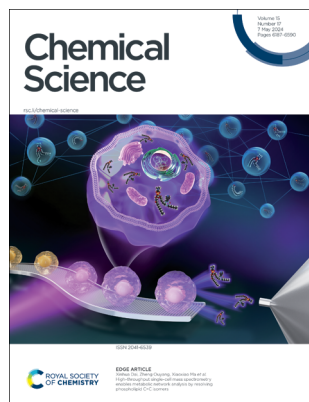


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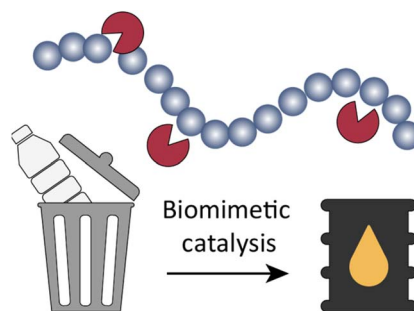
Cover
See Xinhua Dai, Zheng Ouyang, Xiaoxiao Ma *et al.*, pp. 6314–6320. Image reproduced by permission of Simin Cheng from *Chem. Sci.*, 2024, 15, 6314.

PERSPECTIVES

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Opportunities and challenges for plastic depolymerization by biomimetic catalysis

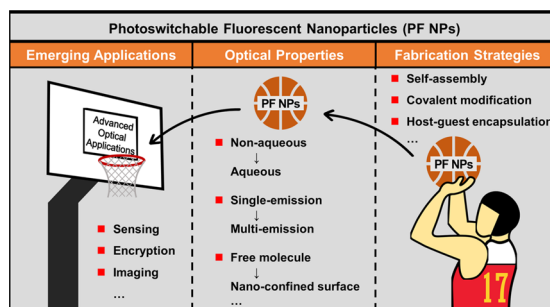
Yanfen Wu, Qikun Hu, Yizhen Che and Zhiqiang Niu*



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Photoswitching the fluorescence of nanoparticles for advanced optical applications

Wencheng Zhong and Li Shang*



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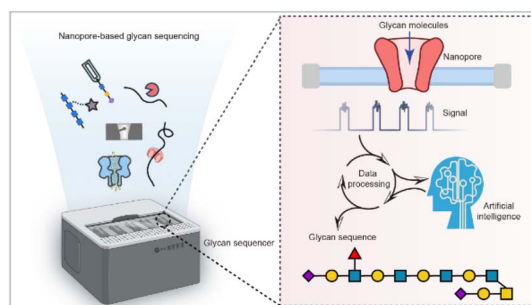
Fundamental questions
Elemental answers



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Nanopore-based glycan sequencing: state of the art and future prospects

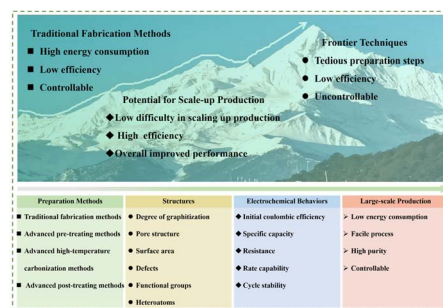
Guangda Yao, Wenjun Ke, Bingqing Xia* and Zhaobing Gao*



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Hard carbon for sodium-ion batteries: progress, strategies and future perspective

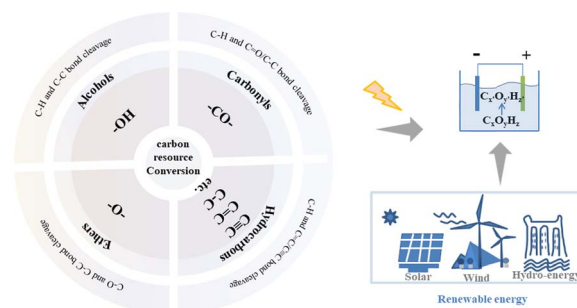
Chun Wu, Yunrui Yang, Yinghao Zhang, Hui Xu, Xiangxi He, Xingqiao Wu* and Shulei Chou*



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Electrocatalytic functional group conversion-based carbon resource upgrading

