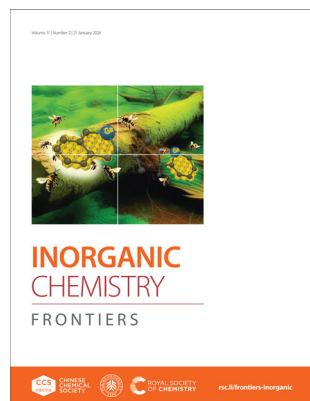


IN THIS ISSUE

ISSN 2052-1553 CODEN ICFNAW 11(2) 313–648 (2024)



Cover

See Yoshiyuki Mizuhata *et al.*, pp. 400–408.

Image reproduced by permission of Yoshiyuki Mizuhata from *Inorg. Chem. Front.*, 2024, **11**, 400.

REVIEWS

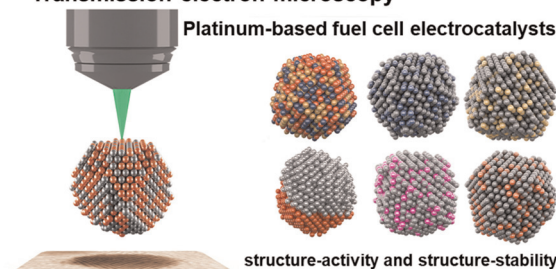
323

The role of high-resolution transmission electron microscopy and aberration corrected scanning transmission electron microscopy in unraveling the structure–property relationships of Pt-based fuel cells electrocatalysts

Lazar Bijelić, Francisco Ruiz-Zepeda and Nejc Hodnik*

Transmission electron microscopy

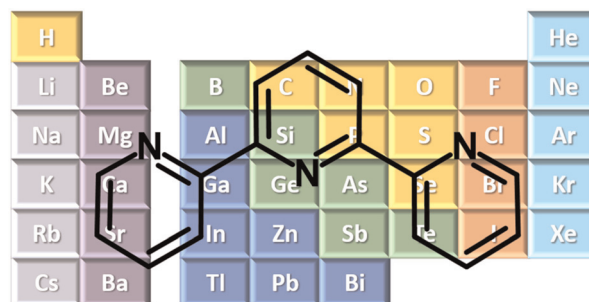
Platinum-based fuel cell electrocatalysts



342

The chemistry of the s- and p-block elements with 2,2':6',2''-terpyridine ligands

Andreas Winter, George R. Newkome and Ulrich S. Schubert*



GOLD
OPEN
ACCESS

RSC Applied Polymers

**The application of polymers,
both natural and synthetic**

Interdisciplinary and open access

rsc.li/RSCApplPolym

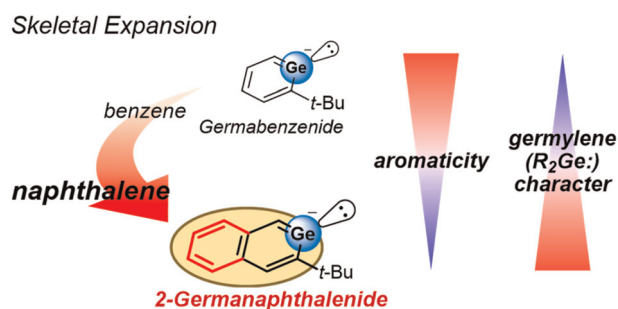
**Fundamental questions
Elemental answers**

RESEARCH ARTICLES

400

Potassium 2-germanaphthalenide: an isolable polycyclic system of germanium-incorporated anionic benzenoid

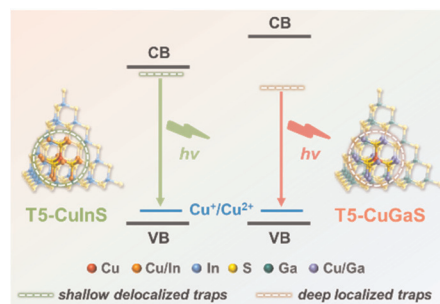
Shingo Tsuji, Norihiro Tokitoh, Hiroko Yamada and Yoshiyuki Mizuhata*



409

Molecular insight into intrinsic-trap-mediated emission from atomically precise copper-based chalcogenide models

