

Journal of Materials Chemistry C

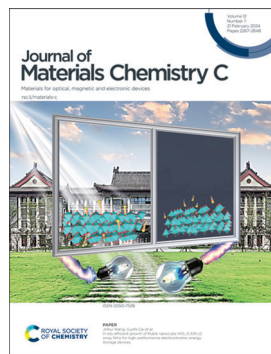
Materials for optical, magnetic and electronic devices

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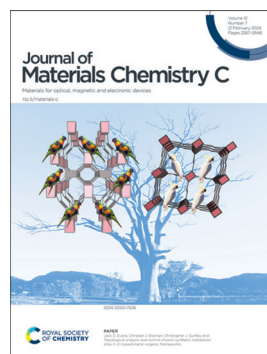
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Cover

See Jinhui Wang, Guofa Cai *et al.*, pp. 2350–2358. Image reproduced by permission of Guofa Cai from *J. Mater. Chem. C*, 2024, 12, 2350.



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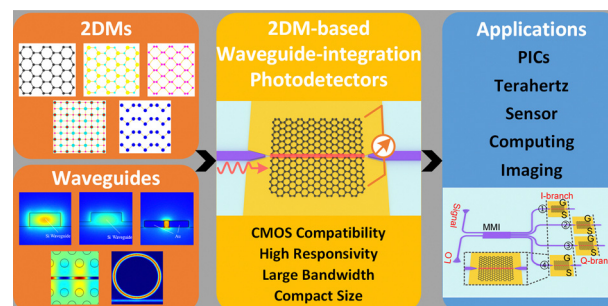
See Jack D. Evans, Christian J. Doonan, Christopher J. Sumby *et al.*, pp. 2359–2369. Image reproduced by permission of Christopher Sumby and Pol Gimeno-Fonquernie from *J. Mater. Chem. C*, 2024, 12, 2359. Topology diagrams generated by Diamond, Crystal Impact www.crystalimpact.com/diamond/

REVIEWS

2279

On-chip two-dimensional material-based waveguide-integrated photodetectors

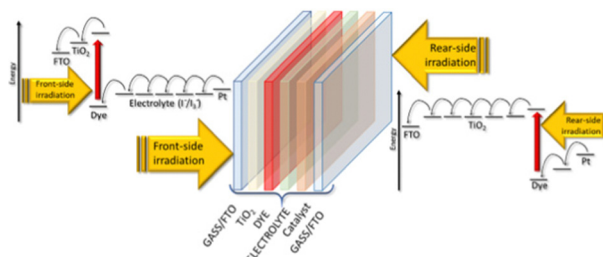
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Bifacial dye-sensitized solar cells for indoor and outdoor renewable energy-based application

Jessica Barichello,* Paolo Mariani, Luigi Vesce, Donatella Spadaro, Ilaria Citro, Fabio Matteocci, Antonino Bartolotta, Aldo Di Carlo and Giuseppe Calogero*



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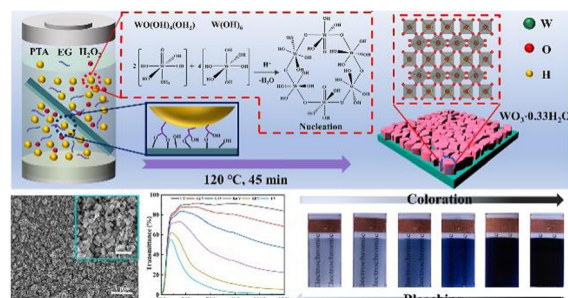


PAPERS

2350

In situ efficient growth of Rubik nanocube $\text{WO}_3 \cdot 0.33\text{H}_2\text{O}$ array films for high-performance electrochromic energy storage devices

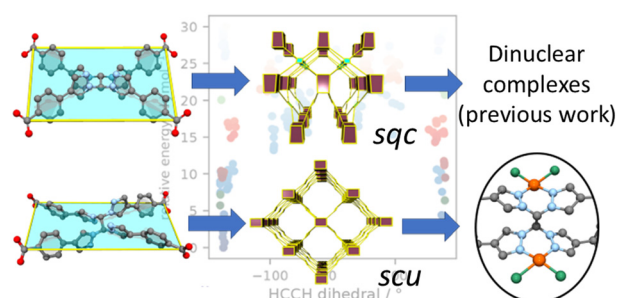
Sensen Jia, Pengyang Lei, Zhuanpei Wang, Weilong Yang, Jinhui Wang* and Guofa Cai*



