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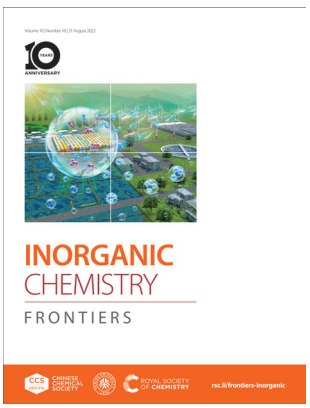
ISSN 2052-1553 CODEN ICFNAW 10(16) 4599–4890 (2023)



Cover
See Hao Li, Fei Wang *et al.*, pp. 4610–4631.

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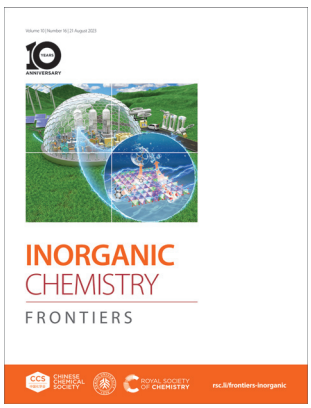

Inside cover
See Liang Chen, Huimin Yang, Chenjing Shang *et al.*, pp. 4695–4701.

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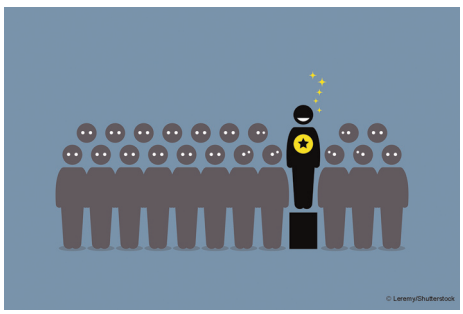
EDITORIAL

4609

Outstanding Reviewers for *Inorganic Chemistry Frontiers* in 2022

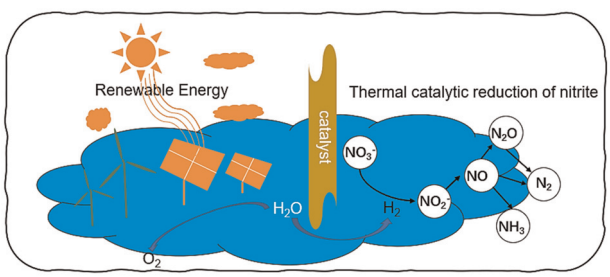


REVIEWS

4610

Opportunities and challenges in aqueous nitrate and nitrite reduction beyond electrocatalysis

Guanling Yang, Pengfei Zhou, Jinsheng Liang, Hao Li* and Fei Wang*



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REVIEWS

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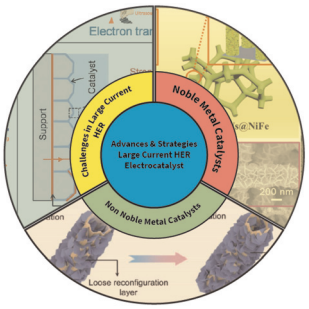
Recent advances and strategies of electrocatalysts for large current density industrial hydrogen evolution reaction

Tong Wu, Mingzi Sun, Hon Ho Wong, Cheuk Hei Chan, Lu Lu, Qiuyang Lu, Baian Chen and Bolong Huang*



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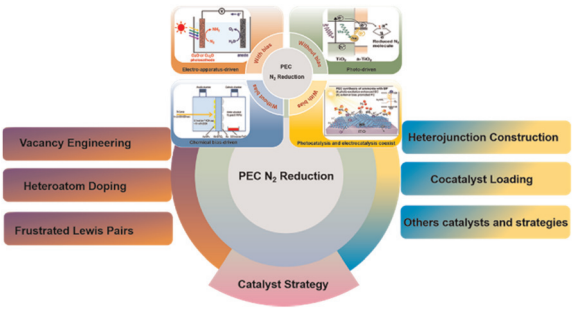
Recent progress in ammonia synthesis based on photoelectrocatalysis

