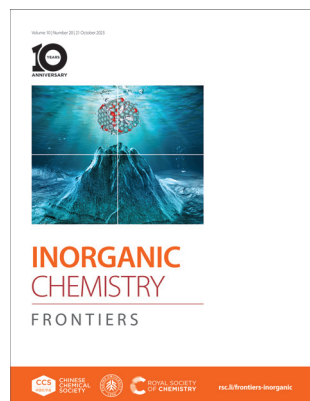


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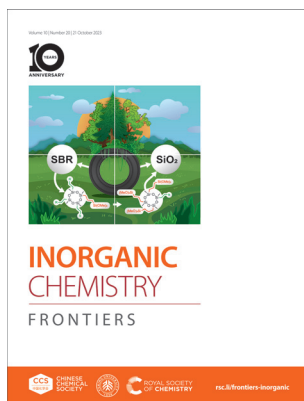
ISSN 252-1553 CODEN ICFNAW 10(20) 5791-6118 (2023)



Cover

See Nuria Romero, Xavier Solans-Monfort, Karine Philippot, Xavier Sala *et al.*, pp. 5885–5896.

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Inside cover

See Jędrzej Walkowiak *et al.*, pp. 5897–5907.

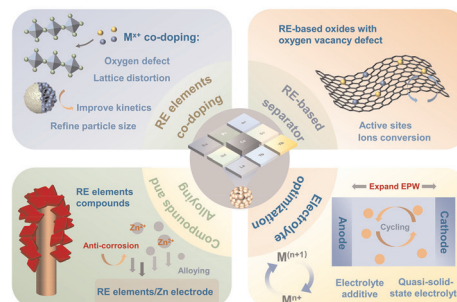
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REVIEWS

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Recent progress and prospects of rare earth elements for advanced aqueous zinc batteries

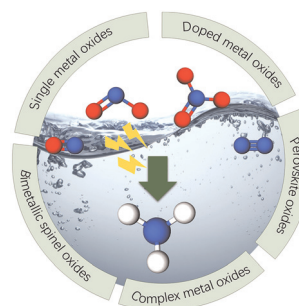
Xi Li, Zhenjie Chen, Yongqiang Yang, Bingan Lu, Yan Tang* and Jiang Zhou*



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Recent advances of metal oxide catalysts for electrochemical NH_3 production from nitrogen-containing sources

Bowen Li, Yinlong Zhu* and Wanlin Guo



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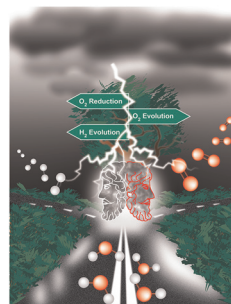
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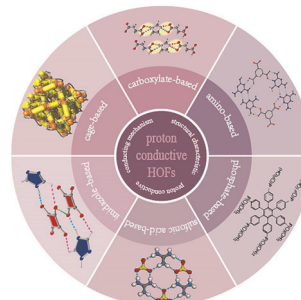
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Abhishek Saini, Goutam K. Lahiri* and Arnab Dutta*

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Abhishek Saini, Goutam K. Lahiri* and Arnab Dutta*



Latest progress in proton-conducting hydrogen-bonded organic frameworks

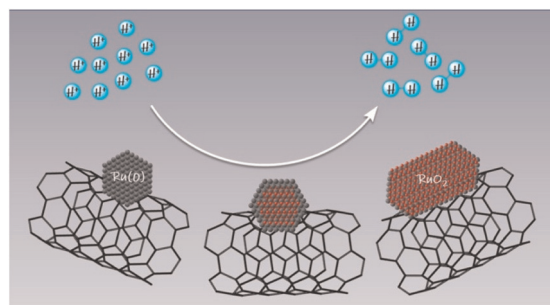
Jin-Qi Qiao, Shuai-Wu Zuo, Zi-Feng Li* and Gang Li*



