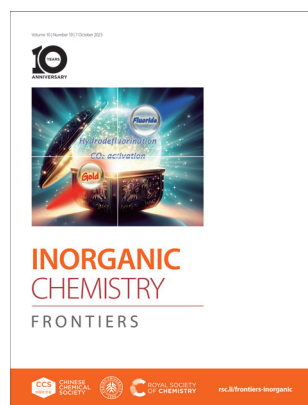


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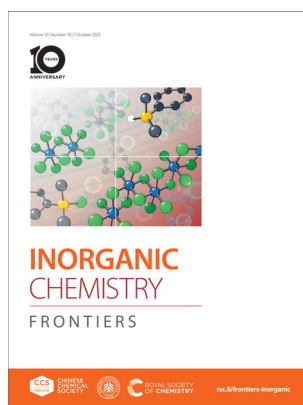
ISSN 2052-1553 CODEN ICFNAW 10(19) 5499–5790 (2023)



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See Jun-Long Zhang *et al.*, pp. 5573–5583.

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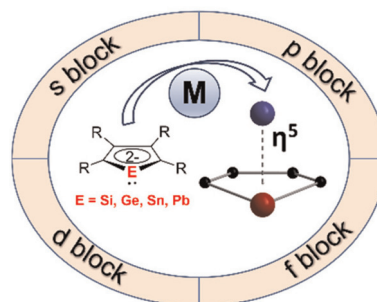
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#### Group 14 metallole dianions as $\eta^5$ -coordinating ligands

Xiaofei Sun and Peter W. Roesky\*

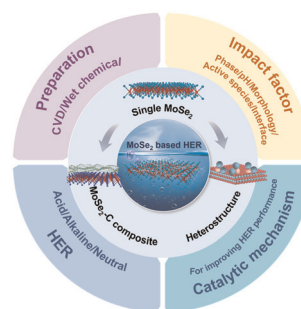


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#### Recent advances in molybdenum diselenide-based electrocatalysts: preparation and application in the hydrogen evolution reaction

Chunming Yang,\* Xiang Li and Yucang Liang\*



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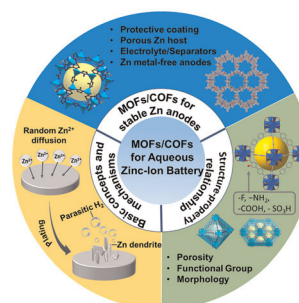


## REVIEWS

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### Porous framework materials for stable Zn anodes in aqueous zinc-ion batteries

Liling Lei, Jiahao Dong, Siwen Ke, Shishan Wu\* and Shuai Yuan\*

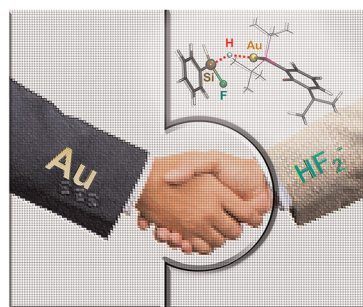


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### Fluoride counterions boost gold(i) catalysis: case studies for hydrodefluorination and CO<sub>2</sub> hydrosilylation

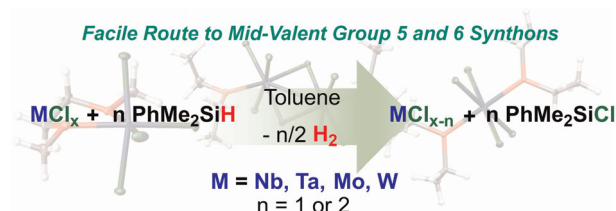
Yuhang Yao, Jiyun Hu, Guiyu Liu, Yin-Shan Meng, Song Gao and Jun-Long Zhang\*



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### Facile access to mid-valent Group 5 and 6 metal synthons

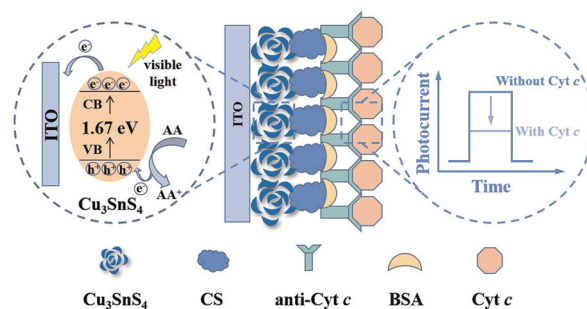
Thomas E. Shaw, Charlotte L. Stern, Alfred P. Sattelberger\* and Titel Jurca\*



