

Journal of Materials Chemistry C

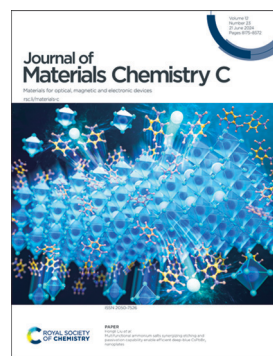
Materials for optical, magnetic and electronic devices

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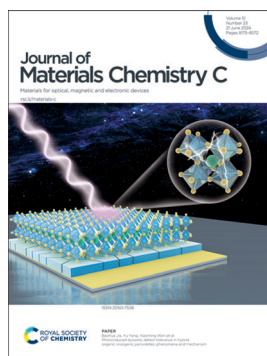
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ISSN 2050-7526 CODEN JMCCCX 12(23) 8175-8572 (2024)



Cover

See Hongli Liu *et al.*, pp. 8302–8308.
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Inside cover

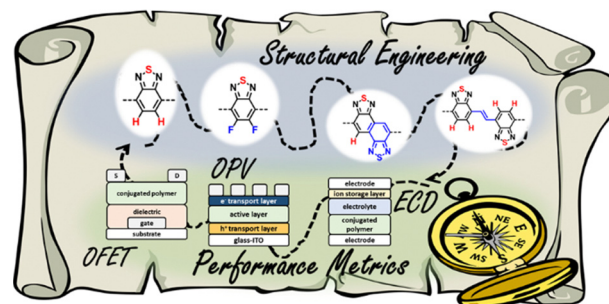
See Baohua Jia, Yu Yang, Xiaoming Wen *et al.*, pp. 8309–8319.
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REVIEWS

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Conjugated polymers with near-infrared (NIR) optical absorption: structural design considerations and applications in organic electronics

Tanzida Zubair, Md Mahmudul Hasan, Raul S. Ramos and Robert M. Pankow*



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Stimuli responsive actuators: recent advances

Feng Du, Shu Wang, Zhihao Chen and Quan Li*



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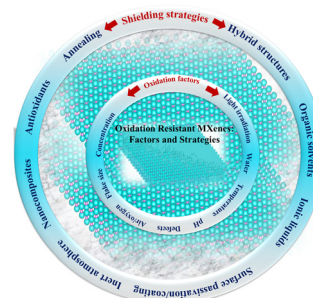


REVIEWS

8243

Shielding 2D MXenes against oxidative degradation: recent advances, factors and preventive measures

Sunil Kumar,* Nitu Kumari, Tej Singh and Yongho Seo*

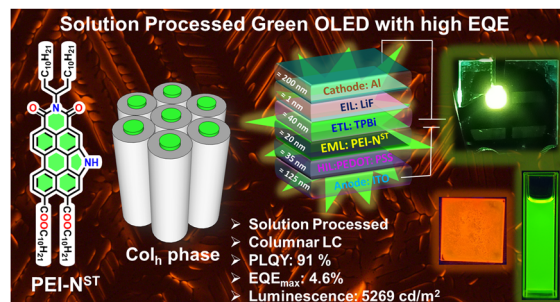


COMMUNICATIONS

8282

Bright green electroluminescence with an EQE of 4.6% from a host-guest OLED fabricated from an unsymmetric liquid crystalline *N*-annulated perylene ester imide as a dopant

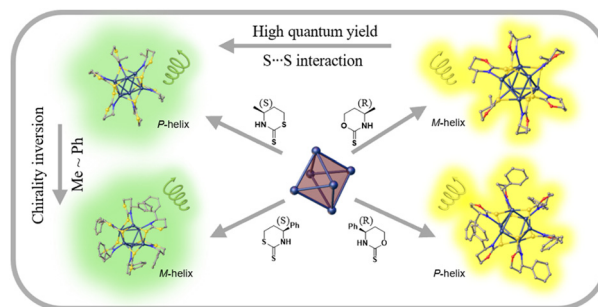
Paresh Kumar Behera, Feng-Rong Chen, Jwo-Huei Jou* and Ammathnadu Sudhakar Achalkumar*