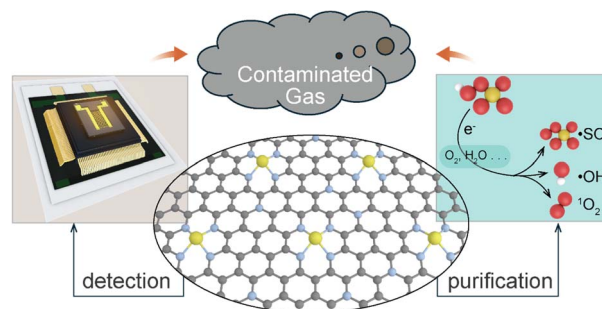
Di Si, Xue Teng, Bingyan Xiong, Lisong Chen* and Jianlin Shi



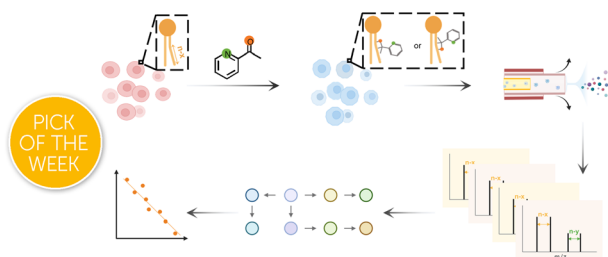
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Emerging single-atom catalysts in the detection and purification of contaminated gases

Lingyue Liu, Ka-Fu Yung,* Hongbin Yang* and Bin Liu*



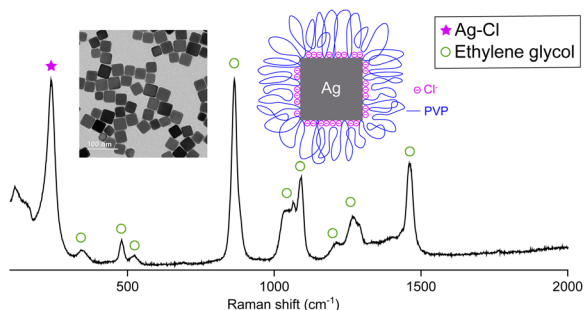
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High-throughput single-cell mass spectrometry enables metabolic network analysis by resolving phospholipid C=C isomers

Simin Cheng, Chenxi Cao, Yao Qian, Huan Yao, Xiaoyun Gong, Xinhua Dai,* Zheng Ouyang* and Xiaoxiao Ma*

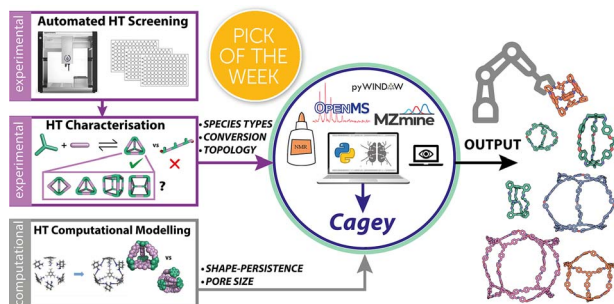
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Seeing is believing: what is on the surface of silver nanocrystals suspended in their original reaction solution

Qijia Huang, Dong Qin and Younan Xia*

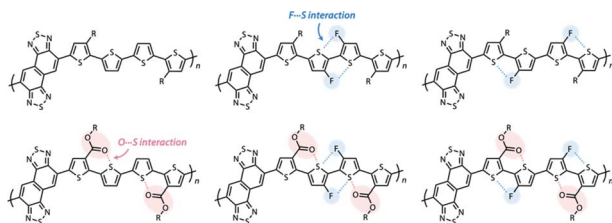
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Streamlining the automated discovery of porous organic cages

Annabel R. Basford, Steven K. Bennett, Muye Xiao, Lukas Turcani, Jasmine Allen, Kim. E. Jelfs* and Rebecca L. Greenaway*

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Manipulating the functionality and structures of π -conjugated polymers utilizing intramolecular noncovalent interactions towards efficient organic photovoltaics

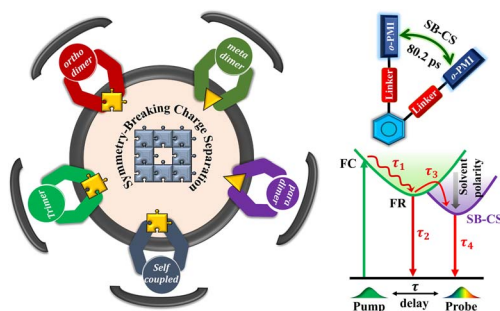
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Ultrafast symmetry-breaking charge separation in Perylenemonoimide-embedded multichromophores: impact of regioisomerism

