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Chemical Communications

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See Demeng Sun, Gemin Fang, Changlin Tian *et al.*, pp. 5839-5842. Image reproduced by permission of Changlin Tian from *Chem. Commun.*, 2023, 59, 5839.



Inside cover

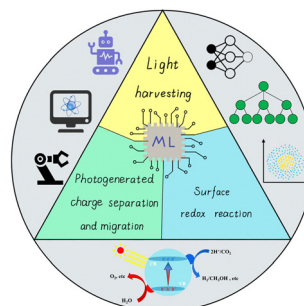
See Daniel Globisch *et al.*, pp. 5843-5846. Image reproduced by permission of Daniel Globisch from *Chem. Commun.*, 2023, 59, 5843.

HIGHLIGHT

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Machine learning integrated photocatalysis: progress and challenges

Luyao Ge, Yuanzhen Ke and Xiaobo Li*

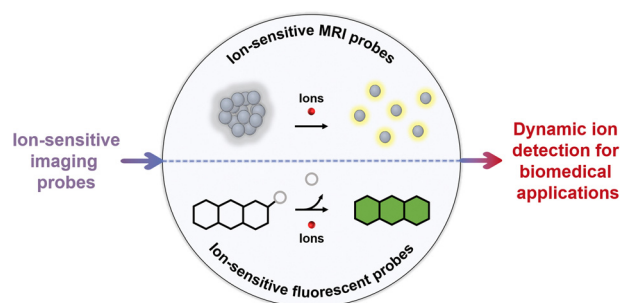


FEATURE ARTICLES

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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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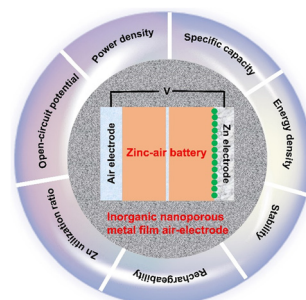
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Recent advances in zinc–air batteries: self-standing inorganic nanoporous metal films as air cathodes

Jinfa Chang and Yang Yang*

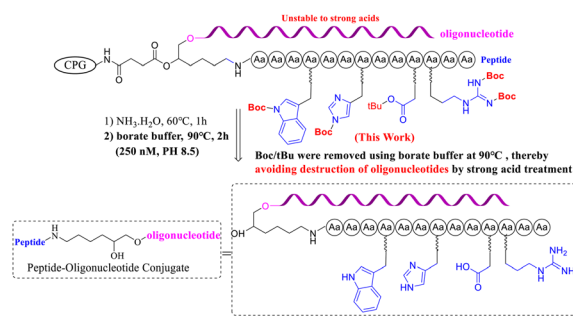


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Total stepwise solid-phase synthesis of peptide-oligonucleotide conjugates using side-chain Boc/tBu protecting groups

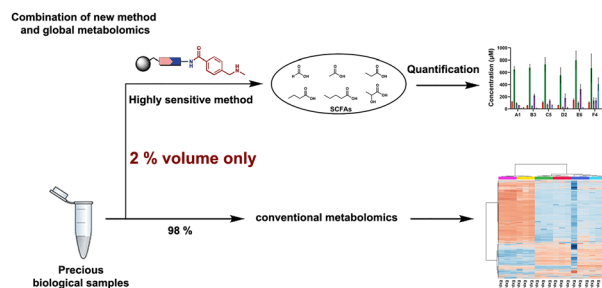
Tao Wang, Xiuxiu Cao, Yong Zheng, Chenchen Chen,
Li Zhou, Demeng Sun,* Gemin Fang* and Changlin Tian*



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Sensitive quantification of short-chain fatty acids combined with global metabolomics in microbiome cultures

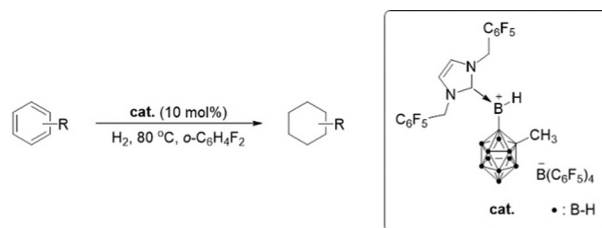
Weifeng Lin, Fabricio Romero García,
Elisabeth Lissa Norin, Didem Kart, Lars Engstrand,
Juan Du and Daniel Globisch*