8287

Ligand engineering of circularly polarized luminescence inversion and enhancement for chiral Ag₆ nanoclusters

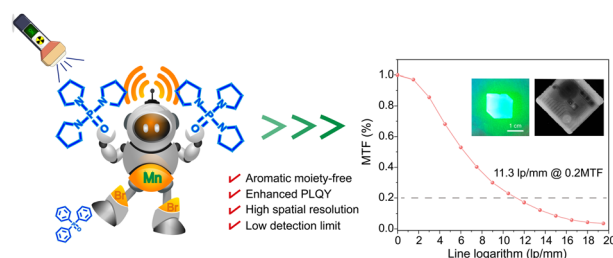
Hui Chen, Xiangyang Zhang, Kuo Fu, Xuejuan Wang and Guofeng Liu*



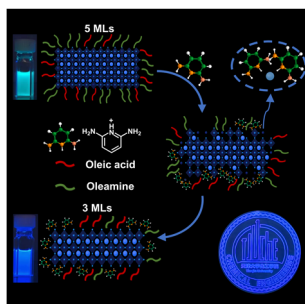
8296

Designing an aromatic moiety-free neutral luminescent manganese(II) halide scintillator for efficient X-ray imaging

Xiaokang Zheng, Zijian Zhou, Zikang Li, Ka-Yan Tran, Pengfei She, Hua Wang, Wai-Yeung Wong,* Qiang Zhao* and Peng Tao*



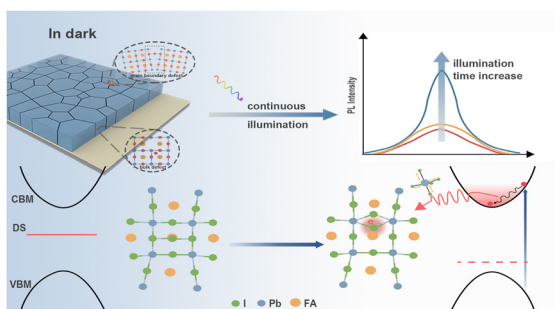
8302



Multifunctional ammonium salts synergizing etching and passivation capability enable efficient deep-blue CsPbBr₃ nanoplates

Yanyin Wang, Shirong Wang, Zhanpeng Qin, Jing Zhou, Sixiao Gu, Xianggao Li and Hongli Liu*

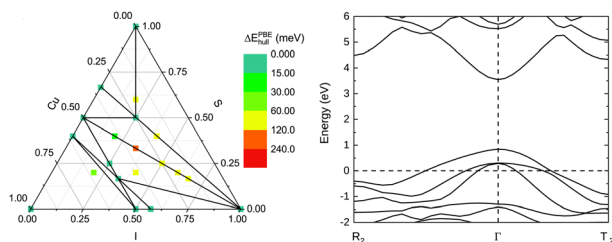
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Photoinduced dynamic defect tolerance in hybrid organic–inorganic perovskites: phenomena and mechanism

Guangsheng Liu, Qianwen Wei, Guijun Zhang, Mehri Ghasemi, Qi Li, Junlin Lu, Juan Wang, Baohua Jia,* Yu Yang* and Xiaoming Wen*

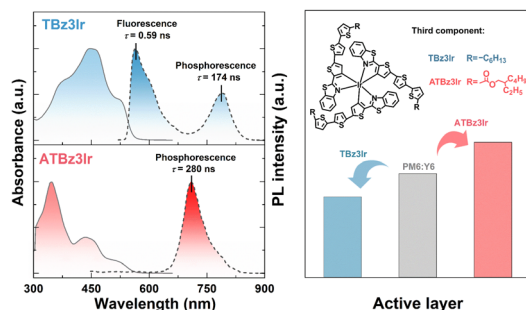
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Computational prediction and characterization of CuI-based ternary p-type transparent conductors

