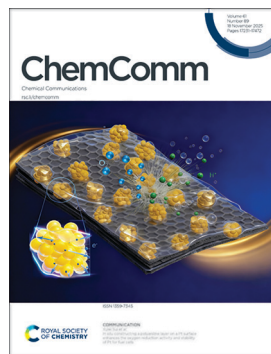


IN THIS ISSUE

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



Cover

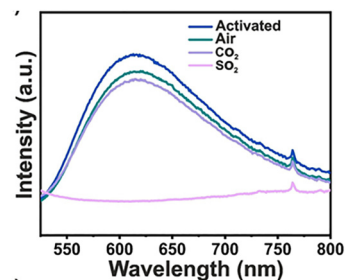
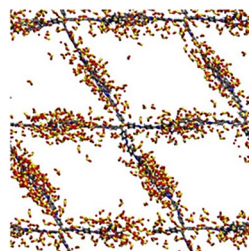
See Xulei Sui *et al.*, pp. 17360–17363. Image reproduced by permission of Xulei Sui from *Chem. Commun.*, 2025, 61, 17360.

HIGHLIGHTS

17244

Supramolecular chemistry-based materials on SO₂ capture: recent advances

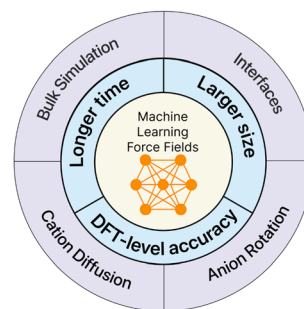
Antonio Hernández-Monsalvo, Pablo Marín-Rosas, Víctor M. Trejos, Nancy E. Dívila-Guzmán, Jose Antonio de los Reyes, Diego Solis-Ibarra, Enrique Lima,* Ricardo A. Peralta* and Ilich A. Ibarra*



17254

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

Rui Zhou, Kun Luo and Qi An*



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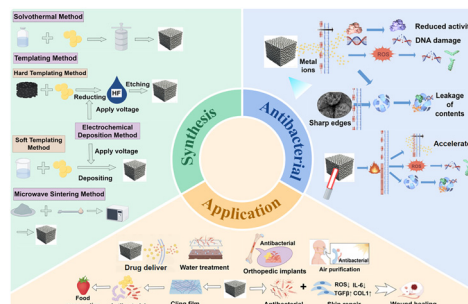
Fundamental questions
Elemental answers

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*

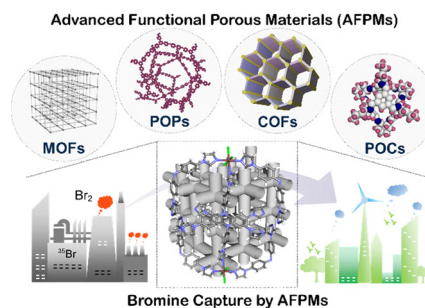


FEATURE ARTICLES

17290

Bromine sequestration by advanced functional porous materials

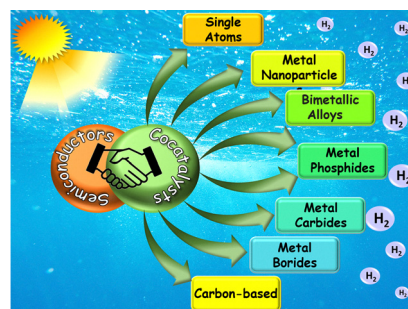
Sahel Fajal and Sujit K. Ghosh*



17302

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

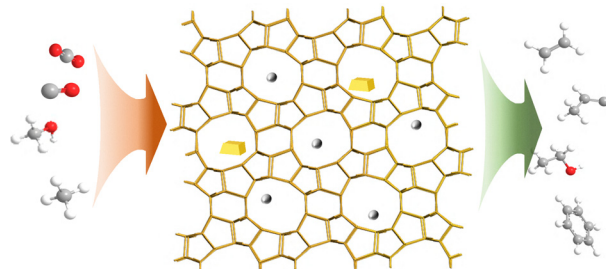
Bhagyashree Priyadarshini Mishra,* Jasbir Dahiya and Venkata Krishnan*