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Topological analysis and control of post-synthetic metalation sites in Zr-based metal–organic frameworks

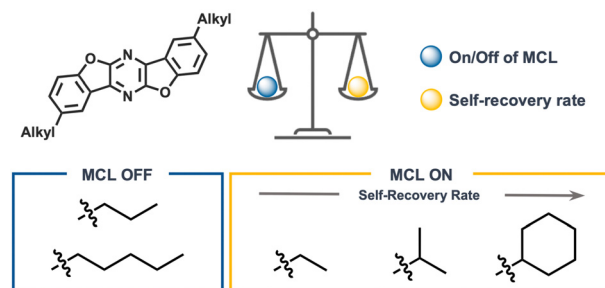
Pol Gimeno-Fonquernie, Jorge Albalad, Jason R. Price, Witold M. Bloch, Jack D. Evans,* Christian J. Doonan* and Christopher J. Sumby*



2370

Tunable mechanochromic luminescence of benzofuran-fused pyrazine: effects of alkyl chain length and branching pattern

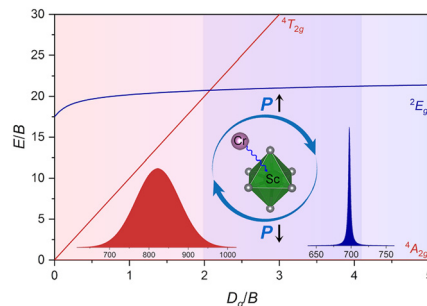
Shotaro Nakamura, Kohei Okubo, Yuji Nishii, Koji Hirano,* Norimitsu Tohnai* and Masahiro Miura



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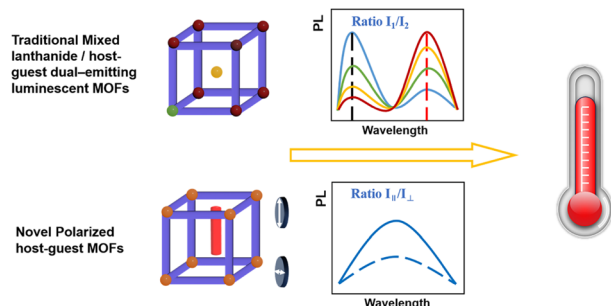
Crystal-field regulation enables broadband-to-line emission switching in Cr^{3+} -activated pyroxenes

Yingying Ma, Ting Wen,* Ke Liu, Chen Li, Dequan Jiang, En Chen, Tianyao Pei, Chuanlong Lin and Yonggang Wang*



PAPERS

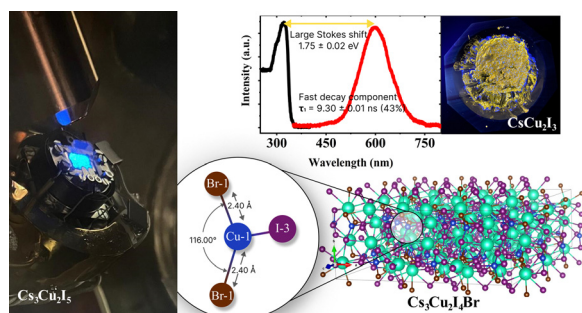
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A polarized luminescence thermometer based on a dye encapsulated metal-organic framework

Shenghan Lin, Zhengluan Liao, Heqi Zheng, Chenyu Li, Yuanjing Cui,* Zhiyu Wang and Guodong Qian*

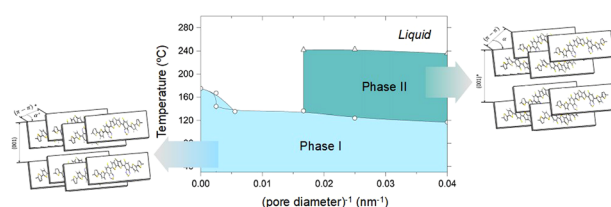
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All-inorganic copper-halide perovskites for large-Stokes shift and ten-nanosecond-emission scintillators

