

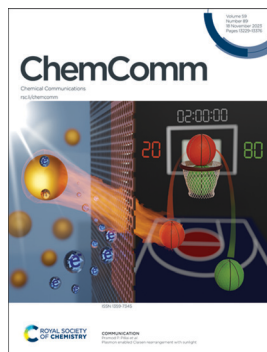
## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(89) 13229-13376 (2023)



### Cover

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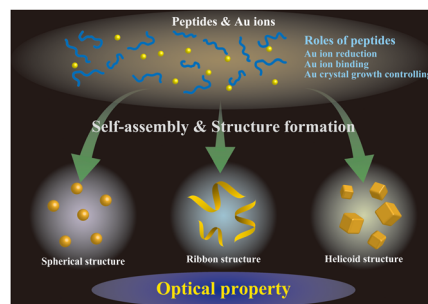
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## HIGHLIGHT

13239

### Shape control of Au nanostructures using peptides for biotechnological applications

Shuhei Yoshida, Kin-ya Tomizaki and Kenji Usui\*

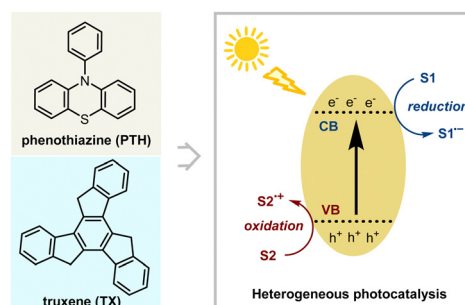


## FEATURE ARTICLES

13245

### Optoelectronic materials as emerging photocatalysts: opportunities in sustainable organic synthesis

Cen Zhou, Bohang An, Feng Lan and Xiao Zhang\*



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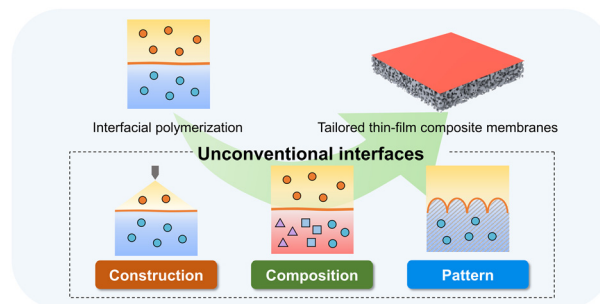


## FEATURE ARTICLES

13258

### Interfacial polymerization at unconventional interfaces: an emerging strategy to tailor thin-film composite membranes

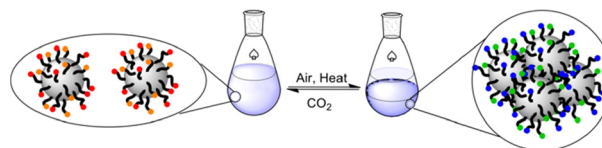
Jia-Hui Xin, Hong-Yu Fan, Bian-Bian Guo, Hao-Cheng Yang,\* Cheng-Ye Zhu, Chao Zhang and Zhi-Kang Xu\*



13272

### CO<sub>2</sub>-Switchable colloids

Michael F. Cunningham\* and Philip G. Jessop

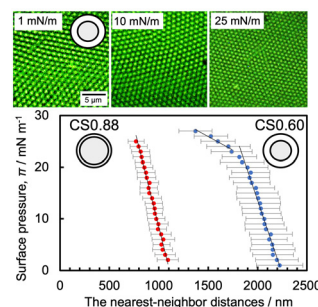


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13289

### The compression of deformed microgels at an air/water interface

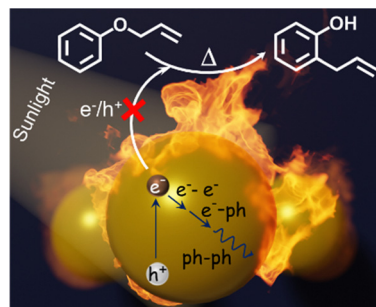
Takahisa Kawamoto, Kohei Yanagi, Yuichiro Nishizawa, Haruka Minato and Daisuke Suzuki\*