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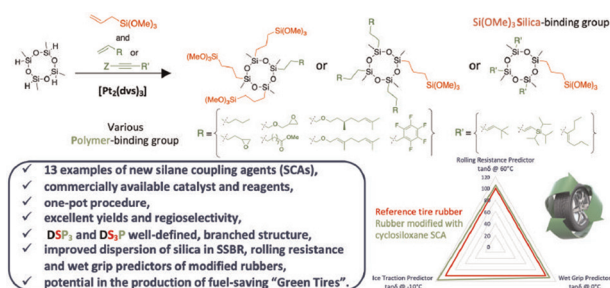
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Jordi Creus, Gerard Martí, Javier Heras-Domingo,
Vincent Collière, Camilo A. Mesa, Sixto Giménez,
Laia Francàs, Luis Rodríguez-Santiago, Xavier Solans-
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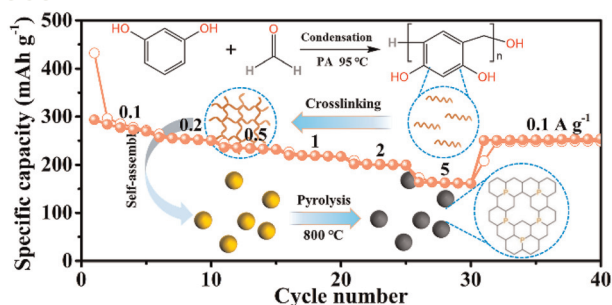
Coupling agents with 2,4,6,8-tetramethylcyclotetrasiloxane core – synthesis and application in styrene–butadiene rubber production

Tomasz Sokolnicki, Adrian Franczyk, Radostaw Kozak
and Jędrzej Walkowiak*



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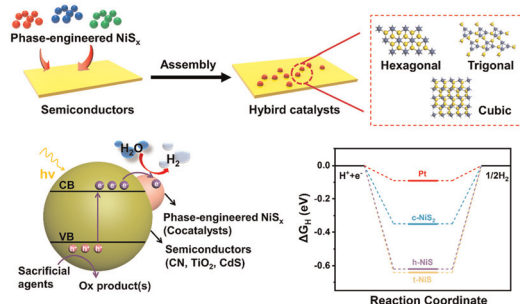
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P-doped hard carbon microspheres for sodium-ion battery anodes with superior rate and cyclic performance

Sheng Wu, Handong Peng, Le Huang, Yongsi Liu, Yanxue Wu, Lei Liu, Wei Ai* and Zhipeng Sun*

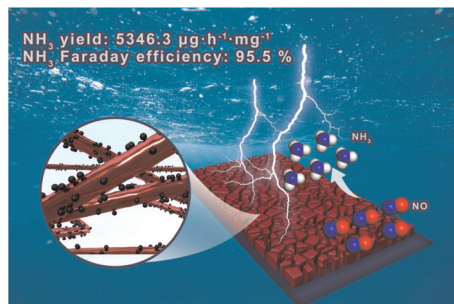
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Crystal phase of nickel sulfide dictates hydrogen evolution activity of various semiconducting photocatalysts

Jianjian Yi, Yu Xia, Zhou Zhou, Ganghua Zhou, Xianglin Zhu, Sai Zhang, Xingwang Zhu, Xiaozhi Wang,* Hui Xu* and Huan Pang*

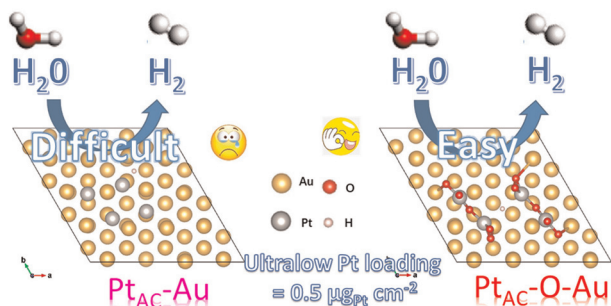
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The *in situ* decoration of Ti₃C₂ quantum dots on Cu nanowires for highly efficient electrocatalytic reduction of nitric oxide to ammonia

Baojing Li, Dongcai Shen, Zhengting Xiao, Quan Li, Shuo Yao, Wentai Wang* and Licheng Liu

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Ultra-low loading Pt atomic cluster electrode with Pt–O bond as an active site with high hydrogen evolution reaction performance

Zhandong Ren,* Zhiqiang Xie, Li Deng, Chen Dong, Guocan Song, Xiaohui Liu, Juanjuan Han, Lin Zhuang, Yi Liu and Yuchan Zhu*

