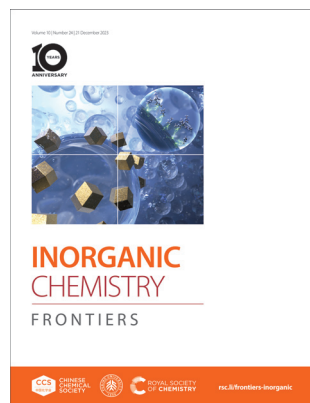


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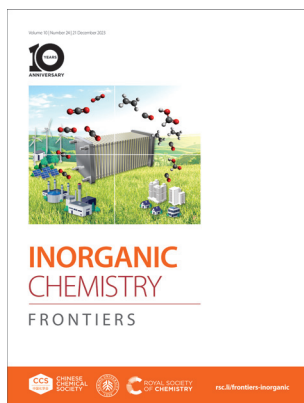
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Cover

See Juyeong Kim *et al.*, pp. 7146–7154.

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Inside cover

See Naohiro Fujinuma and Samuel E. Lofland, pp. 7095–7108.

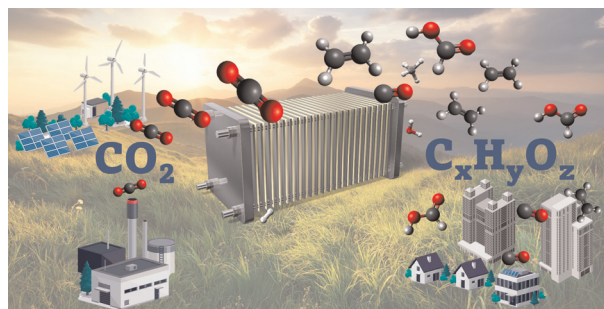
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REVIEWS

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Recent advances in electrocatalytic reduction of ambient CO₂ toward high-value feedstock

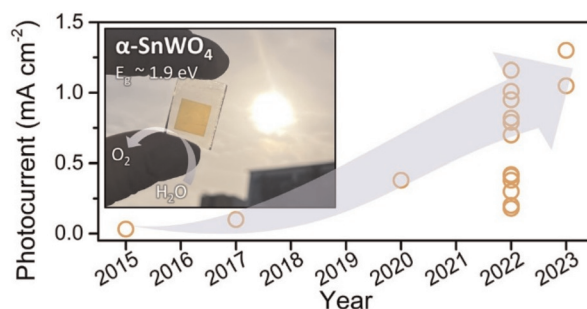
Naohiro Fujinuma* and Samuel E. Lofland*



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Recent progress in the development of tin tungstate (α -SnWO₄) photoanodes for solar water oxidation

Heejung Kong and Fatwa F. Abdi*



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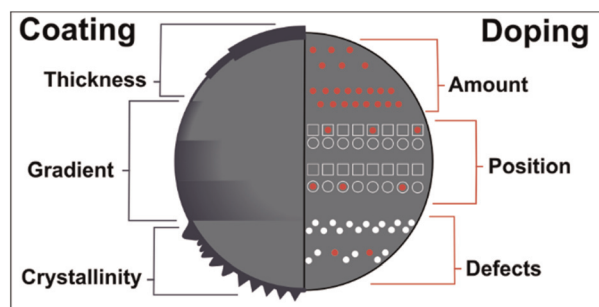


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The role of niobium in layered oxide cathodes for conventional lithium-ion and solid-state batteries

Barbara Nascimento Nunes,* Wessel van den Bergh,* Florian Strauss, Aleksandr Kondrakov, Jürgen Janek and Torsten Brezesinski*

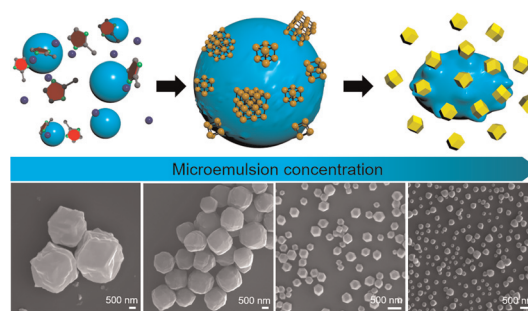


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Soft seed-mediated dimensional control of metal–organic framework nanocrystals through oil-in-water microemulsions

