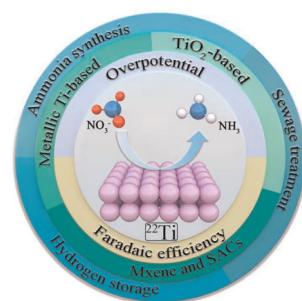


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# Recent developments in Ti-based nanocatalysts for electrochemical nitrate-to-ammonia conversion

Wenda Chen, Yuan Xu, Jiaxin Liu, Huiqun Cao,  
Yongliang Li, Xiangzhong Ren, Shenghua Ye,\*  
Jianhong Liu\* and Qianling Zhang\*

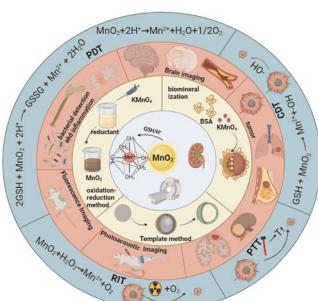


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## Advances in the application of manganese dioxide and its composites for theranostics

Jiaqi Hao, Yu Zhao, Yiqi Ma, Beibei Liu, Yonglan Luo, Sulaiman Alfaifi, Xuping Sun\* and Min Wu\*



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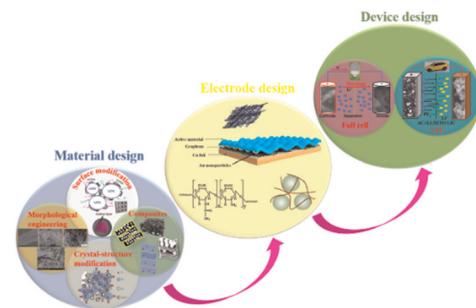


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**Li<sub>2</sub>ZnTi<sub>3</sub>O<sub>8</sub> anode: design from material to electrode and devices**

Huanhuan Liu, Xue Zhang, Haoran Xu, Wenzhao Ma, Lijuan Wang,\* Zhaohui Meng\* and Fei Wang\*

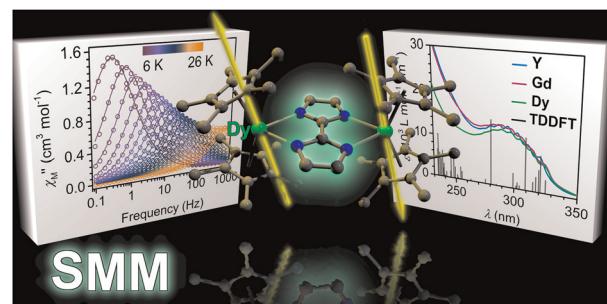


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**From unprecedented 2,2'-bisimidazole-bridged rare earth organometallics to magnetic hysteresis in the dysprosium congener**

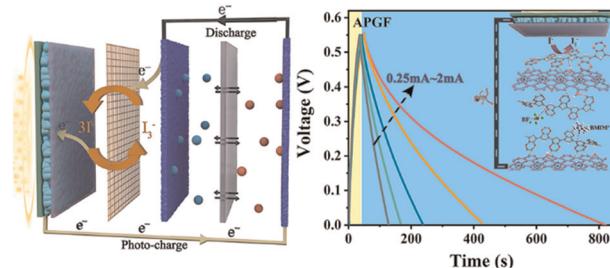
Florian Benner and Selvan Demir\*



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**Compatible and high-efficiency quasi-solid-state integrated photocapacitor based on the synergism of PEDOT/RGO electrode and gel electrolyte to improve the carrier migration**

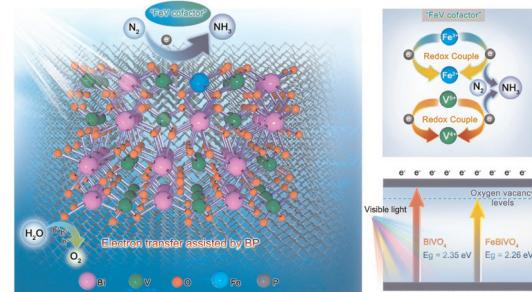
Yuanduo Qu, Siqi Liao, Liangyi Wu, Junkai Wang, Lianfeng Duan,\* Xia He and Fushen Lu\*



