

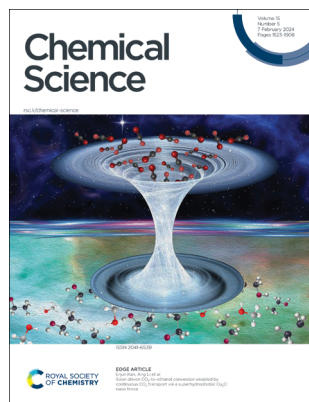
# Chemical Science

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## IN THIS ISSUE

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**Inside cover**  
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Carlos E. Puerto Galvis,\* Dora A. González Ruiz, Eugenia Martínez-Ferrero and Emilio Palomares\*

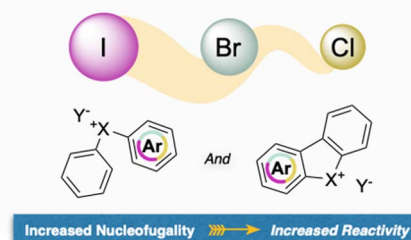


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### Diaryl hypervalent bromines and chlorines: synthesis, structures and reactivities

Matteo Lanzì\* and Joanna Wencel-Delord\*

#### Diaryl halogens hypervalent compounds



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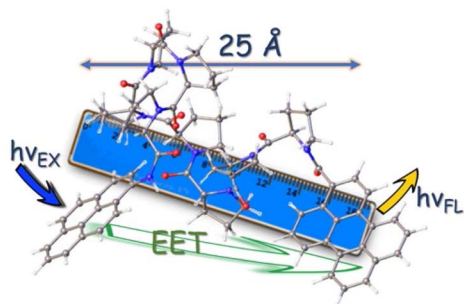
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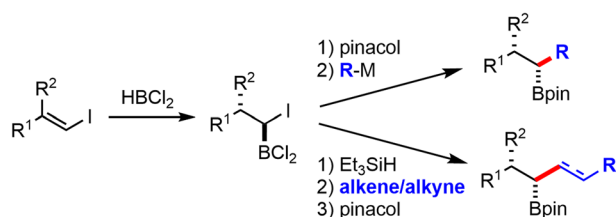
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### Deducing the conformational space for an octa-proline helix

Sara M. A. Waly, Andrew C. Benniston\* and Anthony Harriman\*

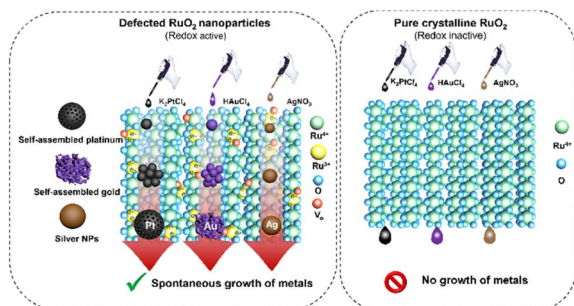
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### Borylative transition metal-free couplings of vinyl iodides with various nucleophiles, alkenes or alkynes

Gesa Seidler, Max Schwenzer, Florian Clausen, Constantin G. Daniliuc and Armido Studer\*

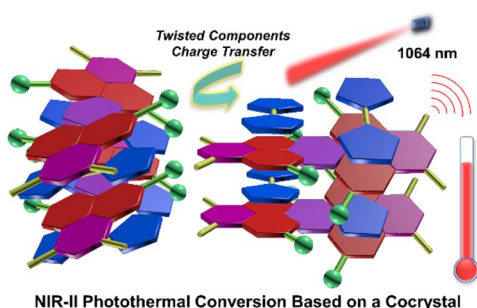
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### Hydrous ruthenium oxide triggers template-free and spontaneous growth of metal nanostructures

Faheem Muhammad, Xiwen Chen, Jiayi Tang, Yuan Cheng, Yuyang Li, Chenxin Zhu, Yihong Zhang, Leiyong Miao, Yu Deng and Hui Wei\*

