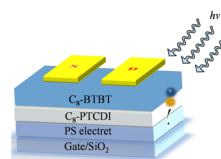


COMMUNICATIONS

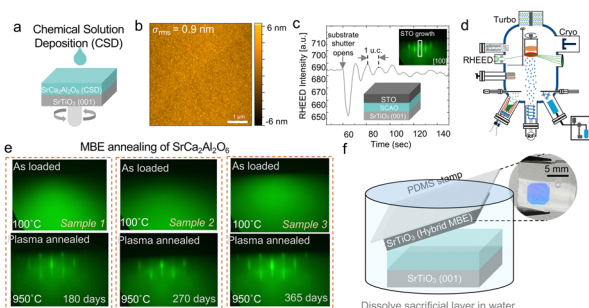
13797

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*



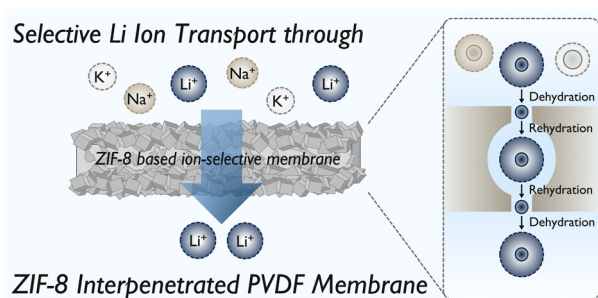
13809



Epitaxially grown single-crystalline SrTiO₃ membranes using a solution-processed, amorphous SrCa₂Al₂O₆ sacrificial layer

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

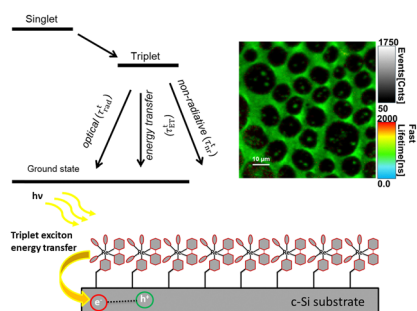
13816



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*

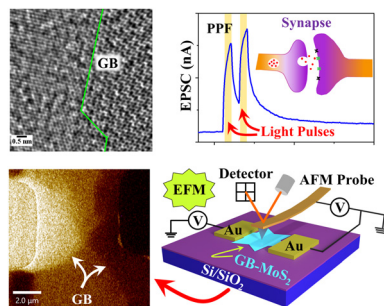
13822



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 MoS₂ for photonic neuromorphic applications

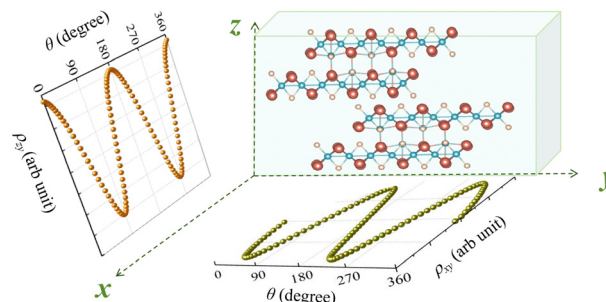
Navaneeth Krishnan K, Sandaap Sathyanarayana and Bikas C. Das*



13840

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

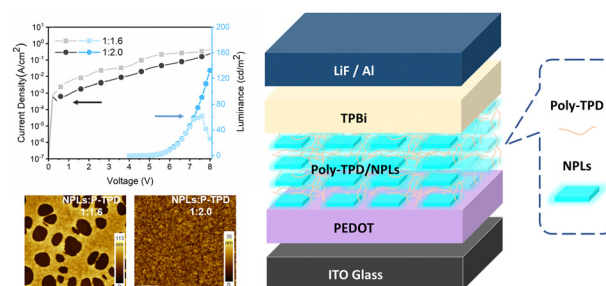
Yuzhe Ma, Wen Sun, Qiunan Xu, Xinming Wang, Aisha Aqeel and Guowei Li*