Tobias Haposan, Arramel Arramel,* Pramitha Yuniar Diah Maulida, Sri Hartati, Afif Akmal Afkauni, Muhammad Haris Mahyuddin, Lei Zhang, Dominik Kowal, Marcin Eugeniusz Witkowski, Konrad Jacek Drozdowski, Michal Makowski, Winicjusz Drozdowski, Lina Jaya Diguna* and Muhammad Danang Birowosuto*

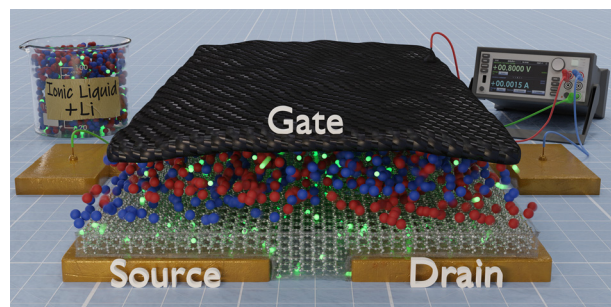
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Using spatial confinement to decipher polymorphism in the organic semiconductor p-DTS(FBTTh₂)₂

Sara Marina, Matthew Dyson, Xabier Rodríguez-Martínez, Obadiah G. Reid, Ruipeng Li, Garry Rumbles, Detlef Smilgies, Aram Amassian, Mariano Campoy-Quiles, Natalie Stingelin* and Jaime Martín*

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A study of the doping process in Li₄Ti₅O₁₂ and TiO₂ battery electrode materials studied in the ion-gated transistor configuration

José Ramón Herrera Garza, Luan Pereira Camargo, Ramin Karimi Azari, Lariel Chagas da Silva Neres, Shahid Khaleel, Martin Schwellberger Barbosa,* Francesca Soavi* and Clara Santato*

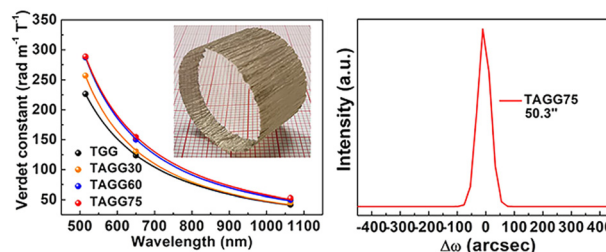


PAPERS

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Lattice engineering through Al-substitution leads to enhanced magneto-optical properties of $\text{Tb}_3(\text{Al}_x\text{Ga}_{1-x})_5\text{O}_{12}$ single crystals

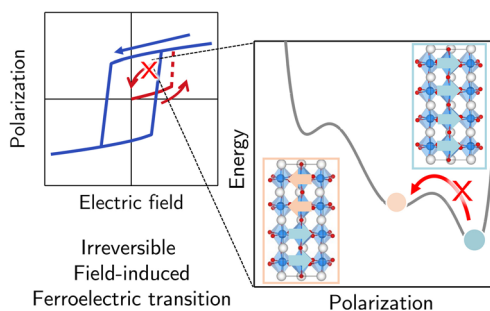
Xianhui Xin, Yuankai Hao, Xianxian Yang, Zhen Zhang, Xiuwei Fu,* Zhitai Jia* and Xutang Tao



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Unlocking the key mechanism behind field-induced ferroelectric phase transition in sodium niobate for energy storage systems

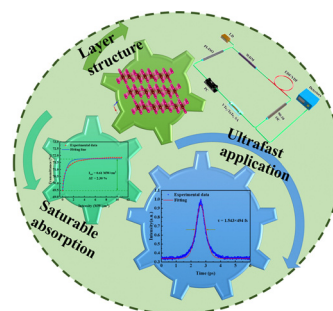
Woohyun Hwang and Aloysius Soon*



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Ultrafast nonlinear optical properties of MTe_2 ($\text{M} = \text{V}$ and Ta) and their application as broadband saturable absorbers