17330

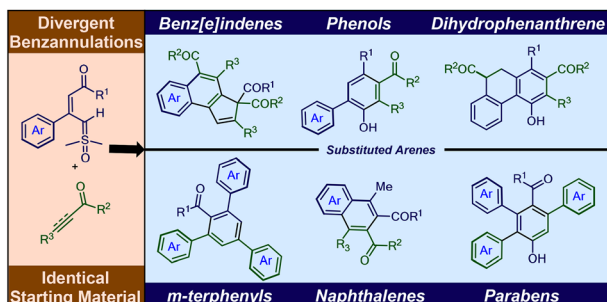
Recent progress in efficient zeolite-based catalysts for catalytic conversion of C₁ molecules

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



FEATURE ARTICLES

17345

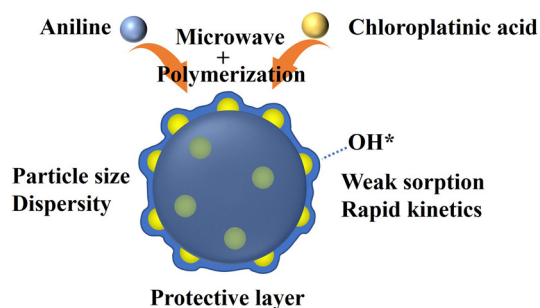


Versatile benzannulation strategies with vinyl sulfoxonium ylides and electron-deficient alkenes/alkynes

Daksh Singh Davas and Janakiram Vaitla*

COMMUNICATIONS

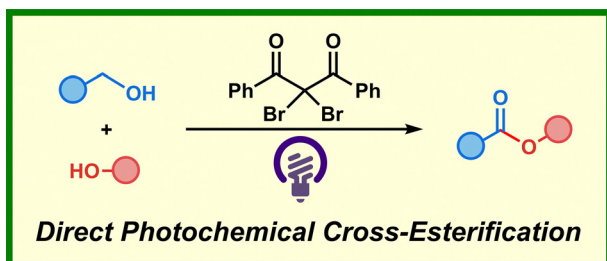
17360



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*

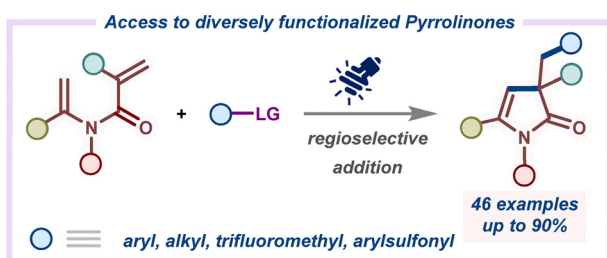
17364



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

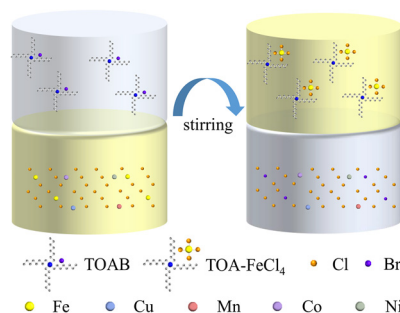
Rupashri Dash, Karan Ramdas Thombare, Anindya Das and Sandip Murarka*



17372

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

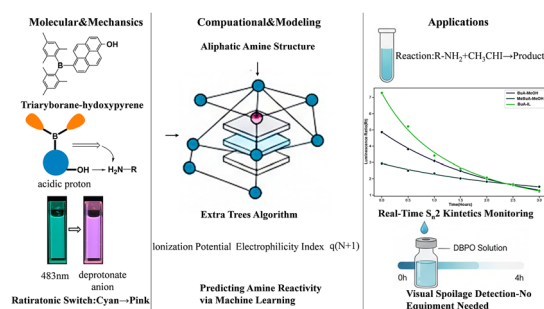
Binghao Zhang, Feng Guo, Hui Liu, Dong Chen, Shaonan Tian* and Jun Yang*