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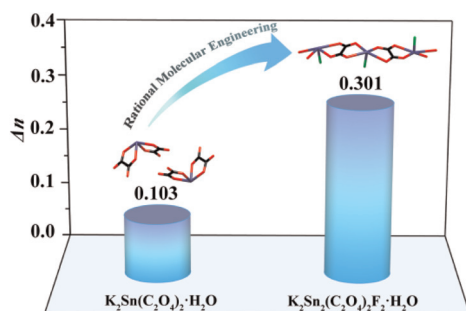
### Portable self-powered photoelectrochemical immunosensor based on Cu<sub>3</sub>SnS<sub>4</sub> nanoflower for ultra-sensitive and real-time detection of human cytochrome c

Xin Zhang, Ling-Hua Jin, Yan-Yan Li, Zi-Zhen Xiao, Yu Feng, Ying-Wu Lin\* and Ye Zhang\*



## RESEARCH ARTICLES

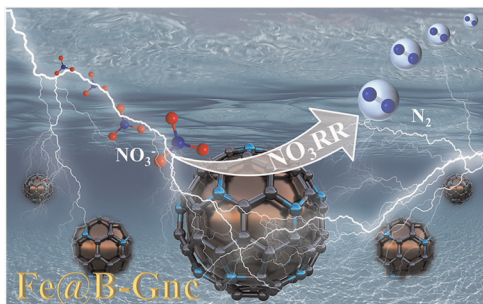
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### The transformation of a zero-dimensional cluster into a one-dimensional chain structure achieving a dramatically enhanced birefringence in tin(II)-based oxalates

Liying Ren, Linhong Cheng, Xiaoyan Zhou, Jinxuan Ren, Liling Cao,\* Ling Huang, Xuehua Dong, Yuqiao Zhou, Daojiang Gao and Guohong Zou\*

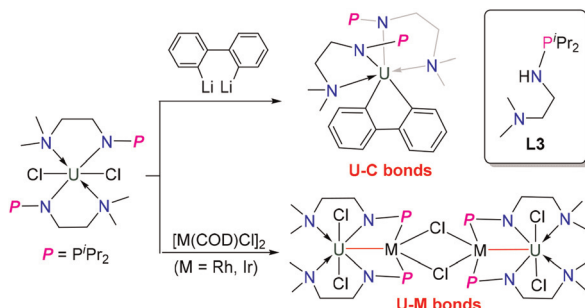
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### Confinement engineering for enhanced electrocatalytic nitrate reduction by integrating B-doped graphene with iron catalysts for long-term stability

Hongxia Luo, Chuqi Wang, Yuting Cong, Yuanyuan Ma,\* Jianping Yang and Jun Chen\*

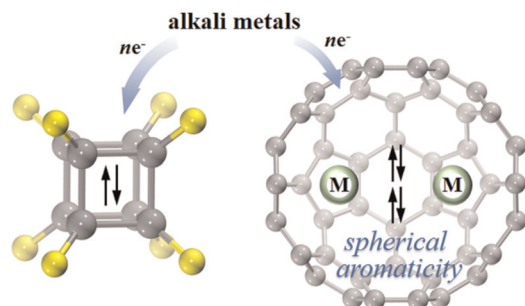
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### Synthesis and reactivity of a uranium(IV) complex supported by a monoanionic nitrogen–phosphorus ligand

Kai Li, Jialu He, Yue Zhao and Congqing Zhu\*

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### Alkali-metal coating: an effective method to inject electrons into cage molecules and achieve direct metal–metal bonds and spherical aromaticity for endohedral metallofullerenes

Xiaojiao Gu and Peng Jin\*

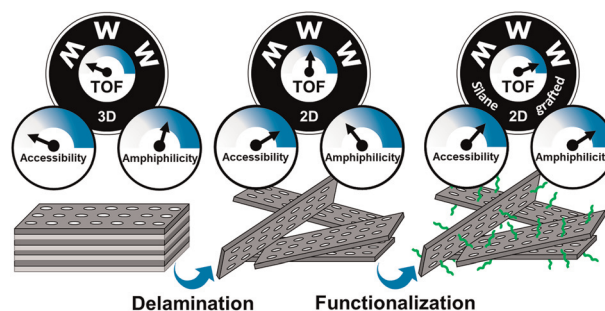


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## Tailoring the accessibility and amphiphilicity of MWW zeolites for two-phase glycerol ketalization