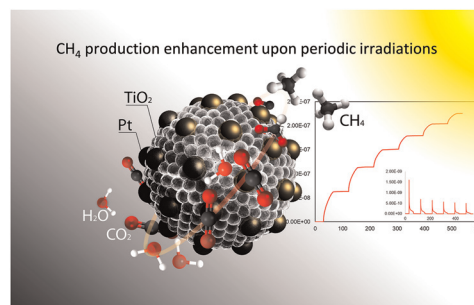
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Exploring the effect of the reaction conditions on the mechanism of the photocatalytic reduction of CO₂ in the vapor phase over Pt/TiO₂: an *operando* FTIR study

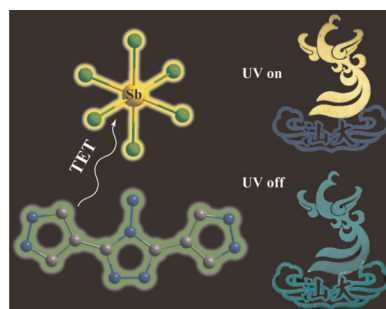
Joudy Dankar,* Virgile Rouchon, Céline Pagis, Mickael Rivallan and Mohamad El-Roz*



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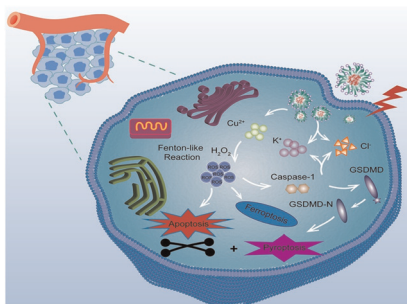
Efficient triplet energy transfer in a 0D metal halide hybrid with long persistence room temperature phosphorescence for time-resolved anti-counterfeiting

Jie Li, Jingjie Wu, Yonghong Xiao, Longshi Rao, Ruosheng Zeng,* Ke Xu, Xiao-Chun Huang, Jin Z. Zhang and Binbin Luo*



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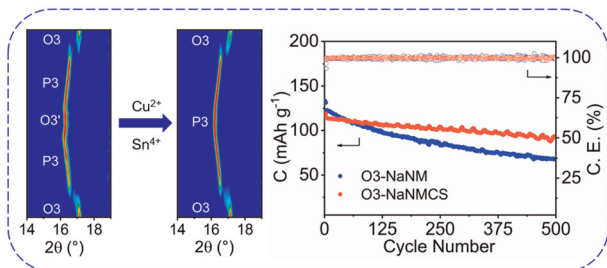
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Copper-based inorganic nanozymes enhance the electrical conductivity of tumors to synergistically induce the pyroptosis, ferroptosis, and apoptosis of tumors

Xia Qin, Jianmin Xiao, Huimin Li, Hai Huang, Hongyuan Jin, Yu Zhang, Geng Tian, Gang Wang* and Guilong Zhang*

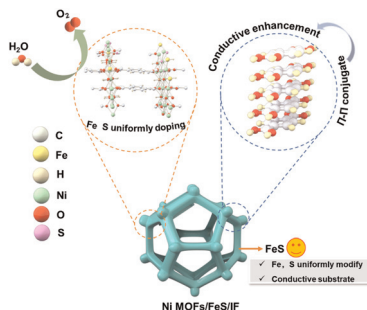
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Depressed P3–O3' phase transition in an O3-type layered cathode for advanced sodium-ion batteries

Zhaohui Liang, Meng Ren, Yihe Guo, Tong Zhang, Xiuling Gao, Hua Ma and Fujun Li*

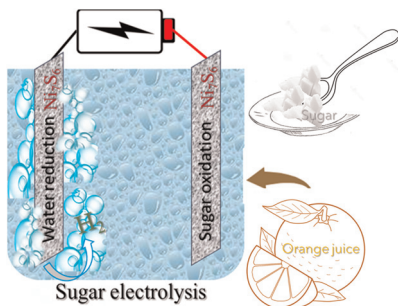
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Fe, S-uniformly dispersed Ni MOFs based on FeS substrate precipitation-dissolution equilibrium for water and seawater oxidation