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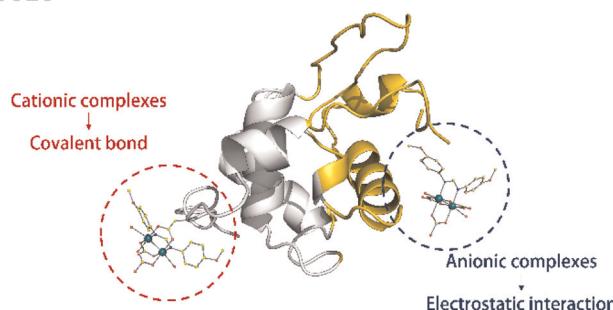
**"FeV-cofactor"-inspired bionic Fe-doped BiVO<sub>4</sub> photocatalyst decorated with few-layer 2D black phosphorus for efficient nitrogen reduction**

Hongda Li, Shuai Jian, Boran Tao, Guoxiao Xu, Baosheng Liu, Shaonan Gu,\* Guofu Wang\* and Haixin Chang\*



## RESEARCH ARTICLES

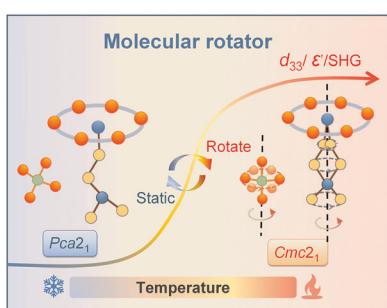
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## Charge effect in protein metalation reactions by diruthenium complexes

Aarón Terán, Giarita Ferraro, Ana E. Sánchez-Peláez, Santiago Herrero\* and Antonello Merlino\*

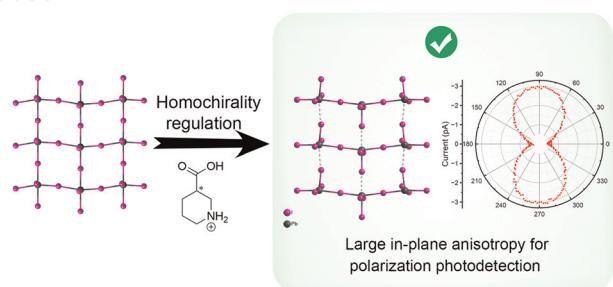
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## Remarkable enhancement of optical and electric properties by temperature-controlled solid-phase molecular motion

Meng-Meng Lun, Chang-Yuan Su, Qiang-Qiang Jia, Zhi-Xu Zhang, Jie Li, Hai-Feng Lu,\* Yi Zhang\* and Da-Wei Fu\*

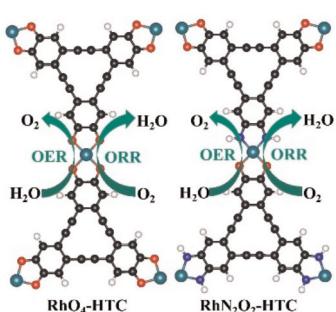
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## Large in-plane anisotropic 2D perovskites toward highly linear polarized light responses

Bei-Dou Liang, Chang-Chun Fan, Cheng-Dong Liu, Tong-Yu Ju, Chao-Yang Chai,\* Xiang-Bin Han\* and Wen Zhang\*

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## Two-dimensional conductive metal-organic frameworks as efficient electrocatalysts for oxygen evolution and reduction reactions

Yanan Zhou, Li Sheng, Lanlan Chen, Qiquan Luo, Wenhui Zhao,\* Wenhua Zhang\* and Jinlong Yang\*

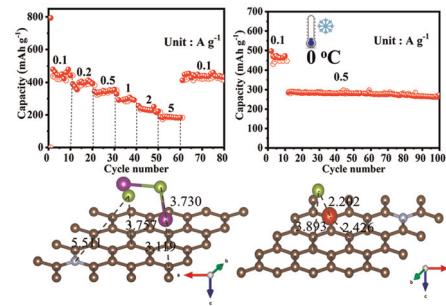


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**Rational construction of  $\text{VSe}_2$  encapsulated in seleniumized polyacrylonitrile toward a high-rate capacity and wide temperature tolerance for potassium-ion batteries**

