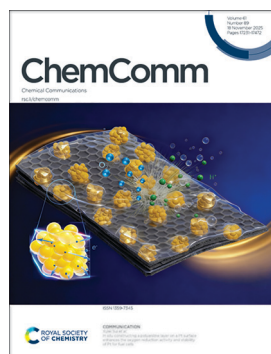


## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(89) 17231-17472 (2025)



### Cover

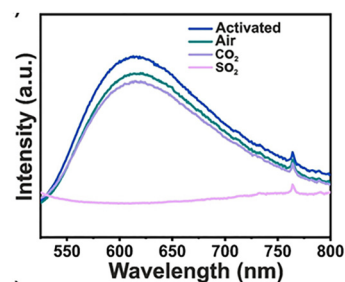
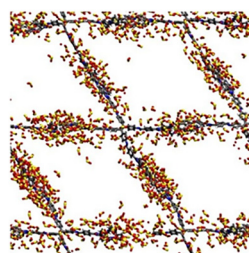
See Xulei Sui *et al.*, pp. 17360-17363. Image reproduced by permission of Xulei Sui from *Chem. Commun.*, 2025, 61, 17360.

## HIGHLIGHTS

17244

### Supramolecular chemistry-based materials on SO<sub>2</sub> capture: recent advances

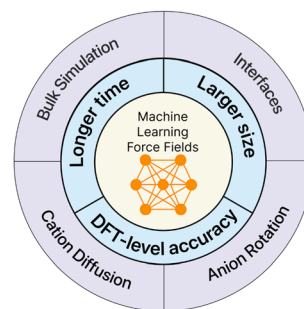
Antonio Hernández-Monsalvo, Pablo Marín-Rosas, Víctor M. Trejos, Nancy E. Dívila-Guzmán, Jose Antonio de los Reyes, Diego Solis-Ibarra, Enrique Lima,\* Ricardo A. Peralta\* and Ilich A. Ibarra\*



17254

### Data-driven atomistic modeling of crystalline and glassy solid-state electrolytes

Rui Zhou, Kun Luo and Qi An\*



# RSC Applied Polymers

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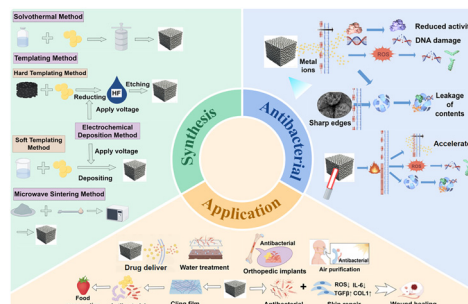
Fundamental questions  
Elemental answers

## HIGHLIGHTS

17271

### Research progress in antibacterial application based on metal porous materials

Bingbing Chen, Jing Hou, Baiyang Liu, Weiyang Gong, Xinran Yang, Zheming Yang\* and Zengchao Guo\*

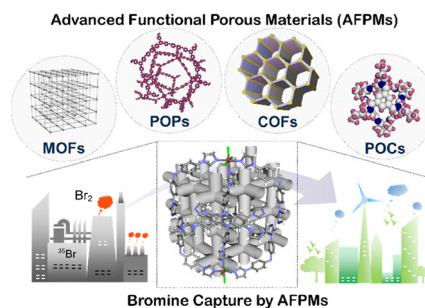


## FEATURE ARTICLES

17290

### Bromine sequestration by advanced functional porous materials

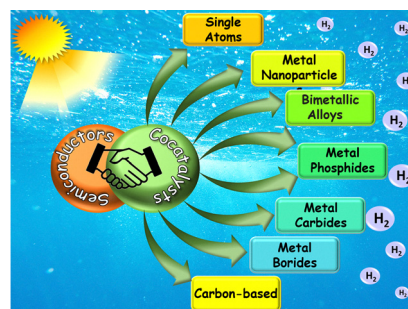
Sahel Fajal and Sujit K. Ghosh\*



17302

### Semiconductor photocatalysts for hydrogen evolution: critical role of cocatalysts in enhancing performance

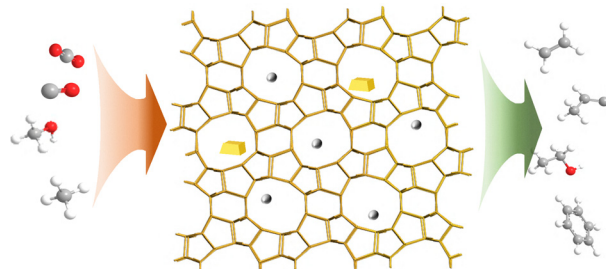
Bhagyashree Priyadarshini Mishra,\* Jasbir Dahiya and Venkata Krishnan\*



