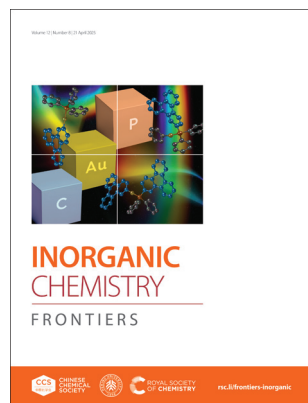


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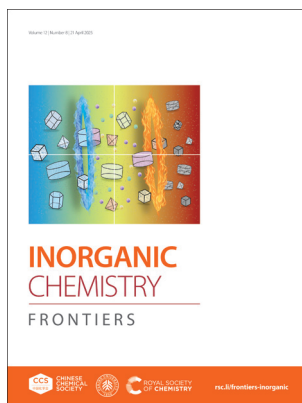
ISSN 2052-1553 CODEN ICFNAW 12(8) 2965–3336 (2025)



#### Cover

See Laura Rodríguez *et al.*, pp. 3041–3054.

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#### Inside cover

See Maryline G. Ferrier, Aiden A. Martin *et al.*, pp. 3055–3072.

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### EDITORIAL

2977

#### *Inorganic Chemistry Frontiers* Outstanding Paper Awards 2014–2023

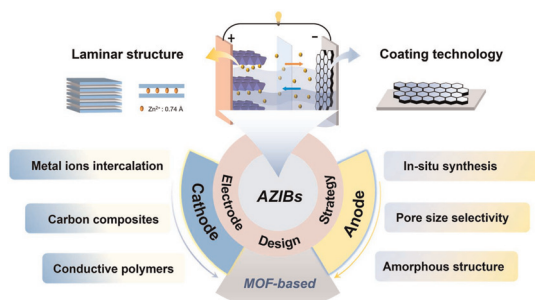


### REVIEWS

2988

#### MOF-based electrode materials for aqueous zinc-ion batteries: design strategy and future challenges

Yingying Wang, Tao Pan, Sicong Zhang, Qing Li\* and Huan Pang\*



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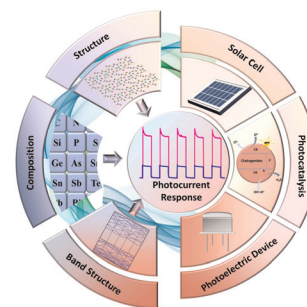
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## REVIEWS

3018

**Structural diversity and photocurrent responses of multi-component chalcogenidometalates**

Chang Liu,\* Wenjing Tian, Mao-Yin Ran, Pan Gao,\* Panpan Jing, Yi Liu and Hua Lin\*



## RESEARCH ARTICLES

3041

**Tuning luminescence in gold(I)-phosphine complexes: structural, photophysical, and theoretical insights**

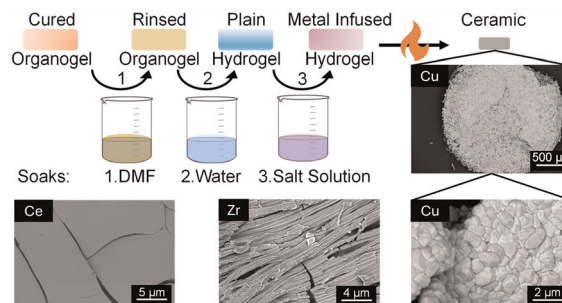
Anyie P. Atencio, Sergi Burguera, George Zhuchkov, Araceli de Aquino, Jas S. Ward, Kari Rissanen, João Carlos Lima, Inmaculada Angurell, Antonio Frontera and Laura Rodríguez\*



3055

**Precursor design for additive manufacturing of ceramics through hydrogel infusion**

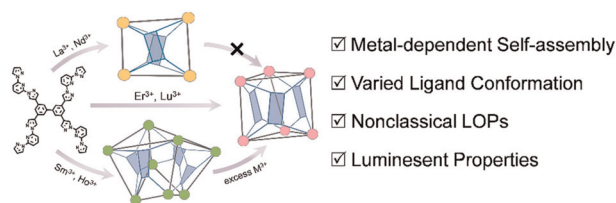
Natalie S. Yaw, Maryline G. Ferrier,\* R. Joey Griffiths, Joshua A. Hammons, Andrew J. Swift, Silvina A. Di Pietro, Jean-Baptiste Forien, Bradley C. Childs, Aiden A. Martin,\* Kiel S. Holliday, Xiaofeng Guo and Jason R. Jeffries



