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Chemical Communications

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## IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 59(39) 5785-5932 (2023)



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### Inside cover

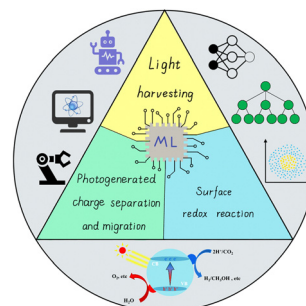
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## HIGHLIGHT

5795

### Machine learning integrated photocatalysis: progress and challenges

Luyao Ge, Yuanzhen Ke and Xiaobo Li\*

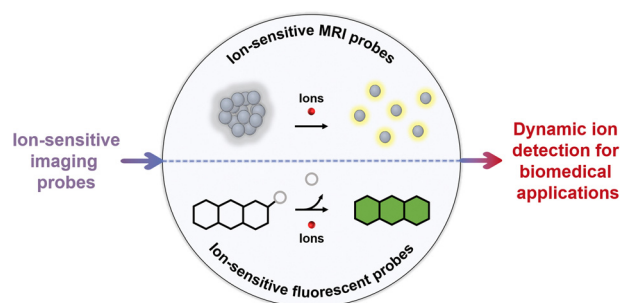


## FEATURE ARTICLES

5807

### Inorganic ion-sensitive imaging probes for biomedical applications

Qiyue Wang, Pengzhan Wang, Canyu Huang, Sirui Cui, Shengfei Yang, Fangyuan Li\* and Daishun Ling\*



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Chemical Communications (print: ISSN 1359-7345; electronic: ISSN 1364-548X) is published 100 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

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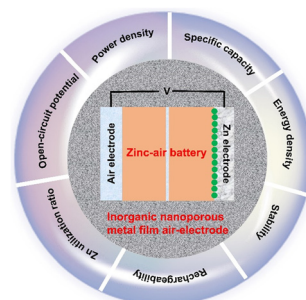
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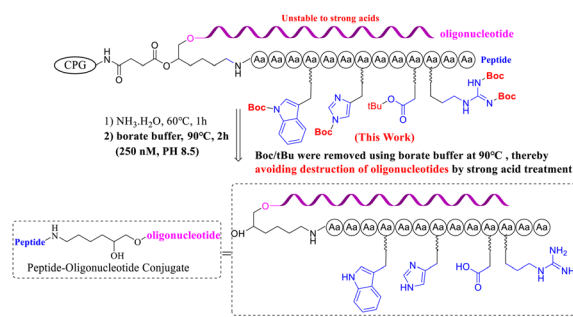


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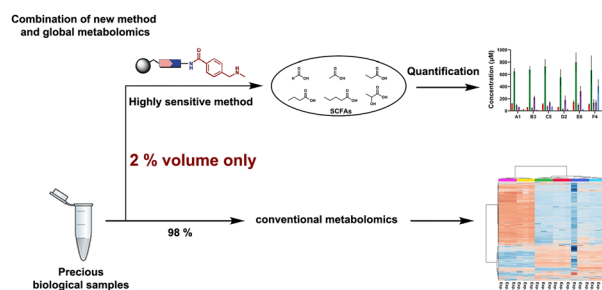
## 5839

Tao Wang, Xiuxiu Cao, Yong Zheng, Chenchen Chen,  
Li Zhou, Demeng Sun,\* Gemin Fang\* and Changlin Tian\*



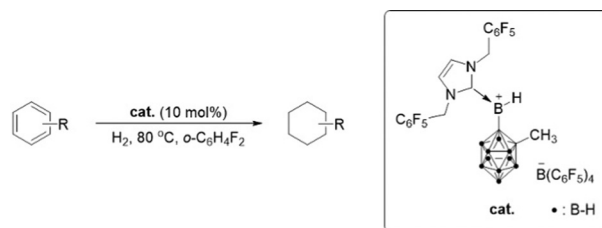
## 5843

Weifeng Lin, Fabricio Romero García,  
Elisabeth Lissa Norin, Didem Kart, Lars Engstrand,  
Juan Du and Daniel Globisch\*