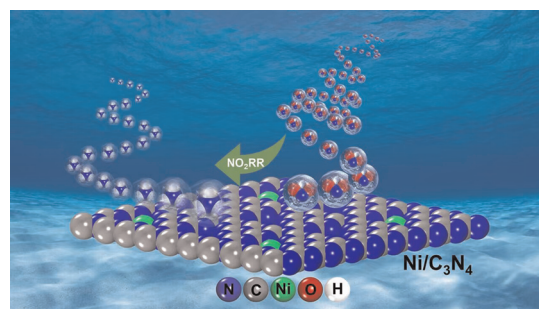


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Low-coordination single Ni atoms on graphitic C₃N₄ for nitrite electroreduction to ammonia

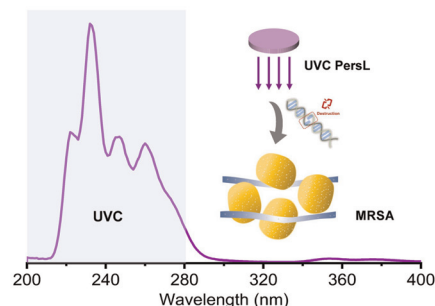
Hongyan Zhao, Jiaqi Xiang, Guike Zhang, Kai Chen and Ke Chu*



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Long-persistent far-UVC light emission in Pr³⁺-doped Sr₂P₂O₇ phosphor for microbial sterilization

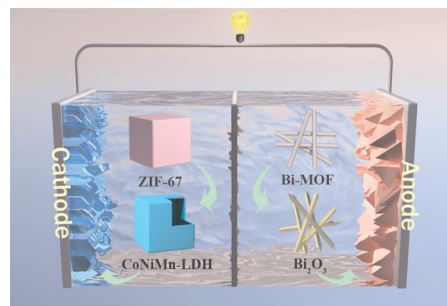
Yi Zhang, Shao Yan, Fang Xiao,* Xihui Shan, Xulong Lv, Weili Wang and Yanjie Liang*



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Both layered trihydroxide hollow cubes and bismuth oxide derived from MOF templates for high-performance alkaline batteries

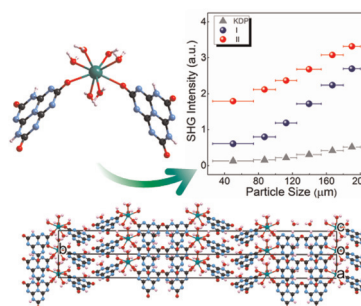
Jianwei Wang,* Wenhui Wang, Huan Wang, Wenlin Zhang, Yanzhong Zhen, Feng Fu* and Bin Xu*



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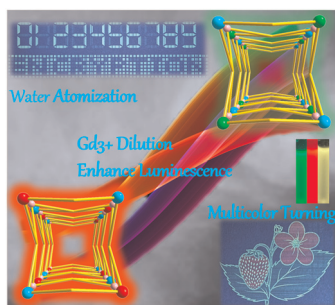
A_{0.5}H₂C₆N₇O₃·4H₂O (A = Ca²⁺, Sr²⁺) iso-cyanamides with ultra-large π -conjugated group and excellent nonlinear optical properties

Xiaoguang Du, Fangyan Wang, Fei Liang,* Zhanggui Hu, Yicheng Wu and Xinyuan Zhang*



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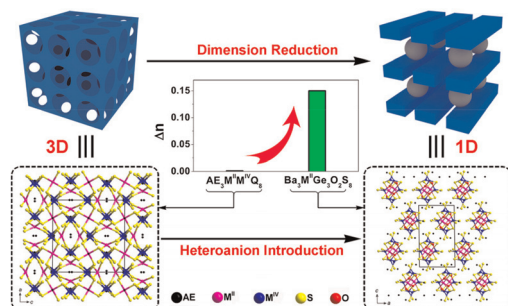
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Humidity and ultraviolet modulate color turned LnNa-based metal–organic frameworks as Bi-deryption anti-counterfeit materials

Jinzeng Wang,* Mengjuan Cui, Haiyun Yao, Fang Wang* and Xiaolong Li*

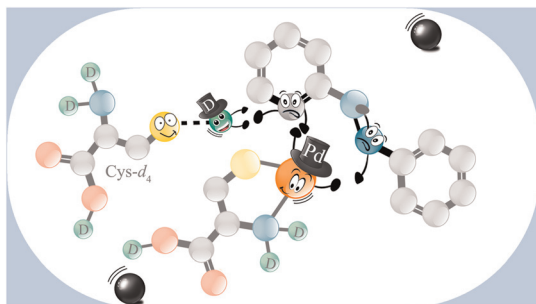
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Heteroanion-introduction-driven birefringence enhancement in oxychalcogenide $\text{Ba}_3\text{M}^{\text{II}}\text{Ge}_3\text{O}_2\text{S}_8$ ($\text{M}^{\text{II}} = \text{Mn}, \text{Cd}$)