Pengyan Li, Yumin Liu, Muhammad Asim Mushtaq and Dongpeng Yan*



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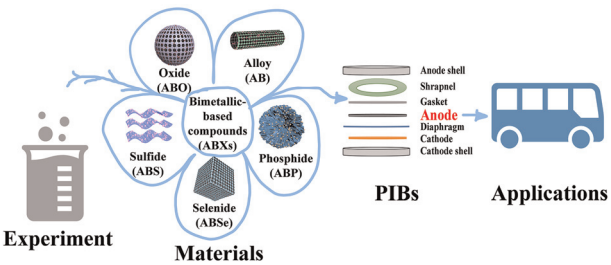
Bimetallic-based composites for potassium-ion storage: challenges and perspectives

Ping Hu, Yulian Dong, Zhijun Wu, Qun Fu, Huaping Zhao and Yong Lei*



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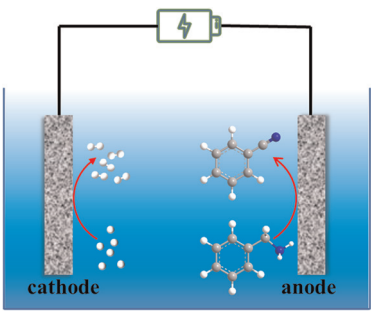
V modified Ni-based layer hydroxides for the electrocatalytic upgrading of amines to nitriles

Shaoxiong Bai, Liang Chen,* Jingjing Bai, Chenghang Lv, Shoudong Xu, Ding Zhang, Haibin Meng, Chunli Guo, Huimin Yang* and Chenjing Shang*



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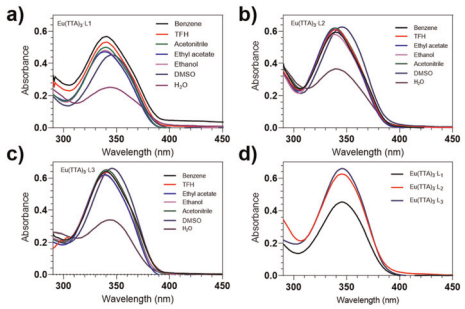

Design and synthesis of RNA-responsive *o*-phenanthroline Eu(III) complexes as probes for STED super-resolution dual-targeted bioimaging

Hao Yuan, Tao Wang, Tong Zhu, Zhihui Feng, Fei Wang, Yupeng Tian, Liulin Xiong and Xiaohe Tian*

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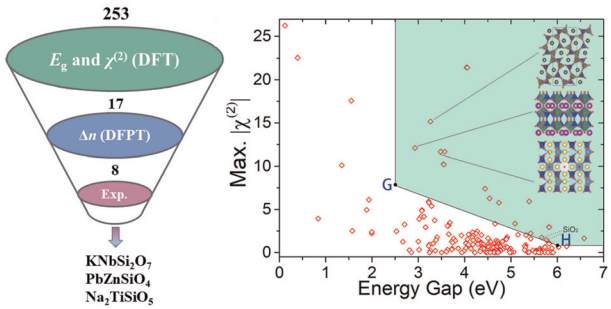

Searching for silicate nonlinear optical materials by combining calculation and experiment

Jingjing Zhang, Ruqing Wei, Daqing Yang, Ying Wang and Bingbing Zhang*

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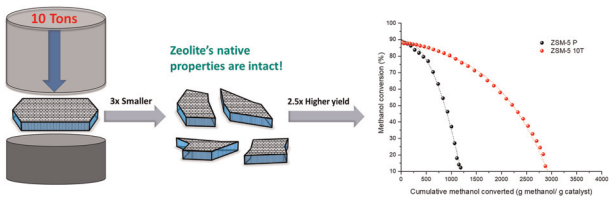

Mono-directional pressure induced downsizing of zeolite crystals increases their catalytic performances

Mohammad Fahda, Louwanda Lakiss, Kamila Goldyn, Edwin Clatworthy, Marie Desmurs, Jean-Pierre Gilson, Svetlana Mintova and Valentin Valtchev*

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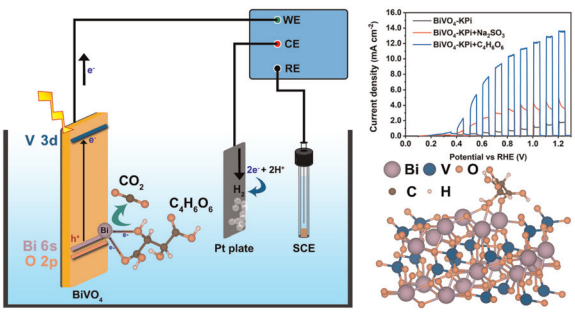

