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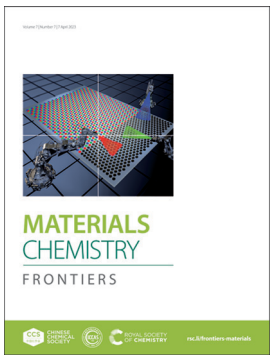
ISSN 2052–1537 CODEN MCFAC5 7(7) 1157–1454 (2023)



Cover
See Jian-Xin Tang, Yan-Qing Li *et al.*, pp. 1166–1196. Image reproduced by permission of Jian-Xin Tang from *Mater. Chem. Front.*, 2023, **7**, 1166.

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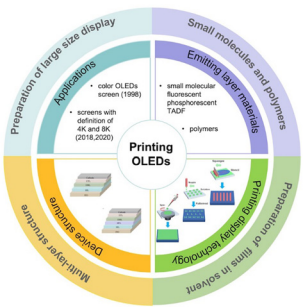
Solution-processed OLEDs for printing displays

Xin-Yi Zeng, Yan-Qing Tang, Xiao-Yi Cai, Jian-Xin Tang* and Yan-Qing Li*



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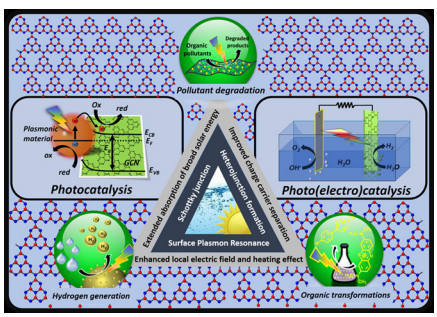
Frontier nanoarchitectonics of graphitic carbon nitride based plasmonic photocatalysts and photoelectrocatalysts for energy, environment and organic reactions

Ajay Kumar, Priyanka Choudhary, Tripti Chhabra, Harpreet Kaur, Ashish Kumar, Mohammad Qamar and Venkata Krishnan*



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REVIEWS

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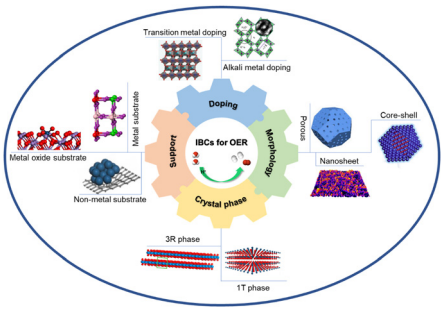
Iridium-based electrocatalysts for the acidic oxygen evolution reaction: engineering strategies to enhance the activity and stability

Hongzhe Xu, Yun Han, Qilong Wu, Yi Jia, Qin Li,* Xuecheng Yan* and Xiangdong Yao



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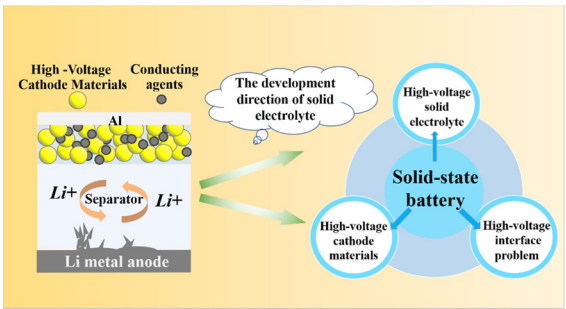
A review of all-solid-state electrolytes for lithium batteries: high-voltage cathode materials, solid-state electrolytes and electrode–electrolyte interfaces

Mingming Ma, Menghui Zhang, Bitao Jiang, Yang Du, Bingcheng Hu* and Chengguo Sun*



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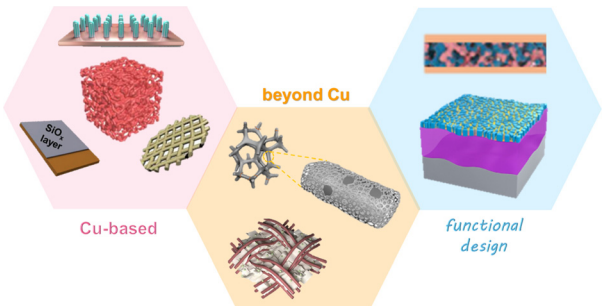
Recent developments in current collectors for lithium metal anodes