3073

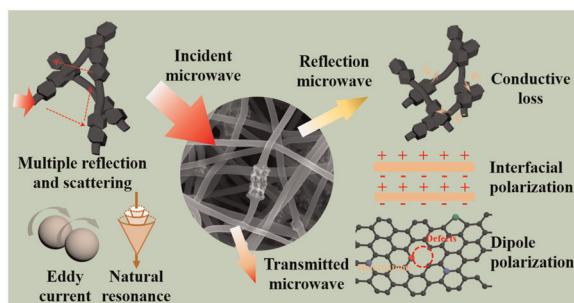
**Ionic radius-dependent self-assembly of lanthanide organic polyhedra: structural diversities and luminescent properties**

Jing Su, Fan Yin, Xiao-Fang Duan, Jing-Yao Zhou, Li-Peng Zhou, Chong-Bin Tian\* and Qing-Fu Sun\*



## RESEARCH ARTICLES

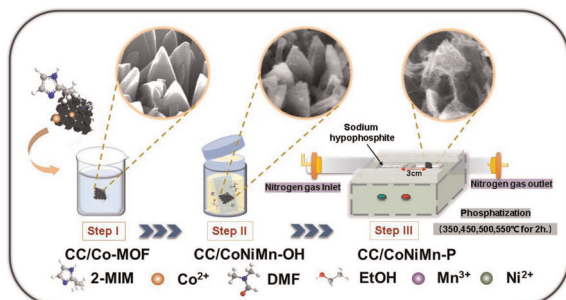
3083



### Enhanced interfacial polarization loss induced by hollow engineering of hollow alloyed CoFe-ZIF nanocages/carbon nanofibers for efficient microwave absorption

Dan Wu, Congmin Fan,\* Wusi Luo,\* Yingzhi Jin, Qinchuan He and Yiqun Wang\*

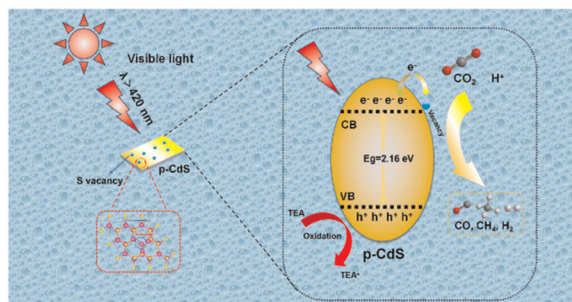
3098



### Conformal phosphating hierarchical interface of CC/CoNiMn-P for hybrid supercapacitors with high cycling stability

Dongxu Wang, Feng Zhu, Yupeng Dang, Jingze Luan, Mingquan Li, Zexiang Shen\* and Dandan Han\*

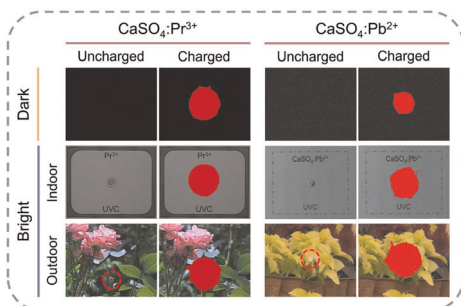
3110



### Morphological regulation of sulfur-vacancy-rich CdS for tunable CO<sub>2</sub> photoreduction under visible light irradiation

Lu-Wen Qiu, Wen-Ni Zhang, Lin-Ying Wang, Hao Li, Tian-Kuan Zhang, Mi-Xin Lin, Su-Qin Ci\* and Jian Lü\*

3118



### Long-lasting far-UVC persistent luminescence for solar-blind optical tagging

Xihui Shan, Yi Zhang, Xulong Lv and Yanjie Liang\*

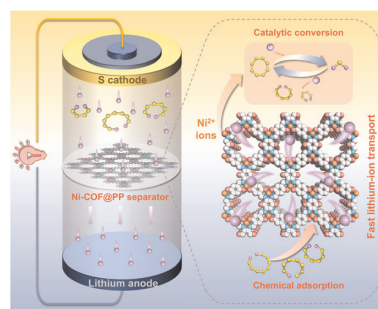


## RESEARCH ARTICLES

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### Multifunctional covalent organic framework with extended $\pi$ -d conjugated structure for lithium–sulfur batteries

