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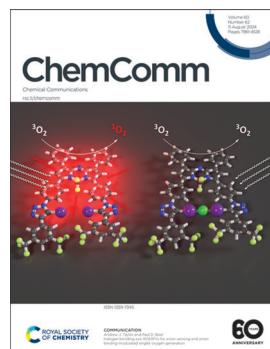
### IN THIS ISSUE

ISSN 1359–7345 CODEN CHCOFS 60(62) 7961–8128 (2024)



#### Cover

See Kazushi Kinbara et al., pp. 7979–7982.  
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#### Inside cover

See Andrew J. Taylor and Paul D. Beer, pp. 7983–7986.  
Image reproduced by permission of Paul D. Beer from *Chem. Commun.*, 2024, **60**, 7983.

### PROFILE

7972

Contributors to the Pioneering Investigators Collection 2024: Part 1

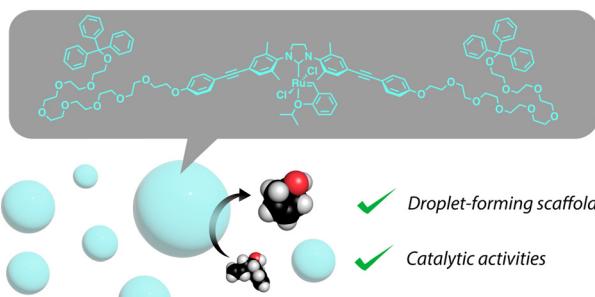


### COMMUNICATIONS

7979

A bioinspired bifunctional catalyst: an amphiphilic organometallic catalyst for ring-closing metathesis forming liquid droplets in aqueous media

Miki Mori, Hiroka Sugai, Kohei Sato, Asuki Okada, Takashi Matsuo and Kazushi Kinbara\*





# RSC Applied Interfaces

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Fundamental questions  
Elemental answers

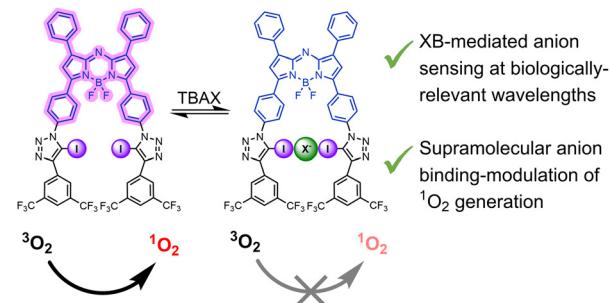
Registered charity number: 207890

## COMMUNICATIONS

7983

**Halogen bonding aza-BODIPYs for anion sensing and anion binding-modulated singlet oxygen generation**

Andrew J. Taylor and Paul D. Beer\*

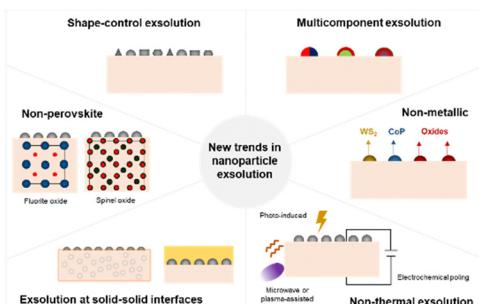


## FEATURE ARTICLES

7987

**New trends in nanoparticle exsolution**

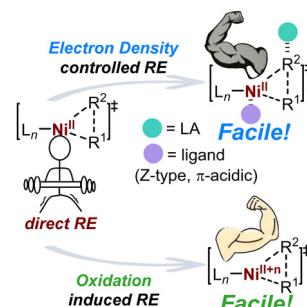
Alfonso J. Carrillo,\* Andrés López-García, Blanca Delgado-Galicia and Jose M. Serra\*