Insight into the complexation mechanism between a $BiVO_4$ photoanode and tartaric acid for efficient photoelectrochemical H_2 production

Zhaoqi Wang, Shuhua Wang, Xiaolei Liu,* Yayang Xu, Dujuan Dai, Shuang Zhao, Peng Wang, Zhaoke Zheng, Yuanyuan Liu, Hefeng Cheng, Ying Dai, Zeyan Wang* and Baibiao Huang*

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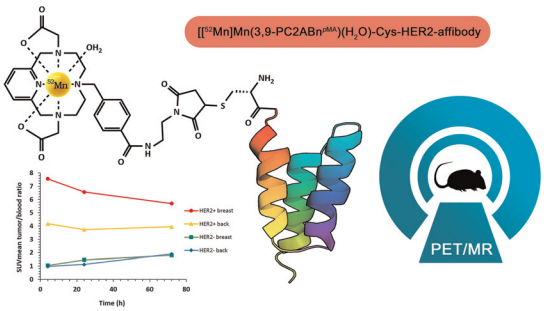
Synthesis and characterization of a novel [^{52}Mn] Mn-labelled affibody based radiotracer for HER2+ targeting

Balázs Váradi, Károly Brezovcsik, Zoltán Garda, Enikő Madarasi, Horea Szedlacsek, Rodica-Aura Badea, Andrei-Mihai Vasilescu, Adina-Gabriela Puiu, Aura Elena Ionescu, Livia-Elena Sima, Cristian V. A. Munteanu, Simona Călăraş, Adrienn Vágner, Dezső Szikra, Ngô Minh Toàn, Tibor Nagy, Zoltán Szűcs,* Stefan Szedlacsek,* Gábor Nagy* and Gyula Tircsó*



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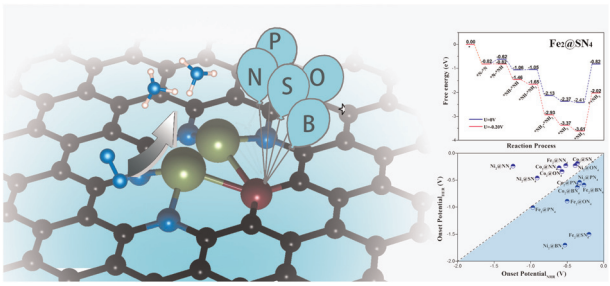
Synergetic effect between non-metals and dual metal catalysts for nitrogen reduction reaction

Ji Zhang, Weisong Yang and Chenghua Sun*



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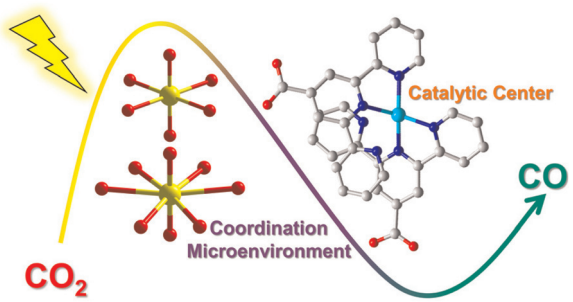
Modulating the coordination microenvironment of uranyl compounds to enhance photocatalytic CO_2 reduction

Zhi-Wei Huang, Shu-Wen An,* Kong-Qiu Hu,* Xiao-Bo Li, Zhi-Ni Bin, Zhi-Heng Zhou, Lei Mei, Zhi-Jun Guo, Wang-Suo Wu, Zhi-Fang Chai and Wei-Qun Shi*



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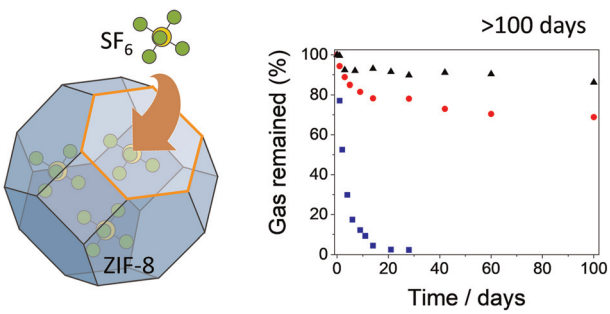
MOFs for long-term gas storage: exploiting kinetic trapping in ZIF-8 for on-demand and stimuli-controlled gas release

