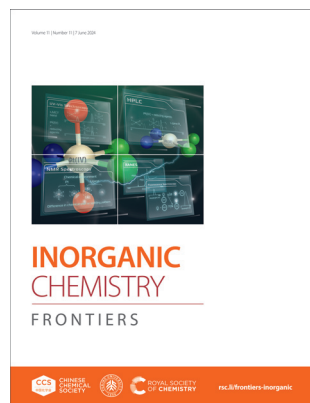


IN THIS ISSUE

ISSN 2052-1553 CODEN ICFNAW 11(11) 3075–3388 (2024)



Cover

See Guangyu Zhu *et al.*, pp. 3085–3118.

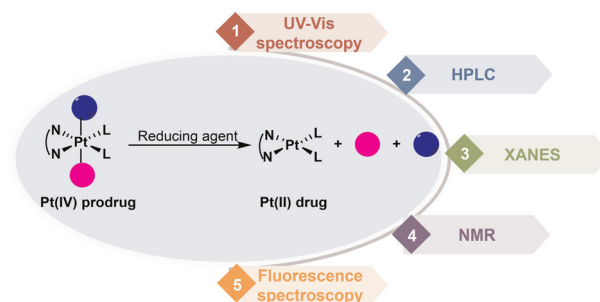
Image reproduced by permission of Guangyu Zhu from *Inorg. Chem. Front.*, 2024, **11**, 3085.

REVIEWS

3085

Advances in technical strategies for monitoring the reduction of platinum(IV) complexes

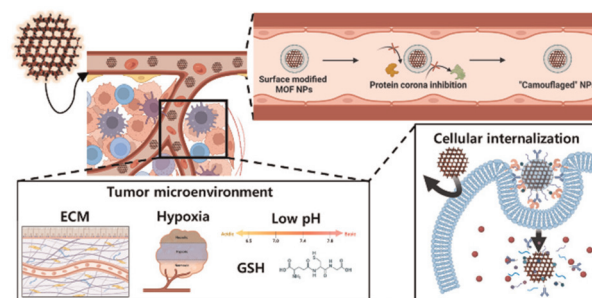
Shu Chen, Qiyuan Zhou, Ka-Yan Ng, Zoufeng Xu, Weikang Xu and Guangyu Zhu*



3119

Surface functionalization of metal–organic framework nanoparticle for overcoming biological barrier in cancer therapy

Jun Yong Oh, Youjung Sim, Gyeongseok Yang, Myoung-Hwan Park,* Kibeom Kim* and Ja-Hyoung Ryu*



Advance your career in science

with professional recognition that showcases
your **experience, expertise and dedication**

Stand out from the crowd

Prove your commitment
to attaining excellence in
your field

Gain the recognition you deserve

Achieve a professional
qualification that inspires
confidence and trust

Unlock your career potential

Apply for our professional
registers (RSci, RSciTech)
or chartered status
(CChem, CSci, CEnv)

Apply now

rsc.li/professional-development

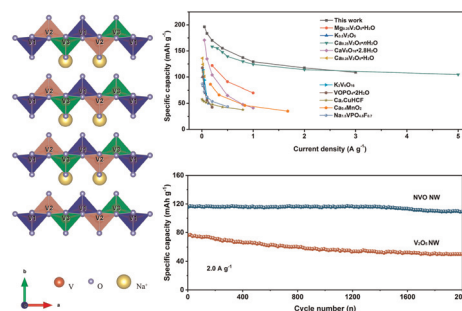


RESEARCH ARTICLES

3136

Sodium ion pre-intercalation regulates the electron density and structural stability of vanadium oxide nanowires for Ca-ion batteries

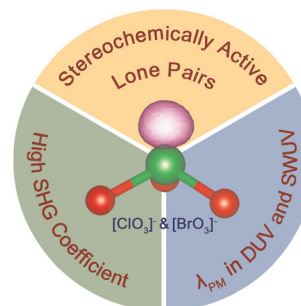
Huajie Feng, Yize Wang, Wenda Qiu,* Zixi Liu, Yaping Tao and Xihong Lu



3150

Discovery of excellent ultraviolet nonlinear optical materials in chlorates and bromates with highly stereochemically active lone pairs

