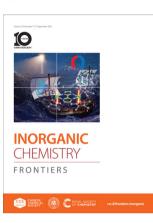
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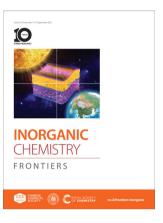
ISSN 2052-1553 CODEN ICFNAW 10(17) 4891-5200 (2023)



#### Cover

See Florian Benner and Selvan Demir. pp. 4981-4992.

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#### Inside cover

See Lianfeng Duan, Fushen Lu et al., pp. 4993-5003.

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

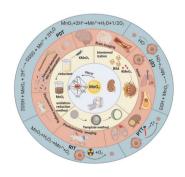
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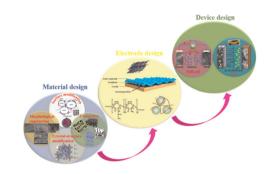


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Huanhuan Liu, Xue Zhang, Haoran Xu, Wenzhao Ma, Lijuan Wang,\* Zhaohui Meng\* and Fei Wang\*

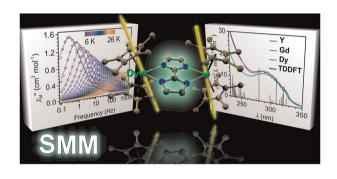


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From unprecedented 2,2'-bisimidazole-bridged rare earth organometallics to magnetic hysteresis in the dysprosium congener

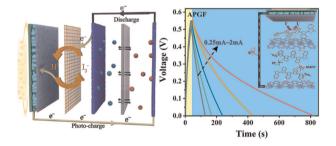
Florian Benner and Selvan Demir\*



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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

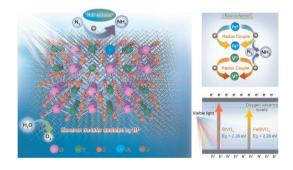
Yuanduo Qu, Sigi Liao, Liangyi Wu, Junkai Wang, Lianfeng Duan,\* Xia He and Fushen Lu\*

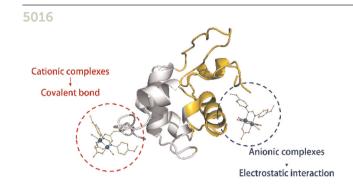


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"FeV-cofactor"-inspired bionic Fe-doped BiVO<sub>4</sub> photocatalyst decorated with few-layer 2D black phosphorus for efficient nitrogen reduction

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

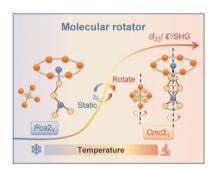




# Charge effect in protein metalation reactions by diruthenium complexes

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

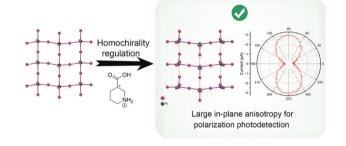
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# Remarkable enhancement of optical and electric properties by temperature-controlled solid-phase molecular motion

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

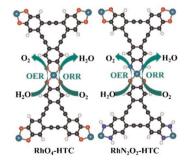
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## Large in-plane anisotropic 2D perovskites toward highly linear polarized light responses

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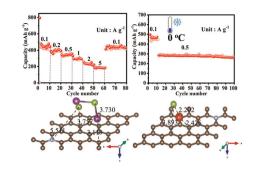
# Two-dimensional conductive metal-organic frameworks as efficient electrocatalysts for oxygen evolution and reduction reactions

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

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Rational construction of VSe2 encapsulated in selenized polyacrylonitrile toward a high-rate capacity and wide temperature tolerance for potassium-ion batteries

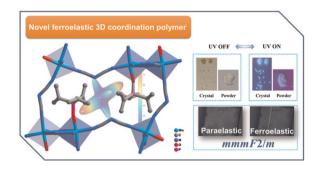
Lihong Xu, Jiefeng Ye, Wenti Guo, Tingjie Chen, Xiaochuan Chen,\* Qingrong Qian, Jianmin Zhang,\* Mingdeng Wei, Xiangfang Peng\* and Lingxing Zeng\*



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A three-dimensional Mn(II) coordination polymer with ferroelasticity obtained by introducing coligands to form novel networks