Qitao Shi, Chen Lu, Yutong Cao, Yufeng Hao, Alicja Bachmatiuk and Mark H. Rümmeli*



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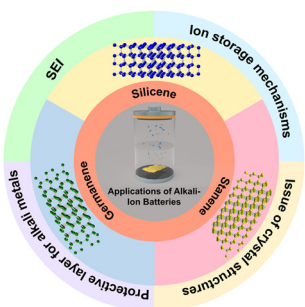
Group IV elemental 2D materials beyond graphene used as electrodes for alkali-ion batteries

Hsu-Sheng Tsai, Jing Li, Zhengguang Shi, Mingxue Huo* and Shih-Hsin Ho*



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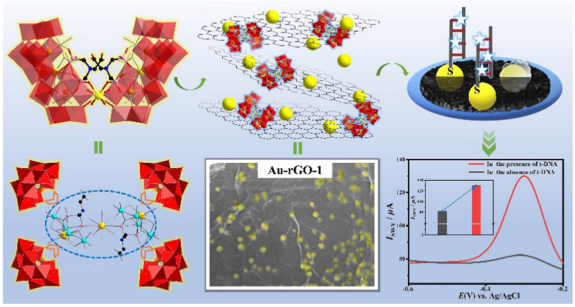

Organophosphonic acid and cerium functionalized antimonotungstate with electrochemical promise in biosensing bacterial dissimilatory sulfite reductase gene sequence

Zhigang Tang, Wenshu Zhang, Yalun Hu, Xiaodan Jia, Lina Meng, Dan Wang,* Lijuan Chen* and Junwei Zhao*

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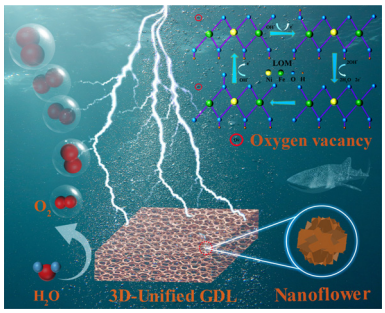

Construction of a NiFe-LDH catalyst with a three-dimensional unified gas diffusion layer structure *via* a facile acid etching route for the oxygen evolution reaction

Dong Shi, Yajun Ji,* Faxue Lu, Junnan Yao and Lijun Pei

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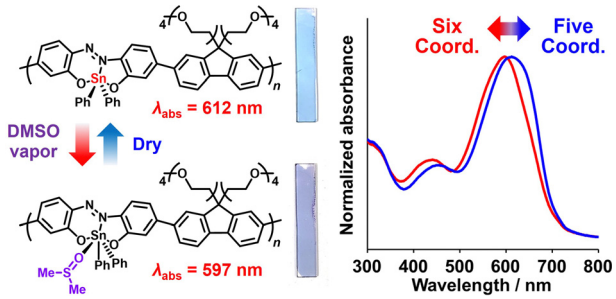

Vapochromic films of π-conjugated polymers based on coordination and desorption at hypervalent tin(IV)-fused azobenzene compounds

Masayuki Gon, Yusuke Morisaki, Kazuya Tanimura, Kazuo Tanaka* and Yoshiki Chujo

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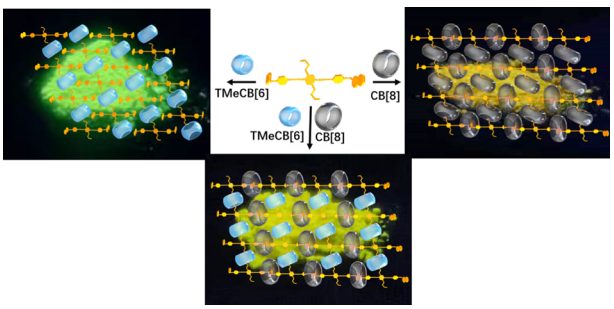

2D supramolecular organic framework with tunable luminescence *via* cucurbit[*n*]uril-based hydrogen bonds, outer-surface interactions and host–guest interactions