Sheng-Hua Zhou, Mao-Yin Ran, Wen-Bo Wei, A-Yang Wang, Xin-Tao Wu, Hua Lin* and Qi-Long Zhu*

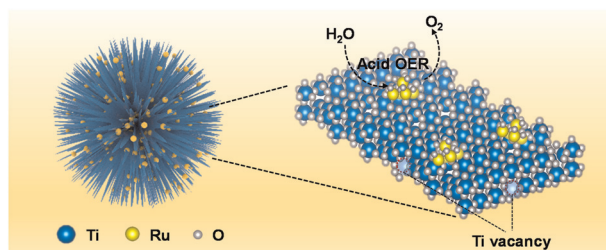
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Deuteration of Pd-activated $\text{C}(\text{sp}^2)\text{--H}$ bonds in the solid state

Alen Bjelopetrović, Dajana Barišić, Marina Juribašić Kulcsár,* Ivan Halasz, Manda Ćurić and Stipe Lukin*

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Charge-enriched RuO_2 nanoparticles decorating TiO_2 with Ti defects to promote oxygen evolution reaction in acidic media

Ye Wang, YiXin Hao, Luqi Wang, Chunsheng Li, Jianwei Ren, Yan Sun, Feng Hu,* Linlin Li and Shengjie Peng*

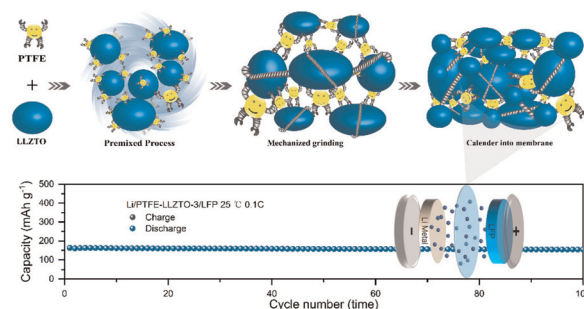


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Dry approach production of a garnet solid electrolyte membrane for lithium batteries

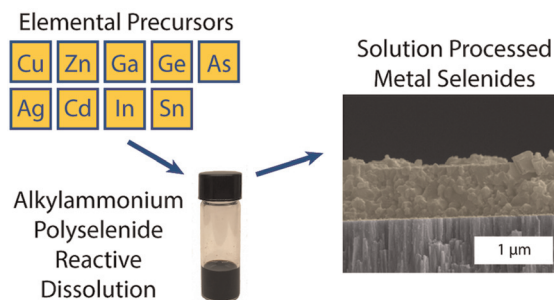
Qiulin Li, Yiqiu Li, Hao Chen, Hui Liu, Lianjie Li, Jie Song,*
Maowen Xu* and Shu-Juan Bao*



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A selenium-based “alkahest”: reactive dissolutions of metals and metal compounds with *n*-alkylammonium polyselenide solutions

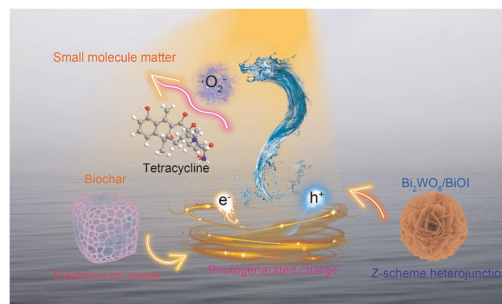
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Victoria M. Boulos, Robert Spilker, Christian J. Breckner,
Kevin Ng, Judy Kuan-Yu Liu, Jeffrey T. Miller,
Hilkka I. Kenttämä and Rakesh Agrawal*



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Electron-rich biochar enhanced Z-scheme heterojunctioned bismuth tungstate/bismuth oxyiodide removing tetracycline