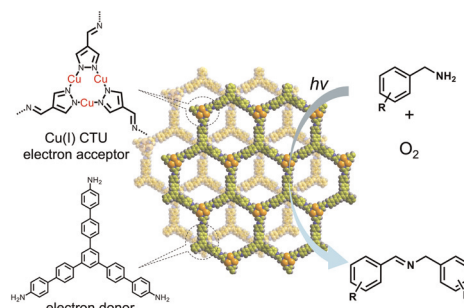
Yi-Lei Xu, Yayun Ding, Lin-Mei Zhang, Hao Ma, Jia-Xing Liu, Jiaxu Zhang, Rui Zhou, Dong-Sheng Li, Shang-Fu Yuan* and Tao Wu*



417

Imine-linked donor-acceptor metal-organic frameworks for an efficient photocatalytic oxidative coupling reaction

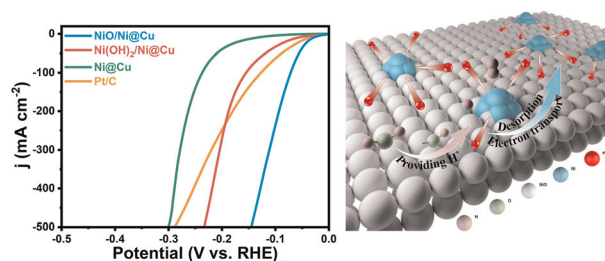
Ri-Qin Xia, Tian-E. Zhang, Zhen-Na Liu, Rong-Jia Wei,* Guo-Hong Ning* and Dan Li



425

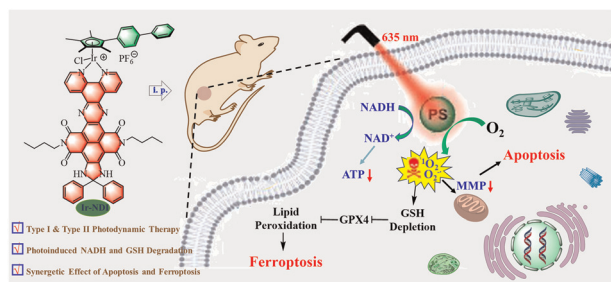
Ultrastable and highly efficient hydrogen evolution by heterogeneous NiO/Ni catalysts under industrial electrolysis conditions

Feng Chen, Wenfeng Peng, Junshuang Zhou,* Xuezheng Ma, Yan Wang, Ying Zhang and Faming Gao*



RESEARCH ARTICLES

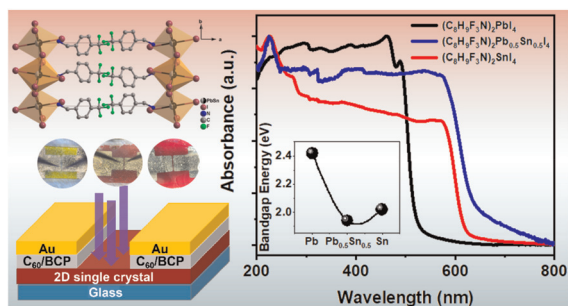
436



An electron-accepting half-sandwich iridium(III) complex for the treatment of hypoxic tumors via synergistic chemo- and phototherapy

Yuliang Yang, Ya Gao, Jian Zhao* and Shaohua Gou*

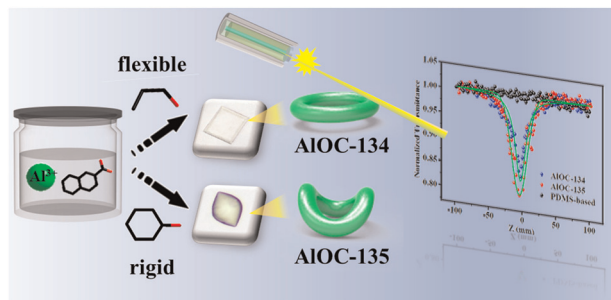
451



Centimeter-sized novel two-dimensional organic lead-tin mixed iodide single crystals for efficient photodetector applications

Xiaomei Jiang,* Tiantian Li, Qingzheng Kong, Ying Sun and Xutang Tao*

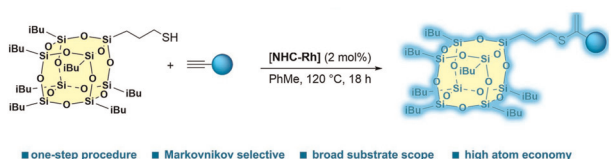
462



Two solvent-dependent Al₁₆ nanorings: design, synthesis and nonlinear optical limiting behavior

San-Tai Wang, Xiao Qi, Ran-Qi Chen, Wei-Hui Fang* and Jian Zhang

470



Highly effective synthesis of mercapto-functionalized cubic silsesquioxanes as the first step in designing advanced nano-delivery systems