Shuai-Peng Jin, Huai-Li Wu, Le-Ping Zhang, Guan-Yu Yang and Bo Yang*

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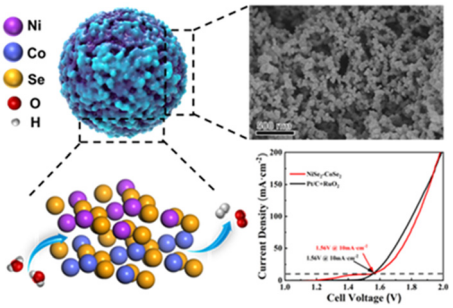
Bimetallic Ni–Co selenide heterostructure aerogel for highly efficient overall water splitting

Hongchen Liu, Fan Yang,* Fengjiang Chen, Sai Che, Neng Chen, Chong Xu, Ni Wu, Wenkai Wei and Yongfeng Li*



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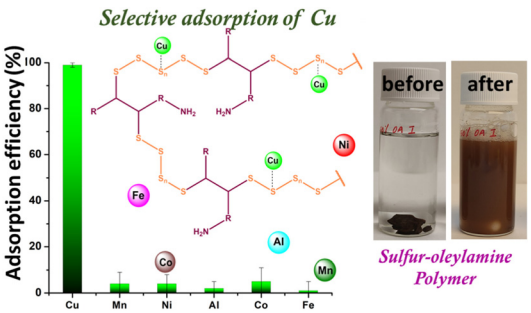
Sulfur–oleylamine copolymer synthesized *via* inverse vulcanization for the selective recovery of copper from lithium-ion battery E-waste

Suchithra Ashoka Sahadevan, Xiong Xiao, Yiqian Ma, Kerstin Forsberg, Richard T. Olsson and James M. Gardner*



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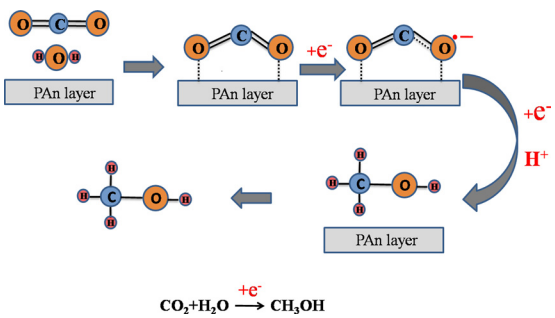
Nano-polyaniline enables highly efficient electrocatalytic reduction of CO_2 to methanol in supporting electrolyte-free media and the detection of free-radical signals

Shaolin Mu,* Qiaofang Shi, Chong Chen, Xiangxiang Gong and Huaiguo Xue



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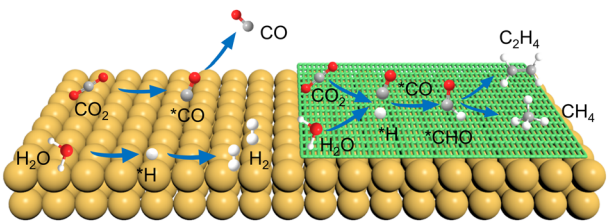
Steering CO_2 electroreduction selectivity towards CH_4 and C_2H_4 on a tannic acid-modified Cu electrode

Keqiang Xu, Jinhan Li, Fangming Liu, Wence Xu, Tete Zhao and Fangyi Cheng*



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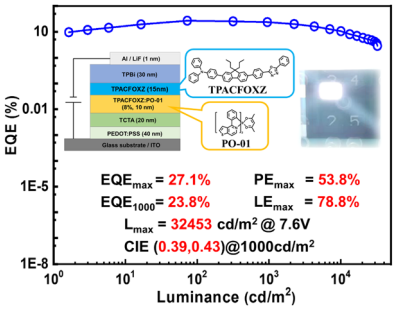

Highly efficient white organic light-emitting diodes based on balanced bipolar-transporting blue hybridized local charge transfer fluorophores

Tengyue Li, Shian Ying, Huayi Zhou, Runze Wang, Chenglin Ma, Mizhen Sun, Mingliang Xie, Qikun Sun, Wenjun Yang and Shanfeng Xue*