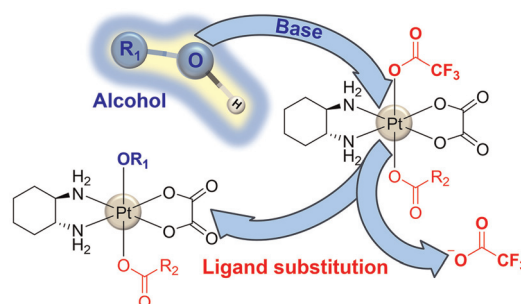
Fuyan Kang, Xiaona Jiang, Yao Wang, Juanna Ren,
Ben Bin Xu, Guoyang Gao, Zhanhua Huang* and
Zhanhu Guo*



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Ligand substitution reactions afford oxaliplatin-based platinum(IV) complexes bearing axial alkoxido ligands

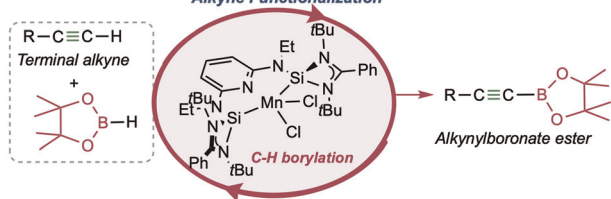
Zoufeng Xu, Long Lin, Binbin Fu, Fu-Ping Huang,
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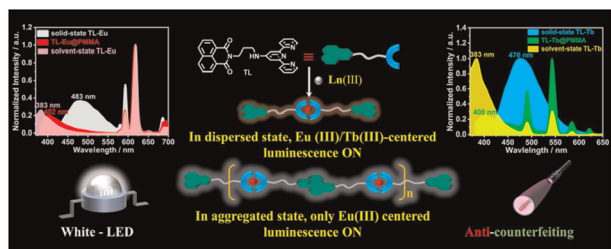
Controlling Chemoselectivity in Manganese-Catalyzed Alkyne Functionalization



Chemoselective C(sp)–H borylation of terminal alkynes catalyzed by a bis(N-heterocyclicsilylene) manganese complex

Himani Ahuja, Harleen Kaur and Rebeca Arevalo*

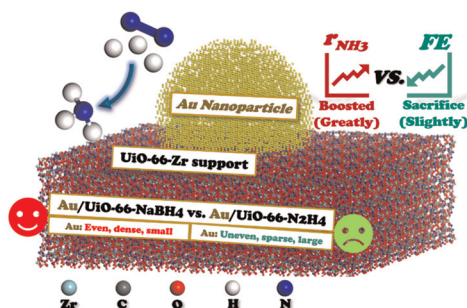
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Tailoring photoluminescence and multifunctionalities of lanthanide coordination complexes employing ligand-controlled aggregation states

Jun Wang,* Qianbo Zhang, Zhiming Chen, Xin Lan, Wenjing Shi and Zhiqiang Li*

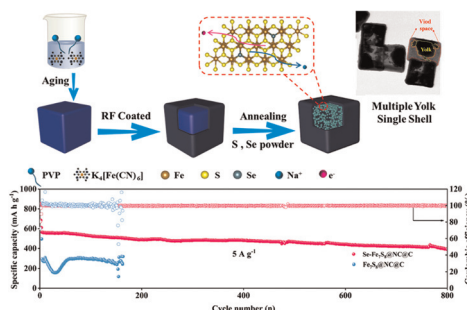
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Au/UO-66-Zr nanohybrids: boosting the yield rates of electrochemical ammonia synthesis with the sacrificial effects of faradaic efficiencies

Xiaoyu Qian, Lu Ding, Yanling Zhao, Zhichun Li, Yuanxiu Liao, Jiabin Tan and Xiaobo He*

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Prussian blue-derived multiple yolk–single shell-structured Se-doped $Fe_7S_8@NC@C$ microcube composites as high-rate anodes for sodium-ion batteries

Qingping Li, Peng Wang, Yuxiang Chen, Xiangyue Liao, Ransha Deng, Qiaoqi Zheng* and Dunmin Lin*



CORRECTION

6116

Correction: A bifunctional hierarchical core–shell $\text{Mo}_2\text{C}@\text{ZnIn}_2\text{S}_4$ Schottky junction for efficient photocatalytic H_2 -evolution integrated with valuable furfural production

Jian Yang, Xiaorui Zhang, Zikang Zeng, Chuang Han and Yujun Liang*