13847

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

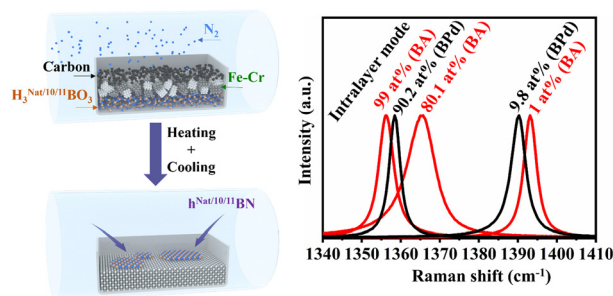
Jiale Chen, Jiaxiong Li, Georgian Nedelcu, Paul Hansch, Lorenzo Di Mario, Loredana Protesescu and Maria A. Loi*



13854

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

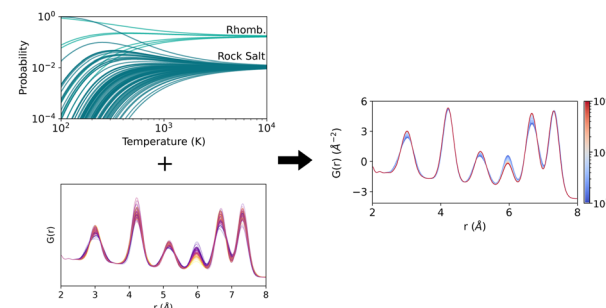
Ming Tian, Cui Ding, Hui Shi, Jun-peng Shu, Ruo-wang Chen, Md Al Shahriar Akash, Zhen-ning Hu, Nadia Afzal, Tao Lin and Neng Wan*



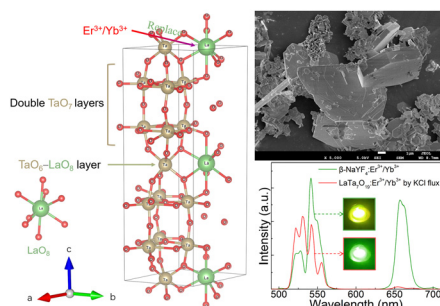
13863

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*



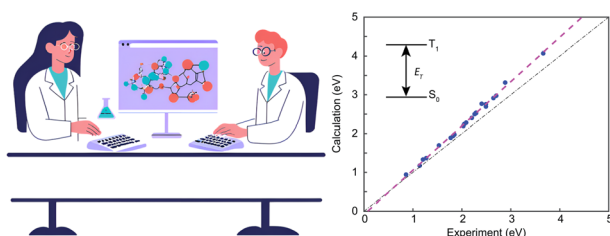
13875



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*

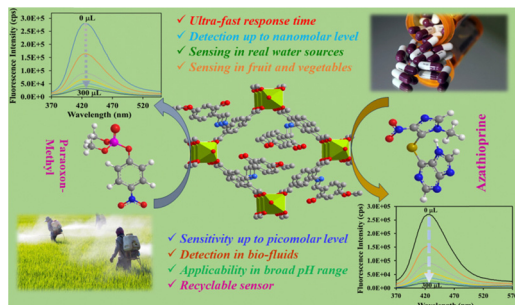
13884



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

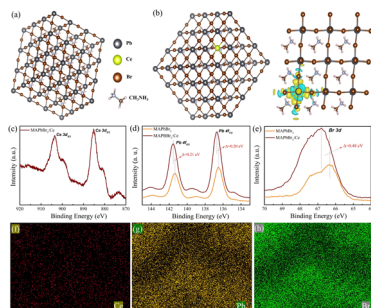
13892



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

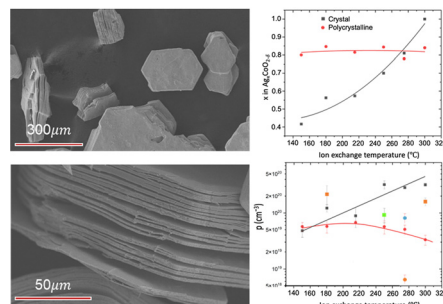
Xuyang Liu, Chao Shi, Dongxu Guang, Lijuan Yao, Bobo Li,* Xuan Fang,* Mingxia Qiu,* Dan Wu and Peigang Han