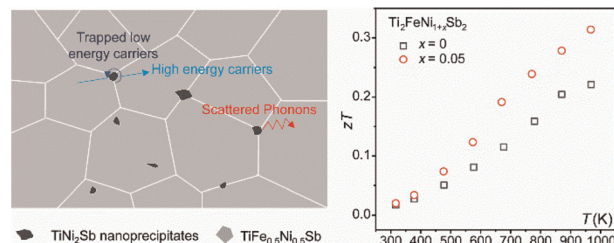
Diego S. D. Lima, Laura L. Silva, Iago W. Zapelini, Svetlana Mintova and Leandro Martins\*



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Enhancing the thermoelectric performance of a  $\text{Ti}_2\text{FeNiSb}_2$  double half-Heusler alloy through excess Ni-induced full-Heusler nanoprecipitates

Rahidul Hasan, Yan Gu, Se Yun Kim, Dong Won Chun\* and Kyu Hyung Lee\*



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Tailoring the d-band center of porous  $\text{CoS}_2$  nanospheres via low-electronegative Fe for weakened  $\text{OH}^*$  adsorption and boosted oxygen evolution

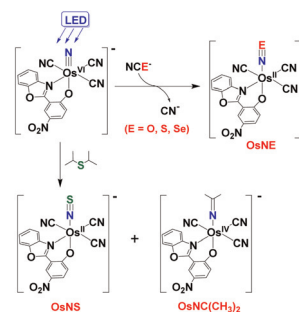
Heyuan Chen, Wei Wu, Suhao Chen, Zichen Wang, Runzhe Chen and Niancai Cheng\*



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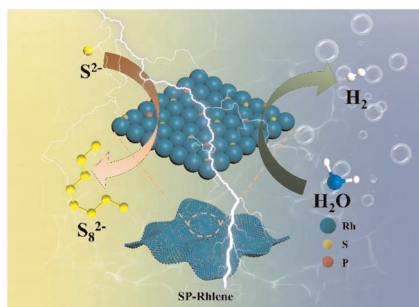
Chalcogen atom abstraction from  $\text{NCE}^-$  ( $\text{E} = \text{O}, \text{S}, \text{Se}$ ) and  $i\text{-Pr}_2\text{S}$  by the excited state of a luminescent tricyano osmium(vi) nitride

Li-Xin Wang, Miaomiao Zhou, Lu-Lu Liu, Jing Xiang\*, Ji-Yan Liu, Kai-Chung Lau\* and Tai-Chu Lau\*



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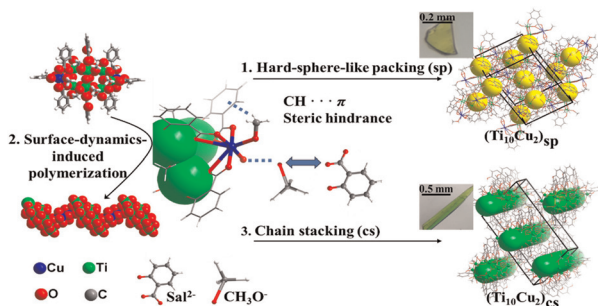
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### Electronic and active site engineering in Rh metallene via phosphorus and sulfur dual-doping for electrocatalytic sulfion recycling and hydrogen generation

Hongjing Wang, Yuqin Liang, Songliang Liu, Xu Mu, Hongjie Yu, Kai Deng, Ziqiang Wang, You Xu\* and Liang Wang\*

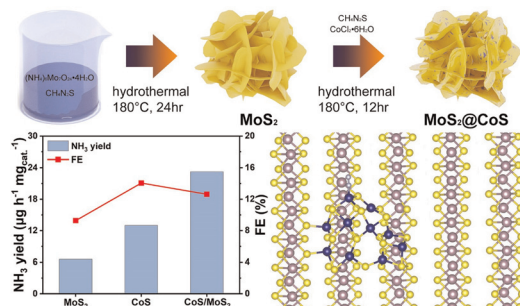
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### A surface-dynamic approach toward supercrystal engineering of titanium–oxo clusters