8008

**Mechanistic insights into facilitating reductive elimination from Ni(II) species**

Bolin Qiao, Fa-You Lin, Dongmin Fu, Shi-Jun Li, Tao Zhang\* and Yu Lan\*

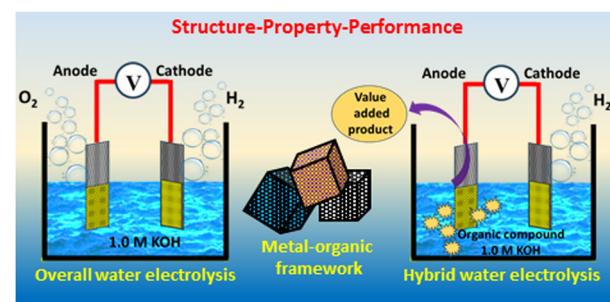


## HIGHLIGHT

8020

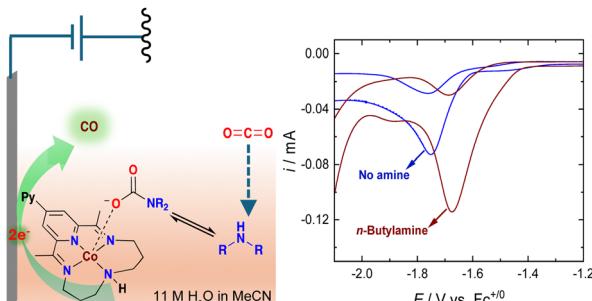
**Metal–organic frameworks (MOFs) for hybrid water electrolysis: structure–property–performance correlation**

Baghendra Singh\* and Harshit Gupta



## COMMUNICATIONS

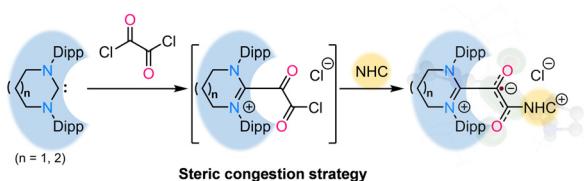
8039



### The influence of exogenous amines on the electrochemical CO<sub>2</sub> reduction activity of a cobalt–pyridylidium catalyst