13915

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

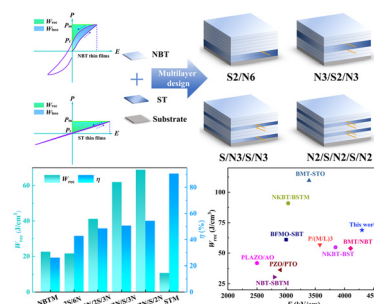
Marc Kamel, Hatem M. Titi, Mohamad Ataya, Antranik Jonderian, Kirk H. Bevan* and Eric McCalla*



13927

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

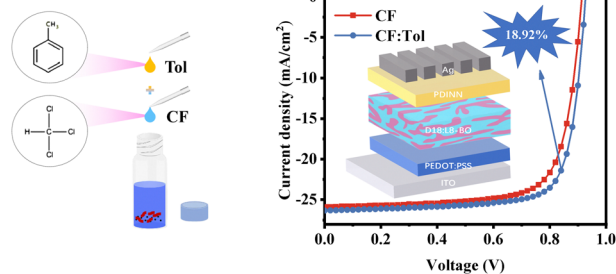
Qingguo Chi, Bo Dong, Chao Yin,* Xue Zhang, Shimin Sun, Changhai Zhang, Yongquan Zhang, Yue Zhang and Tiandong Zhang*



13936

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

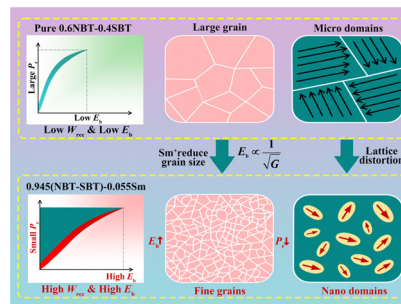
Mandi Li, Fenghua Zhang, Xiong Li,* Dan Wang, Yang Liu, Denghui Xu, Jia Zhao, Yaohui Zhu and Jun Zhou



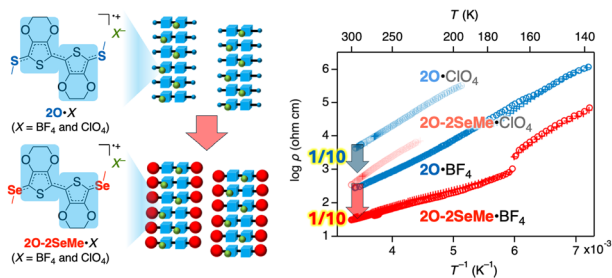
13946

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



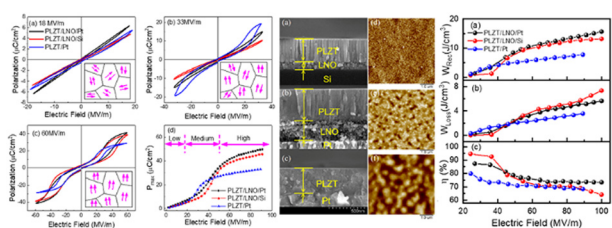
13956



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*

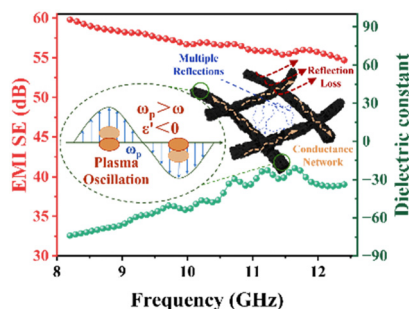
13966



Improvement of the energy storage performance of antiferroelectric Pb,La(Zr,Ti)O₃ thin films by the LaNiO₃ buffer layer on the metal electrode