Karsten Heinz, Sven M. J. Rogge, Andreas Kalytta-Mewes, Dirk Volkmer and Hana Bunzen*



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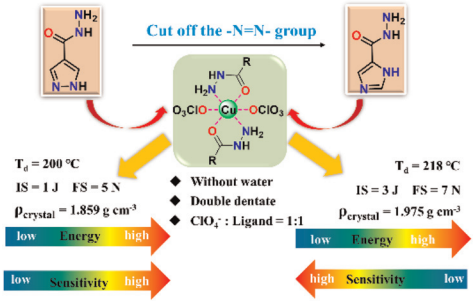

Regulation of stability and detonation performance: preparation of coordination compounds by using isomeric ligands

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

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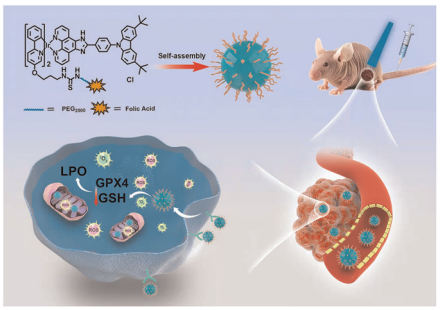

Folate-targeted iridium complexes amplify photodynamic therapy efficacy through ferroptosis

Xiangdong He, Lai Wei, Jun Chen, Shuwang Ge, Martha Kandawa-Shultz, Guoqiang Shao* and Yihong Wang*

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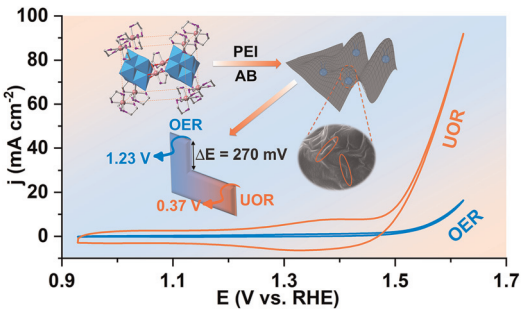

An organic–inorganic hybrid polyoxoniobate decorated by a Co(III)-amine complex for electrocatalytic urea splitting

Da-Huan Li, Nian Shi, Yong-Jiang Wang, Ping-Wei Cai, Yan-Qiong Sun* and Shou-Tian Zheng*

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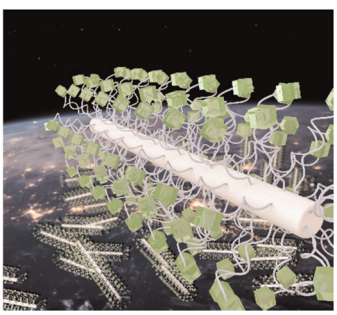

Amino-bridged attapulgite@perovskite nanocomposites: the role of bridge linkage in their optical properties and stabilities

Lei Qiu, Mengyu Guan, Wei Wang, Maxim S. Molokeev, Sergey P. Polyutov, Zhigao Dai* and Guogang Li*

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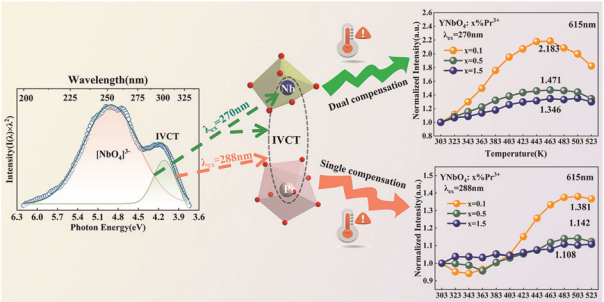
Design of anti-thermal quenching Pr^{3+}-doped niobate phosphors based on a charge transfer and intervalence charge transfer band excitation-driven strategy

Chunwei Yang, Ning Guo,* Song Qu, Qincan Ma, Jianxia Liu, Shunyi Chen and Ruizhuo Ouyang