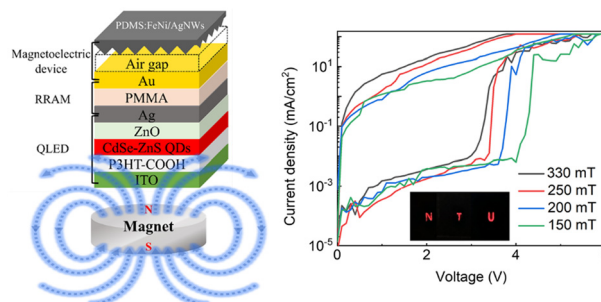
Wenyao Zhang, Zichen Li, Xudong Leng, Qun Jing and Qiao Wen*



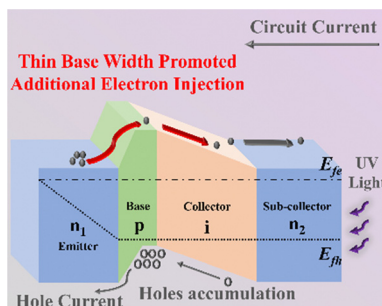
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A high-performance magnetoelectric non-volatile light-emitting memory device

Jia-Wei Wu, Yu-Chieh Chao, Jia-Yu Lin, Chia-Chun Ho, Meng-Ching Lai, Fang-Chi Hsu* and Yang-Fang Chen*



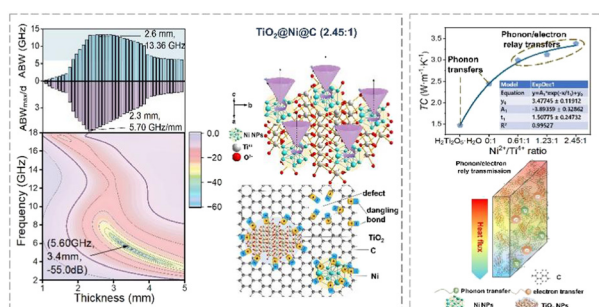
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Realizing high zero-bias gain in a GaN-based bipolar phototransistor through thin-base configuration for ultraviolet imaging

Bingxiang Wang, Ke Jiang,* Shanli Zhang, Yuxuan Chen, Tong Fang, Zhiwei Xie, Jianwei Ben, Yang Chen, Yuping Jia, Mingrui Liu, Xiaojuan Sun* and Dabing Li

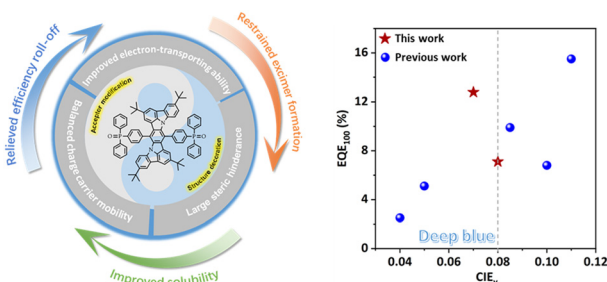
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Synchronous achievement of ultra-wideband microwave absorption and high thermal conduction in spongy TiO_2 -based magnetic composites via constructing magnetic/dielectric double loss and phonon/electron co-transmission

Qibin Yao, Kang Fu, Ran Ji, Meiwan Ying, Yijun Yang, Kaixia Yang, Guoxiu Tong,* Wenhua Wu and Dabo Chen*

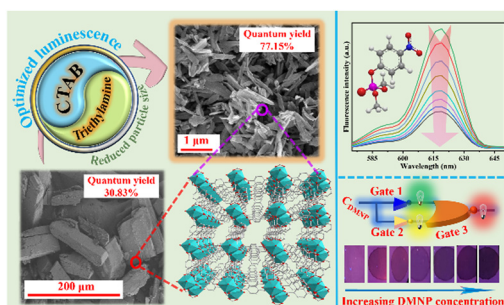
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Acceptor modification of diindolocarbazole embedded multiple-resonance emitters for efficient narrowband deep-blue OLEDs with $\text{CIE}_y \leq 0.08$ and alleviated efficiency roll-off