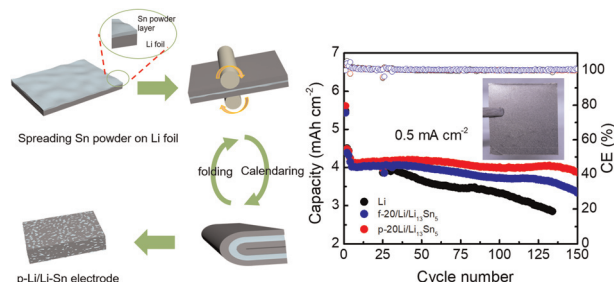
Manman Wu, Hao Zhang, Shaobo Cai, Xiandi Ma, Menggai Jiao, Yongzheng Fang, Yiyang Liu\* and Zhen Zhou\*



3137

### Tuning the Li–Sn alloy dispersity to improve the lithiophilicity of lithium metal anodes towards stable lithium metal batteries

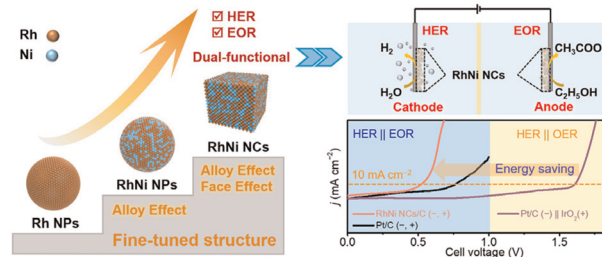
Junmou Du, Guocheng Li, Yuchen Tan, Xiangrui Duan, Tianchi Fan, Changhong Du, Anjian Zhou and Yu Wang\*



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### Dual-functional RhNi nanocubes for coupling electrocatalytic water reduction and alcohol oxidation for energy-saving hydrogen production

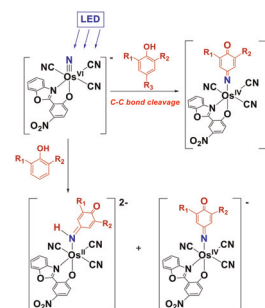
Hui-Zi Huang, Di Liu, Zhejiayi Zhu, Wenjing Tian, Li-Wei Chen, Jiani Li and An-Xiang Yin\*



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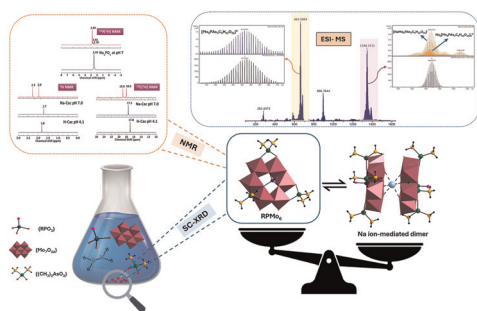
### Oxidation of phenols by the excited state of an osmium(VI) nitrido complex

Yu-Zhong Lu, Li-Xin Wang, Rui-Yue Qi, Jing Xiang\*, Ji-Yan Liu\* and Tai-Chu Lau\*



## RESEARCH ARTICLES

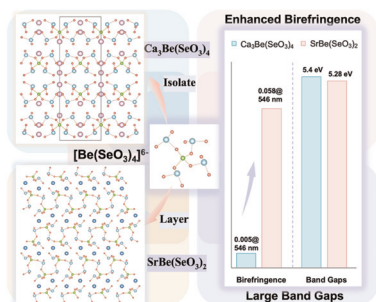
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### Organophosphonate- and dimethylarsinate-functionalized hexamolybdates(v) and their solution and gas phase properties

Vinaya Siby, Arun Pal, Bassem S. Bassil, Saurav Bhattacharya, Anusree Sundar, Juliane Oberstein, Damin Kim, Rizul Gupta, Alisher Kuanysh, Jana Hölscher, Dorothea Schmidt, Nikolai Kuhnert and Ulrich Kortz\*

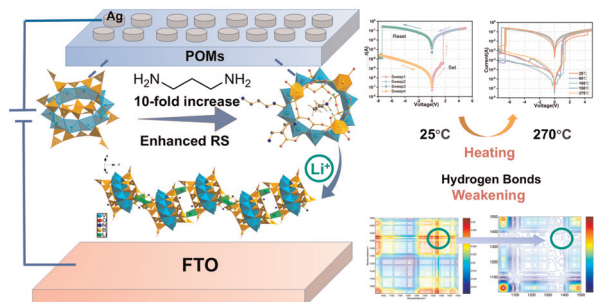
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### From $\text{Ca}_3\text{Be}(\text{SeO}_3)_4$ to $\text{SrBe}(\text{SeO}_3)_2$ : two unprecedented alkaline earth metal beryllium selenites with large band gaps and enhanced birefringence