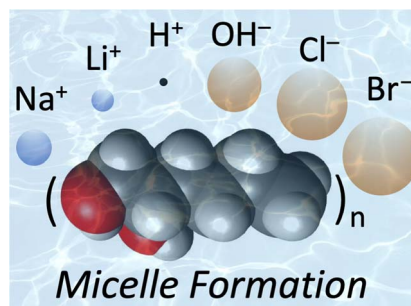
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Influence of H⁺, OH⁻ and salts on hydrophobic self-assembly

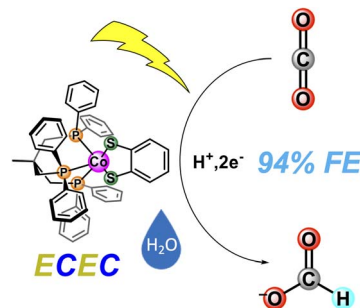
Kenneth D. Judd, Denilson Mendes de Oliveira, Andres S. Urbina and Dor Ben-Amotz*



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Electrocatalytic CO₂ reduction to formate by a cobalt phosphino–thiolate complex

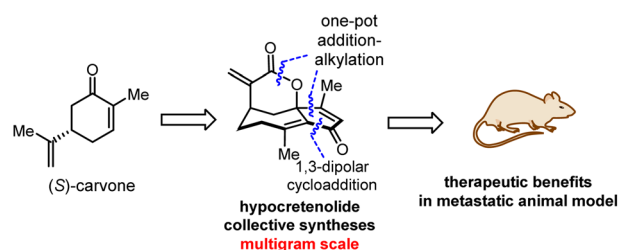
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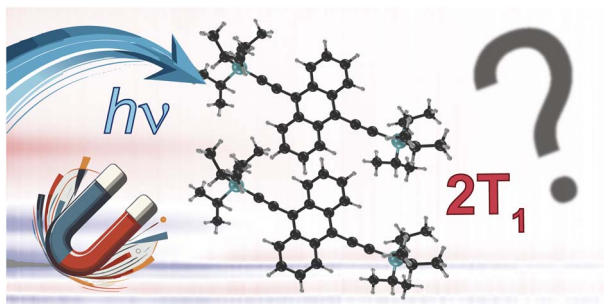
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Hypocretenolides: collective total syntheses and activities toward metastatic colon cancer

Bolin Chen, Xijing Zhang, Yufen Yang, Dongdong Xu, Qianwei Wu, Shibo Wang, Shiqi Bao, Xuemei Zhang, Yahui Ding,* Liang Wang* and Yue Chen*



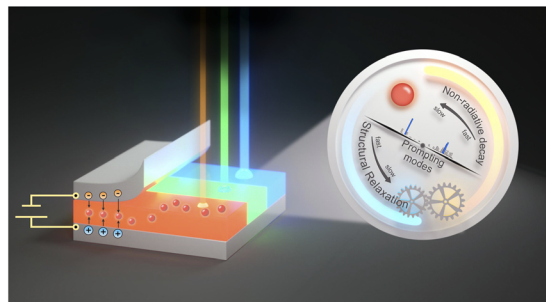
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Singlet fission in TIPS-anthracene thin films

Damon M. de Clercq, Miles I. Collins, Nicholas P. Sloane, Jiale Feng, Dane R. McCamey, Murad J. Y. Tayebjee, Michael P. Nielsen and Timothy W. Schmidt*

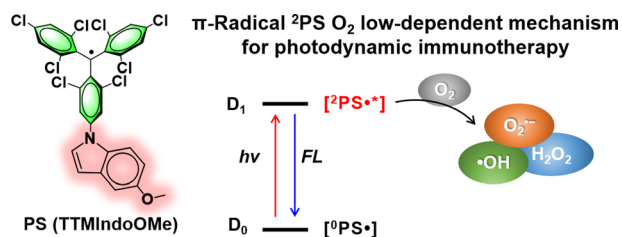
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Ultrafast photophysics of an orange-red thermally activated delayed fluorescence emitter: the role of external structural restraint

Yixuan Gao, Yaxin Wang, Zilong Guo,* Yan Wan, Zheng Xue, Yandong Han, Wensheng Yang and Xiaonan Ma*