Michael Seifert, Tomáš Rauch, Miguel A. L. Marques and Silvana Botti*

8334



Significant differences in photophysical and photovoltaic properties of flexible chain terminated homoleptic tris-Ir(III) complexes

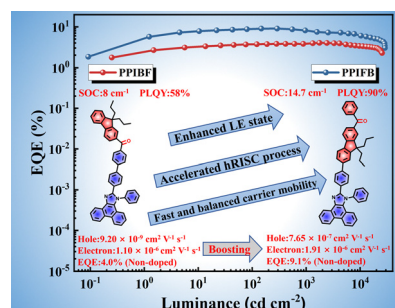
Duoquan You, Tianjian Yang, Aihua Zhou, Siyuan Li, Kaiqi Lv, Huili Ma, Hongliang Zhong and Youtian Tao*



8343

Efficient non-doped blue electroluminescence based on phenanthroimidazole–benzoylfluorene hybrid molecules with high spin–orbit coupling and balanced charge mobilities

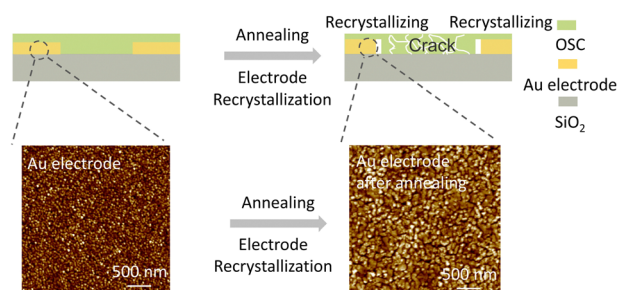
Yannan Zhou, Mingliang Xie, Xin Wang, Mizhen Sun, Huayi Zhou, Shi-Tong Zhang,* Wenjun Yang and Shanfeng Xue*



8351

Impact of electrode recrystallization on the stability of organic transistors

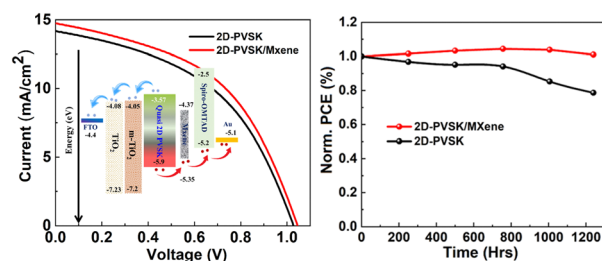
Shougang Sun, Hanyang Guan, Jinbo He, Jiannan Qi, Xiaosong Chen,* Liqiang Li and Wenping Hu



8357

MXenes as a hole transport interfacial layer for efficient and air-stable quasi-2D perovskite solar cells

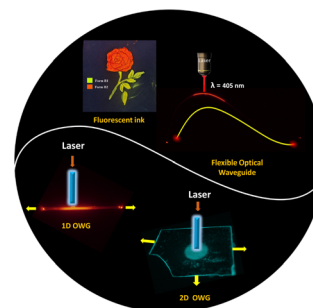
Sanjay Sahare,* Mykhailo Solovan, Marina Smirnova, Błażej Scheibe, Mariusz Jancelewicz, Grzegorz Nowaczyk, Mateusz Kempniński and Marcin Ziótek*



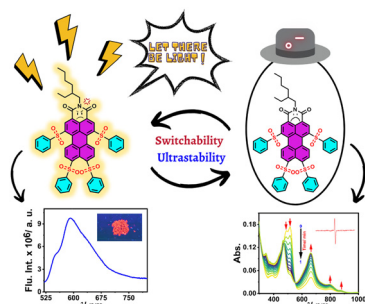
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Unravelling polymorphism-driven luminescence in GFP chromophore analogues: insights into the phase transition and morphology-dependent optical waveguide properties

Niteen B. Dabke, Yash Raut, Bhupendra P. Mali, Rinu Pandya, Kumar Vanka, Kochunnonny Manoj and Rajesh G. Gonnade*