13293

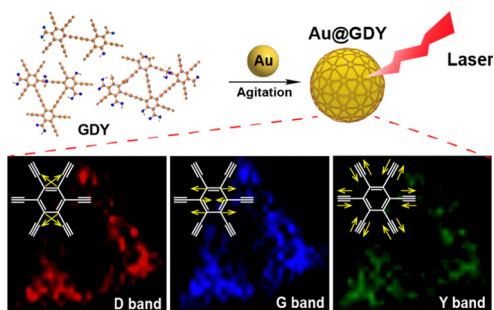
### Plasmon enabled Claisen rearrangement with sunlight

Radha Krishna Kashyap, Shreya Tyagi and Pramod P. Pillai\*



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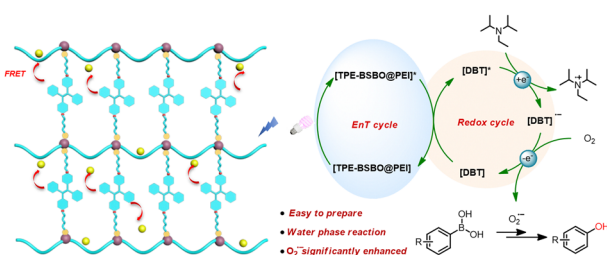
13297



### An intelligent alkyne-tag for Raman imaging of living cells: graphdiyne-encapsulated Au nanospheres

Yutong Tao, Wenyu Jia, Ningning Fang, Yuan Wang, Hui Zhang, Ping Wu\* and Chenxin Cai

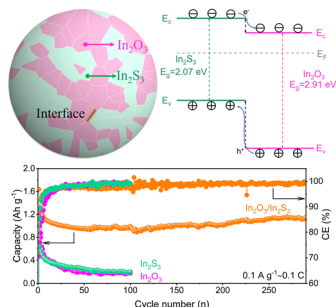
13301



### Construction of an efficient artificial light-harvesting system based on hyperbranched polyethyleneimine and improvement of photocatalytic performance

Xin-Long Li, Rong-Zhen Zhang, Kai-Kai Niu,\* Rui-Zhi Dong, Hui Liu, Sheng-Sheng Yu, Yue-Bo Wang\* and Ling-Bao Xing\*

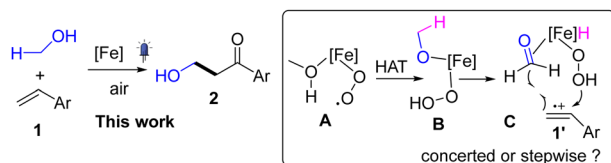
13305



### Accelerating ion/electron transport by engineering an indium-based heterostructure toward large and reversible lithium storage

Shuoyu Wang, Yuanxia Zhang, Ru-Ning Tian, Mengnuo Fu, Jingjing Chen, Dajian Wang, Chenlong Dong\* and Zhiyong Mao\*

13309



### Iron-catalyzed β-hydroxymethylative carbonylation of styrene under photo-irradiation

Meng Guan, Ming Hou, Shuwang Tang, Guang Cheng, Xinyu Zhu, Yun-Hui Zhao,\* Ximei Tang, Hongwei Zhou and Guanyinsheng Qiu\*