Piyush Kumar Verma and Charles C. L. McCrory\*

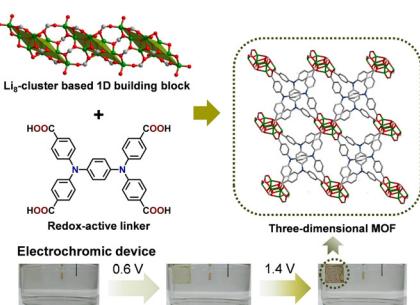
8043



### Synthesis of sterically congested unsymmetrical 1,2-dicarbonyl radicals through a stepwise approach

Yuna Song, Hayoung Song, Yunseop Choi, Jongcheol Seo\* and Eunsung Lee\*

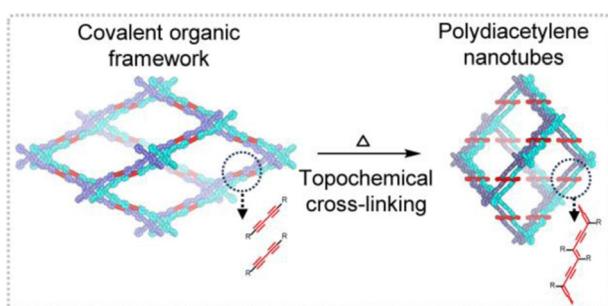
8047



### Construction of a redox-active metal–organic framework with an octanuclear lithium one-dimensional building block

Shu-Fan Li, Ya-Ru Meng, Min-Jie Xu, Gen Zhang\* and Jian Su\*

8051



### Topochemical cross-linking of diacetylene in a highly interpenetrated three-dimensional covalent organic framework

Shangqing Liu, Mengyao Chen, Yu Zhao,\* Guolong Xing, Weidong Zhu and Teng Ben\*

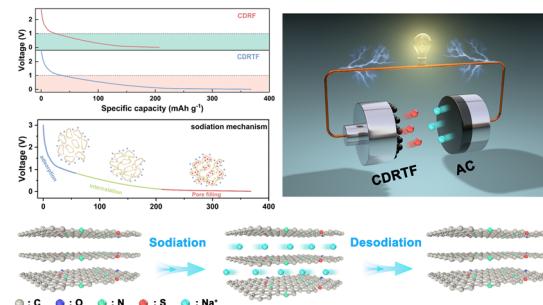


## COMMUNICATIONS

8055

**Heteroatom doping-induced formation of closed pores for high-performance sodium storage hard carbon anodes**

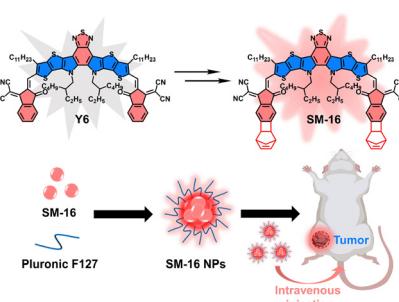
Wenbo Hou, Lili Ma, Anbai Li, Hui Peng, Zhiyuan Liu, Xin Wang, Kanjun Sun, Guofu Ma\* and Yuxi Xu\*



8059

**Design of a high-performance NIR-II nanoprobe by steric regulation for *in vivo* vasculature and tumor imaging**

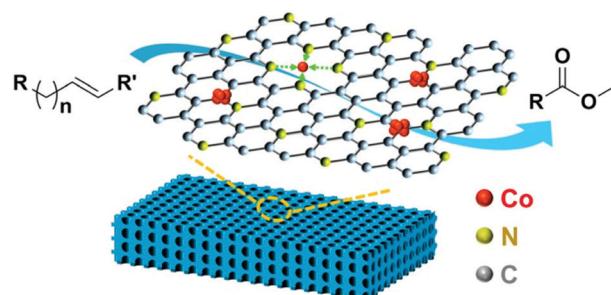
Yu Wang, Yuxin Duan, Chenxing Gong, Yuhang Li, Meilin Xu, Miao Liu, Wenxu Liu,\* Xiaole Zhou\* and Leyu Wang\*



8063

**Synergistic catalysis: cobalt-catalyzed cascade reaction for the oxidative cleavage of olefins to access esters**

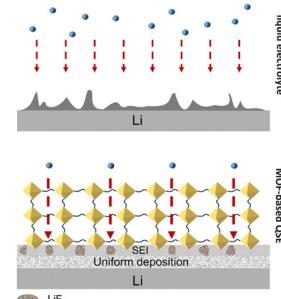
Xiangzhu Yu, Zhengjia Zhao, Shangzhi Tan, Lina Zhu, Weiru Fu, Yue An\* and Lianyue Wang\*



8067

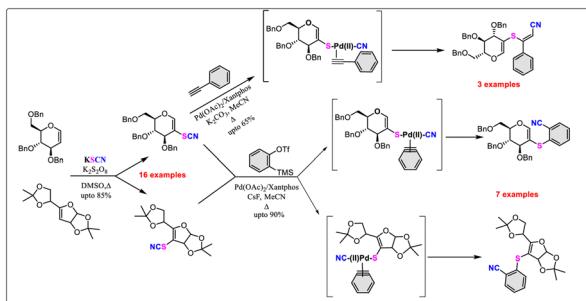
**A fluorinated metal–organic framework-based quasi-solid electrolyte for stabilizing Li metal anodes**

Xiang Wang, Mengxi Bai, Qiufen Li, Jiashuai Li, Dongze Li, Xiaoyan Lin, Siyuan Shao and Ziqi Wang\*



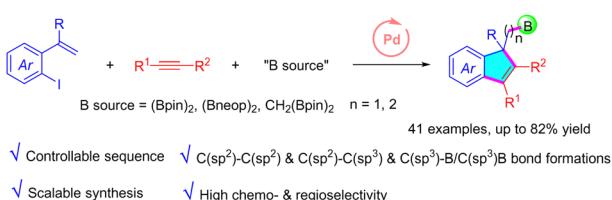
## COMMUNICATIONS

8071

**Peroxodisulfate-assisted synthesis of 2-thiocyanato glycals and their transformation to C-2-thio acrylo/aryl nitrile-substituted glycals**

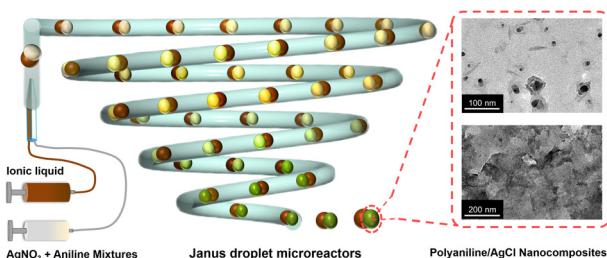
Bisma Rasool, Irshad Ahmad Zargar, Sanchari Kundu and Debaraj Mukherjee\*