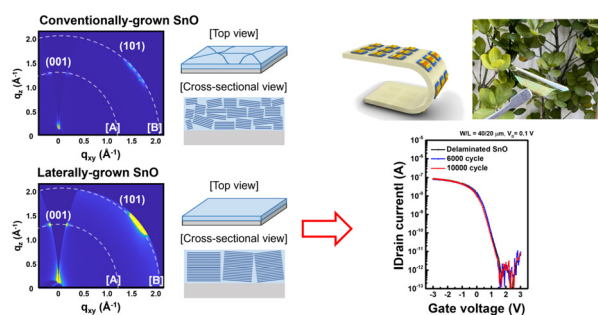
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Perylenemonoimide-based superstable radical anions and dianions with solid-state emission properties

Sukomal Bhunia, Anup Pramanik, Suman Bhattacharya* and Apurba Lal Koner*

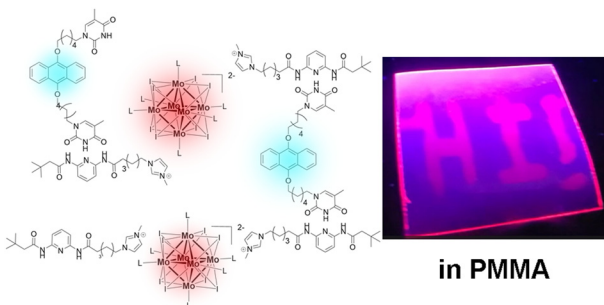
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Controlled 2D growth approach *via* atomic layer deposition for improved stability and performance in flexible SnO thin-film transistors

Hye-Mi Kim, Won-Bum Lee, Haklim Koo, Seo-Yeong Kim and Jin-Seong Park*

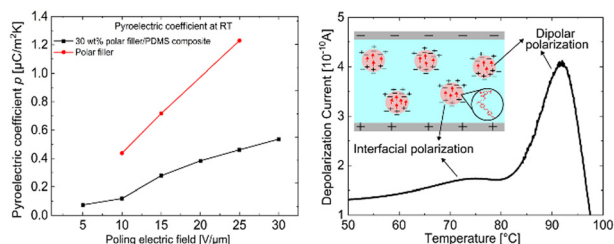
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Smart emissive hybrid dynamer and nanocomposite made of complementary organic and inorganic emitters combined *via* a supramolecular Janus synthon

Ilya V. Kashnik, Jeanne Rebours, Noée Dumait, Konstantin A. Brylev and Yann Molard*

8408



Pyroelectricity in poled all-organic polar polynorborene/polydimethylsiloxane-based stretchable electrets

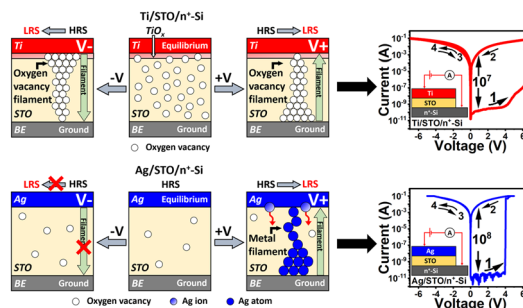
Thulasinath Raman Venkatesan,* Francis Owusu, Frank A. Nüesch, Manuel Schulze and Dorina M. Opris



8418

Demonstration of high-performance STO-based WORM devices controlled by oxygen-vacancies and metal filament growth

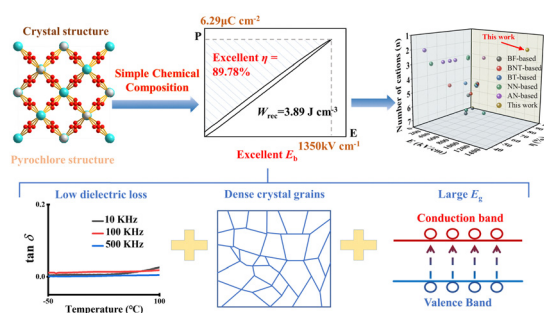
Chih-Chieh Hsu,* Xiu-Ming Wen, Kai-Zer Xiao, Wun-Ciang Jhang and Mojtaba Joodaki