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

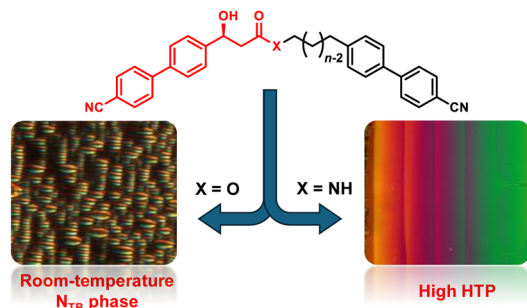
13974



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

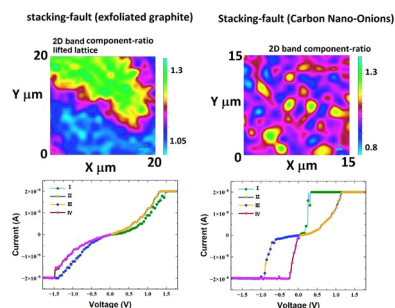
Antonija Ožegović, Jordan Hobbs, Richard Mandle, Andreja Lesac and Anamarija Knežević*



13994

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

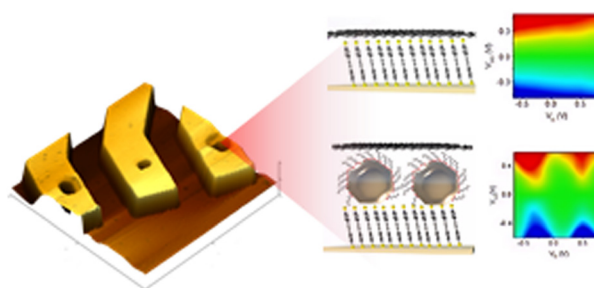
Hansong Wu, Li Lei, Shanling Wang, Hong Zhang* and Filippo S. Boi*



14004

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

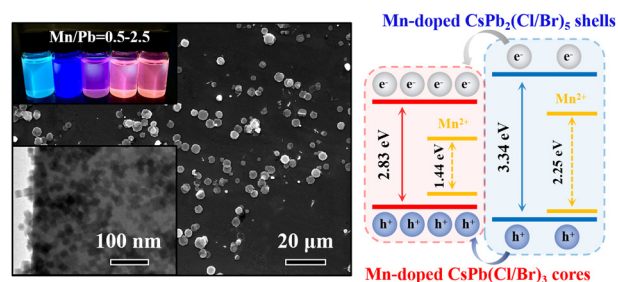
Ali Ismael,* Xintai Wang,* Alaa Al-Jobory, Shanglong Ning, Turki Alotaibi, Bashayr Alanazi, Hanan Althobaiti, Junsheng Wang, Naixu Wei, Christopher J. B. Ford* and Colin J. Lambert*



14013

Environmentally stable Mn-doped CsPbX₃@CsPb₂X₅ core-shell materials with efficient energy transfer

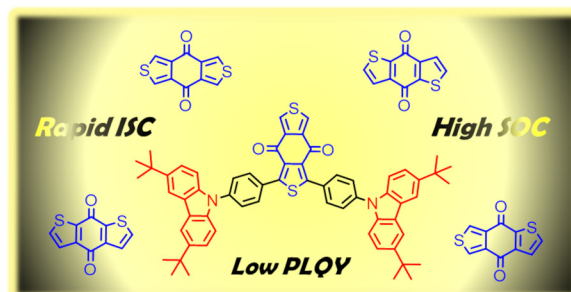
Chen Zhang, Luxia Xu, Minqiang Wang,* Zheyuan Da, Jindou Shi, Junnan Wang, Qing Yao, Jinshou Tian, Nikolai V. Gaponenko and Youlong Xu