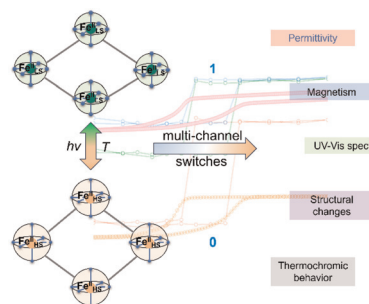
Chun-Li Hu, Qian-Qian Chen, Fang Kong and Jiang-Gao Mao*



3159

Hysteretic magnetism–dielectricity switching in 2D Hofmann type spin-crossover compounds

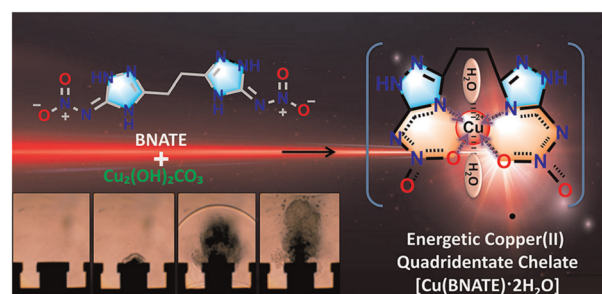
Nian-Tao Yao, Meng-Jia Shang, Han-Han Lu, Qiang Liu, Wen Wen, Shi-Hui Zhang, Liang Zhao, Hiroki Oshio, Yin-Shan Meng* and Tao Liu*



3168

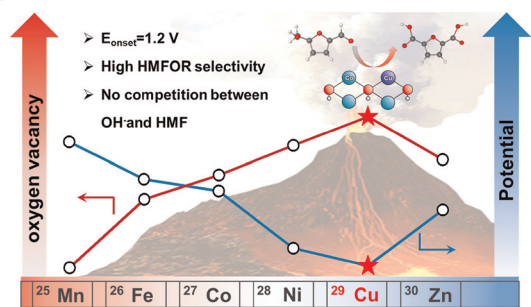
Energetic copper(II) quadridentate chelate: a novel green laser-sensitive primary explosive

Qi Zhang,* Ruibing Lv, Ying Wang, Zhenghang Luo, Pengyang Pan, Tingwei Wang and Quancheng Liu*



RESEARCH ARTICLES

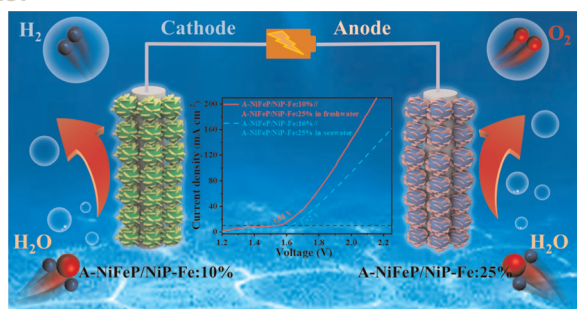
3178



Large enhancement of electrochemical biomass oxidation by optimizing the competitive adsorption of HMF and OH^- on doped CoO_x

Tianqi Nie, Guihao Liu, Ziheng Song, Tianyang Shen, Xiaoliang Sun, Tianrui Yu, Sha Bai, Lirong Zheng and Yu-Fei Song*

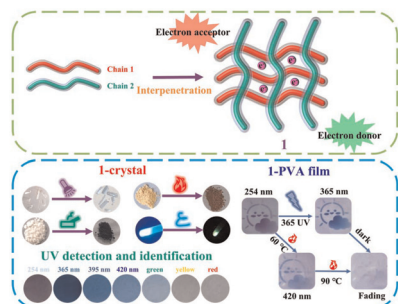
3187



Adjustable composition of self-supported amorphous Ni-Fe-P nanosheet decorated NiP microspheres for efficient and stable overall alkaline freshwater/seawater splitting

Shi-Yu Lu,* Ling Wang, Chunjie Wu, Jun Zhang, Wenzhao Dou, Tingting Hu, Rong Wang, Yin Liu, Qian Yang and Meng Jin*

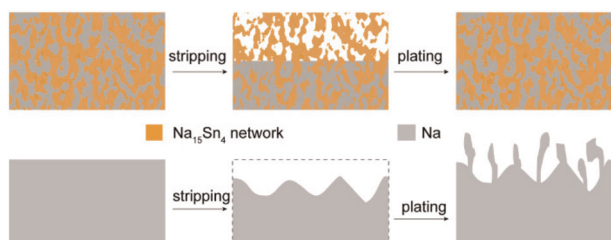
3200



Incorporation of a one-dimensional electron-rich chain in viologen-based coordination polymers for super photochromic properties and improved optical applications in polyvinyl alcohol film