Ling-Cui Meng, Zhi-Ming Feng, Zhan-Guo Jiang\* and Cai-Hong Zhan\*

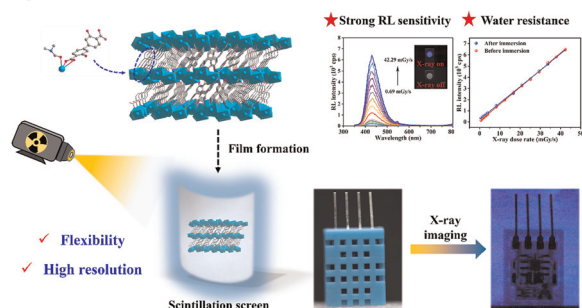
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### Interface engineering of CoS/MoS<sub>2</sub> heterostructure for the electrocatalytic reduction of N<sub>2</sub> to NH<sub>3</sub>

Yixian Liu, Ruqiang Wu, Yunliang Liu, Peiji Deng, Yaxi Li, Yuanyuan Cheng, Yongchao Du, Zenan Li, Xiong Yan, Naiyun Liu,\* Zhenhui Kang\* and Haitao Li\*

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### Flexible strontium-based metal–organic framework scintillation screens for high-resolution X-ray imaging

Peng-Kun Wang, Wen-Fei Wang, Bao-Yi Li, Mei-Juan Xie, Hong-Yi Bian, Shuai-Hua Wang, Fa-Kun Zheng\* and Guo-Cong Guo\*

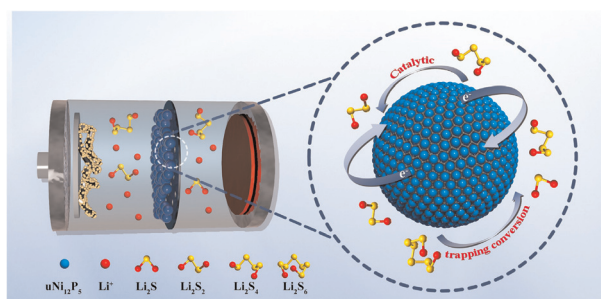


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### Ultrafine Ni<sub>12</sub>P<sub>5</sub> nanoparticle-embedded carbon with abundant catalytic activity sites as separator modifiers in high-performance lithium–sulfur batteries

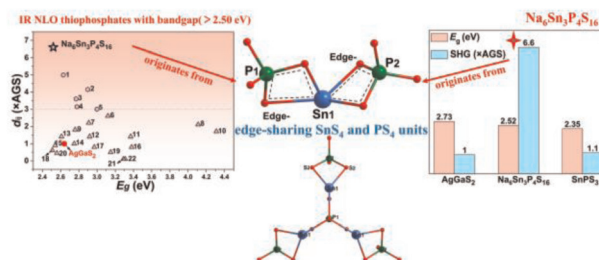
Yiqian Li, Yuehan Hao, Usman Ali, Bingqiu Liu, Qi Zhang, Zhanshuang Jin,\* Lu Li, Chungang Wang and Lingyu Zhang\*



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### Na<sub>6</sub>Sn<sub>3</sub>P<sub>4</sub>S<sub>16</sub>: Sn(II)-chelated PS<sub>4</sub> groups inspired an ultra-strong SHG response

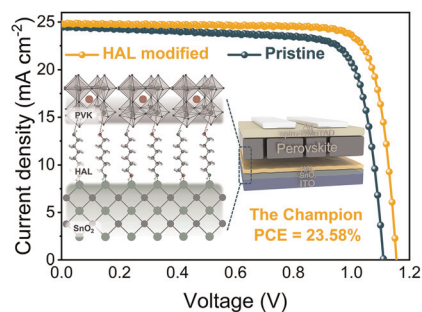
Chenyao Zhao, Bingbing Zhang,\* Xinyu Tian, Guoqiang Zhou,\* Jingjing Xu and Kui Wu\*



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### Enhanced performance of perovskite solar cells via a bilateral electron-donating passivator as a molecule bridge

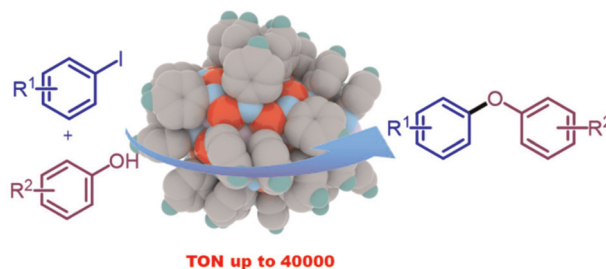
Weichun Pan, Pengxu Chen, Sijia Zhu, Ruowei He, Qingshui Zheng, Fengxian Cao, Zhang Lan, Jihuai Wu,\* Weihai Sun\* and Yunlong Li\*