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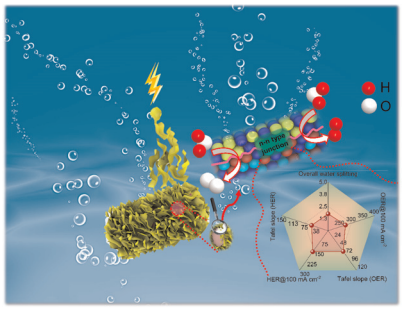
Constructing an n–n junction between CoFe-LDH and NiCoP as bifunctional electrocatalysts for efficient overall water splitting

Mengyuan Qin, Guiyuan Ma, Wenxue Tan, Zunhao Fan and Xing Xin*



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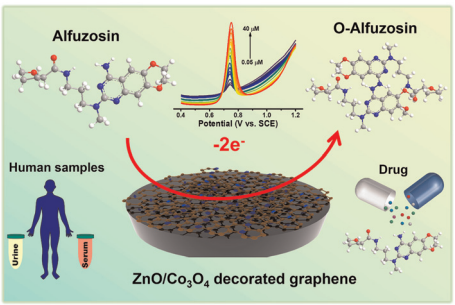
An ultra-sensitive electrochemical sensor based on MOF-derived ZnO/Co_3O_4 decorated on graphene for low-level monitoring of the α_1-AR antagonist alfuzosin in tablets and human samples

Gajapaneni Venkata Prasad, Venkatachalam Vinothkumar, Seung Joo Jang and Tae Hyun Kim*



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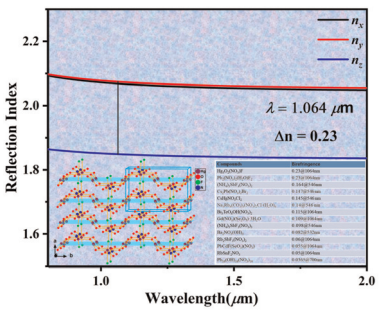
$Hg_3O_2(NO_3)F$: a mercury nitrate oxyfluoride with an unprecedented $[(Hg_3O_2F)^+]_\infty$ cationic framework and excellent optical anisotropy

Yi-Lei Lv, Lei Huai, Yu-Long Wei, Liang Ma, Yue-Qi Wei, Wenlong Liu and Ru-Ling Tang*



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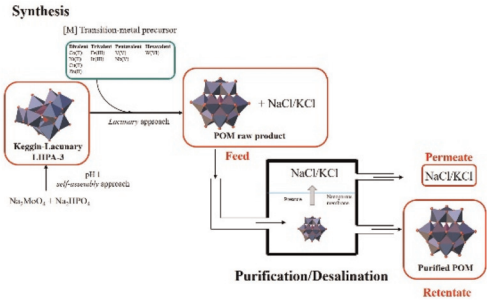

Study on the incorporation of various elements into the Keggin lacunary-type phosphomolybdate $[PMo_9O_{34}]^{9-}$ and subsequent purification of the polyoxometalates by nanofiltration

Jan-Christian Raabe, Tobias Esser, Froze Jameel, Matthias Stein, Jakob Albert and Maximilian J. Poller*

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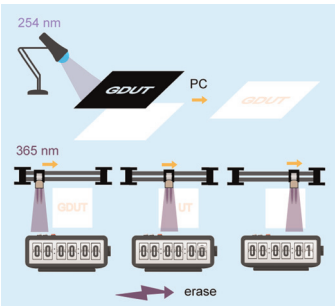
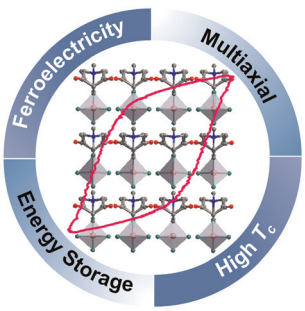


Bi^{3+}/Sm^{3+} co-doped $LiTaO_3$ photochromic perovskites: an ultrafast erasable optical information storage medium

Ruiting Zhang, Yahong Jin,* Yanmei Li,* Haoyi Wu and Yihua Hu*

4881



A multifunctional molecular ferroelectric with a high Curie temperature and electrical–thermal double-switch coexistence: $(C_8H_{14}NO)[FeCl_4]$

Fang-Xin Wang, Yun-Zhi Tang,* Yu-Hui Tan,* Yi-Ran Zhao, Jia-Ying Wang, Yu-Kong Li, Hao Zhang, Ting-Ting Ying and Ming-Yang Wan

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