17330

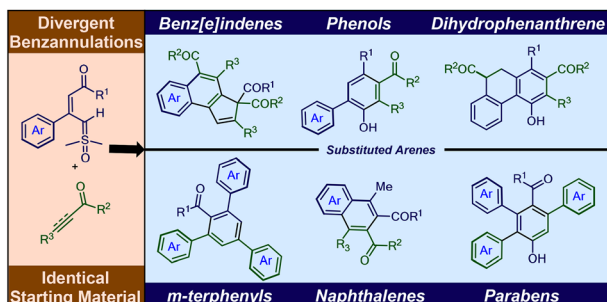
### Recent progress in efficient zeolite-based catalysts for catalytic conversion of C<sub>1</sub> molecules

Yaqi Lai, Feng Li, Xiangju Meng\* and Feng-Shou Xiao\*



## FEATURE ARTICLES

17345

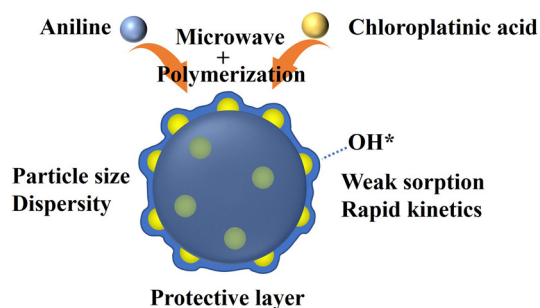


## Versatile benzannulation strategies with vinyl sulfoxonium ylides and electron-deficient alkenes/alkynes

Daksh Singh Davas and Janakiram Vaitla\*

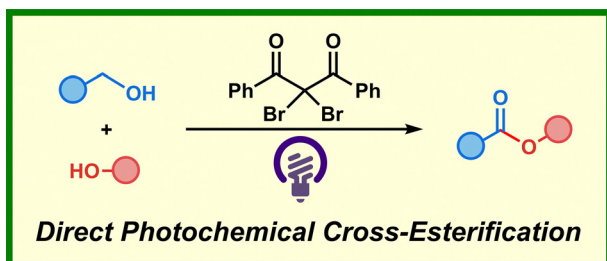
## COMMUNICATIONS

17360

*In situ* constructing a polyaniline layer on a Pt surface enhances the oxygen reduction activity and stability of Pt for fuel cells

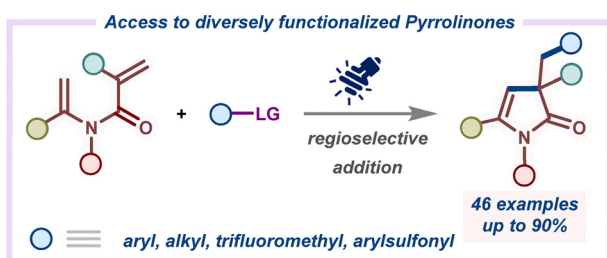
Anyu Li, Yuzhe Liu, Zhen Zhang, Hong Chen, He Qi, Zhenbo Wang and Xulei Sui\*

17364

The direct photochemical cross-esterification of alcohols *via* site-selective C–H bromination

Atsuya Miyamoto, Hiroyoshi Takamura, Isao Kadota\* and Kenta Tanaka\*

17368



## Visible-light-driven cascade cyclization: a modular approach to functionalized 4-pyrrolin-2-ones

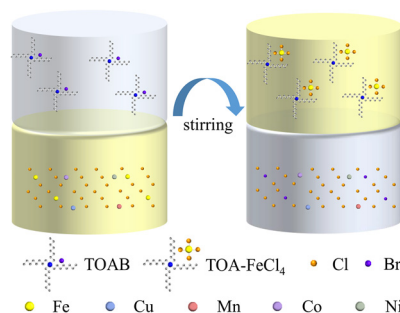
Rupashri Dash, Karan Ramdas Thombare, Anindya Das and Sandip Murarka\*



17372

### Tetra-*n*-octylammonium bromide-mediated rapid, highly efficient, selective, and recyclable extraction of Fe(III) from acidic chloride media