Shuxin Wang, Jianping Zhou, Jibiao Jin, Minqiang Mai, Chui-Shan Tsang, Lawrence Yoon Suk Lee, Lian Duan* and Wai-Yeung Wong*

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Construction of a logic gate computation and visual test paper for methyl paraoxon assay based on a fluorescent europium-organic framework

Nan Li, Yanyan Yu, Yuanyuan Zhou, Kexin Xu, Yunshan Zhou,* Lijuan Zhang* and Yuxu Zhong*

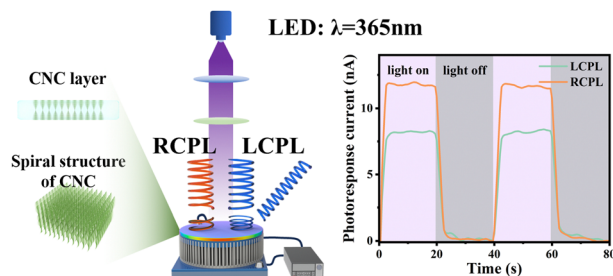


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High-performance and environmentally friendly circularly polarized light direct detection based on ZnO nanowires and chiral cellulose nanocrystals

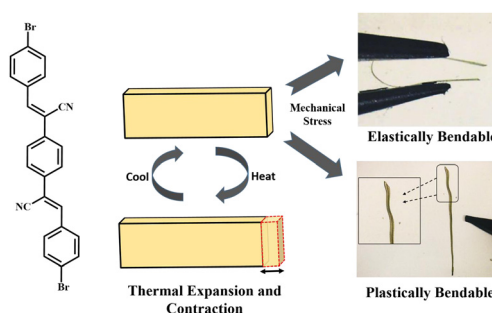
Junjun Yang, Yuxin Huang, Sixian He, Congcong Dang, Ming Li, Liancheng Zhao and Liming Gao*



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Elasto-plastic behaviour with reversible thermosalient expansion in acrylonitrile-based organic crystals

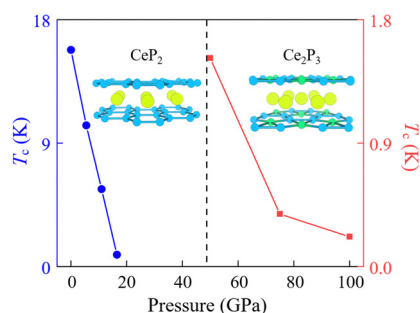
Deepak Manoharan, Subham Ranjan, Franziska Emmerling, Biswajit Bhattacharya,* Satoshi Takamizawa* and Soumyajit Ghosh*



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Superconducting Ce_2P_3 and CeP_2 with an interesting planar P layer

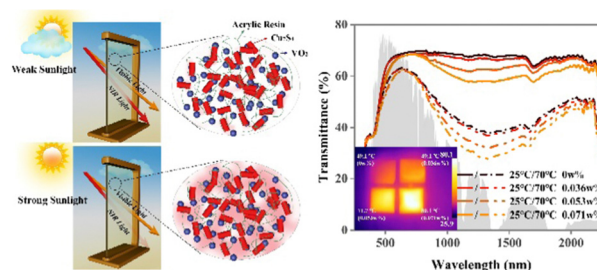
Xing Li, Aitor Bergara, Xiaohua Zhang, Fei Li, Yong Liu and Guochun Yang*



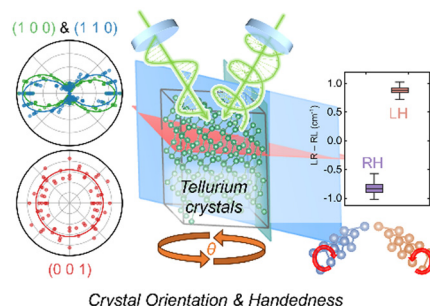
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Novel sunlight-driven $\text{Cu}_7\text{S}_4/\text{VO}_2$ composite films for smart windows

Yong Zhao, Haining Ji,* Yangyong Ou, Yi Wang, Yongxing Chen, Jundong Tao, Bin Liu, Mingying Lu, Yan Huang and Junlong Wang