8426

New pyrochlore $\text{La}_2\text{Zr}_2\text{O}_7$ ceramics with ultra-high breakdown electric field strength and energy storage efficiency

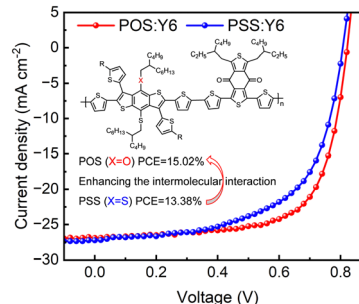
Teng Sui, Qin Feng,* Nengneng Luo, Jinhong He, Haoxiang Huang, Changlai Yuan,* Zhenyong Cen and Xiyong Chen



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Wide bandgap copolymers with asymmetric side chains for efficient organic solar cells

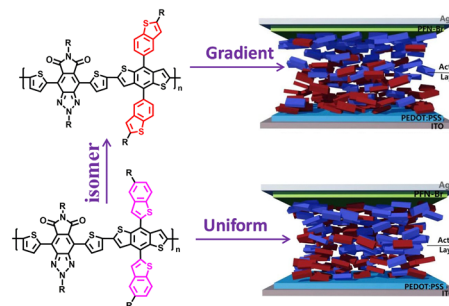
Zicheng Tao, Yi Li, Wenxiong Shen, Huiting Fu, Yunlong Ma and Qingdong Zheng*



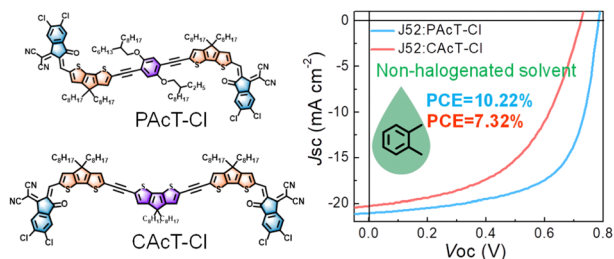
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The isomerization effect of a benzothiophene-substituted benzodithiophene-based donor polymer on the blend morphology and photovoltaic performance of all-polymer solar cells

Jinping Lin, Jiejie Wan, Haifen Liu, Zejiang Li, Shuqi Chang, Guangsheng Fu, Shaopeng Yang and Lixin Wang*



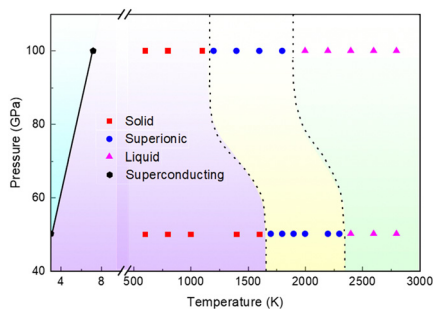
8452



Non-fused ring electron acceptors with an ethynylene linker for non-halogenated solvent-processed organic solar cells

Dou Luo, Aung Ko Ko Kyaw,* Tingting Dai, Erjun Zhou and Wai-Yeung Wong*

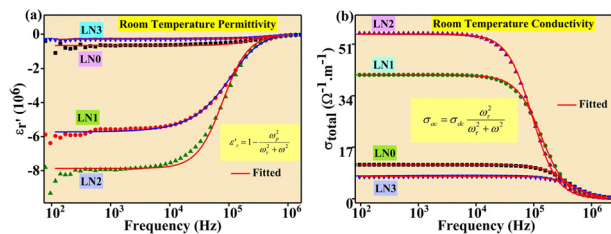
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Superconductivity and superionic behaviors of Kagome lattices in Li-Si compounds under high pressure

Xinwei Wang, Bohan Cao, Wenting Tang, Mengxin Yang, Jiabin Chen, Shi Chen, Mengrui Zhang, Fubo Tian* and Liang Li*