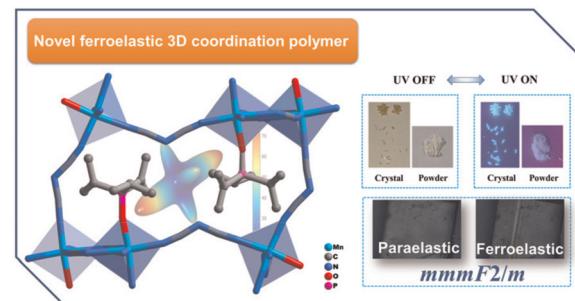
Lihong Xu, Jiefeng Ye, Wenti Guo, Tingjie Chen, Xiaochuan Chen,\* Qingrong Qian, Jianmin Zhang,\* Mingdeng Wei, Xiangfang Peng\* and Lingxing Zeng\*



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**A three-dimensional  $\text{Mn}^{(II)}$  coordination polymer with ferroelasticity obtained by introducing coligands to form novel networks**

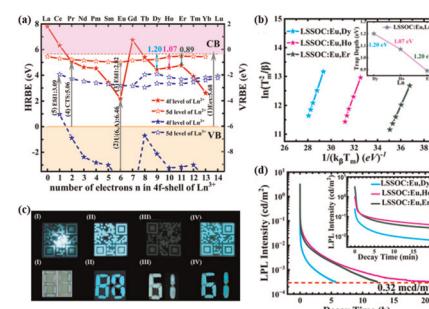
Ke Xu, Zining Zhou, Jintao Men, Qingjie Zhou and Qiong Ye\*



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**Co-doped long persistent luminescence materials  $\text{LiSr}_3\text{SiO}_4\text{Cl}_3:\text{Eu}^{2+},\text{Ln}^{3+}$  ( $\text{Ln} = \text{Dy, Ho, Er}$ ): construction and verification of VRBE and HRBE scheme and their multifunctional applications**

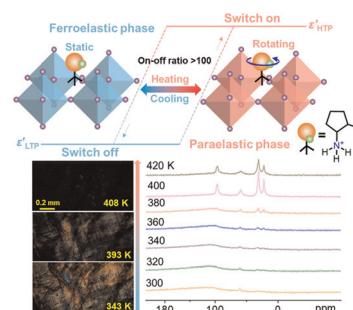
Yuanying Lin, Chengzhuo Ming, Zhenbin Wang, Bin Yu, Yuzhu Yang and Weisheng Liu\*



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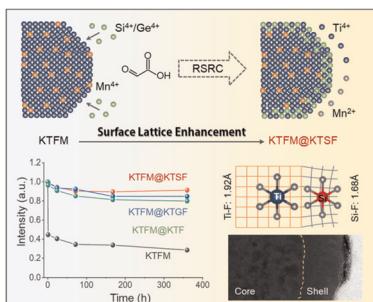
**Fast rotating dipole array inducing large dielectric response in a Ruddlesden–Popper hybrid perovskite ferroelastic**

Wang Luo, Na Wang, Hua-Kai Li, Ze-Jiang Xu, Yan Feng, Xiao-bin Fu,\* Chao Shi,\* Heng-Yun Ye and Le-Ping Miao\*



## RESEARCH ARTICLES

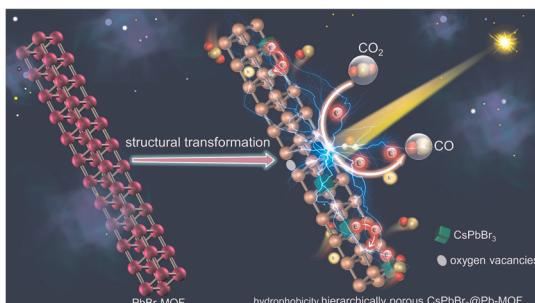
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### Surface lattice enhancement of red-emitting fluorides enabled by embedding small cations