Yong-Sheng Shi, Tong Xiao, Dong-Dong Yang and Xiang-Jun Zheng*

3211



In situ formed self-embedded ion/electron conductive skeletons enabling highly stable sodium metal anodes

Fang-Yu Tao, Dan Xie,* Dan-Hong Wang, Wan-Yue Diao, Chang Liu, Xing-Long Wu, Wen-Liang Li* and Jing-Ping Zhang*

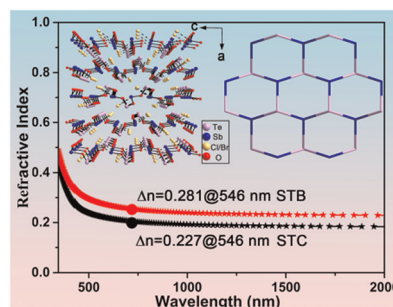


RESEARCH ARTICLES

3221

Designing excellent UV birefringent materials through the synergistic interaction of two highly distorted functional groups

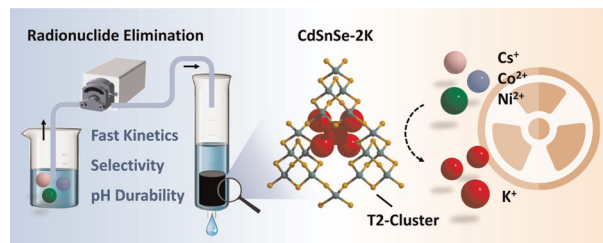
Xiaoyan Zhou, Xiang Mao, Pu Zhang, Xuehua Dong,*
Ling Huang, Liling Cao, Daojiang Gao and
Guohong Zou*



3229

Tailoring supertetrahedral cadmium/tin selenide clusters into a robust framework for efficient elimination of Cs⁺, Co²⁺, and Ni²⁺ ions

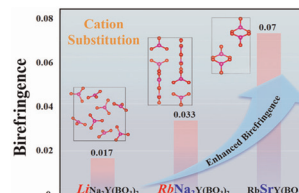
Kai-Yao Wang,* Meng-Yu Li, Lin Cheng, Xin Hao and
Cheng Wang



3245

New ultraviolet transparent rare-earth borates with enhanced birefringence induced by cation chemical substitution

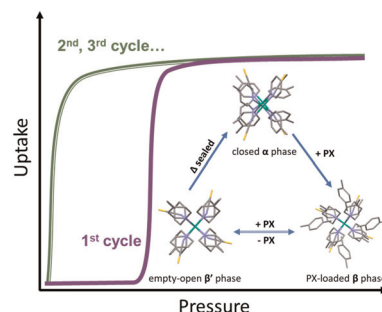
Guanglian Sun, Xiaofang Qi,* Hongping Wu,*
Zhanggui Hu, Jiyang Wang and Yicheng Wu



3254

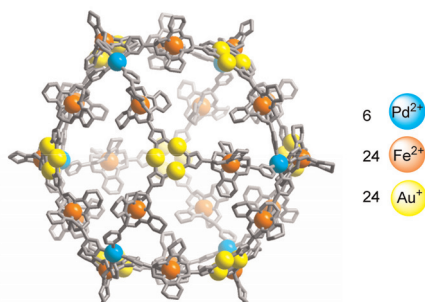
Phase switching and shape-memory effect in a molecular material: revisiting the Werner complex [Ni(4-MePy)₄(NCS)₂]

Shi-Qiang Wang,* Shaza Darwish, Catiúcia
R. M. O. Matos, Zicong Marvin Wong,
Anjaiah Nalaparaju, Yifei Luo, Jun Zhu, Xiaofei Zhang,
Zhengtao Xu* and Michael J. Zaworotko*