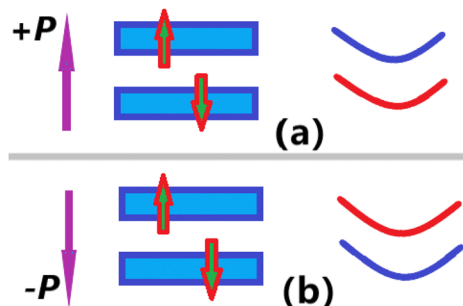
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Establishing the correlation of negative permittivity and AC conductivity of $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4$ ($x = 0, 0.1, 0.3, 1.0$) for microwave shielding applications

Tarun Katheriya, Gurudeo Nirala and Shail Upadhyay*

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Spontaneous and reversible spin-splitting in ferroelectric A-type antiferromagnetism

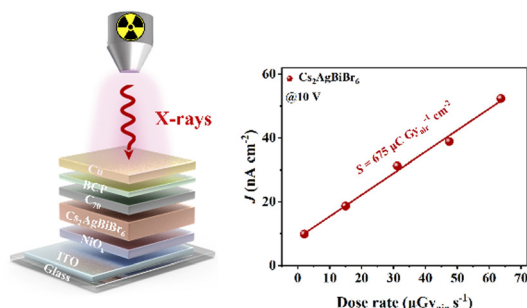
Liguo Zhang, San-Dong Guo* and Guangzhao Wang



8491

Printable thick junction-based lead-free perovskite single crystal powders for X-ray detection

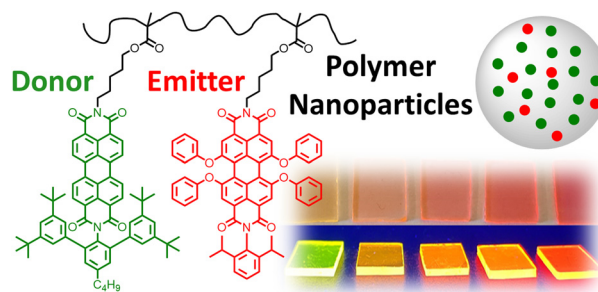
Wei Wu, Zhenglin Jia, Yong Liu, Jiali Peng* and Qianqian Lin*



8498

Fluorescent polymer nanoparticles containing perylene diimides for application in luminescent solar concentrators

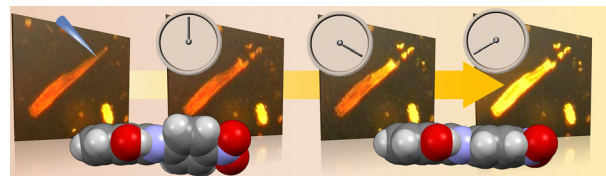
Rehana Pervin, Elham M. Gholizadeh, Kenneth P. Ghiggino and Wallace W. H. Wong*



8508

Mechanically-sensitive fluorochromism by molecular domino transformation in a Schiff base crystal

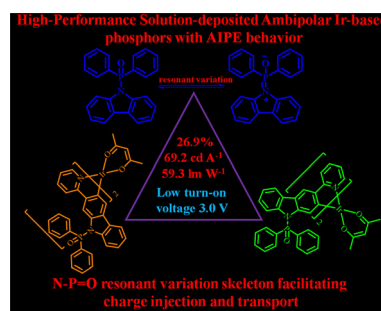
Toshiyuki Sasaki,* Takanori Nakane, Akihiro Kawamoto, Yakai Zhao, Yushi Fujimoto, Tomohiro Nishizawa, Nabadeep Kalita, Seiji Tsuzuki,* Fuyuki Ito,* Upadrasta Ramamurty,* Ranjit Thakuria* and Genji Kurisu*