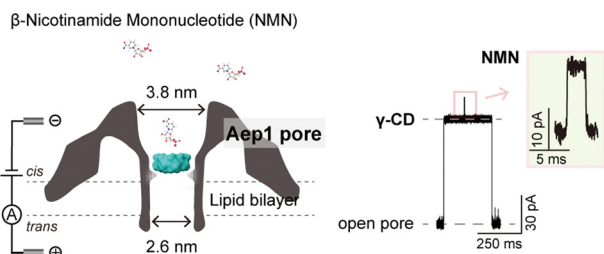
## 5847

## Yizhou Yang, Yuliang Xu and Huadong Wang\*



## COMMUNICATIONS

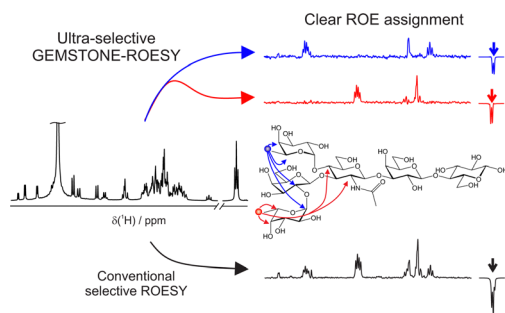
5850



### Profiling the chemistry- and confinement-controlled sensing capability of an octameric aerolysin-like protein

Xue-Yuan Wu, Jie Jiang, Jun-Ge Li, Meng-Yin Li\* and Yi-Tao Long

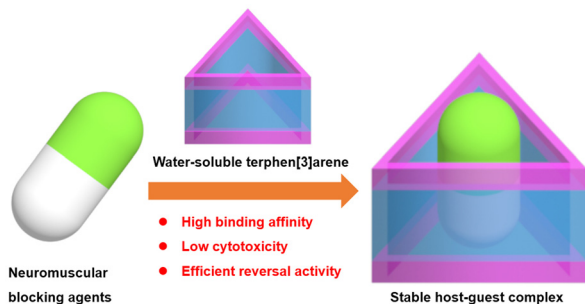
5854



### Ultra-selective, ultra-clean 1D rotating-frame Overhauser effect spectroscopy

Emma L. Gates, Marshall J. Smith, Jonathan P. Bradley, Myron Johnson, Göran Widmalm, Mathias Nilsson, Gareth A. Morris, Ralph W. Adams\* and Laura Castañar\*

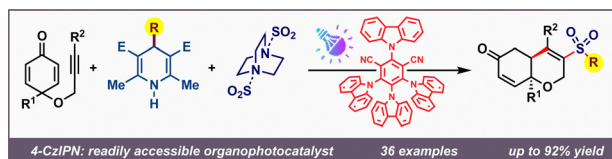
5858



### Water-soluble terphen[3]arene macrocycle: a versatile reversal agent of neuromuscular blockers

Yibo Zhao, Longming Chen, Junyi Chen, Jian Li, Qingbin Meng,\* Andrew C.-H. Sue\* and Chunju Li\*

5862



### A visible light mediated alkyl sulfonylative cascade using Hantzsch esters via $\text{SO}_2$ insertion

Indranil Halder, Akshay M. Nair and Chandra M. R. Volla\*

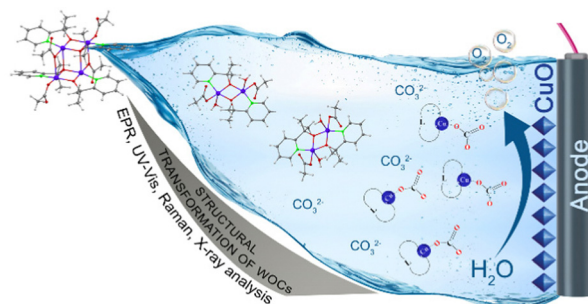


## COMMUNICATIONS

5866

### Copper(II) defect-cubane water oxidation electrocatalysts: from molecular tetramers to oxidic nanostructures

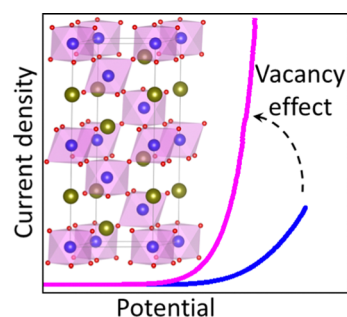
Devi Prasad Adiyeri Saseendran, Jörg W. A. Fischer, Lea Müller, Daniel F. Abbott, Victor Mougél, Gunnar Jeschke, Carlos A. Triana and Greta R. Patzke\*