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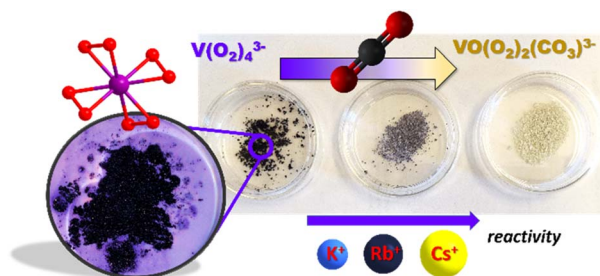
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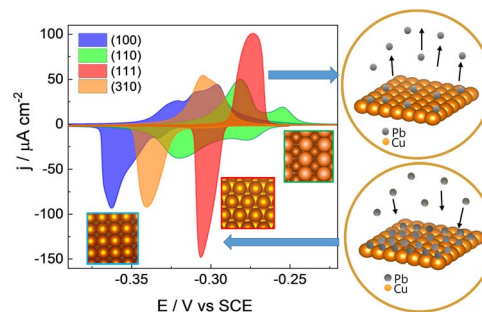
Eduard Garrido Ribó, Zhiwei Mao, Jacob S. Hirschi, Taylor Lindsay, Karlie Bach, Eric D. Walter, Casey R. Simons, Tim J. Zuehlsdorff and May Nyman\*



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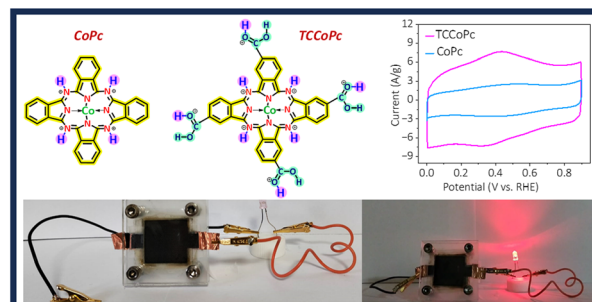
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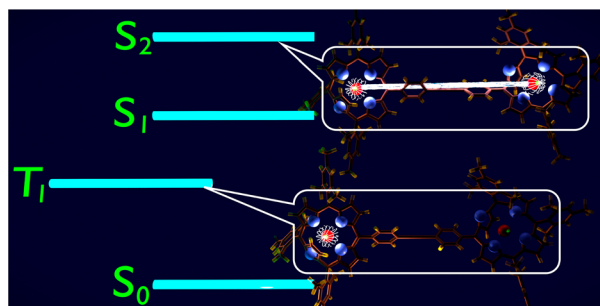
Sanchayita Mukhopadhyay, Alagar Raja Kottaichamy, Mruthyunjayachari Chattanahalli Devendrachari, Rahul Mahadeo Mendhe, Harish Makri Nimbegondi Kotresh,\* Chathakudath Prabhakaran Vinod\* and Musthafa Ottakam Thotiyal\*



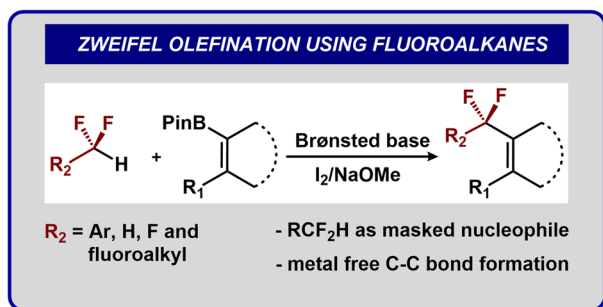
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### Decorrelated singlet and triplet exciton delocalization in acetylene-bridged Zn-porphyrin dimers

Hasini Medagedara, Mandefro Y. Teferi, Sachithra T. Wanasinghe, Wade Burson, Shahad Kizi, Bradley Zaslona, Kristy L. Mardis, Jens Niklas, Oleg G. Poluektov\* and Aaron S. Rury\*