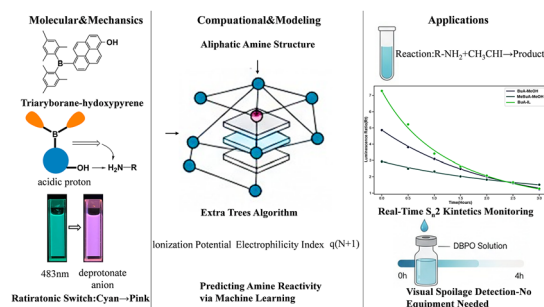
Binghao Zhang, Feng Guo, Hui Liu, Dong Chen, Shaonan Tian\* and Jun Yang\*



17376

### A data-driven fluorescent platform for monitoring amine dynamics in reactions

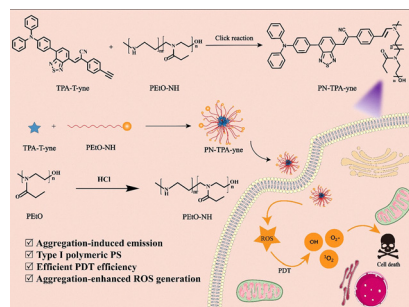
Zhen Liu, Mingjun Wang and Shayu Li\*



17380

### A poly(2-ethyl-2-oxazoline)-based AIE-active photosensitizer with aggregation-enhanced reactive oxygen species for efficient photodynamic therapy

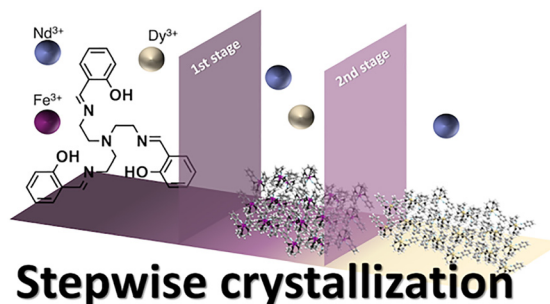
Yuan Wang, Yuqin Xu, Jiawei Gu, Yanlong Zhong, Duoduo Wei, Meiyong Liu, Qianyong Cao,\* Shaorong Huang,\* Xiaoyong Zhang\* and Yen Wei



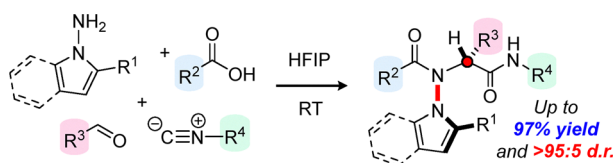
17384

### Stepwise selective crystallization of Fe and Dy complexes from a Fe/Nd/Dy mixture: separation despite charge and solubility similarity

Natsuki Hasegawa, Akiho Yanai, Hinako Masaki, Akira Kirishima, Ryo Tsunashima and Atsuko Masuya-Suzuki\*



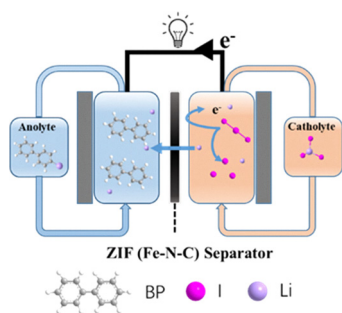
17388

Class 3 N-N atropisomeric peptide analogues ( $\Delta G^\ddagger$  up 144 kJ/mol)

### A multicomponent approach for the stereoselective synthesis of atropisomeric N–N peptide analogues

Natalie J. Roper, George M. Hardy, Jack M. Wootton, Paul G. Waddell, James Wilson and Roly J. Armstrong\*

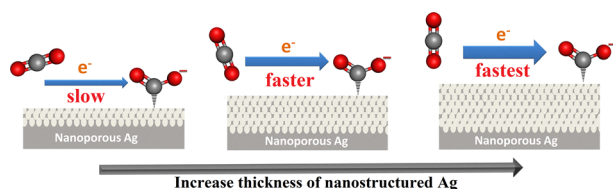
17392



### A low-potential lithium-biphenyl anolyte for high-performance nonaqueous redox flow batteries with a metal–organic-framework-based separator

Chenyang Shao, Junpeng Li, Yunzhan Liu and Hongning Chen\*

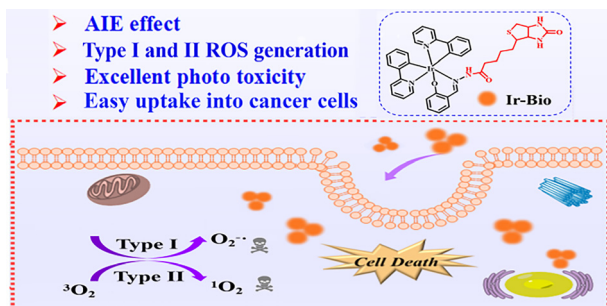
17396



### Tunable charge transfer for electrocatalytic CO<sub>2</sub> reduction on Ag<sub>2</sub>CO<sub>3</sub>-derived nanostructured Ag