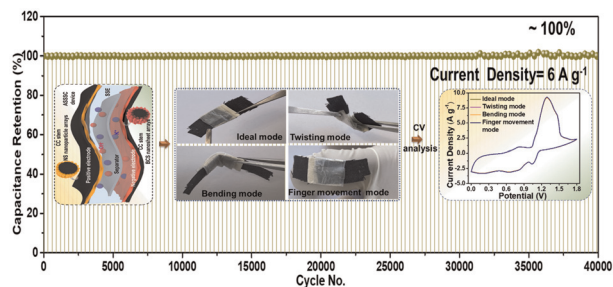
RESEARCH ARTICLES

3263

Stepwise synthesis of heterotrimetallic Fe^{II}/Pd^{II}/Au^I coordination cages

Noga Eren, Farzaneh Fadaei-Tirani and Kay Severin*

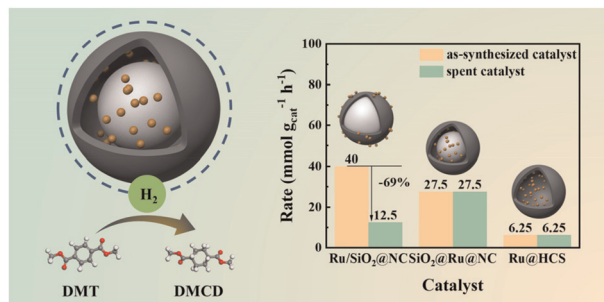
3270



Electrochemically triggered rational design of bismuth copper sulfide for wearable all-sulfide semi-solid-state supercapacitor with a wide operational potential window (1.8 V) and ultra-long life

Edugulla Girija Shankar, Bhimanaboina Ramulu, Manchi Nagaraju and Jae Su Yu*

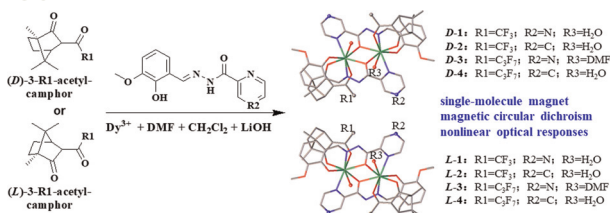
3285



Yolk-shell type carbon-silica nanoarchitecture with dispersed and stabilized Ru nanoparticles for enhanced hydrogenation of aromatic compounds

Lu Yan, Yue Shen, Zidan Zou, Xiao Zhang,* Zhixin Yu, Guozhong Wang and Chun Chen*

3296

Homochiral Dy₂ single-molecule magnets with strong magneto-optical Faraday effects and strong third-harmonic generation

Cai-Ming Liu,* Rong Sun, Xiang Hao, Xi-Li Li and Bing-Wu Wang*

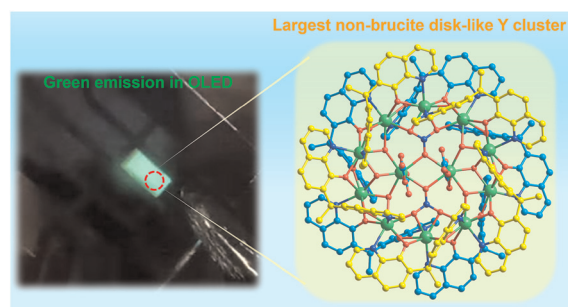


RESEARCH ARTICLES

3309

An unprecedented $\{Y_2CY_{10}\}$ type disk-like Y_{12} nanocluster featuring electroluminescence property in OLED device

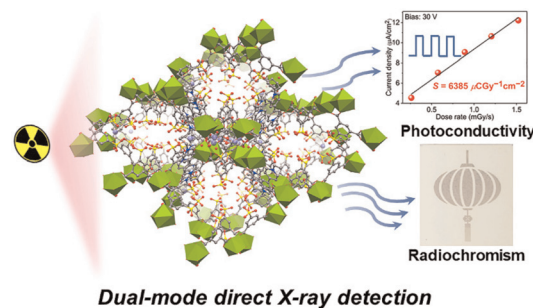
Lin-Ping Shi, Wen-Liang Li, Pu-Yue Wang, Xiao-Ming Wu,* Zhao-Quan Yao,* Jiong-Peng Zhao* and Fu-Chen Liu*



3316

Radiochromic semiconductive MOFs with high sensitivity and fast photochromic responses for dual-mode X-ray direct detection

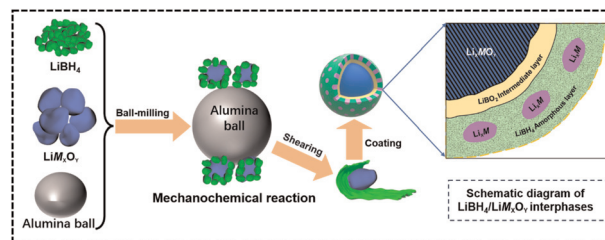
Xu-Ying Yu, Jia-Rong Mi, Qiu-Pei Qin, Xin-Ping Fang, Yong-Fang Han, Li-Zhen Cai, Ming-Sheng Wang* and Guo-Cong Guo*