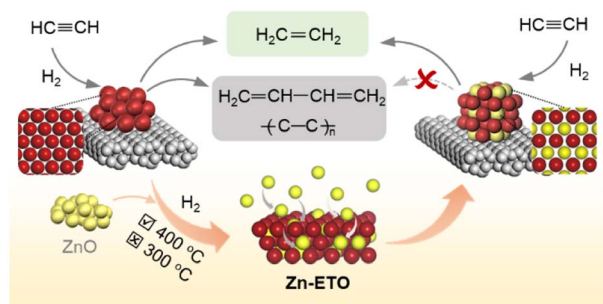
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### A metal-free strategy to construct fluoroalkyl–olefin linkages using fluoroalkanes

Kaushik Chakrabarti, Michael M. Wade Wolfe, Shuo Guo, Joseph W. Tucker, Jisun Lee and Nathaniel K. Szymczak\*

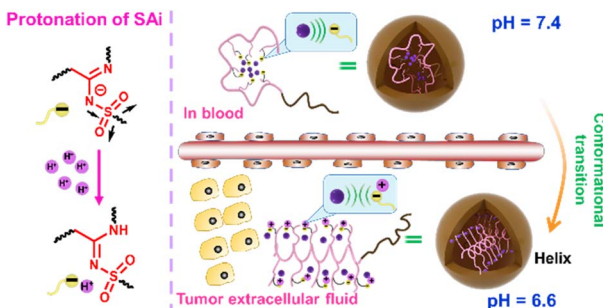
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### Thermally induced intermetallic Rh<sub>1</sub>Zn<sub>1</sub> nanoparticles with high phase-purity for highly selective hydrogenation of acetylene

Xiaocheng Lan, Yu Wang, Boyang Liu, Zhenyu Kang and Tiefeng Wang\*

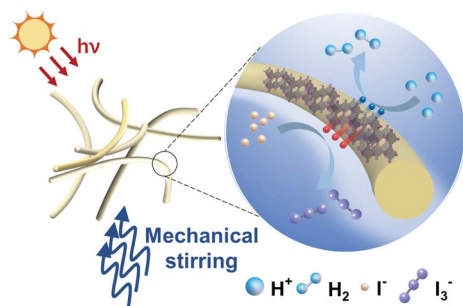
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### N-Sulfonyl amidine polypeptides: new polymeric biomaterials with conformation transition responsive to tumor acidity

Xiang Xu, Jinjuan Ma, Aiguo Wang\* and Nan Zheng\*

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### Significant hydrogen generation *via* photo-mechanical coupling in flexible methylammonium lead iodide nanowires

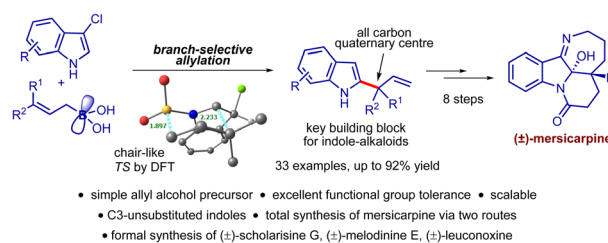
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## Construction of C2-indolyl-quaternary centers by branch-selective allylation: enabling concise total synthesis of the (±)-mersicarpine alkaloid

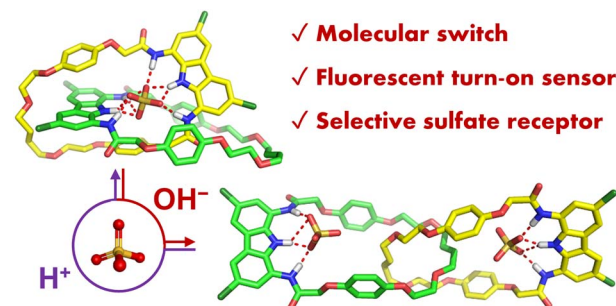
Minakshi Ghosh, Samrat Sahu, Shuvendu Saha and Modhu Sudan Maji\*