Pingping Wan, Chen Yang, Aolin Wang, Liping Yu, Shixun Lian and Wenli Zhou\*

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### Oxygen vacancies confined in hierarchically porous $\text{CsPbBr}_3@\text{Pb-MOF}$ through *in situ* structural transformation for promoting photocatalytic $\text{CO}_2$ reduction

Yangwen Hou, Man Dong, Jingting He, Jing Sun, Chunyi Sun,\* Xiao Li, Xinlong Wang and Zhongmin Su\*

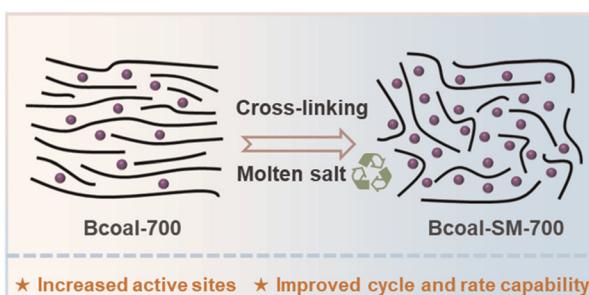
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### A copper interface promotes the transformation of nickel hydroxide into high-valent nickel for an efficient oxygen evolution reaction

Junjun Zhang, Fengchen Zhou, Aiming Huang, Yong Wang, Wei Chu\* and Wen Luo\*

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### Molten salt assisted fabrication of coal-based carbon anode materials for efficient Na ion storage

Wei Zhang, Ning Sun,\* He Chen, Razium Ali Soomro and Bin Xu\*

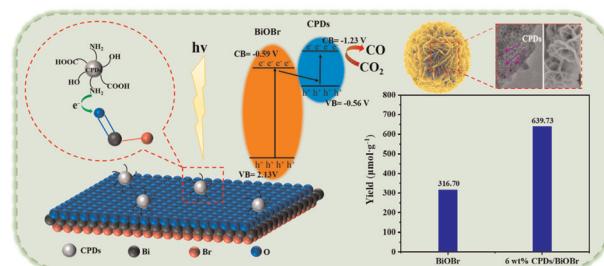


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**Up-conversion effect boosted the photocatalytic  $\text{CO}_2$  reduction activity of Z-scheme CPDs/BiOBr heterojunction**

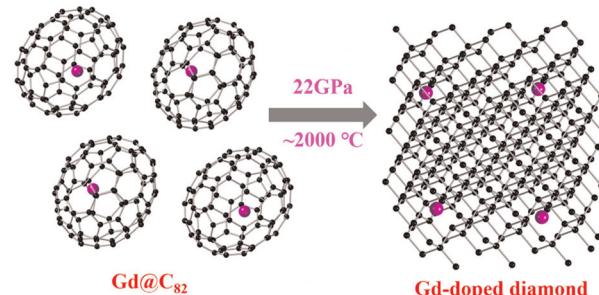
Jing Xie,\* Xiaojing Zhang, Zhenjiang Lu, Jindou Hu, Aize Hao, Yue Feng and Yali Cao\*



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**Gd-doped diamond synthesized using  $\text{Gd@C}_{82}$  under high pressure and high temperature**

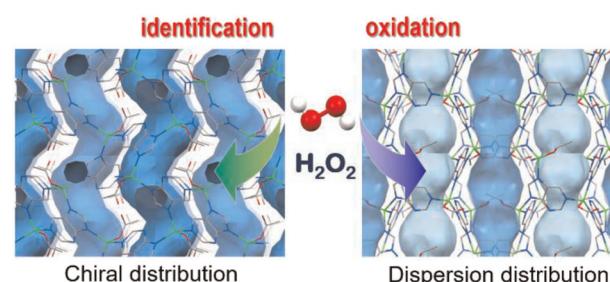
Shuhang Liu, Jun Han, Rongli Cui, Xin Yang, Yunfan Fei, Xingyu Tang, Yida Wang, Yajie Wang, Yongjin Chen, Jiajia Feng, Haiyan Zheng, Kuo Li\* and Xiaoyang Liu\*



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**Recognition, detection and host–guest chemistry of hydrogen peroxide in a fluorescent metal–organic framework with chiral helical channels**