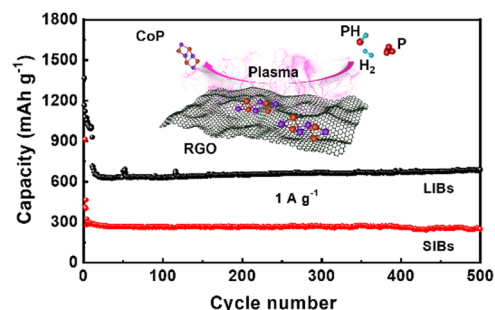


## COMMUNICATIONS

13313

### Graphene cladded cobalt phosphide nanoparticles with a sandwich structure by plasma for lithium and sodium storage

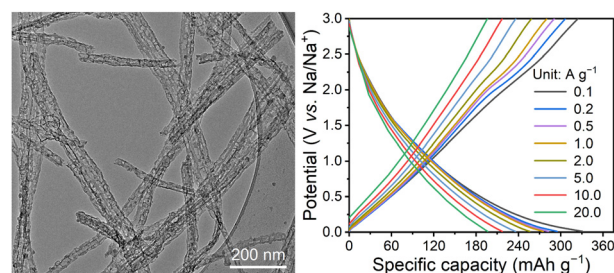
Bingxue Sun, Hui Chen and Guoling Li\*



13317

### Ion-catalyzed synthesis of N/O co-doped carbon nanorods with hierarchical pores for high-rate Na-ion storage

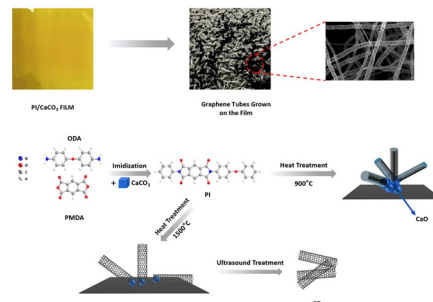
Meixiang Cen, Yingxue Cui, Sherif A. El-Khodary, Juan Wang, Dickon H. L. Ng, Shanhai Ge\* and Jiabiao Lian\*



13321

### Template free preparation of graphene tubes from polyimide catalyzed by calcium carbonate

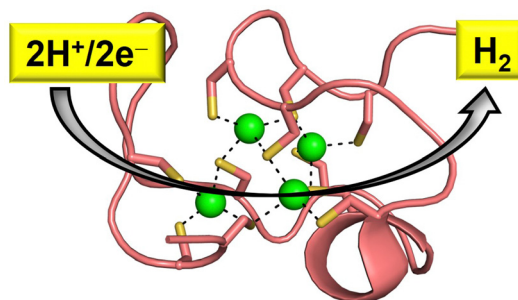
Xuliang Luo, Jintao Huang,\* Xiu Wang, Mengman Weng, Yan Cao and Yonggang Min\*



13325

### Converting a cysteine-rich natively noncatalytic protein to an artificial hydrogenase

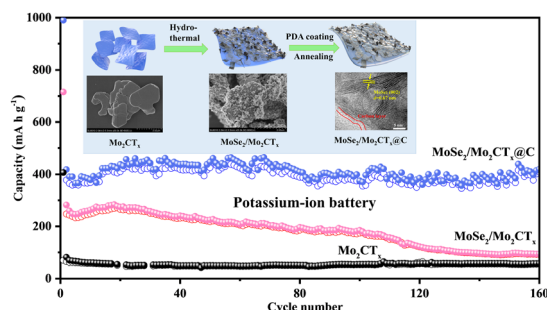
Sreya Malayam Parambath, Divyansh Prakash, Windfield Swetman, Aditya Surakanti and Saumen Chakraborty\*





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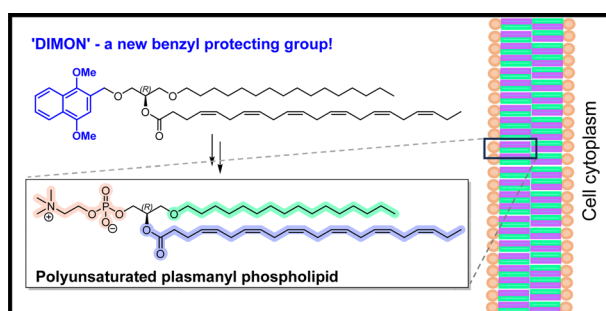
13329



### Architecting carbon-coated $\text{Mo}_2\text{CT}_x/\text{MoSe}_2$ heterostructures enables robust potassium storage

Qingqing Jiang,\* Weifang Zhao, Xinyue Xu, Da Ke, Ran Ren, Fuzhen Zhao, Shilin Zhang, Tengfei Zhou\* and Juncheng Hu\*