17376

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

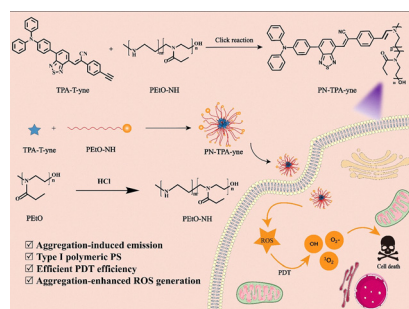
Zhen Liu, Mingjun Wang and Shayu Li*



17380

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

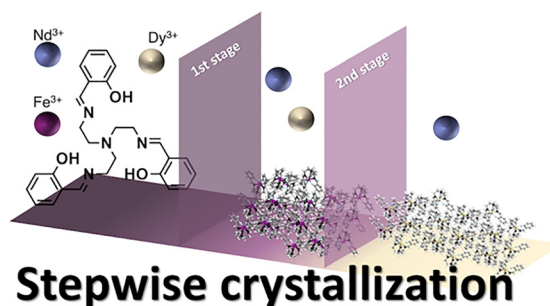
Yuan Wang, Yuqin Xu, Jiawei Gu, Yanlong Zhong, Duoduo Wei, Meiyong Liu, Qianyong Cao,* Shaorong Huang,* Xiaoyong Zhang* and Yen Wei



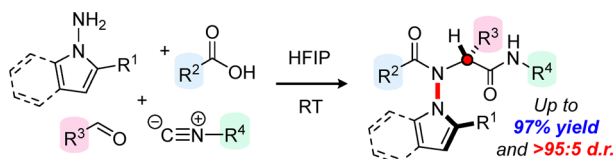
17384

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*



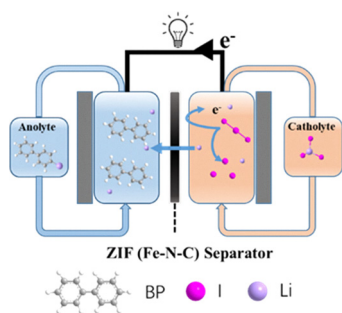
17388



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*

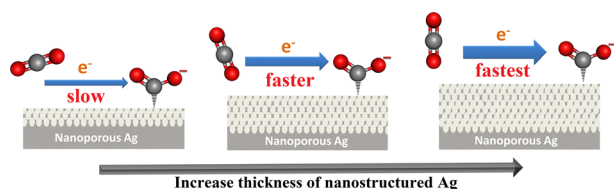
17392



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*

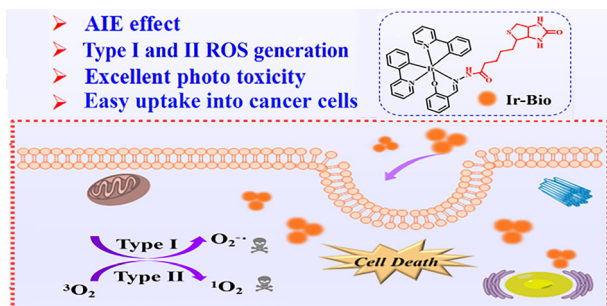
17396



Tunable charge transfer for electrocatalytic CO₂ reduction on Ag₂CO₃-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

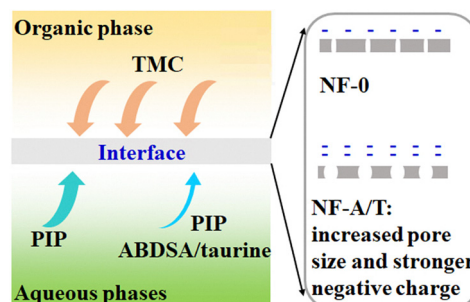
Zihan Wu, Runlin Wang, Chunguang Shi, Dongxia Zhu* and Martin R. Bryce*



17404

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

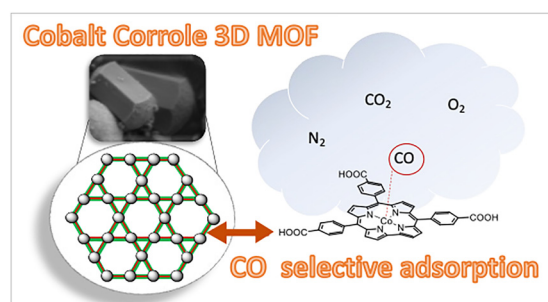
Hongchang Pei, Yan Zou, Haisong Zhao, Ze Meng, Hongsen Hui, Lei Zhang* and Xianhui Li*