Tiantian Wu, Zerui Zhang, Hangyu Bu, ChunChi Guo, Beining Xu and Ming Ma\*

17400



### AIE Ir(III) complex conjugated with biotin as a photosensitizer for enhanced photodynamic anticancer therapy

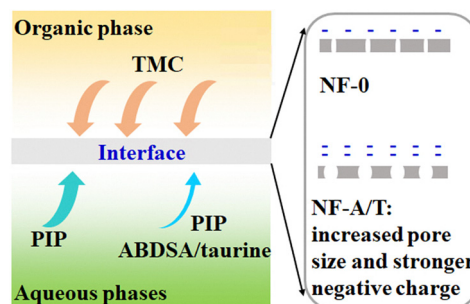
Zihan Wu, Runlin Wang, Chunguang Shi, Dongxia Zhu\* and Martin R. Bryce\*



17404

### A reactive terminator dual-tuning polyamide structure for high-performance nanofiltration membranes

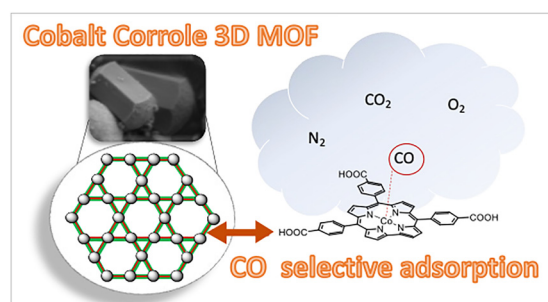
Hongchang Pei, Yan Zou, Haisong Zhao, Ze Meng, Hongsen Hui, Lei Zhang\* and Xianhui Li\*



17408

### A 3D cobalt corrole-based Zr-MOF for the selective adsorption of carbon monoxide

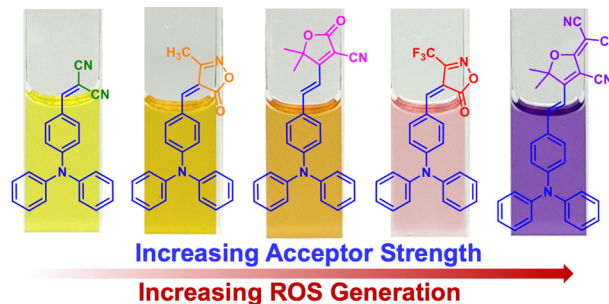
Ken Rapady, Jian Yang, Stéphane Brandès, Nicolas Desbois, Laurie André\* and Claude P. Gros\*



17412

### Acceptor engineering in triphenylamine-based push-pull dyes for enhanced photosensitization

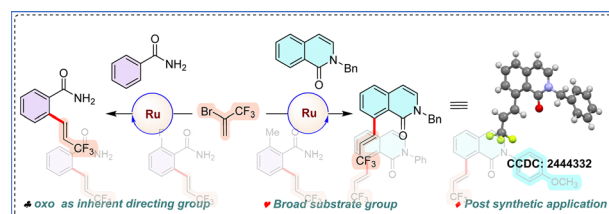
Yebeen Choi, Yeonkyeong Lee, Dayoung Kang and Youngmi Kim\*



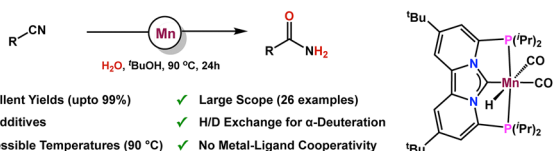
17416

### Ru(II)-catalysed, inherent-directing-group-enabled site-selective C–H vinyl trifluoromethylation of isoquinolones and benzamides

Sachin, Tamanna Sharma, Shourabh Rav and Upendra Sharma\*



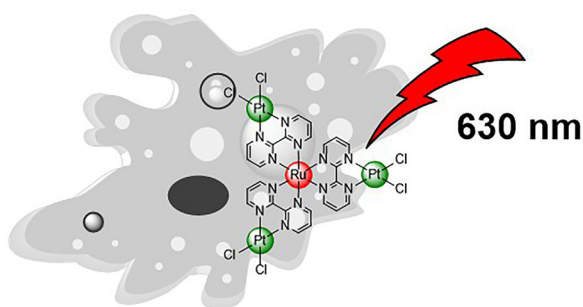
17420



### Nitrile hydration and $\alpha$ -deuteration of amides catalyzed by a PC<sub>NHC</sub>P Mn(I) pincer complex

Rohit Kamte, Ranjeesh Thenarukandiyil, Kartick Dey, Natalia Fridman and Graham de Ruiter\*