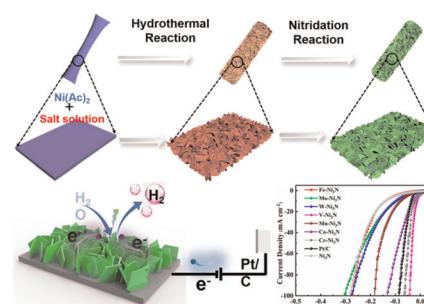
Hong Cai,\* Jie-Wen Wu, Xiao-Jun Cai, Zhou Lu, Ya-Liang Lai, Jing-Xuan Sun, Zhuo-Li Yuan, Yang-Ying Huang, Jing-Wen Cai, Wen Lu, Yi-Hong Lu, Hui-Ying Zhang and Dan Li\*



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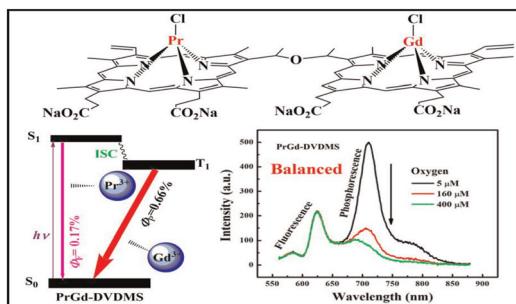
**Formulating a heterolytic cleavage process of water on  $\text{Ni}_3\text{N}$  nanosheets through single transition metal doping for ultra-efficient alkaline hydrogen evolution**

Wansen Ma, Meng Wang, Chaowen Tan, Jiancheng Wang, Yanan Dai, Liwen Hu, Xuewei Lv, Qian Li and Jie Dang\*



## RESEARCH ARTICLES

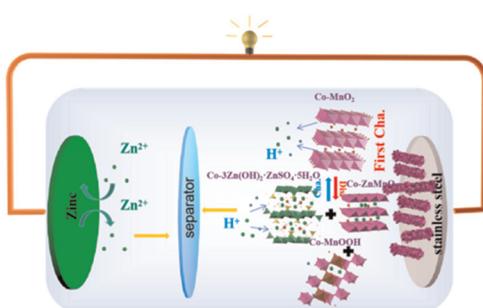
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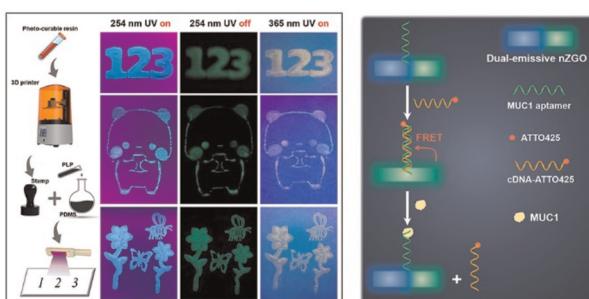
Huimin Zhao,\* Qingqing Wang, Shumin Wang, Junyue Yin, Huibin Wang, Wenhao Shao, Zixin Yao, Jianting Yao and Lixin Zang\*

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Cobalt-doped  $\delta$ -MnO<sub>2</sub>/CNT composites as cathode material for aqueous zinc-ion batteries

ShuLing Liu,\* Jie Wang, ZiXiang Zhou, Ying Li, Wei Zhang and Chao Wang

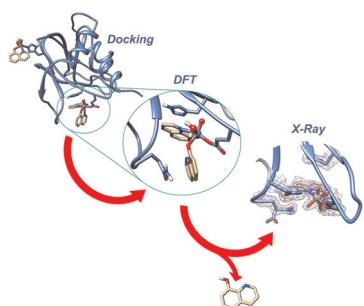
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## Dual-emissive persistent luminescent phosphors for multi-mode anti-counterfeiting and ratiometric luminescent aptasensors

Peng Lin, Junpeng Shi,\* Lin Liu, Yile Kang, Liang Song, Maochun Hong\* and Yun Zhang\*

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Interaction of V<sup>IV</sup>O-8-hydroxyquinoline species with RNase A: the effect of metal ligands in the protein adduct stabilization

Giarita Ferraro, Luigi Vitale, Giuseppe Sciortino, Federico Pisanu, Eugenio Garribba\* and Antonello Merlino\*