17408

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

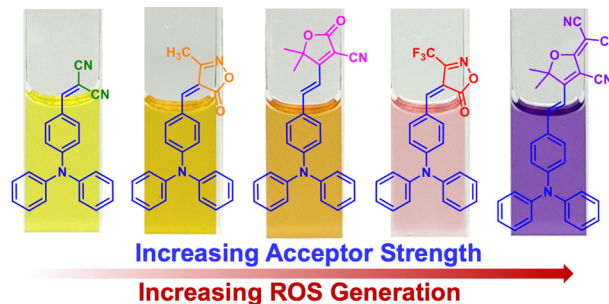
Ken Rapady, Jian Yang, Stéphane Brandès, Nicolas Desbois, Laurie André* and Claude P. Gros*



17412

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

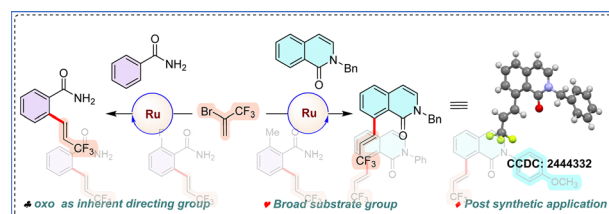
Yebeen Choi, Yeonkyeong Lee, Dayoung Kang and Youngmi Kim*



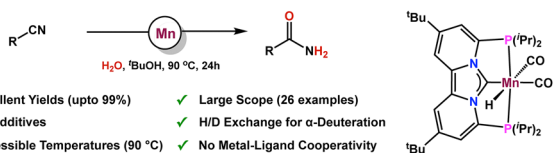
17416

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*



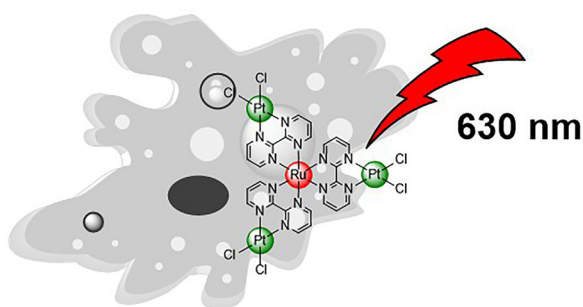
17420



Nitrile hydration and α -deuteration of amides catalyzed by a PC_{NHC}P Mn(I) pincer complex