8075

**Three-component cascade carbopalladation/Heck cyclization/borylation: facile access to boryl-functionalized indenes**

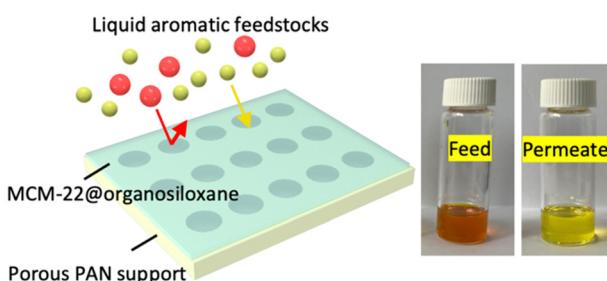
Fei Sun, Yiyi Zheng, Mingxia Wu, Hongsen Ji, Zhongyao Jiang, Chenglin Liu and Xin-Xing Wu\*

8079

**Janus droplet microreactors for preparing polyaniline/AgCl nanocomposites**

Hao Wang, Shiteng Wang, Yao Mu and Yi Cheng\*

8083

**Organosiloxane membranes for heavy aromatic oil fractionation**

Liang Ma,\* Min Hou, Yuemei Wang, Weiyi Tong and Junlin Zheng

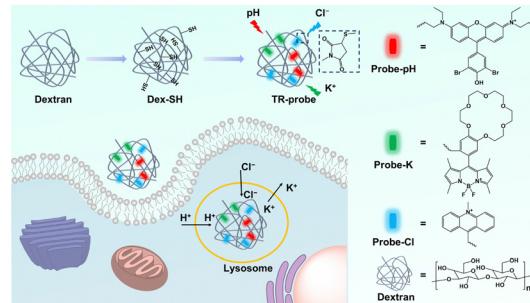


## COMMUNICATIONS

8087

**Ternary recognition fluorescent probe for lysosome acidification counter-ion studies via  $\text{Cl}^-$ ,  $\text{K}^+$ , and pH**

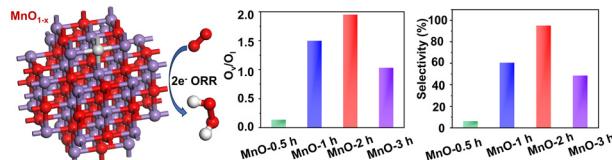
Guang-Yue Zou, Fan Bi, Shuai Chen, Meng-Xian Liu\* and Yong-Liang Yu\*



8091

**Adjusted MnO oxygen vacancy for highly selective ORR production of  $\text{H}_2\text{O}_2$** 

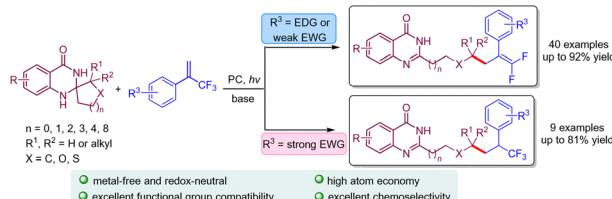
Liangjie Fu, Zixiong Li, Yimin Wu, Aidong Tang\* and Huaming Yang\*



8095

**Metal-free, photoredox-catalyzed aromatization-driven deconstructive functionalization of spiro-dihydroquinazolinones with  $\alpha$ -CF<sub>3</sub> alkenes**

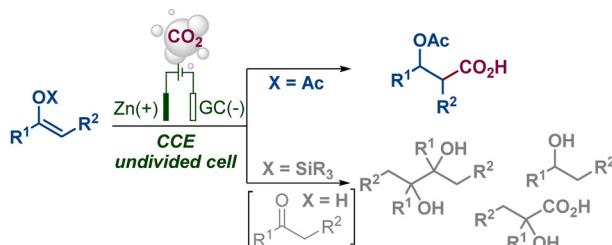
Jin-Hua Zhang, Hong-Jie Miao, Jia-Yi Li, Wenke Li, Pengchen Ma,\* Xin-Hua Duan and Li-Na Guo\*