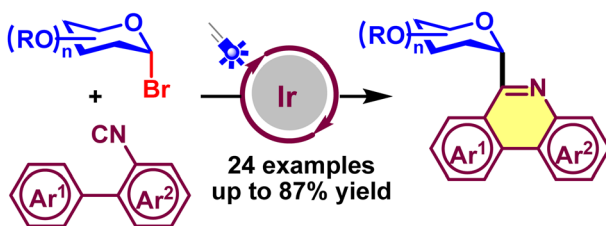
13333



### 1,4-Dimethoxynaphthalene-2-methyl ('DIMON'), an oxidatively labile protecting group for synthesis of polyunsaturated lipids

Jay Tromans, Bian Zhang and Bernard T. Golding\*

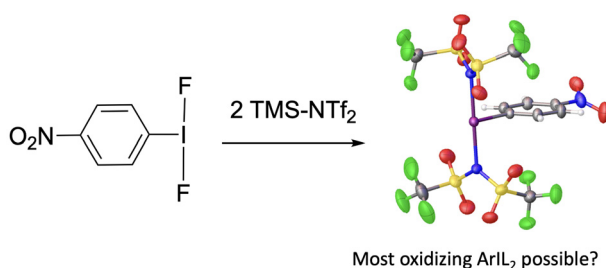
13336



### Photoredox-catalyzed C-heteroaryl glycosylation of biphenyl isocyanides with glycosyl bromides

Yi Jiao, Xiaoran Shi and Shouyun Yu\*

13340



### $\text{ArI}(\text{NTf}_2)_2$ : the boundary of oxidative capacity for $\text{ArIL}_2$ ?

Lachlan Barwise, Jason D. Bennetts, Keith F. White and Jason L. Dutton\*

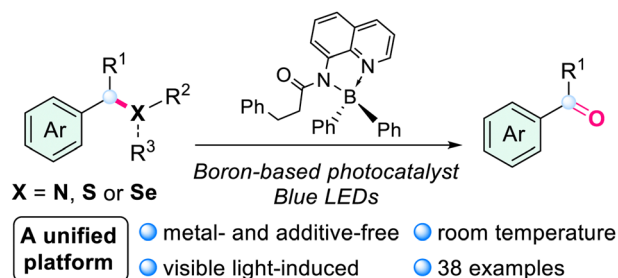


## COMMUNICATIONS

13344

### Visible light-induced metal-free chemoselective oxidative cleavage of benzyl C–heteroatom (N, S, Se) bonds utilizing organoboron photocatalysts

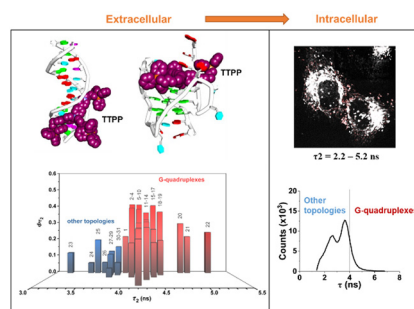
Lanfeng Wei, Wenbo Bai, Zhiyan Hu, Zhiyong Yang\* and Liang Xu\*



13348

### Detection and tracking of cytoplasmic G-quadruplexes in live cells

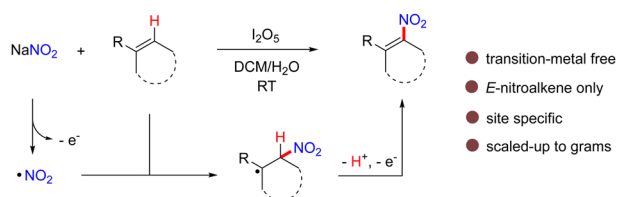
Lu-Si Rao, Liang Hao, Liu-Yi Liu, You-Liang Zeng, Bing-Bing Liang, Wenting Liu\* and Zong-Wan Mao\*