Kamil Hanek, Monika Wałęsa-Chorab and Patrycja Żak*

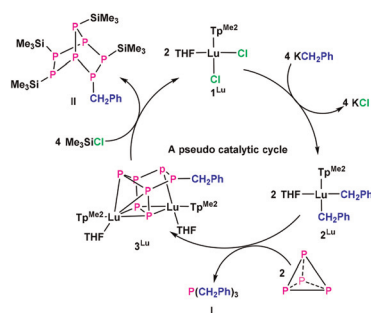


RESEARCH ARTICLES

478

A rare-earth-mediated conversion of white phosphorus into PBN_3 and highly functionalized norbornane- P_7

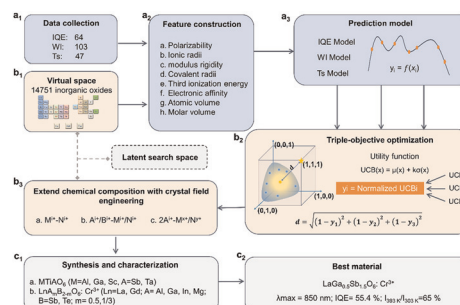
Fangjun Zhang, Keyu Han, Jiamin Cai, Zihao Ye, Jie Zhang,* Xigeng Zhou* and Zhiming Li*



487

Developing and optimizing novel Cr^{3+} -activated inorganic NIR phosphors by combining triple-objective optimization and crystal field engineering

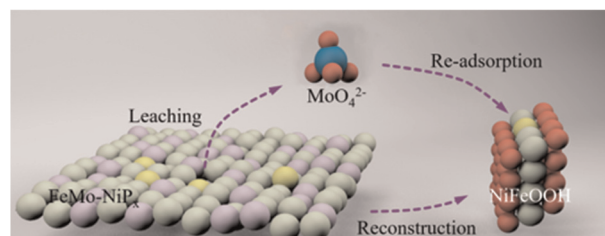
Lipeng Jiang, Xue Jiang,* Mei Yang, Xinpeng Zhao, Changxin Wang, Panpan Gao and Yanjing Su*



498

Molybdate ion leaching and re-adsorption facilitate structural and electronic modulation of nickel–iron catalysts for seawater electrolysis

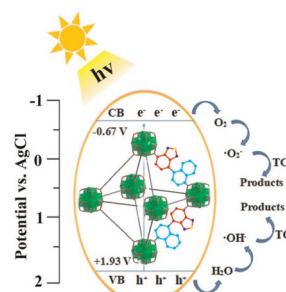
Jieshu Zhou, Lihua Liu, Hangxing Ren, Liming Li, Wei Song, Ning Li, Xuxia Shi, Chendong Kou, Yuetao Sun, Mei Han, Haibin Wang, Jingrui Han, Kangning Liu, Christopher Dorma Momo, Jr., Yingying Liu, Donghui Feng, Weijun Zhu, Songhua Chen, Hui Jiang, Yongchang Liu and Hongyan Liang*



508

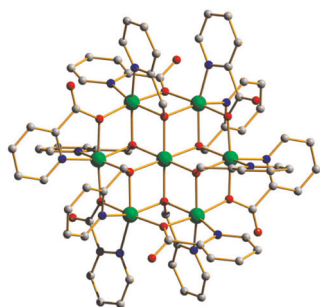
Donor–acceptor-modified UiO-67-type metal–organic frameworks for the enhanced photodegradation of tetracycline under visible light

Jinqiang Xu, Ting Zhou, Ye Bi, Huadong Guo,* Yanan Su, Lishan Wang, Mingxue Shao, Yan Wang and Xianmin Guo*



RESEARCH ARTICLES

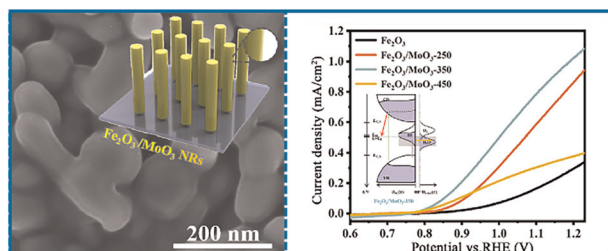
515



Magnetic exchange, anisotropy and excitonic fluctuations in a $[\text{Ni}_{12}]$ Anderson wheel

Emily H. Payne, Lucinda R. B. Wilson, Mukesh K. Singh, Gary S. Nichol, J. R. Stewart, V. Garcia-Sakai, R. A. Ewings, Harry Lane, Jürgen Schnack,* Chris Stock* and Euan K. Brechin*