5870

### Vacancy effect on the electrocatalytic activity of $\text{LaMn}_{1/2}\text{Co}_{1/2}\text{O}_{3-\delta}$ for hydrogen and oxygen evolution reactions

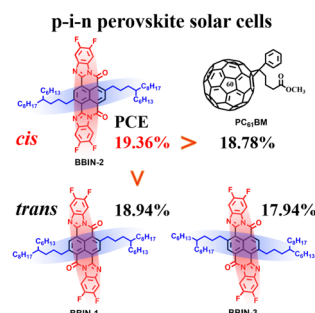
Md. Sofiul Alom and Farshid Ramezanipour\*



5874

### Soluble perinone isomers as electron transport materials for p-i-n perovskite solar cells

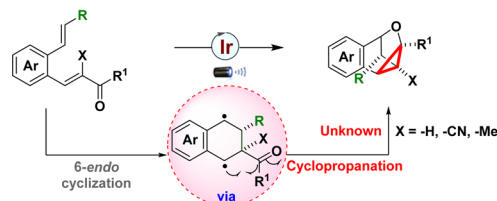
Xinxin Zhang, Tianyu Xu, Ziqi Tian, Xiang He, Shengxiong Zhang, Ling Ai, Wenjun Zhang,\* Shiyong Liu\* and Weijie Song\*



5878

### Visible-light-induced oxidant/additive-free atom-economic synthesis of multifunctionalized cyclopropanes via energy transfer

Babasaheb Sopan Gore and Jeh-Jeng Wang\*

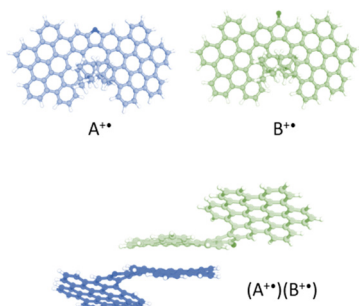


- 100% atom-economic
- Mild conditions
- Easy operation
- Broad scope, Upto 91% yield
- Prevalent core in drug molecules
- Gram scale synthesis
- Room temperature





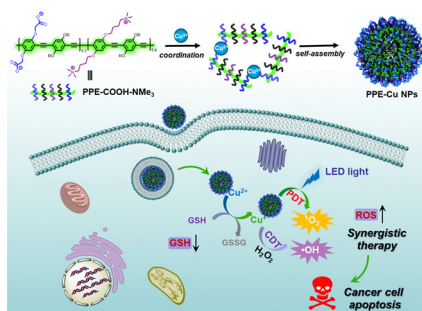
5882



### Superhelicenes in the gas phase: experimental and computational evidence of stable radical cation dimers

Marina Kinzelmann, David Reger, Vera Warmbrunn, Dominik Lungerich,\* Norbert Jux\* and Thomas Drewello\*

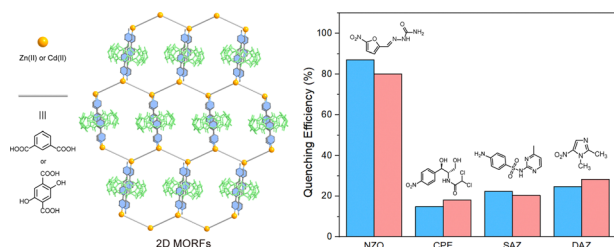
5886



### Copper coordination-based conjugated polymer nanoparticles for synergistic photodynamic and chemodynamic therapy

Qiang Cheng, Yuyan Li, Wei Huang, Ke Li, Minhuan Lan, Benhua Wang,\* Jianxiu Wang\* and Xiangzhi Song