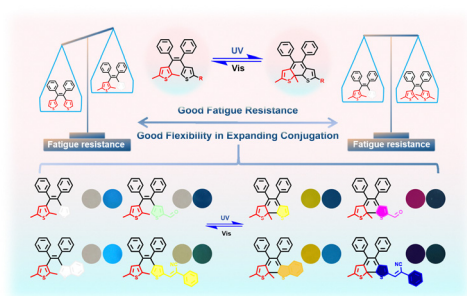
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Lattice dynamics in chiral tellurium by linear and circularly polarized Raman spectroscopy: crystal orientation and handedness

Davide Spirito, Sergio Marras and Beatriz Martín-García*

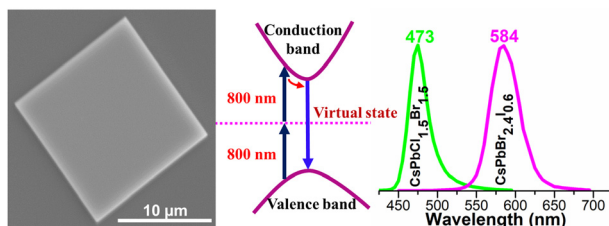
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Multicolor AIE-active photoswitches with improved fatigue resistance by introducing asymmetric photoactive units

Yuzhen Wu, Jiale Zhan, Zhengdong Han, Weidong Liu, Zhaosheng Qian and Hui Feng*

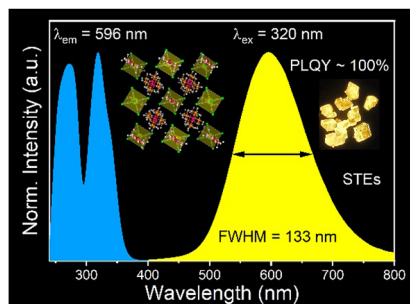
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Quaternary CsPbX₃ (X = Cl_{1-x}Br_x, Br_{1-x}I_x) alloy microplates synthesized by single-step chemical vapor deposition and their two-photon absorption (TPA) properties

Mohammad Kamal Hossain, Wayesh Qarony, Ying Wang, Cheuk Kai Gary Kwok, Kingsley O. Egbo, Yuen Hong Tsang, Johnny C. Ho and Kin Man Yu*

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Near-unity photoluminescence quantum yield in zero-dimensional lead-free indium-based hybrid perovskites by antimony doping

Jingheng Nie, Xiangyan Yun, Fangrui Cheng, Ban Lan,* Renping Cao and Jing Wang*

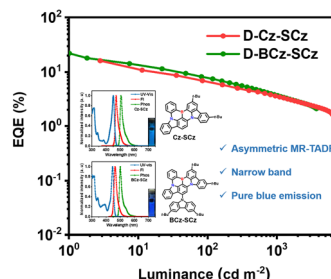


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Asymmetric multiple resonance thermally activated delayed fluorescence emitters for sky-blue and pure blue electroluminescence

Hua-Xiu Ni, Xu-Feng Luo, Li Yuan, Jia-Jun Hu, Wen-Wei Zhang* and You-Xuan Zheng*

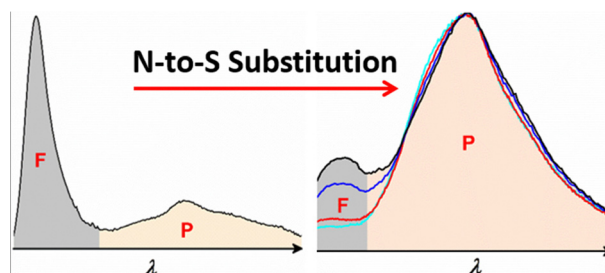
Asymmetric MR-TADF emitters for blue emission



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N-to-S substitution induced fluorescence-to-phosphorescence dominant emission with excitation-dependent intersystem crossing

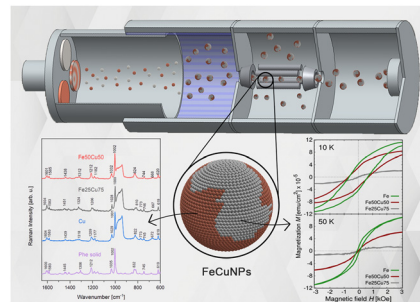
Guoyan Li, Yexin Li,* Xiaofeng Yang, Jinling Miao, Yu Cui, Yong Nie, Shuaijun Yang, Wei Liu and Guoxin Sun*