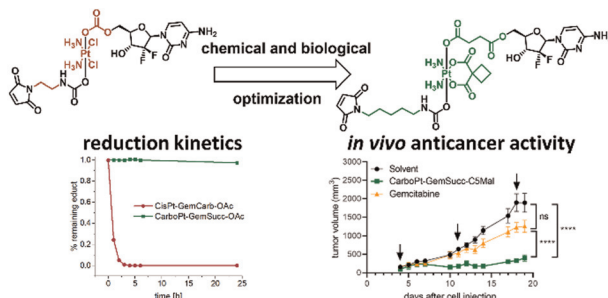
526



Boosting the photoelectrochemical water splitting of Fe_2O_3 by surface-state regulation

Shanshan Jiang, Xinxin Zhang, Madiha Nawaz, Xiaoxing Fan* and Ran Tao*

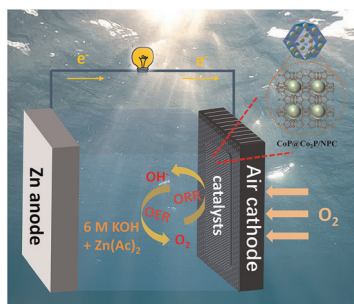
534



Stepwise optimization of tumor-targeted dual-action platinum(IV)-gemcitabine prodrugs

Alexander Kastner, Theresa Mendrina, Tomer Babu, Subhendu Karmakar, Isabella Poetsch, Walter Berger, Bernhard K. Keppler, Dan Gibson,* Petra Heffeter* and Christian R. Kowol*

549



Interfacial engineering of cobalt phosphide heterostructures confined in N,P-doped carbon for efficient bifunctional electrocatalysis in Zn–air batteries

Zongxu Li, Yonghang Zeng, Dongbin Xiong, Lina Zhou, Jiangqing Zhou, Yahui Yang, Faqi Zhan, Kai Wang, Yue Du* and Yisi Liu*

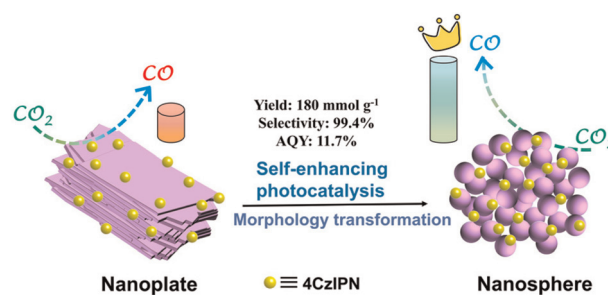


RESEARCH ARTICLES

562

Photoinduced morphological transformation of a self-assembled iron(II) coordination polymer: high-performance, non-precious metal, and self-enhancing photocatalytic CO₂ reduction

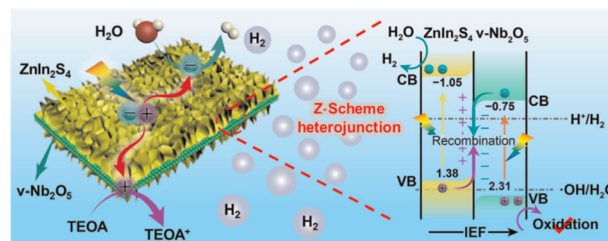
Youting Fang, Xinyue Hong and Duobin Chao*



571

Enwrapping ZnIn₂S₄ on vacancy-rich Nb₂O₅ nanoplates for enhanced photocatalytic hydrogen evolution

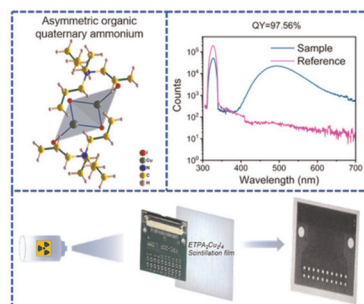
Yong-Qi Liu, Wen-Jing Yi, Chuan-Qi Li,* Xin Du, Zhong-Yi Liu and Xin-Zheng Yue*



579

Exceptional optical performance of the zero-dimensional hybrid cuprous halide ETPA₂Cu₂I₄ as an X-ray scintillator