13352

### A free radical nitration of olefins with NaNO<sub>2</sub>/I<sub>2</sub>O<sub>5</sub>

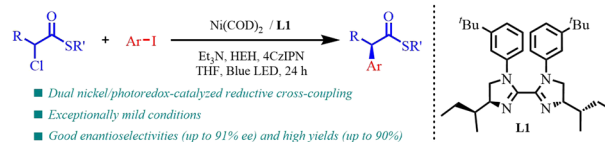
Xuan Huang, Huichao You, Fang Fang, Fan Wang and Zhong-Quan Liu\*



13355

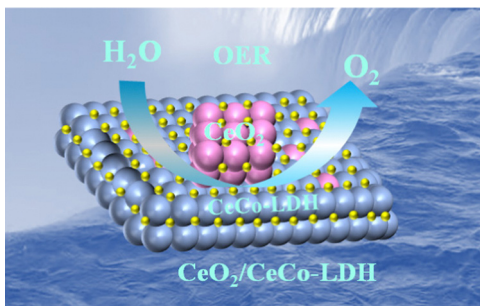
### Nickel/photoredox-catalyzed enantioselective arylation of α-chloro thioesters

Fei Xing, Tingzhi Lin, Yu Ye, Yan-En Wang, Xianzhong Cao, Xueying Gao, Dongzhao Zhang, Lingfeng Kong, Xiyu Zhu, Dan Xiong and Jianyou Mao\*



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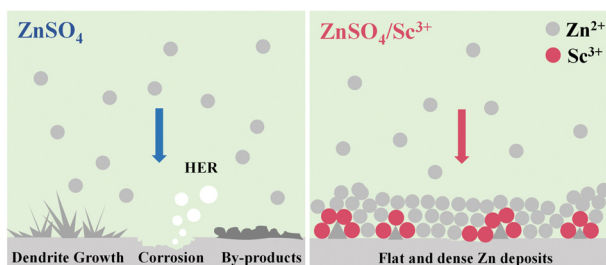
13359



### 4f–2p–3d orbital overlap in a metal–organic framework-derived CeO<sub>2</sub>/CeCo-LDH heterostructure promotes water oxidation

Priyanka Maurya, Toufik Ansari and Arindam Indra\*

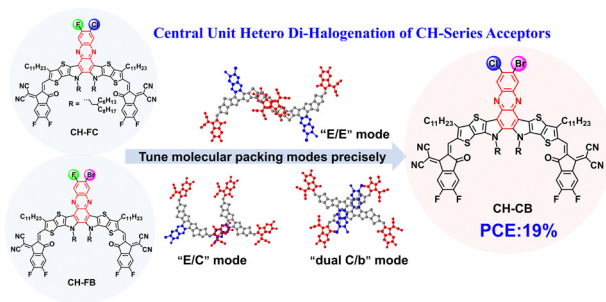
13363



### Trace Sc<sup>3+</sup>-electrolyte additive enabling stable Zn metal anodes for aqueous zinc-ion batteries

Chun Chen, Liansheng Li, Zuxin Long and Qinghua Liang\*

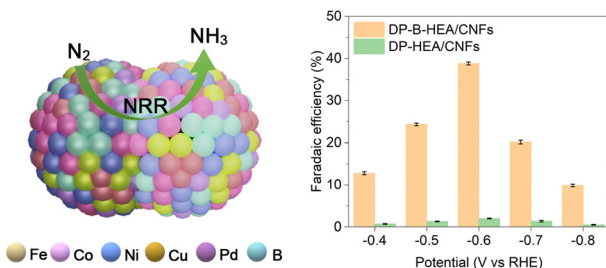
13367



### Central unit hetero-di-halogenation of acceptors enables organic solar cells with 19% efficiency

Huazhe Liang, Hongbin Chen, Yalu Zou, Yunxin Zhang, Yaxiao Guo, Xiangjian Cao, Xingqi Bi, Zhaoyang Yao,\* Xiangjian Wan and Yongsheng Chen\*

13371



### Dual-phase B-doped FeCoNiCuPd high-entropy alloys for nitrogen electroreduction to ammonia

Yankun Wen, Wenchao Zhang, Xiaofan Wang, Shuanglong Lu, Fang Duan, Han Zhu\* and Mingliang Du\*