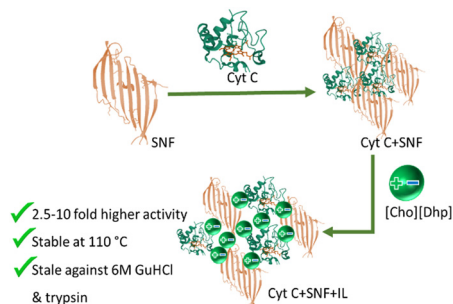
5890



### Metal–organic rotaxane frameworks constructed from a cucurbit[8]uril-based ternary complex for the selective detection of antibiotics

Weijie Wu, Yinghao Xu, Shoujun Wang, Qingqing Pang\* and Simin Liu\*

5894



### Designing protein nano-construct in ionic liquid: a boost in efficacy of cytochrome C under stresses

Sarath Kumar Thayallath, Sachin M. Shet, Meena Bisht, Pranav Bharadwaj, Matheus M. Pereira, Gregory Franklin, S. K. Nataraj and Dibyendu Mondal\*

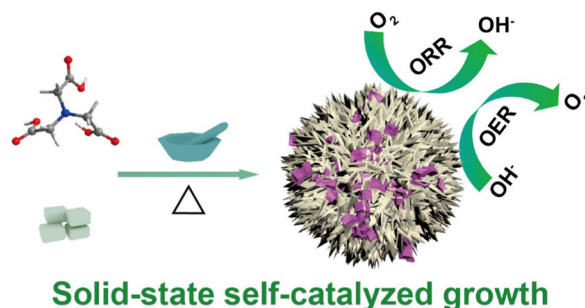


## COMMUNICATIONS

5898

### Solid-state self-catalyzed growth of N-doped carbon tentacles on an M(Fe, Co)Se surface for rechargeable Zn–air batteries

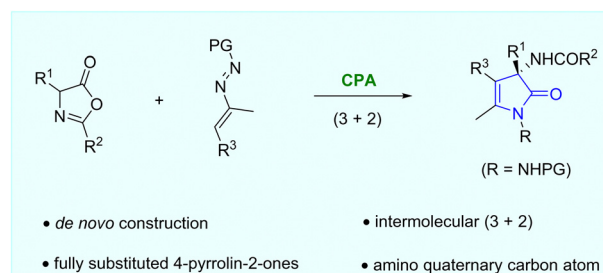
Pan Qi, Mengxu Chen, Teng Luo, Changjiu Zhao, Cong Lin, Hao Luo\* and Dawei Zhang\*



5902

### Catalytic asymmetric *de novo* construction of 4-pyrrolin-2-ones via intermolecular formal [3+2] cycloaddition of azoalkenes with azlactones

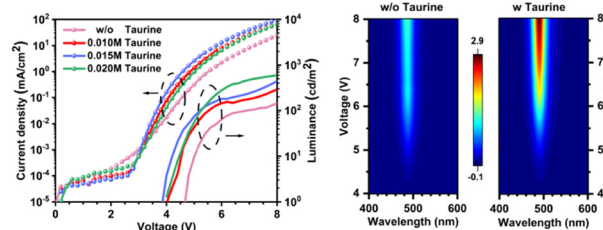
Nan-Nan Mo, Yu-Hang Miao, Xiao Xiao, Yuan-Zhao Hua, Min-Can Wang, Lihua Huang\* and Guang-Jian Mei\*



5906

### Color-stable blue light-emitting diodes with defect management by sulfonate

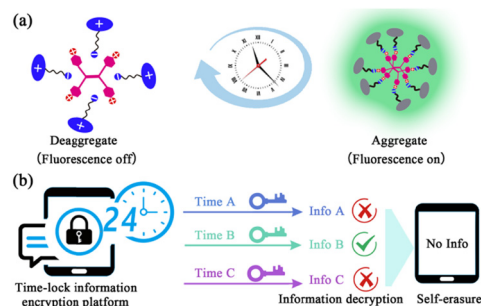
Guanghong Yang, Xingxing Tan, Lanlan Zhai,\* He Huang, Yingyu Wang, Kemin Jiang, Yun Yang, Lijie Zhang, Zhan'ao Tan, Haihong Wen,\* Yuting Xu\* and Chao Zou\*