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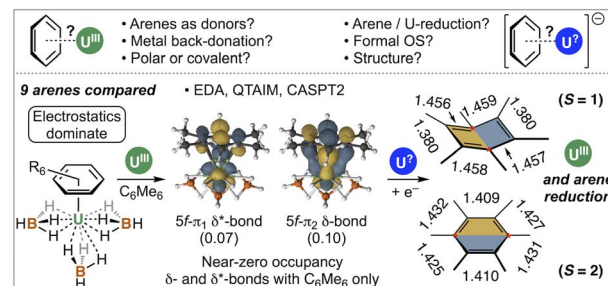
Krzysztof M. Bąk, Bartosz Trzaskowski and Michał J. Chmielewski



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## What is the nature of the uranium(III)–arene bond?

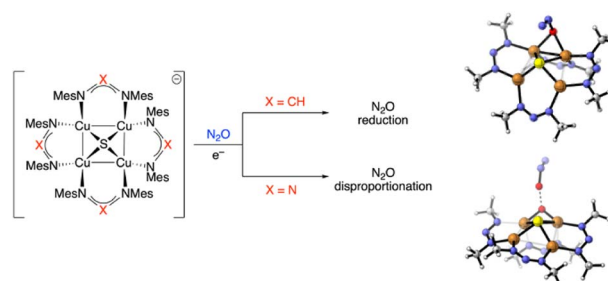
Sabyasachi Roy Chowdhury, Conrad A. P. Goodwin\* and Bess Vlaisavljevich\*



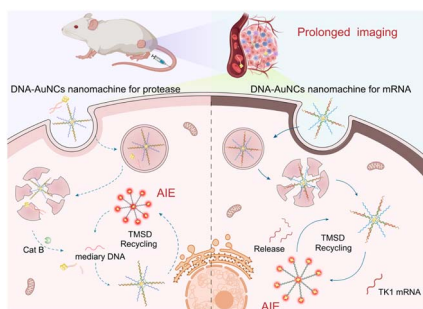
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## Triazenide-supported $[Cu_4S]$ structural mimics of $Cu_2$ that mediate $N_2O$ disproportionation rather than reduction

Neal P. Mankad\*



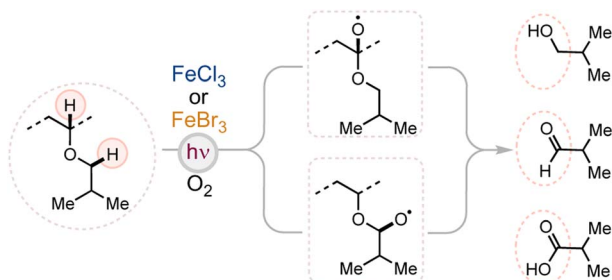
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### Prolonged near-infrared fluorescence imaging of microRNAs and proteases *in vivo* by aggregation-enhanced emission from DNA-AuNC nanomachines

Ting Wang, Kai Jiang, Yifan Wang, Limei Xu, Yingqi Liu, Shiling Zhang, Weiwei Xiong, Yemei Wang, Fenfen Zheng\* and Jun-Jie Zhu\*

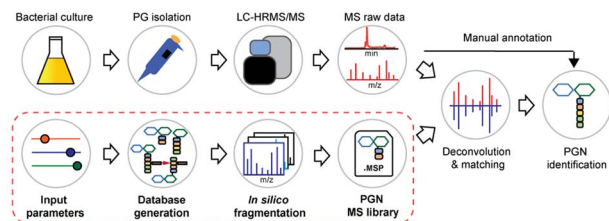
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### Selective poly(vinyl ether) upcycling via photooxidative degradation with visible light

Darren L. Langer, Sewon Oh and Erin E. Stache\*

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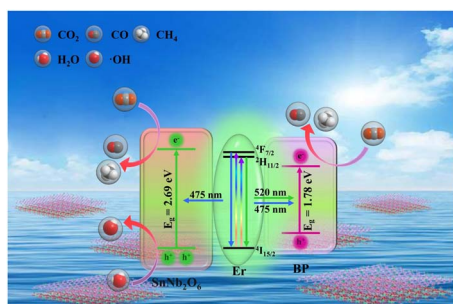