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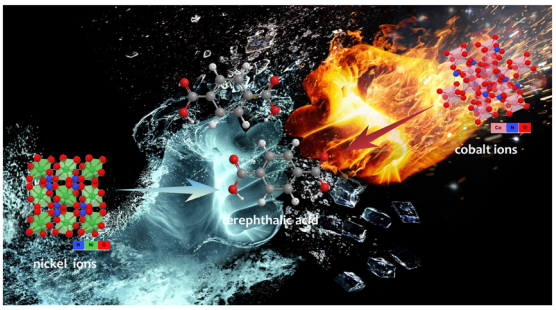

Morphology-controllable bimetallic MOFs/textile composite electrodes with high areal capacitance for flexible electronic devices

Shixiong Zhai, Zhendong Jin, Chengcheng Li, JiaFeng Sun, Hong Zhao, Zhehai Jin, Zaisheng Cai and Yaping Zhao*

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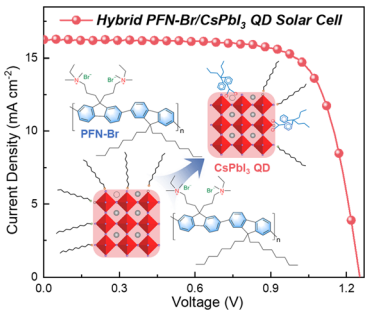

Efficient and stable hybrid conjugated polymer/perovskite quantum dot solar cells

Hehe Huang, Xuliang Zhang, Chenyu Zhao and Jianyu Yuan*

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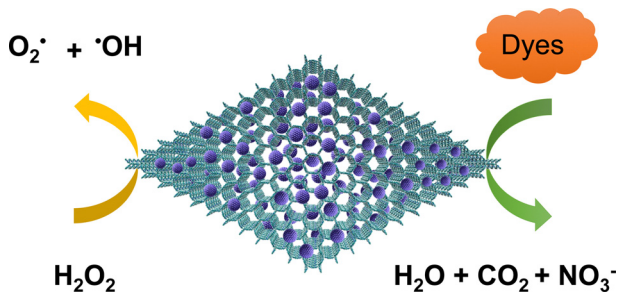

An FeS_x doped three-dimensional covalent organic framework for degradation of dyes

Jialong Song, Chengyang Yu, Yaozu Liu, Junxia Ren, Jianchuan Liu, Zitao Wang, Liangkui Zhu, Jing Fu, Bin Tang, Shilun Qiu, Yujie Wang* and Qianrong Fang*

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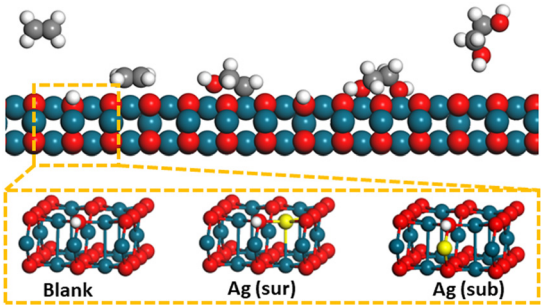
Ag-doped Pd nano-dendritic for promoting the electrocatalytic oxidation of ethylene to ethylene glycol

Xinwei Li, Xiaoyu You, Zhuang Yan, Caoyu Yang, Lulu Zuo, Xuewei Huang, Lin Chang, Siyu Lu and Zhiyong Tang*



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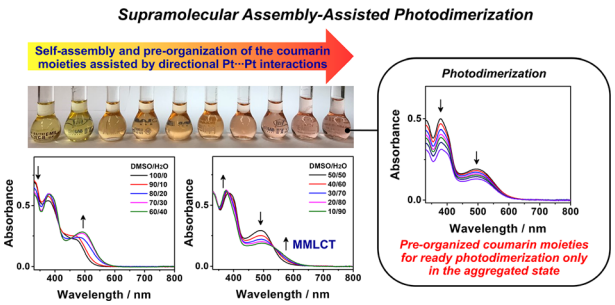
Dinuclear coumarin-containing alkynylplatinum(II) terpyridine complexes with supramolecular assembly-assisted photodimerization

Shishi Fang, Michael Ho-Yeung Chan and Vivian Wing-Wah Yam*