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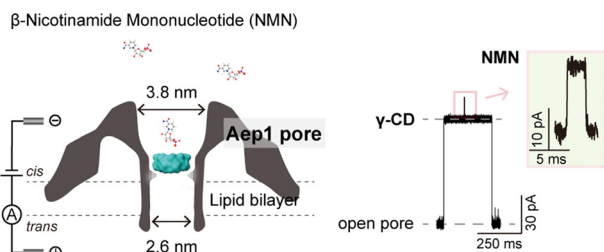
Borenium-ion-catalyzed hydrogenation of arenes

Yizhou Yang, Yuliang Xu and Huadong Wang*



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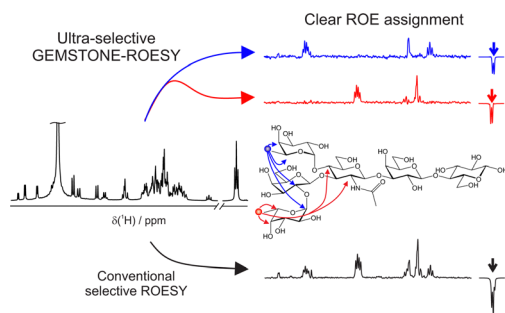
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Profiling the chemistry- and confinement-controlled sensing capability of an octameric aerolysin-like protein

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

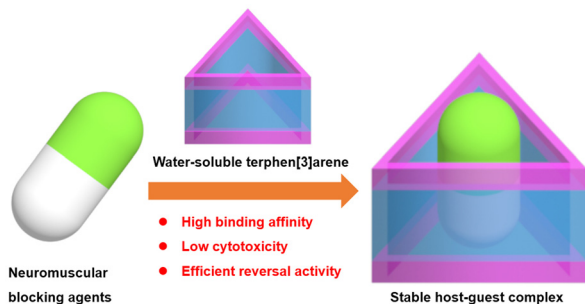
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Ultra-selective, ultra-clean 1D rotating-frame Overhauser effect spectroscopy

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

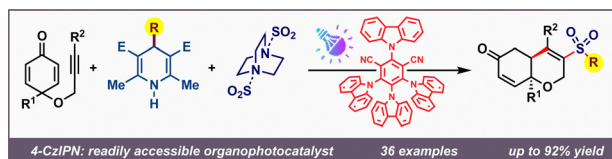
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Water-soluble terphen[3]arene macrocycle: a versatile reversal agent of neuromuscular blockers

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

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A visible light mediated alkyl sulfonylative cascade using Hantzsch esters via SO_2 insertion

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

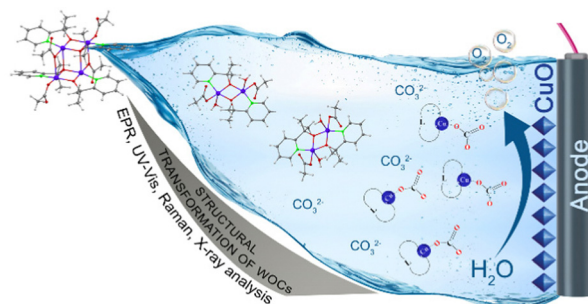


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Copper(II) defect-cubane water oxidation electrocatalysts: from molecular tetramers to oxidic nanostructures

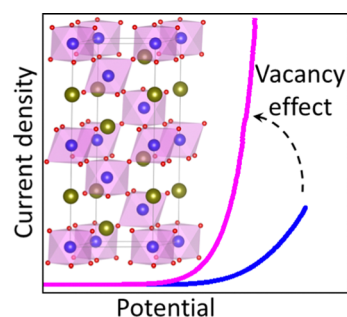
Devi Prasad Adiyeri Saseendran, Jörg W. A. Fischer, Lea Müller, Daniel F. Abbott, Victor Mougél, Gunnar Jeschke, Carlos A. Triana and Greta R. Patzke*



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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

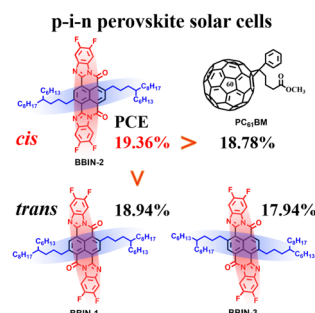
Md. Sofiul Alom and Farshid Ramezanipour*