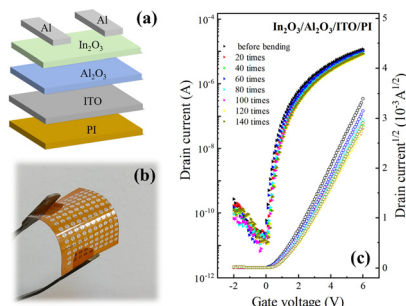
14021

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*



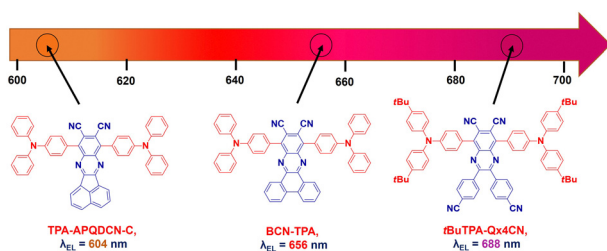
14031



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

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

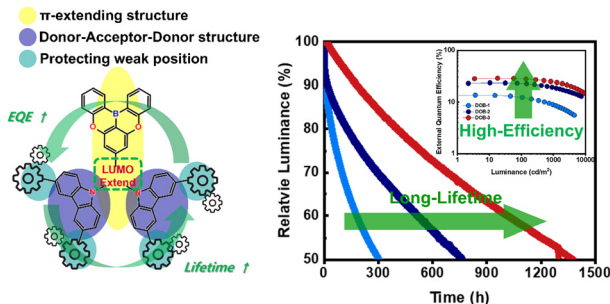
14037



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*

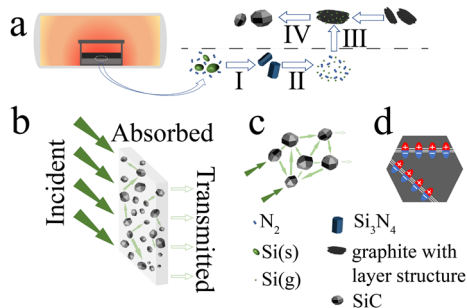
14045



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

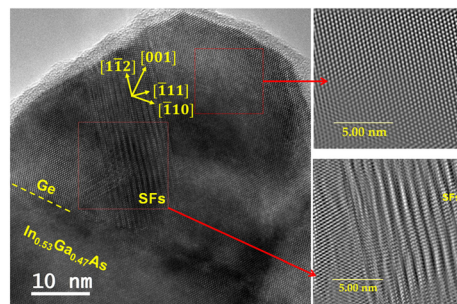
Hairui Zhao, Wentao Liu, Jingxiang Liu, Zongyi Shao and Zhijiang Wang*



14062

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

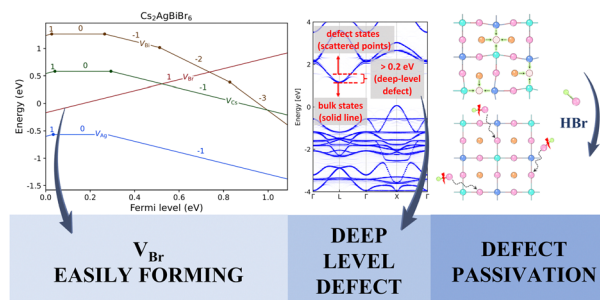
Mantu K. Hudait,* S. Bhattacharya, S. Karthikeyan, J. Zhao, R. J. Bodnar, B. A. Magill and G. A. Khodaparast



14074

Improving the performance of lead-free Cs₂AgBiBr₆ double perovskite solar cells by passivating Br vacancies

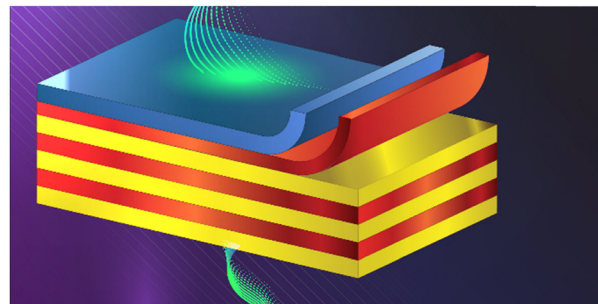
Junjie Chen, Xingyu Ma, Li Gong,* Conghua Zhou, Jianlin Chen, Yangfan Lu, Maojun Zhou, Haiping He* and Zhizhen Ye*



14085

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

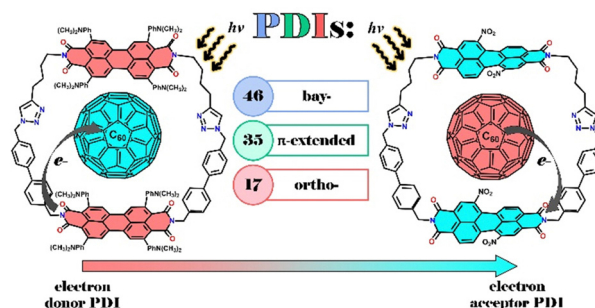
Jaismon Francis, Nikhil Puthiya Purayil, Chandrasekharan Keloth and C. S. Suchand Sangeeth*