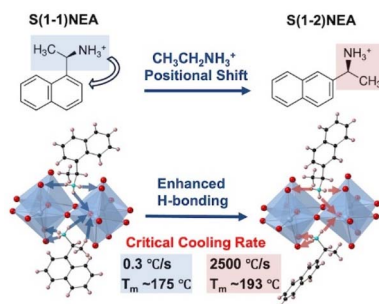
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Fine-tuning of stable organic free-radical photosensitizers for photodynamic immunotherapy

Xiang Wang, Gaona Shi, Rao Wei, Meng Li, Qingyang Zhang, Tiantai Zhang,* Chuan-Feng Chen* and Hai-Yu Hu*

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Controlling glass forming kinetics in 2D perovskites using organic cation isomers

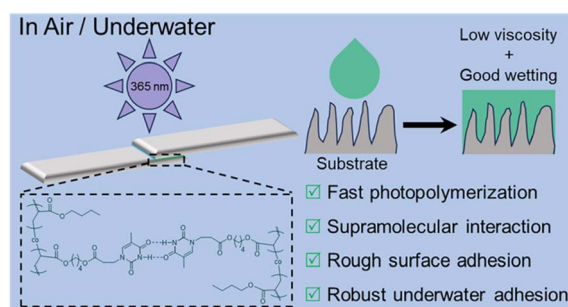
Akash Singh, Yi Xie, Curtis Adams, III, Benjamin G. Bobay and David B. Mitzi*



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Wetting-enhanced adhesion of photo-polymerized supramolecular adhesives for both smooth and rough surfaces

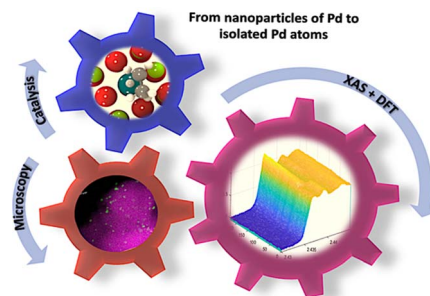
Mengyuan Zhao, Jiang Wu, Fanxuan Zeng, Zhi Dong, Xinyi Shen, Zan Hua* and Guangming Liu*



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Dynamic structural evolution of MgO-supported palladium catalysts: from metal to metal oxide nanoparticles to surface then subsurface atomically dispersed cations

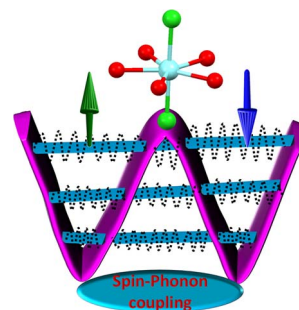
Yizhen Chen, Rachita Rana, Yizhi Zhang, Adam S. Hoffman, Zhennan Huang, Bo Yang, Fernando D. Vila, Jorge E. Perez-Aguilar, Jiyun Hong, Xu Li, Jie Zeng, Miaofang Chi, Coleman X. Kronawitter, Haiyan Wang, Simon R. Bare,* Ambarish R. Kulkarni* and Bruce C. Gates*



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Unravelling the role of spin–vibrational coupling in designing high-performance pentagonal bipyramidal Dy(III) single ion magnets

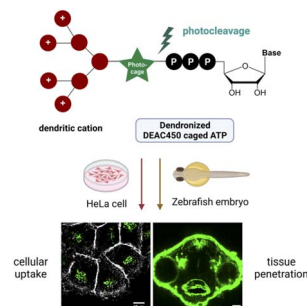
Sourav Dey, Tanu Sharma and Gopalan Rajaraman*



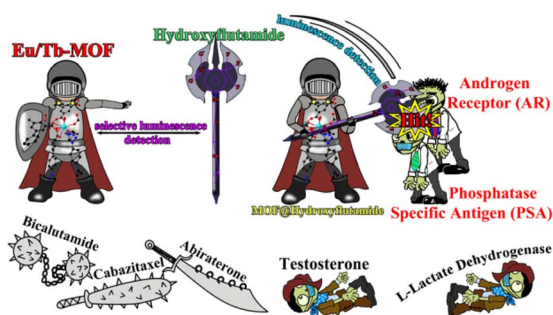
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Intracellular delivery and deep tissue penetration of nucleoside triphosphates using photocleavable covalently bound dendritic polycations

Jiahui Ma, Johanna Wehrle, Dennis Frank, Lina Lorenzen, Christoph Popp, Wolfgang Driever, Robert Grosse and Henning J. Jessen*