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Unlocking the catalytic potential of nickel sulfide for sugar electrolysis: green hydrogen generation from kitchen feedstock

Supriya A. Patil, Atul C. Khot, Kalyani D. Kadam, Hoa Thi Bui, Hyunsik Im and Nabeen K. Shrestha*

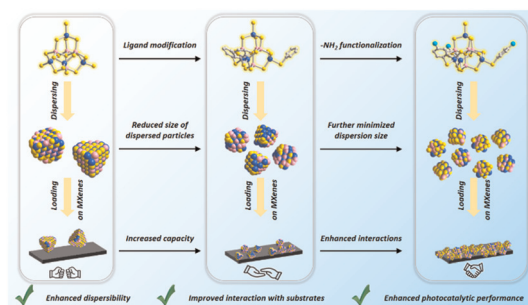


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Surface functionalization of discrete metal-chalcogenide supertetrahedral clusters and the photocatalytic application

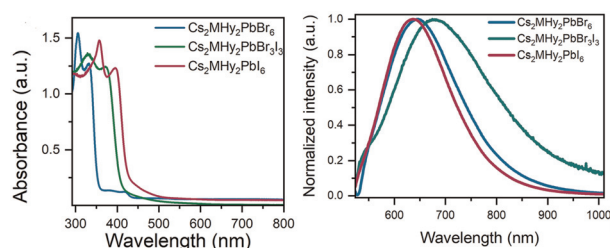
Jin Wu, Qiang Fu, Zixin Wu, Peipei Sun, Xing Zhu, Ying Wang, Ning Chen, Dong-Sheng Li and Tao Wu*



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Zero-dimensional mixed-cation hybrid lead halides with broadband emissions

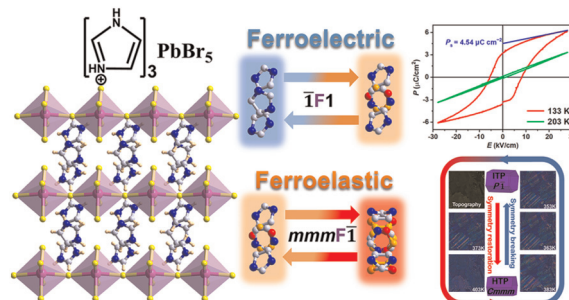
Mirośław Mączka,* Dawid Drozdowski, Dagmara Stefańska and Anna Gągor



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Molecular orientation dynamics triggers ferroelectricity and ferroelasticity in an organic–inorganic halide material

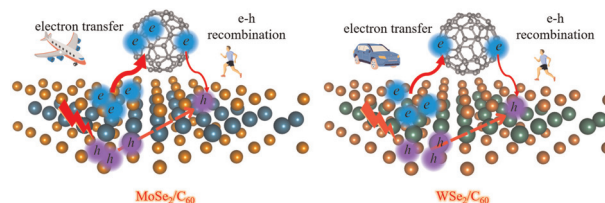
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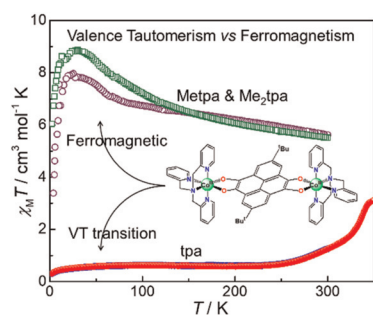
MoSe₂/C₆₀ heterojunction may be efficient for photovoltaic applications: time-domain *ab initio* analysis of interfacial charge separation and recombination dynamics

Pingzhi Zhang, Ting Xue, Zhiguo Wang, Wei Wei, Xiaoyin Xie,* Ran Jia* and Wei Li*