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Inert gas condensation made bimetallic FeCu nanoparticles – plasmonic response and magnetic ordering

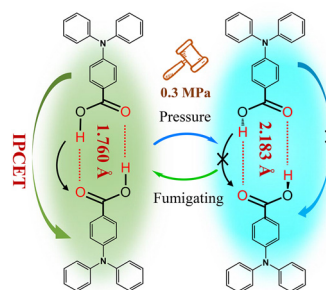
Kamila Kollbek,* Piotr Jabłoński, Marcin Perzanowski, Dominika Święch, Marcin Sikora, Grzegorz Słowik, Mateusz Marzec, Marta Gajewska, Czestawa Paluszkiwicz and Marek Przybylski



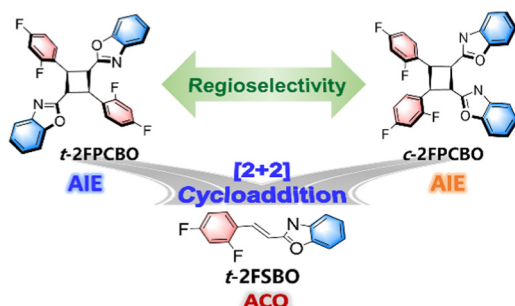
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Controlled intermolecular proton-coupled electron transfer process: a novel design strategy for highly sensitive piezo-chromic fluorescent materials

Miao Yu, Jingping He, Zhenzhen Xu,* Zhongwei Man, Ping Wang, Yuhao Xiang, Fei Yu and Hongbing Fu*



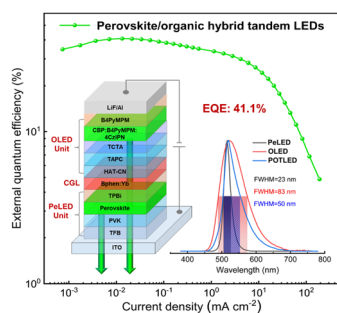
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The origin of [2+2] photocycloaddition reaction in the solid state driving ACQ-to-AIE transformation

Haoran Wei, Hongyang Zhu, Quansong Li* and Xiaoyan Zheng*

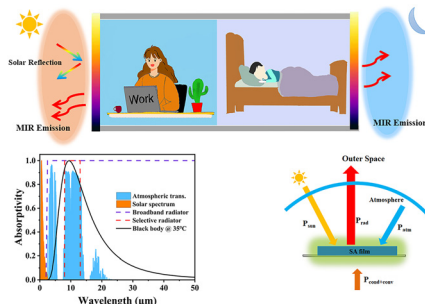
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Perovskite/organic hybrid tandem light-emitting diodes with an external quantum efficiency of over 40%

Min Zhu, Shuang-Qiao Sun, Wei He, Yan-Lin Xu, Qi Sun, Yue-Min Xie,* Man-Keung Fung* and Shuit-Tong Lee*

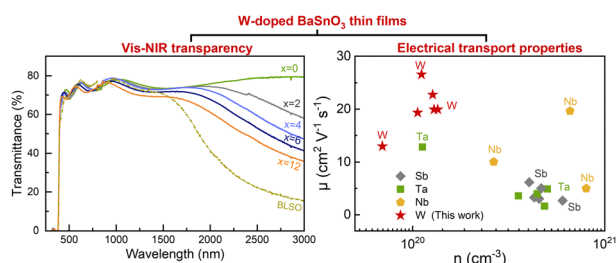
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Flexible and multifunctional composite films based on rare earth phosphors as broadband thermal emitters for high-performance passive radiative cooling

Ruiming Tan, Wangyang Hu, Xin Yao,* Nan Lin, Peng Xue, Shiqing Xu* and Gongxun Bai*

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Tungsten-doped barium stannate as a transparent conducting film

Yuandi He, Yao-long Kang, Renhuai Wei,* Peng-Lai Gong,* Ling Hu, Wenhai Song, Xuebin Zhu* and Yuping Sun