8099

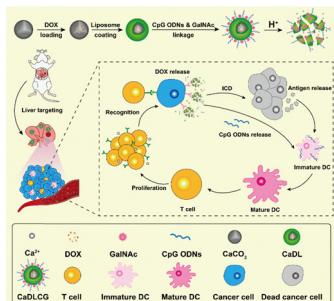
**Electrochemical hydrocarboxylation of enol derivatives with  $\text{CO}_2$ : access to  $\beta$ -acetoxy carboxylic acids**

Alexander O. Ustyuzhanin, Oleg V. Bityukov, Pavel V. Sokolovskiy, Valentina M. Merkulova, Alexey I. Illovaisky, Liang-Nian He, Vera A. Vil'\* and Alexander O. Terent'ev\*



## COMMUNICATIONS

8103



### A GalNAc-modified $\text{CaCO}_3$ nano-immunomodulator for targeted and responsive immunotherapy against orthotopic liver cancer

Yanhua Li, Jiaqi Yin, Jiarui Zhong, Wei Pan, Na Li\* and Bo Tang\*

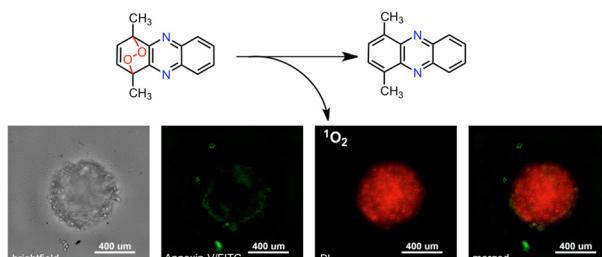
8107



### Photochemical radical decarboxylative disulfurization of $\alpha$ -keto acids and oxamic acids

Huangbin Sun, Xueteng Bin, Qianfang Zhang, Xiaowen Chen,\* Jie Tang\* and Guofang Jiang\*

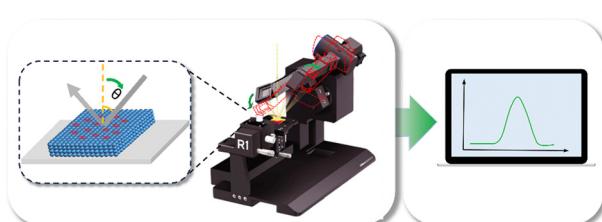
8111



### Self-reporting intracellular delivery agent for singlet oxygen

Yiran Li, Lei Wang,\* Shengli Zhang, Ziang Liu, Rensong Sun, Yuan Qiao and Engin U. Akkaya\*

8115



### Development of an angle-adjustable photonic crystal fluorescence platform for sensitive detection of oxytetracycline

Yunhuan Huang, Jiaheng Zhang, Bo Sui, Guobi Chai, Ajuan Yu, Sheng Chen, Miaomiao Zhang, Shusheng Zhang, Yanhao Zhang\* and Wuduo Zhao\*

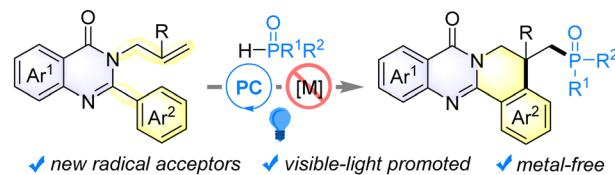


## COMMUNICATIONS

8119

**Visible-light promoted radical cascade cyclization of 3-allyl-2-arylquinazolinones for the synthesis of phosphorylated dihydroisoquinolino[1,2-*b*]quinazolinones**

Jun Huang, Caijin Ban, Jiangping Qin, Jiali Xu, Yunqiong Gu, Liang Wei,\* Jing-Mei Yuan\* and Guobao Huang\*



8123

**A high-performance magnesium/lithium hybrid-ion battery using a hollow multi-layered NiS/Co<sub>3</sub>S<sub>4</sub>/carbon cathode and an all-phenyl-complex-based electrolyte**

Jiamin Liu, Ting Zhou, Yun Shen, Lixing Li, Yajun Zhu and Jinyun Liu\*