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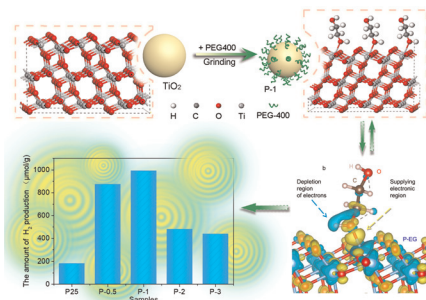
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Tuning the magnetic properties of dinuclear cobalt–tetraoxolene compounds: from valence tautomerism to ferromagnetic coupling

Yu-Meng Zhao, Jia-Ping Wang, Xiang-Yi Chen, Meng Yu,* Alyona A. Starikova* and Jun Tao*

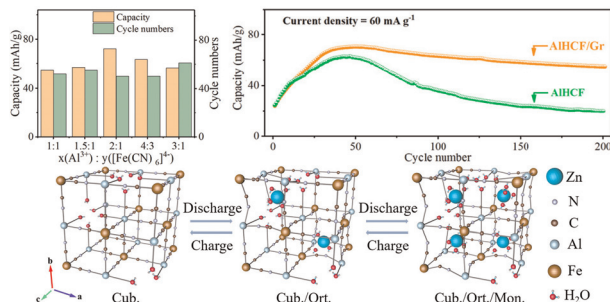
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Construction of surface electron island by a simple organic molecule adsorption strategy: tuning the energy band structure and boosting the photocatalytic performance

Jindou Hu, Xiaoyan Lu, Dilireba Turgan, Anjie Liu, Zhenjiang Lu, Jing Xie and Yali Cao*

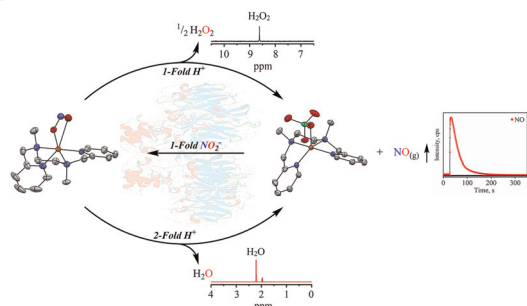
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Open-framework aluminum hexacyanoferrate as a cathode material for high voltage aqueous zinc-ion batteries: effect of Al³⁺ cations on three-phase transition of AlFe(CN)₆

Yulin Kong, Yawei Xiao, Shutao Zhang, Liang Chen, Zhaoping Liu* and Yude Wang*

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Acid-induced conversion of nitrite to nitric oxide at the copper(II) center: a new catalytic pathway

Prabhakar Bhardwaj, Kulbir, Tarali Devi* and Pankaj Kumar*

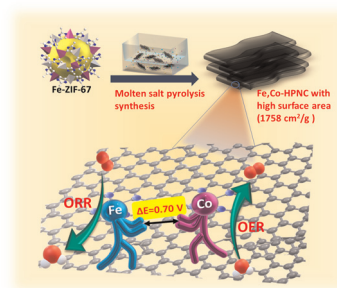


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Rational design of ZIF-derived nanocarbon with dual metal active sites *via* molten salt strategy for advancing oxygen electrocatalysis

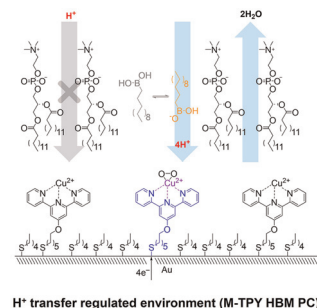
Sakshi Bhardwaj, Tribani Boruah and Ramendra Sundar Dey*



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Protonic nanoenvironment engineering for tuning the electrocatalytic efficiency and product selectivity of O₂ reduction

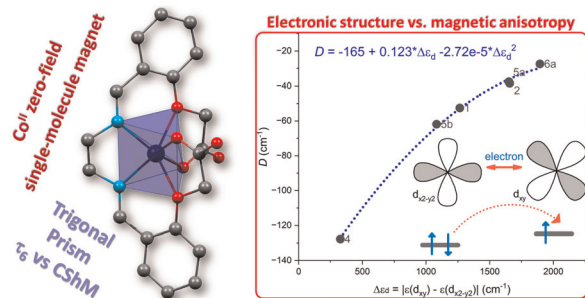
Hei Tung Yau, Zuo Hang Yu and Edmund C. M. Tse*