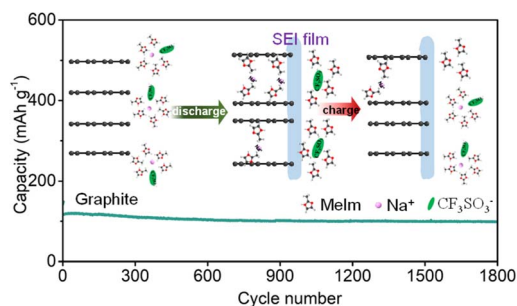
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Lanthanide MOF-based luminescent sensor arrays for the detection of castration-resistant prostate cancer curing drugs and biomarkers

Xinrui Wang, Karuppasamy Gopalsamy, Gilles Clavier, Guillaume Maurin, Bin Ding,* Antoine Tissot* and Christian Serre*

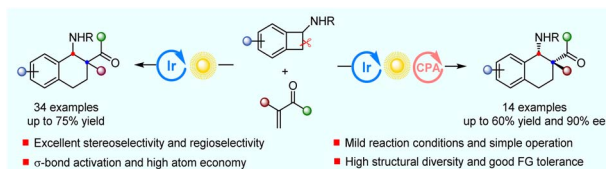
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Revealing the Na storage behavior of graphite anodes in low-concentration imidazole-based electrolytes

Wei Zhao, Chunting Wang, Zhenjie Cheng, Cheng Zheng, Qian Yao, Jun Pan,* Xiaojian Ma* and Jian Yang

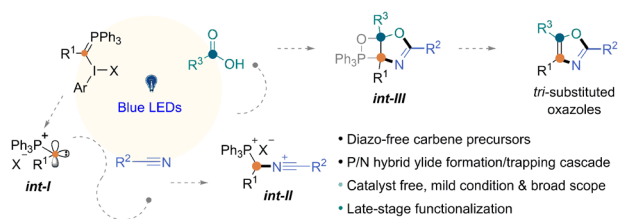
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Visible-light-enabled stereoselective synthesis of functionalized cyclohexylamine derivatives via [4 + 2] cycloadditions

Yi-Nan Lu, Chao Che, Guangjin Zhen, Xin Chang, Xiu-Qin Dong* and Chun-Jiang Wang*

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Photochemical three-component assembly of tri-substituted oxazoles through a carbenic phosphorus-nitrile hybrid ylide formation/trapping cascade

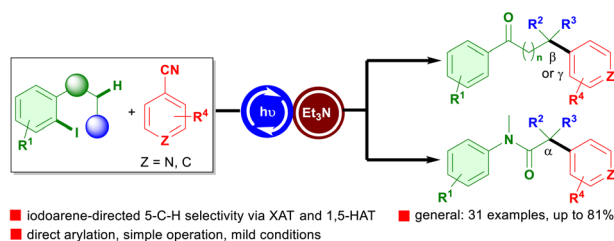
Xingchen Ye, Huaijin Pan, Yong Huang,* Jiean Chen* and Zhaofeng Wang*



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Iodoarene-directed photoredox β -C(sp³)-H arylation of 1-(*o*-iodoaryl)alkan-1-ones with cyanoarenes via halogen atom transfer and hydrogen atom transfer

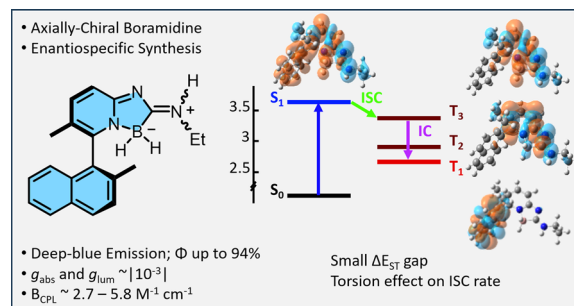
Liang Zeng, Chong-Hui Xu, Xiu-Yuan Zou, Qing Sun,* Ming Hu,* Xuan-Hui Ouyang, De-Liang He* and Jin-Heng Li*



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Axially-chiral boramidine for detailed (chir)optical studies