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

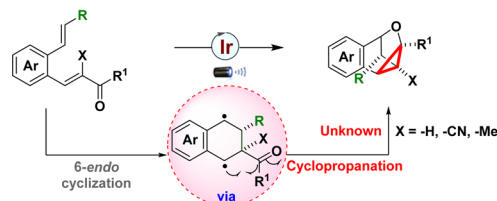
Xinxin Zhang, Tianyu Xu, Ziqi Tian, Xiang He, Shengxiong Zhang, Ling Ai, Wenjun Zhang,* Shiyong Liu* and Weijie Song*



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

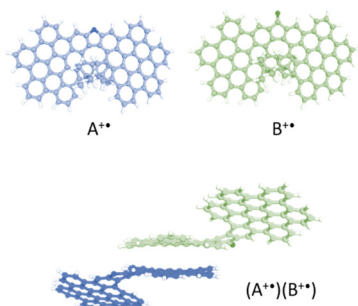
Babasaheb Sopan Gore and Jeh-Jeng Wang*



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



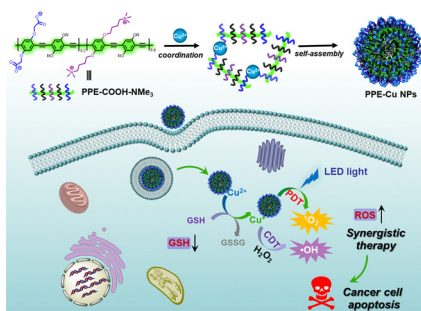
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Superhelicenes in the gas phase: experimental and computational evidence of stable radical cation dimers

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

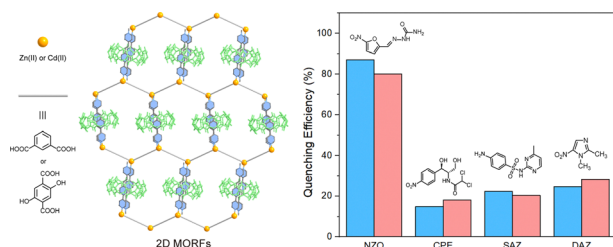
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Copper coordination-based conjugated polymer nanoparticles for synergistic photodynamic and chemodynamic therapy

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

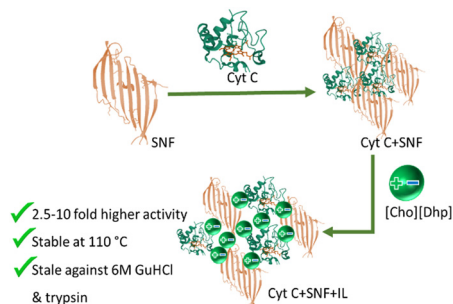
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Metal–organic rotaxane frameworks constructed from a cucurbit[8]uril-based ternary complex for the selective detection of antibiotics

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

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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*

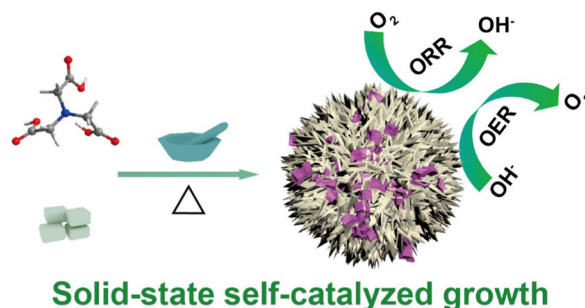


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Solid-state self-catalyzed growth of N-doped carbon tentacles on an M(Fe, Co)Se surface for rechargeable Zn–air batteries

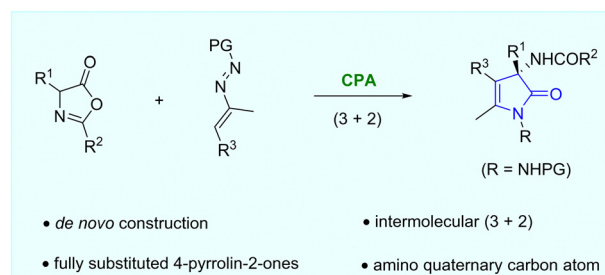
Pan Qi, Mengxu Chen, Teng Luo, Changjiu Zhao, Cong Lin, Hao Luo* and Dawei Zhang*