Xinyi Wang, Xin Wen, Yuchen Yan, Jindong Chen, Guangsai Yang, Guang Peng\* and Ning Ye\*

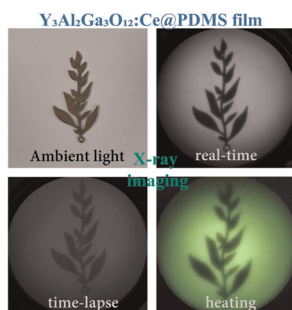
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### Enhancing the performance of polyoxometalate-based memristors in harsh environments based on hydrogen bonding and cooperative $\pi$ -conjugation interactions

Ming-Ze Meng, Yi-Qun Gao, Yi-Ping Chen,\* Hao-Hong Li and Xiao-Hui Huang\*

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### X-ray imaging and storage based on a NaF modified $\text{Y}_3\text{Al}_2\text{Ga}_3\text{O}_{12}:\text{Ce}$ phosphor

Linshuai Li, Gaoqing Chen, Fengluan You, Jingtao Zhao, Danyang Shen, Shisheng Lin, Lei Lei, Shiqing Xu\* and Su Zhou\*

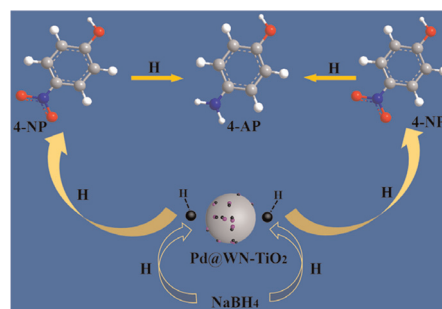


## RESEARCH ARTICLES

3205

### Improving hydrogenation of 4-nitrophenol using Pd catalysts homogeneously anchored on WN-TiO<sub>2</sub>: a synergistic interaction between WN and Pd nanoparticles

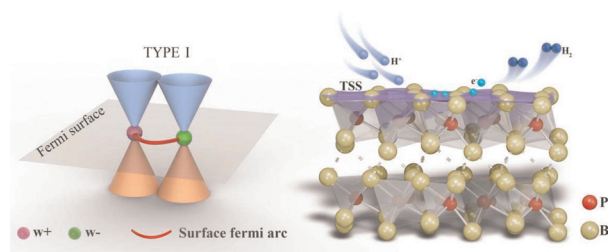
Yanping Dong, Xiqiang Tian,\* Enxin Liu, Shoulei Huang\* and Muhammad Zahid\*



3217

### Electrocatalytic hydrogen evolution and doping modification of Weyl semimetal PtBi<sub>2</sub> acidic solutions

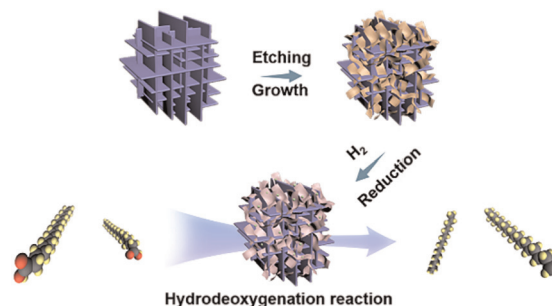
Yinghui Liu, Qiubo Chen, Yukai An, Hailong Qiu,\* Shihui Ma,\* Hongjun Liu, Zhanggui Hu and Yicheng Wu



3229

### Construction of Ni–Co alloy/zeolite nanosheet catalysts for the hydrodeoxygenation of fatty acids to alkanes

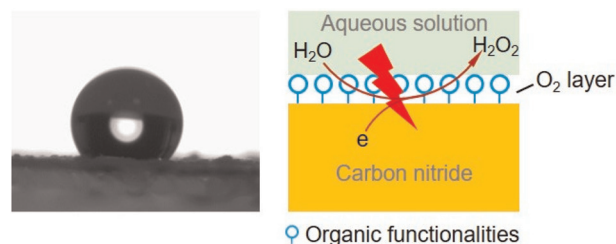
Ge Tian, Guangrui Chen, Risheng Bai, Guoju Yang, Zhenheng Diao, Buyuan Guan\* and Jihong Yu\*