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2-Formylphenoxyacetic acid Schiff bases: a promising ligand scaffold for readily available trigonal prismatic Co(II) single-ion magnets

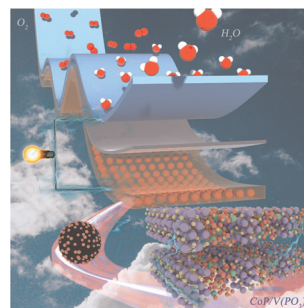
Kamil Kotrlé, Ivan Nemec, Peter Antal, Kamila Petrželová, Erik Čížmár and Radovan Herchel*



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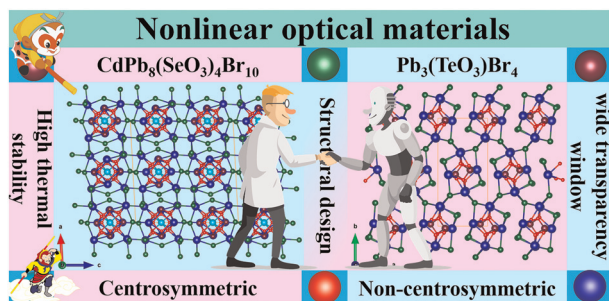
Boosting oxygen reduction of well-dispersed CoP/V(PO₃)₃ sites *via* geometric and electronic engineering for flexible Zn–air batteries

Zuyang Luo, Fengli Wei, Junlin Gong, Lixia Wang, Zhiyang Huang, Tayirjan Taylor Isimjan* and Xiulin Yang*



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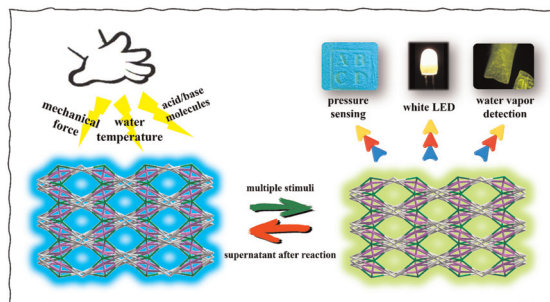
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From $\text{CdPb}_8(\text{SeO}_3)_4\text{Br}_{10}$ to $\text{Pb}_3(\text{TeO}_3)\text{Br}_4$: the first tellurite bromide exhibiting an SHG response and mid-IR transparency

Peng-Fei Li, Chun-Li Hu, Bing-Xuan Li, Jiang-Gao Mao and Fang Kong*

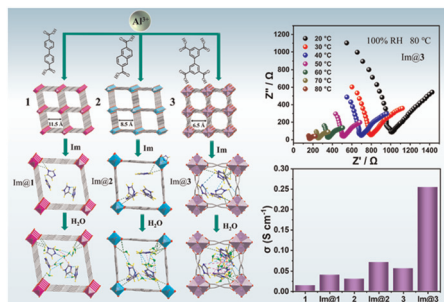
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Multi-stimulus responsive properties of a Cd-MOF based on tetraphenylethylene

Chen Wang, Ting Zhang, Li-Xian Sun, Yong-Heng Xing* and Feng-Ying Bai*

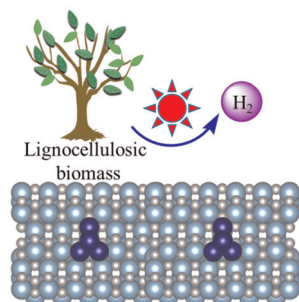
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Pore size effects on high-efficiency proton conduction in three stable 3D Al-based MOFs modified with imidazole

Lu Zhang, Xiaoxue Ma, Xin Li, Ronghua Liu, Xin Zhao, Hongguo Hao,* Hui Yan,* Hongjie Zhu, Huawei Zhou and Dichang Zhong

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Boosted charge transfer in Pt cluster anchored TiO_2 microspheres with rich oxygen vacancies for solar driven H_2 production from lignocellulosic biomass

Fu-Guang Zhang, Miao Cheng, Yong-Jun Yuan,* Qing-Yu Liu, Quan Cheng and Jie Guan*