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

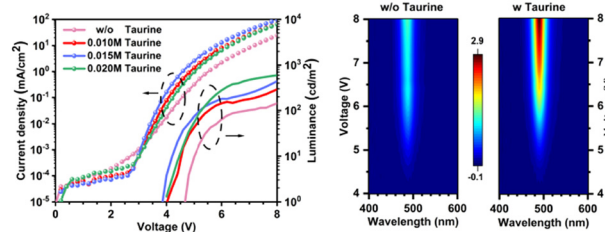
Nan-Nan Mo, Yu-Hang Miao, Xiao Xiao, Yuan-Zhao Hua, Min-Can Wang, Lihua Huang* and Guang-Jian Mei*



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

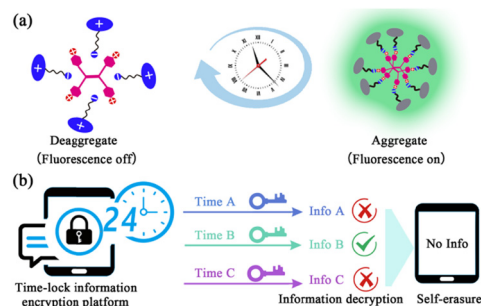
Guanghong Yang, Xingxing Tan, Lanlan Zhai,* He Huang, Yingyu Wang, Kemin Jiang, Yun Yang, Lijie Zhang, Zhan'ao Tan, Haihong Wen,* Yuting Xu* and Chao Zou*



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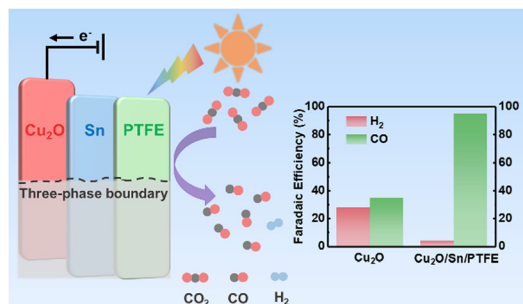
A light-fueled dissipative aggregation-induced emission system for time-dependent information encryption

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



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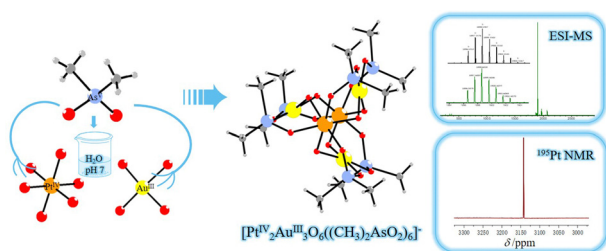
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Hydrophobic surface efficiently boosting Cu₂O nanowires photoelectrochemical CO₂ reduction activity

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

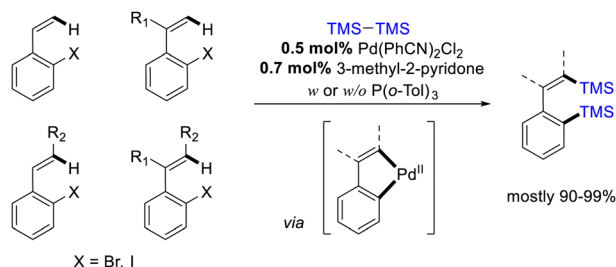
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Mixed noble metal–oxo clusters: platinum(IV)–gold(III) oxoanion [Pt^{IV}₂Au^{III}₃O₆((CH₃)₂AsO₂)₆]⁻

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

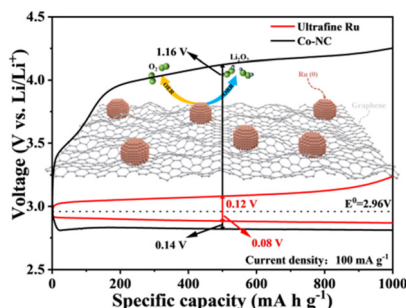
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Palladium-catalyzed disilylation of *ortho*-halophenylethylenes enabled by 2-pyridone ligand

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

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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*