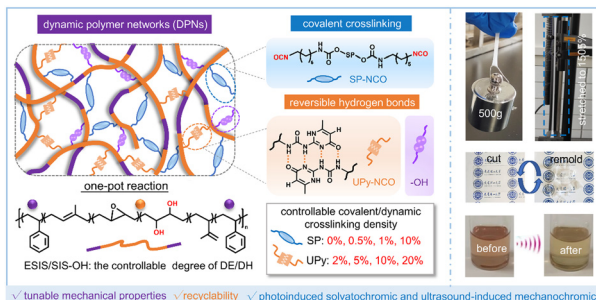
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High-performance solution-deposited ambipolar Ir(III) complex phosphors with aggregation-induced phosphorescence enhancement behavior based on an N-P=O resonant variation skeleton

Zhao Feng, Hongyan Wang, Siqi Liu, Shipan Xu, Ziyi Chen, Daokun Zhong, Xiaolong Yang, Yuanhui Sun and Guijiang Zhou*



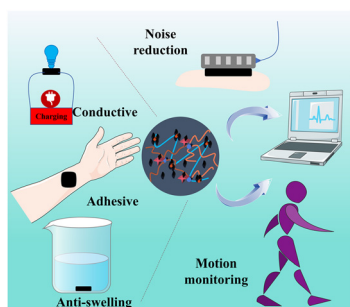
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Stimuli responsive dynamic polymer networks with tunable toughness and elasticity through the regulation of covalent crosslinking and reversible hydrogen bonds

Ruixue Zhang, Meng Lai, Hongyuan Bai, Hongwei Ma* and Li Han*

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An adhesive, low swelling and conductive tri-network hydrogel for wearable electronic devices

Mengyuan Hu, Longhai Qiu, Yuliang Huang, Donghui Wang,* Jiongliang Li, Chunyong Liang, Gen Wu* and Feng Peng*

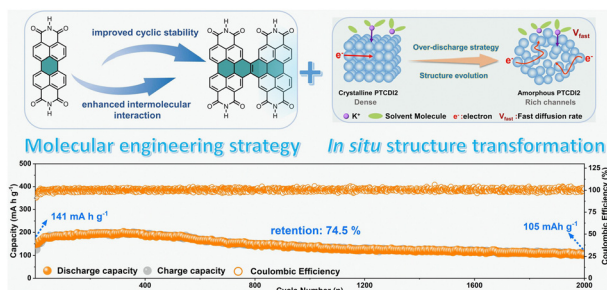
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Modulating the crystal packing to achieve efficient ultralong organic phosphorescence by simple methylation engineering

Huiting Mao, Jing Gao, Yun Geng, Guo-Gang Shan,* Kuizhan Shao, Ruinian Hua* and Zhongmin Su*

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Amorphization of fused perylene diimide dimers for high-efficiency potassium-organic batteries

Mengyuan Cheng, Hang Liu, Zhuocheng Tian, Xiaoqi Luo, Di Wu, Kui Yan* and Dongxue Wang*

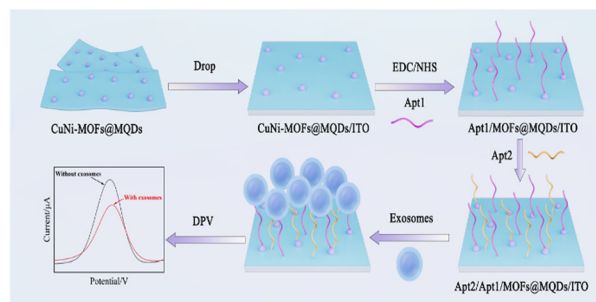


PAPERS

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MXene quantum dot functionalized bimetallic MOFs as a label-free aptasensor for highly sensitive detection of exosomes

Xue Su, Qiannan You,* Panyong Wang, Li Li, Mingfeng Ge, Li Yang,* Wen-Fei Dong and Zhimin Chang*



CORRECTION

8569

Correction: Electromagnetic interference shielding materials: recent progress, structure design, and future perspective

Xiao-Yun Wang, Si-Yuan Liao, Yan-Jun Wan,* Peng-Li Zhu,* You-Gen Hu, Tao Zhao, Rong Sun and Ching-Ping Wong