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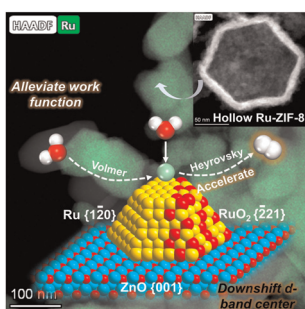
### Gas/solid/liquid triphase interface of carbon nitride for efficient photocatalytic H<sub>2</sub>O<sub>2</sub> production

Mao He, Xiaoying Peng, Suqin Wu,\* Bin Lei, Shuai Xiong, Qin Luo, Zongxing Tu, Xiaoxue Lin and Guiming Peng\*



## RESEARCH ARTICLES

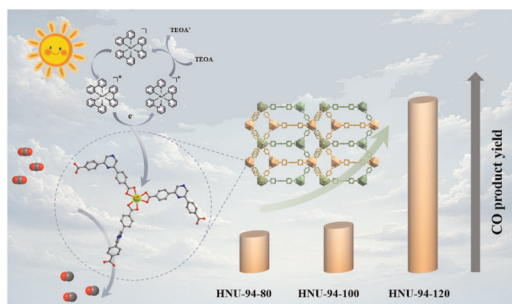
3246



### Work function and d-band center dual-modulation in hollow Ru-ZIF-8-derived Ru<sup>0</sup>-RuO<sub>2</sub>-ZnO heterointerfaces for boosted electrochemical hydrogen evolution

Xiaoxin Xu, Ruidong Shi, Yuanting Li, Xue Wang and Gongbing Zhou\*

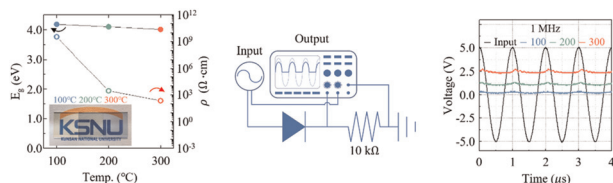
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### Temperature-driven growth of uranyl-organic frameworks for efficient photocatalytic CO<sub>2</sub> reduction

Lu-Yao Wang, Guang Che, Ya-Ru Gong,\* Wei-Ting Yang,\* Yuan Lin, Jiao-Rong Liu, Shu-Yu Chen, Meng-Dan Xiao, Xu-Dong Tian and Zhong-Min Su\*

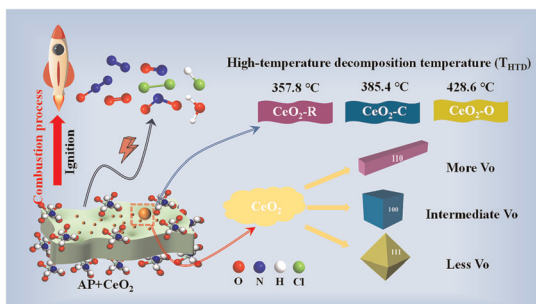
3270



### Fabrication of a p-Ni<sub>0.8</sub>Cu<sub>0.2</sub>WO<sub>4</sub>/n-Si heterojunction diode and its 1 MHz rectifier operation

Inseo Kim, Sora Yun, Hyun Jae Kim, JungYup Yang, Kyu Hyoung Lee, Min Suk Oh\* and Kimoon Lee\*

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### The facet-dependent catalytic performance of CeO<sub>2</sub> nanocatalysts in the decomposition of ammonium perchlorate

Miao Zhang, Huixiang Wang, Shoufeng Xue, Wenting Lv, Ruisheng Qin, Weiwei Pan and Baoliang Lv\*

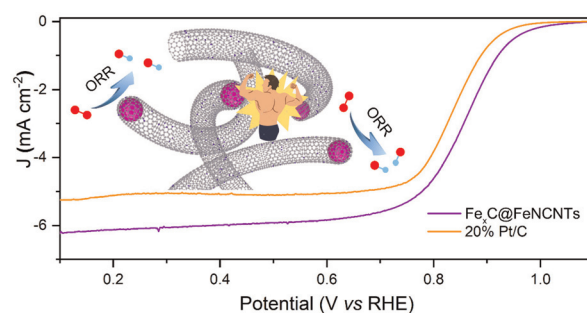


## RESEARCH ARTICLES

3285

### Fe and N co-doped carbon nanotube decorated with $\text{Fe}_x\text{C}$ derived by multiligand coordination self-assembly bimetallic complex for highly efficient oxygen reduction reaction