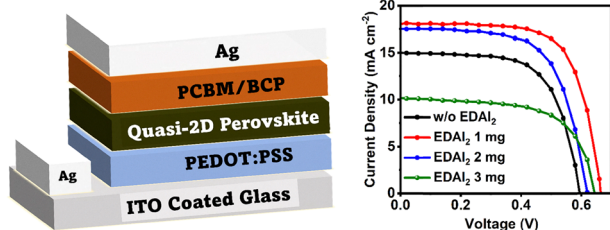
17424



### Red-light excitation of a Ru(II)–Pt(II) tetranuclear complex for combined photoactivated chemotherapy and photodynamic therapy

Pia Siekierski, Eleni Michaltsis, Julia Schleisiek, Nicolás Montesdeoca and Johannes Karges\*

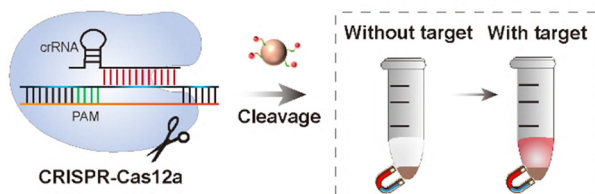
17428



### Boosting the efficiency of Ruddlesden–Popper tin perovskite solar cells through ethylenediamine dihydroiodide-mediated phase modulation

Jorim Okoth Obila, Chunging Li, Masatoshi Yanagida, Yasuhiro Shirai and Yuko Takeoka\*

17432



### One-step naked-eye fluorescence detection of viruses using quantum dot-magnetic beads coupled with CRISPR/Cas12a

Ai-Xin Ma, Qing Zhang, Ming-Yu Zhang, Shu-Lin Liu, Zhi-Gang Wang and Dai-Wen Pang\*

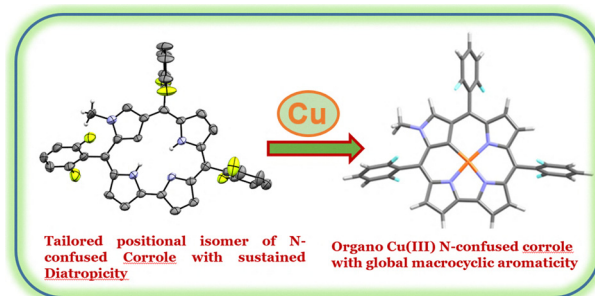


## COMMUNICATIONS

17436

### Targeted synthesis of a positional isomer of aromatic *N*-methyl *N*-confused corrole and its organocopper(III) complex

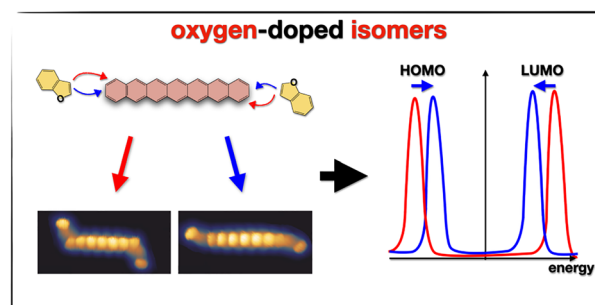
Anirban Panua, Gunasekaran Velmurugan, Peter Comba\* and Harapriya Rath\*



17440

### On-surface synthesis of oxygen-doped analogues of higher acenes

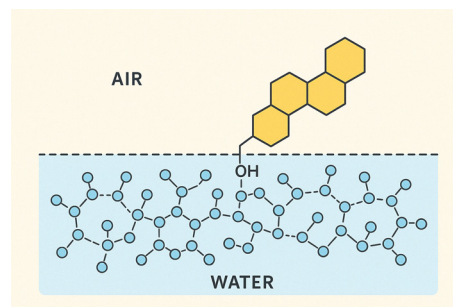
Irena Padniuk, Otilia Stoica, Rafal Zuzak, Remi Blicck, Mariusz Krawiec,\* Antonio M. Echavarren\* and Szymon Godlewski\*