3323

In situ interfacial reactions in hydride–oxide composite electrolytes for stable all-solid-state Li–metal batteries

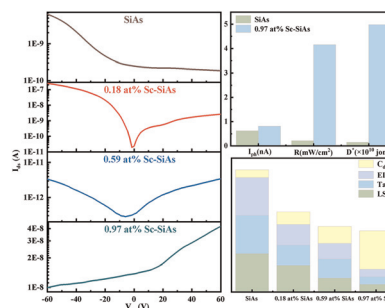
Shunqin Zeng, Meinan Zhao, Chen Xie, Jianhui Li, Xiaoli Ding,* Liqing He, Yongtao Li,* Qingan Zhang and Hai-Wen Li*



3334

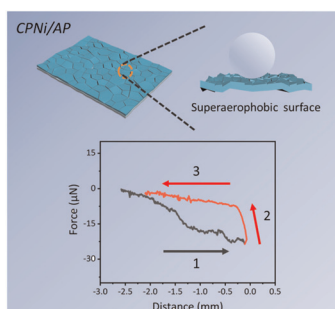
The effect of Sc doping on the electrocatalytic and optoelectronic properties of 2D SiAs single crystals

Tong Yu, Qiubo Chen, Hailong Qiu,* Hongjun Liu, Zhanggui Hu and Yicheng Wu



RESEARCH ARTICLES

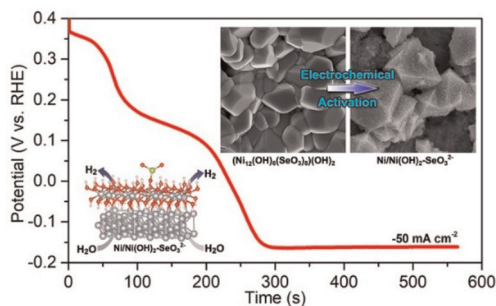
3348



An electrodeposited superaerophobic nickel catalyst on pencil-drawn paper: a novel approach for highly efficient and stable hydrogen evolution

Qian Sun, Xiaoyu Hao, Tianyi Zhang, Zelin Ma, Kui Hu, Ming Yang,* Xiaolei Huang* and Xuqin Liu*

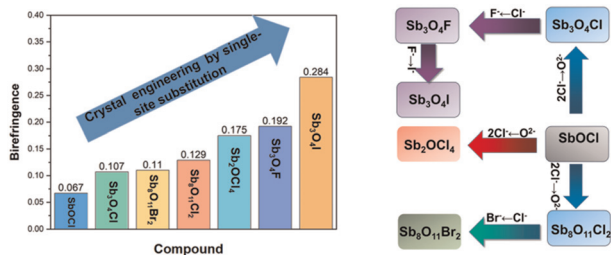
3357



Unveiling the surface hydroxylation and selenite modification of *in situ* generated nickel for promoting the hydrogen evolution reaction

Kailu Guo,* Jinzhi Jia, Huijiao Wang and Cailing Xu*

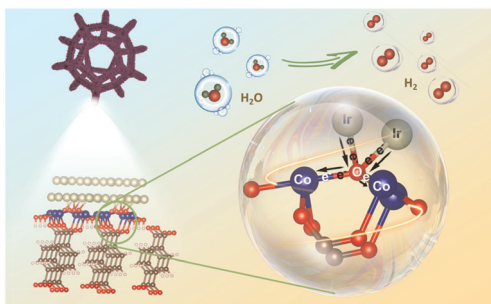
3367



Exploration of antimony(III) oxyhalides via single-site substitution in quest of large birefringence

Chenhui Hu, Dongdong Chu, Xueling Hou, Feng Zhang* and Jian Han*

3377



Electronic modulation by interfacial bridging between Ir nanoparticle and metal–organic framework to enhance hydrogen evolution

Kaipeng Cheng, Yinghuan Xu, Shengmeng Zhang, Heng Zhang,* Yingying Xue, Xiahui Huang, Jianbo Zhao, Pengcheng Zhang, Shuang Ma* and Zhiqiang Hou*