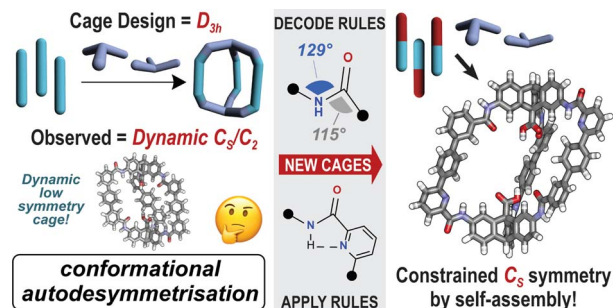
Nidal Saleh,* Estefanía Sucre-Rosales, Francesco Zinna, Céline Besnard, Eric Vauthey* and Jérôme Lacour*



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Programmable synthesis of organic cages with reduced symmetry

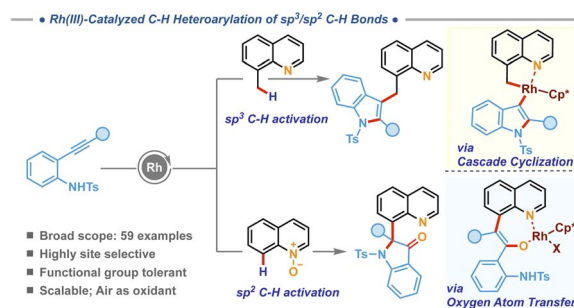
Keith G. Andrews,* Peter N. Horton and Simon J. Coles



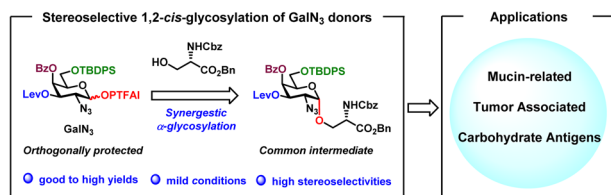
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Rh(III)-catalyzed sp^3/sp^2 -C-H heteroarylations via cascade C-H activation and cyclization

Atul K. Chaturvedi, Rahul K. Shukla and Chandra M. R. Volla*



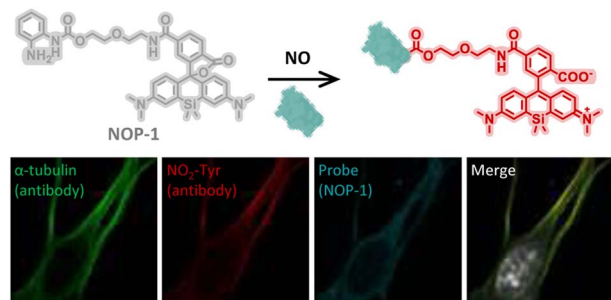
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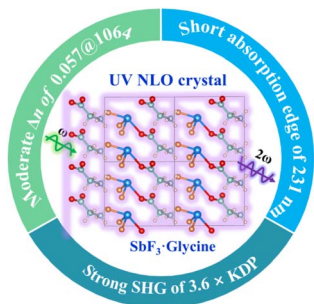
Highly stereoselective α -glycosylation with GalN₃ donors enabled collective synthesis of mucin-related tumor associated carbohydrate antigens

Kunxiu Shou, Yunqin Zhang, Yujie Ji, Bin Liu, Qingli Zhou, Qiang Tan, Fuying Li, Xiufang Wang, Gang Lu* and Guozhi Xiao*

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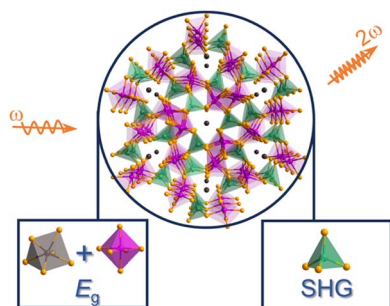
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Hydrogen bonding bolstered head-to-tail ligation of functional chromophores in a 0D SbF₃·glycine adduct for a short-wave ultraviolet nonlinear optical material

Zhiyong Bai, Jihyun Lee, Chun-Li Hu,* Guohong Zou* and Kang Min Ok*

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Wide band gap selenide infrared nonlinear optical materials A^{II}Mg₆Ga₆Se₁₆ with strong SHG responses and high laser-induced damage thresholds

Linan Wang, Dongdong Chu, Zihua Yang, Junjie Li* and Shilie Pan*



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Fine-regulation of gradient gate-opening in nanoporous crystals for sieving separation of ternary C3 hydrocarbons

Shuang Liu, Yuhang Huang, Jingmeng Wan, Jia-Jia Zheng, Rajamani Krishna, Yi Li, Kai Ge,* Jie Tang and Jingui Duan*