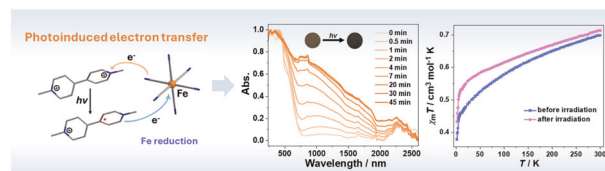
Qiulin Li, Zhiqin Deng, Yan-Dong Ma, Yangyang Tan, Ruilin He, Qianwen Chen, Shu-Juan Bao\* and Heng Liu\*



3294

### Tuning photochromism and photomagnetism via diverse bimetallic cyanido viologen hybrid materials

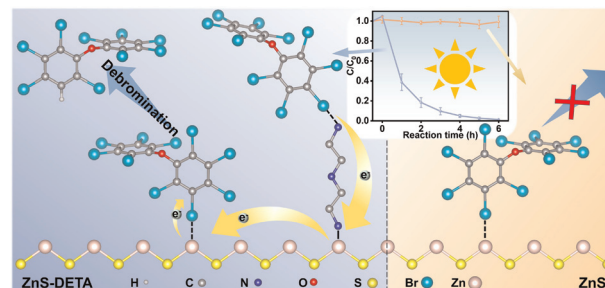
Xin-Xin Jin, Zhen Shao, Peng-Xiang Fu, Yi-Fan Deng, Qi Sui, Yi-Han Wang, Jin Xiong,\* Bing-Wu Wang,\* Zhe-Ming Wang and Song Gao\*



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### N...Br halogen bond enhanced visible-light degradation of decabromodiphenyl ether on organic amine intercalated zinc sulfide

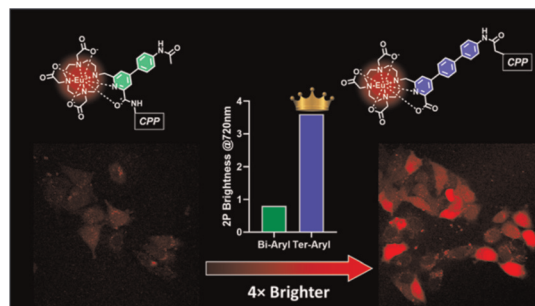
Penglei Xu, Huiluan Qin, Chen Wang, Feiyang Zhang, Zhixin Yu, Ran Duan, Chuncheng Chen, Qi Shen\* and Chunyan Sun\*



3313

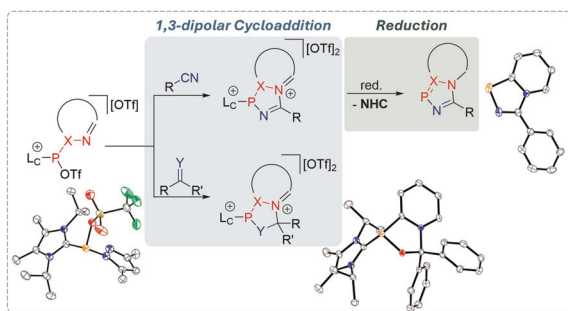
### Amido/alkoxy-aryl-aryl-picolinate push-pull antennas for two-photon sensitization of $\text{Eu}^{3+}$ luminescence

Baptiste Chartier, Alexei Grichine, Lucile Bridou, Adam Nhari, Guillaume Micouin, Akos Banyasz, Didier Boturyn, Jennifer K. Molloy, Sule Erbek, Véronique Martel-Frchet, Olivier Maury\* and Olivier Sènèque\*



## RESEARCH ARTICLES

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### 1,3-Dipolar cycloaddition reactions of triflatophosphanes to afford functionalized azaphospholium salts and azaphospholes

Jannis Fidelius, Kai Schwedtmann, Sebastian Schellhammer, Rongjuan Huang, Felix Hennesdorf, Moritz Fink, Jan Haberstroh, Antonio Bauzá, Antonio Frontera, Sebastian Reineke and Jan J. Weigand\*

## CORRECTION

3334

### Correction: Mn doping for regulating the electronic structure of $\text{Co}_3\text{O}_4$ to construct dual active sites for oxygen electrocatalysis

Ziyi Shui,\* Huiying Tian, Hang Mu, Liuyun Xu, Xiaoming Gao\* and Xi Chen\*