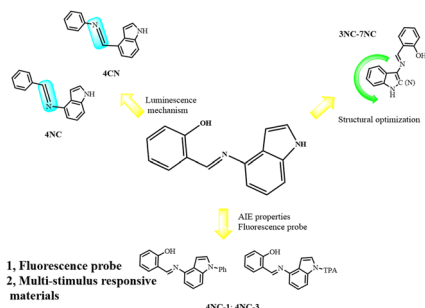
14096

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

Anton. J. Stasyuk*



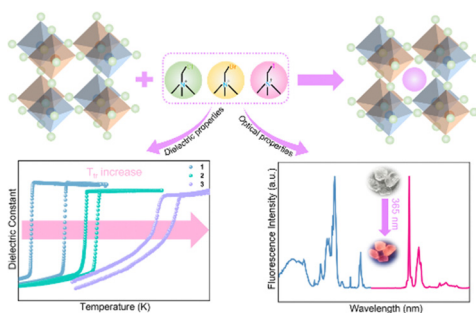
14110



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*

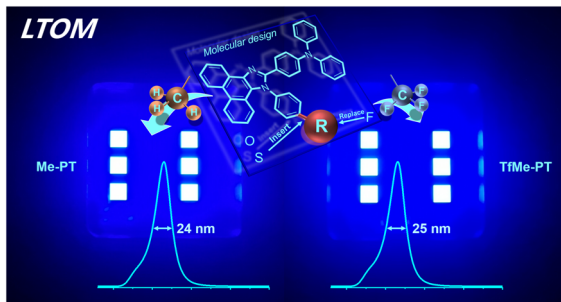
14122



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*

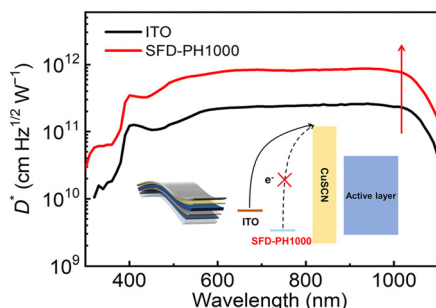
14129



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

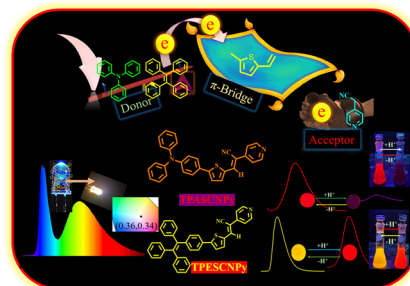


PAPERS

14148

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

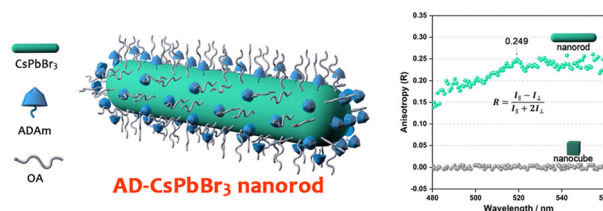
Snigdhamayee Rana, Sivakumar Vaidyanathan* and Sabita Patel*



14165

Adamantyl ligand-induced one-dimensional CsPbBr₃ perovskite nanocrystal formation: mechanism and anisotropic photoluminescence

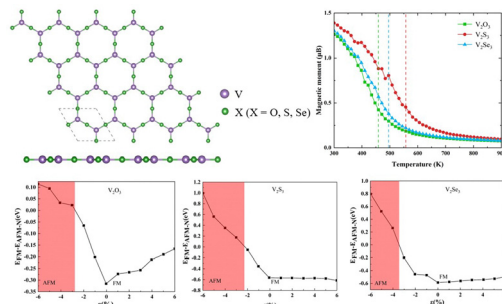
Bo-Yi Deng, Hong-Fei Li, Zi-Hao Liao, Zi-Rong Zhou and Feng Wang*



14172

Two-dimensional honeycomb-kagome V₂X₃ (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 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*