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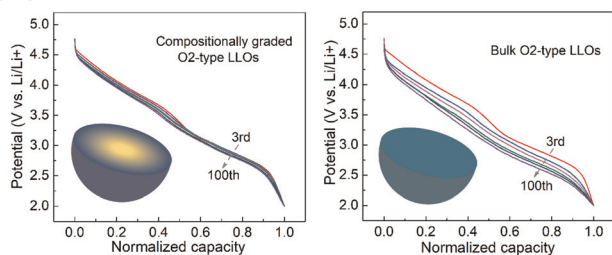
### Ligand-passivated Au/Cu nanoclusters with uncoordinated sites give reaction turnover numbers of up to $4 \times 10^4$

Lu Dong, Linke Yu, Xueli Sun, Xiongkai Tang, Xuexin You, Jiaqi Tang, Zi-Ang Nan, Dongxu Cao, Yanyuan Jia, Simin Li, Fengyu Li,\* Shuo Guo\* and Hui Shen\*



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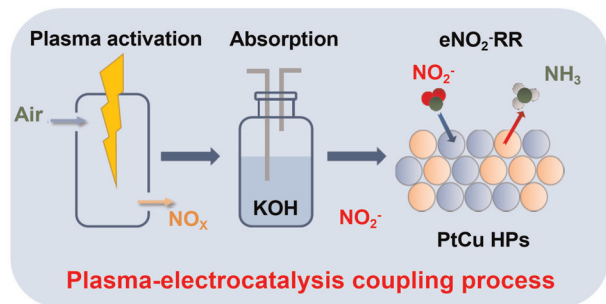
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### Boosting the voltage/capacity stability of O<sub>2</sub>-type Li-rich layered cathodes by tailoring transition metal distribution for Li-ion batteries

Peiyu Hou, Zhenbo Sun, Mohan Dong, Maosheng Gong, Feng Li\* and Xijin Xu\*

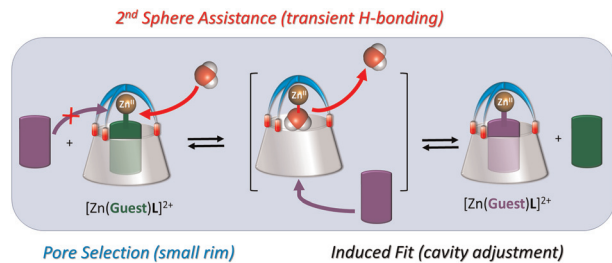
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### Sustainable ammonia synthesis from air by the integration of plasma and electrocatalysis techniques

Jun Ding, Wenyi Li,\* Qingqing Chen, Jiafang Liu, Shu Tang, Zhiwei Wang, Longwei Chen\* and Haimin Zhang\*

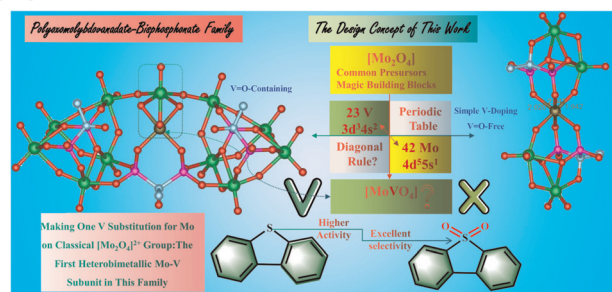
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### Guest exchange in a biomimetic Zn<sup>II</sup> cavity-complex: kinetic control by a catalytic water, through pore selection, 2<sup>nd</sup> sphere assistance, and induced-fit processes

N. Nyssen, N. Giraud, J. Wouters, I. Jabin, L. Leherte\* and O. Reinaud\*

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### Making one V<sup>IV</sup> substitution for Mo on classical [Mo<sub>2</sub>O<sub>4</sub>]<sup>2+</sup> group: the first heterobimetallic Mo–V subunit in polyoxomolybdate–bisphosphonate family

Xiangyu Ren, Baokuan Chen,\* Gang Zhang, Yanfeng Bi,\* Lingling Dai and Guoping Yang\*