### *In silico* MS/MS prediction for peptidoglycan profiling uncovers novel anti-inflammatory peptidoglycan fragments of the gut microbiota

Jeric Mun Chung Kwan, Yaquan Liang, Evan Wei Long Ng, Ekaterina Sviriaeva, Chenyu Li, Yilin Zhao, Xiao-Lin Zhang, Xue-Wei Liu, Sunny H. Wong and Yuan Qiao\*

PGN\_MS2: an *in silico* PGN library for automated LC-MS/MS spectral deconvolution of bacterial peptidoglycan fragments (PGNs)

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### Study on synergistic effects of 4f levels of erbium and black phosphorus/SnNb<sub>2</sub>O<sub>6</sub> heterostructure catalysts by multiple spectroscopic analysis techniques

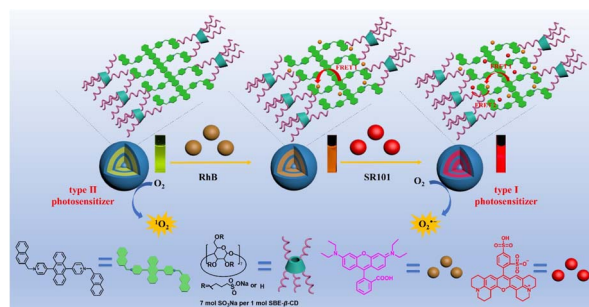
Minze Li, Jingzhen Wang, Qiuye Wang, Honglai Lu, Guofeng Wang\* and Honggang Fu\*



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### Switchover from singlet oxygen to superoxide radical through a photoinduced two-step sequential energy transfer process

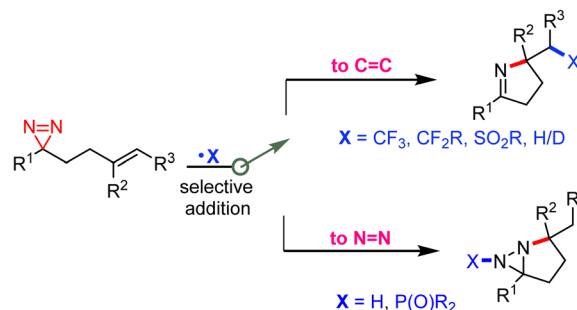
Shengsheng Yu, Rong-Xin Zhu, Kai-Kai Niu, Ning Han, Hui Liu and Ling-Bao Xing\*



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### Access to pyrrolines and fused diaziridines by selective radical addition to homoallylic diazirines

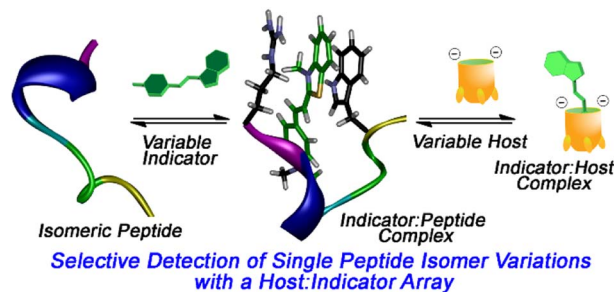
Zhigang Ma, Xinxin Wu, Haotian Li, Zhu Cao and Chen Zhu\*



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### Selective recognition and discrimination of single isomeric changes in peptide strands with a host: guest sensing array

Junyi Chen, Parisa Fasihianifard, Alexie Andrea P. Raz, Briana L. Hickey, Jose L. Moreno, Jr., Chia-En A. Chang, Richard J. Hooley\* and Wenwan Zhong\*



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### Electronic configuration regulation of single-atomic Mn sites mediated by Mo/Mn clusters for an efficient hydrogen evolution reaction

Chengyu Zhang, Xiangyang Wang, Renyuan Zhao, Fabrice Ndayisenga and Zhisheng Yu\*