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

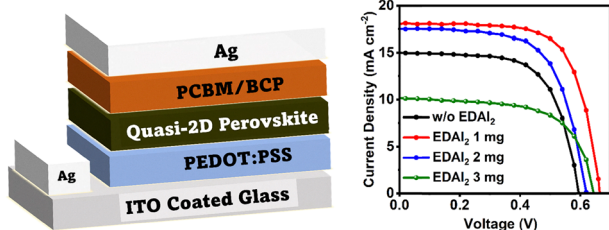
17424



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*

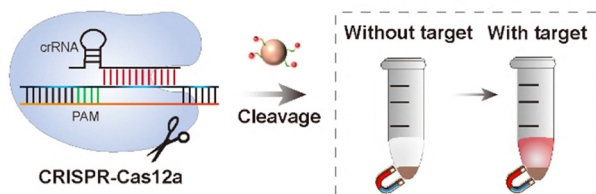
17428



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*

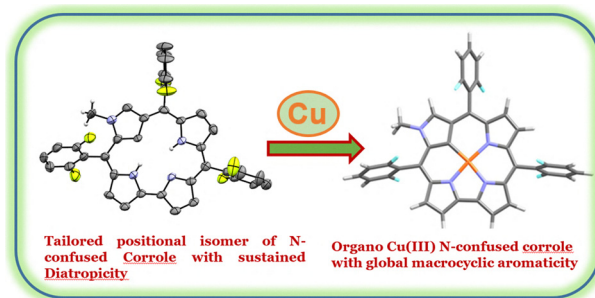


COMMUNICATIONS

17436

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

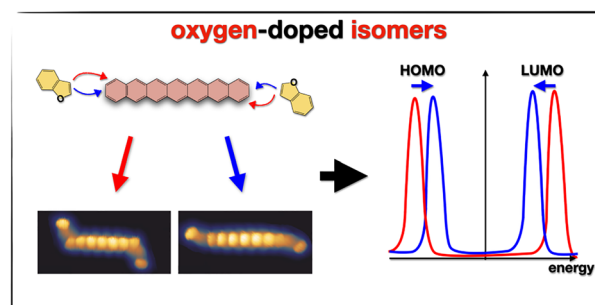
Anirban Panua, Gunasekaran Velmurugan, Peter Comba* and Harapriya Rath*



17440

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

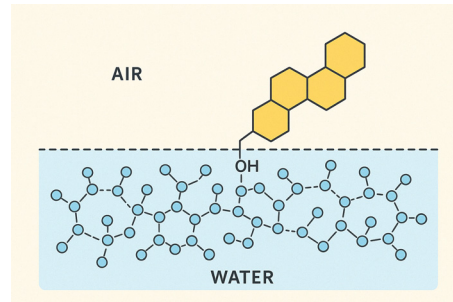
Irena Padniuk, Otilia Stoica, Rafal Zuzak, Remi Blicck, Mariusz Krawiec,* Antonio M. Echavarren* and Szymon Godlewski*



17444

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

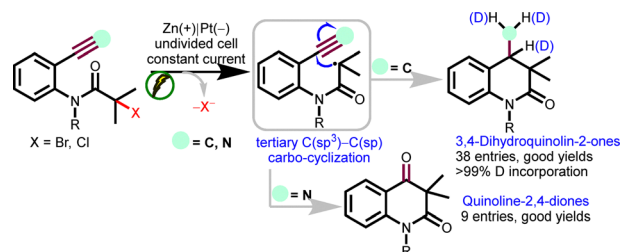
Bun Chan,* Nur Afiqah Ahmad and Junming Ho*



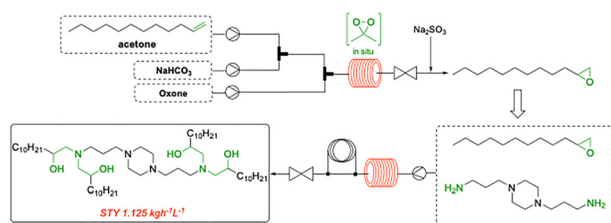
17448

Electro-carbo-cyclization of alkyne-, alkene-, and nitrile-tethered α -halocarbonyls

Subhadeep Ghosh, Sumit Biswas and Indrajit Das*



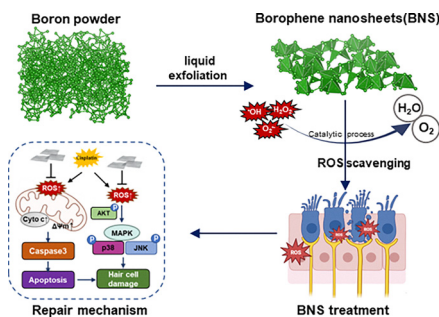
17452



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*

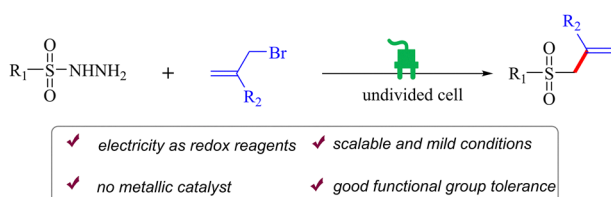
17456



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*

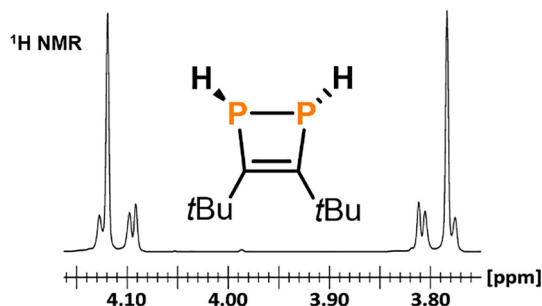
17460



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*