17444

### Cavity formation energy drives the accumulation of amphiphiles at the air–water interface

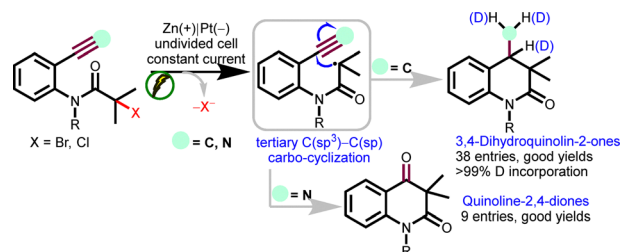
Bun Chan,\* Nur Afiqah Ahmad and Junming Ho\*



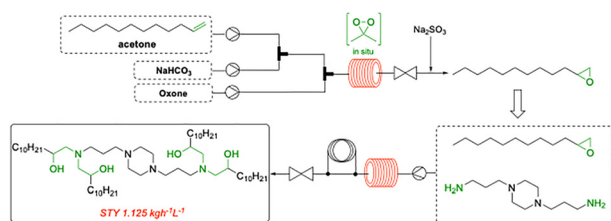
17448

### Electro-carbo-cyclization of alkyne-, alkene-, and nitrile-tethered $\alpha$ -halocarbonyls

Subhadeep Ghosh, Sumit Biswas and Indrajit Das\*



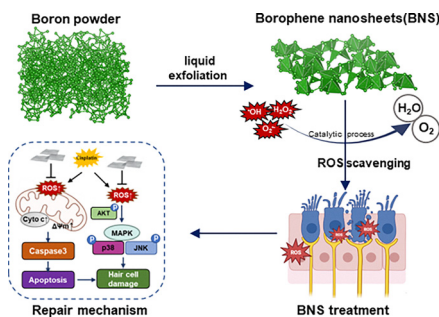
17452



### A two-step continuous flow synthesis of multi-tail ionizable lipids

Nina Bozinovic, Graham Atwood, K. Cory MacLeod,\*  
Jean-François Vincent-Rocan, Vanessa Kairouz and  
André B. Charette\*

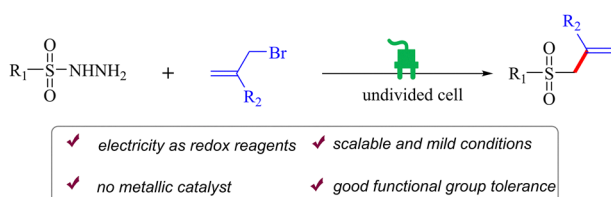
17456



### Borophene nanosheets bearing antioxidative enzyme-like activities for protection against cisplatin-induced hearing loss

Xiaochan Lu, Yanmei Mo, Na Yin, Jiaqi Zhao,  
Jingxian Zhao, Hongyi Hu\* and Bin Zhang\*

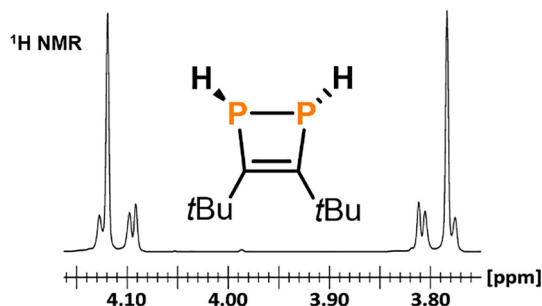
17460



### Electrosynthetic access to allyl sulfones via sulfonylation of allyl bromides

Xinyu Liu, Wei Jin, Zhenpu Wang, Fei Xue,\*  
Mengtao Ma\* and Weiwei Yao\*

17464



### A radical path to 1,2-diphosphacyclobutenes

Maria K. Uttendorfer, Lisa M. Schneider, Lukas S. Diener,  
Gabriele Hiermeier, Gábor Balázs and Robert Wolf\*



## CORRECTIONS

17468

**Correction: Diphanes: cage-like compounds featuring two cavities**

Jun Shen and Shaodong Zhang\*

17469

**Correction: A low-dimensional ferrocenium lead-iodide perovskite ferroelastic with a narrow band gap**

Zhe-Kun Xu and Zhong-Xia Wang\*

17470

**Correction: A dual-site doping strategy to enhance the sodium storage performance of an O3-type layered sodium oxide cathode**

Zhuoming Liu, You Shi, Xiaobing Huang,\* Lingxuan Yao, Ning Ding, Yougen Tang, Haiyan Wang and Dan Sun\*