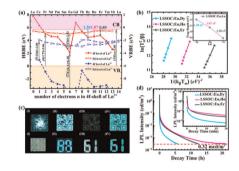
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Co-doped long persistent luminescence materials  $LiSr_3SiO_4Cl_3:Eu^{2+},Ln^{3+}$  (Ln = Dy, Ho, Er): construction and verification of VRBE and HRBE scheme and their multifunctional applications

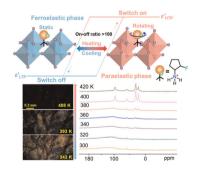
Yuanying Lin, Chengzhuo Ming, Zhenbin Wang, Bin Yu, Yuzhu Yang and Weisheng Liu\*



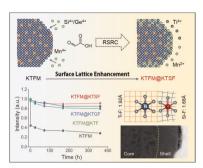
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Fast rotating dipole array inducing large dielectric response in a Ruddlesden-Popper hybrid perovskite ferroelastic

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



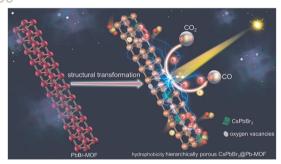
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# Surface lattice enhancement of red-emitting fluorides enabled by embedding small cations

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

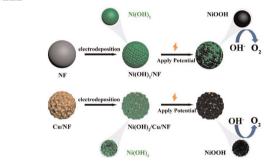
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# Oxygen vacancies confined in hierarchically porous CsPbBr3@Pb-MOF through in situ structural transformation for promoting photocatalytic CO<sub>2</sub> reduction

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

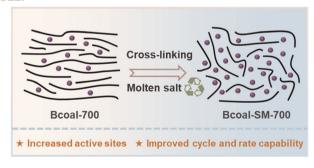
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# A copper interface promotes the transformation of nickel hydroxide into high-valent nickel for an efficient oxygen evolution reaction

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

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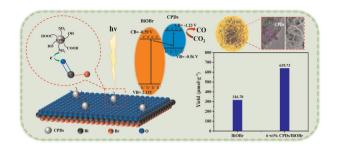
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Wei Zhang, Ning Sun,\* He Chen, Razium Ali Soomro and Bin Xu\*

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Up-conversion effect boosted the photocatalytic CO<sub>2</sub> reduction activity of Z-scheme CPDs/BiOBr heterojunction

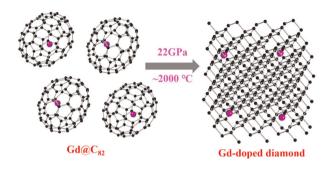
Jing Xie,\* Xiaojing Zhang, Zhenjiang Lu, Jindou Hu, Aize Hao, Yue Feng and Yali Cao\*



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# Gd-doped diamond synthesized using Gd@C82 under high pressure and high temperature

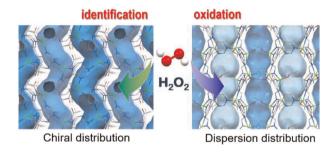
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Recognition, detection and host-guest chemistry of hydrogen peroxide in a fluorescent metal-organic framework with chiral helical channels

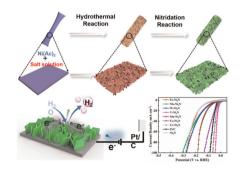
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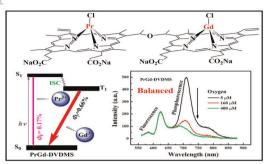
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Formulating a heterolytic cleavage process of water on Ni<sub>3</sub>N nanosheets through single transition metal doping for ultra-efficient alkaline hydrogen evolution

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



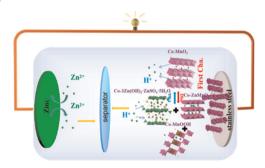
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# Balancing the phosphorescence and fluorescence of a double-ring porphyrin using different lanthanides for ratiometric oxygen sensing

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

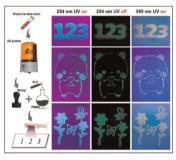
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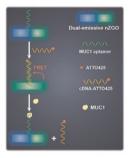


# Cobalt-doped δ-MnO<sub>2</sub>/CNT composites as cathode material for aqueous zinc-ion batteries

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

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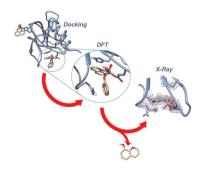




# Dual-emissive persistent luminescent phosphors for multi-mode anti-counterfeiting and ratiometric luminescent aptasensors

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

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