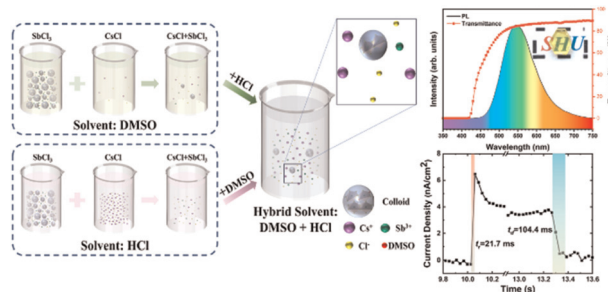
Yuxin Zhan, Peiqing Cai,* Xipeng Pu, Qi Ai, Junjie Si, Xin Yao, Gongxun Bai and Zugang Liu*



589

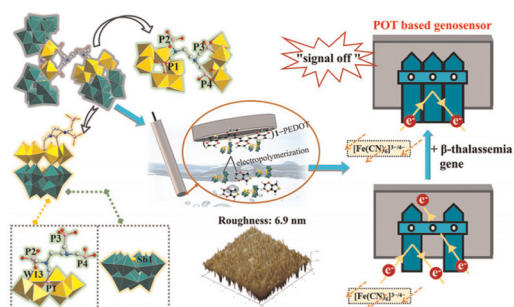
Regulating the microscopic structure of solutions to synthesize centimeter-sized low-dimensional Cs_mSb_nCl_{m+3n} perovskite single crystals for visible-blind ultraviolet photodetectors

Wenzhen Wang, Shanhu Xu, Ziyi Lai, Xiaoxi Feng, Huanzhen Qi, Qiutao Pan, Zichen Yang, Jiaying Kang, Yue Li, Xin Shu, Zifa Zhang, Yan Zhu, Jiabin Bai, Feng Hong, Juan Qin, Run Xu,* Ying He, Fei Xu and Linjun Wang



RESEARCH ARTICLES

602

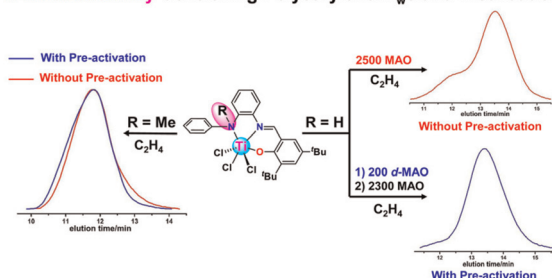


A multifunctional organophosphoric ligand-templated poly(polyoxotungstate) with potential in building a genosensor for thalassemia gene detection

Wenshu Zhang, Zixu Wang, Mengya Cao, Dan Wang,*
Lijuan Chen* and Junwei Zhao*

613

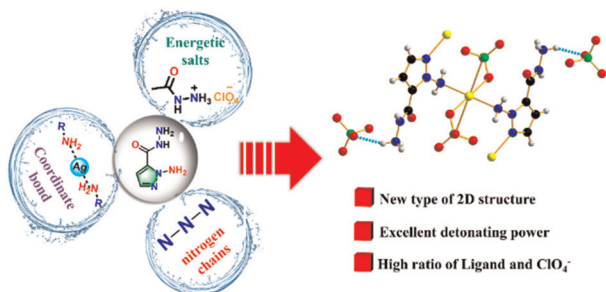
N-H Functionality Controlling Polyethylene M_w s and Distributions



Influence of the N–H functionality on activating O, N,N-titanium complexes and controlling polyethylene molecular weights and distributions

Jiliang Tian, Zhihao Gao, Yongxin Liu, Pierre Braunstein,*
Shaofeng Liu* and Zhibo Li*

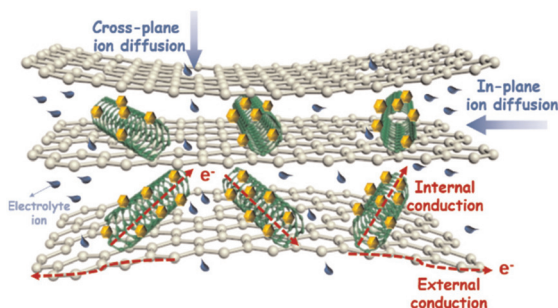
624



Synthesizing new Bi-structure energetic coordination compounds using ternary components

Chao Zhang, Tingwei Wang, Meiqi Xu, Baolong Kuang,
Zhiming Xie, Zujia Lu, Zhenxin Yi, Yan Li and
Jianguo Zhang*

632



Porous graphene/CNT@metal (hydr)oxide composite films achieving fast ion and electron kinetics for asymmetric supercapacitors with ultra-high volumetric performance

Chunjuan Qiu, Baoquan Hou, Lili Jiang,* Huimin Shi,
Jie Chen, Xiaoming Zhou, Xuena Lu, Jian Shi and
Lizhi Sheng*