5910

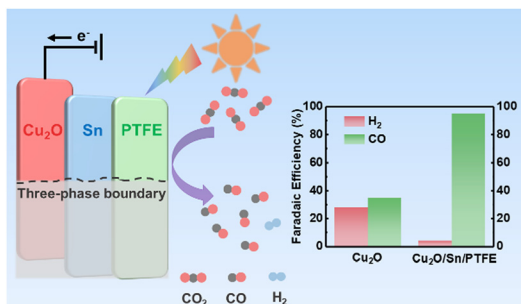
### A light-fueled dissipative aggregation-induced emission system for time-dependent information encryption

Caixia Yang, Hangxiang Xiao, Zichen Luo, Li Tang, Bailin Dai, Ningbo Zhou, Enxiang Liang,\* Guoxiang Wang and Jianxin Tang\*



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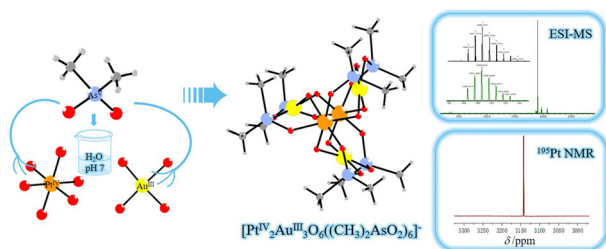
5914



### Hydrophobic surface efficiently boosting Cu<sub>2</sub>O nanowires photoelectrochemical CO<sub>2</sub> reduction activity

Yanfang Zhang, Weixin Qiu, Yang Liu, Keke Wang, Luwei Zou, Yu Zhou, Min Liu, Xiaoqing Qiu, Jie Li\* and Wenzhang Li\*

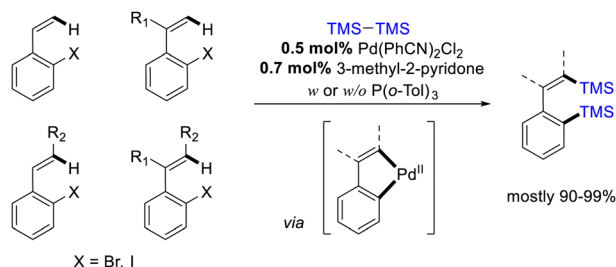
5918



### Mixed noble metal–oxo clusters: platinum(IV)–gold(III) oxoanion [Pt<sup>IV</sup><sub>2</sub>Au<sup>III</sup><sub>3</sub>O<sub>6</sub>((CH<sub>3</sub>)<sub>2</sub>AsO<sub>2</sub>)<sub>6</sub>]<sup>−</sup>

Jiayao Zhang, Saurav Bhattacharya, Anja B. Müller, Levente Kiss, Cristian Silvestru, Nikolai Kuhnert and Ulrich Kortz\*

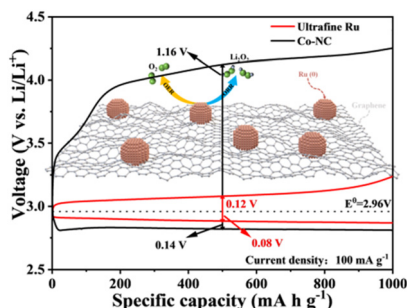
5922



### Palladium-catalyzed disilylation of *ortho*-halophenylethylenes enabled by 2-pyridone ligand

Bin-Bin Zhu, Shu-Sheng Zhang, Jian-Guo Fu, Guo-Qiang Lin\* and Chen-Guo Feng\*

5926



### *In situ* potential-regulated architecture of an ultrafine Ru-based electrocatalyst for ultralow overpotential lithium–oxygen batteries

Liangyu Jin, Aiming Xing, Zhenjiang Zhu, Kui Fu, Meng Zhou, Fancheng Meng, Xiangfeng Wei and Jiehua Liu\*

