

ChemComm

Chemical Communications

rsc.li/chemcomm

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(17) 3411-3570 (2025)



Cover

See Daisuke Hirose, Kenji Takahashi *et al.*, pp. 3484–3487. Image reproduced by permission of Daisuke Hirose from *Chem. Commun.*, 2025, **61**, 3484.



Inside cover

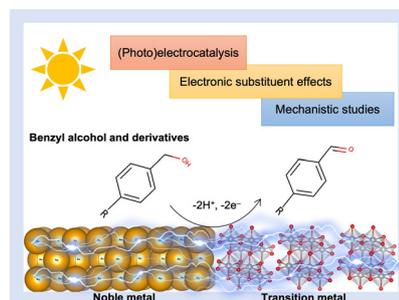
See Joaquín García-Álvarez, Carmen Concellón, Vicente del Amo *et al.*, pp. 3488–3491. Image reproduced by permission of Lucía Fernández and Joaquín García-Álvarez from *Chem. Commun.*, 2025, **61**, 3488.

HIGHLIGHTS

3421

Tailoring the oxidation of benzyl alcohol and its derivatives with (photo)electrocatalysis

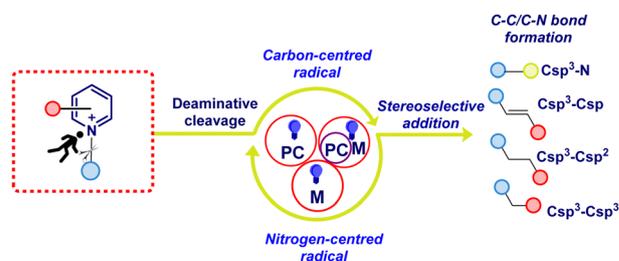
Jingjing Qiu,* Tucker Forbes and Timothy Lin



3436

Photoinduced stereoselective reactions using pyridinium salts as radical precursors

Shashank Singh, Diksha Gambhir and Ravi P. Singh*



Environmental Science: Atmospheres

GOLD
OPEN
ACCESS

Connecting communities
and inspiring new ideas



Open Access Article. Published on 20 February 2025. Downloaded on 4/20/2026 2:48:39 AM.
This article is licensed under a Creative Commons Attribution 3.0 Unported Licence.

rsc.li/submittoEA

Fundamental questions
Elemental answers

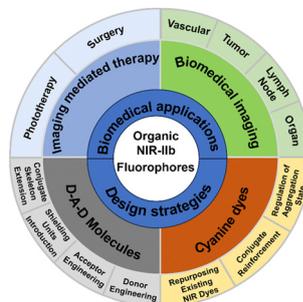


FEATURE ARTICLES

3447

Design strategies and biomedical applications of organic NIR-IIb fluorophores

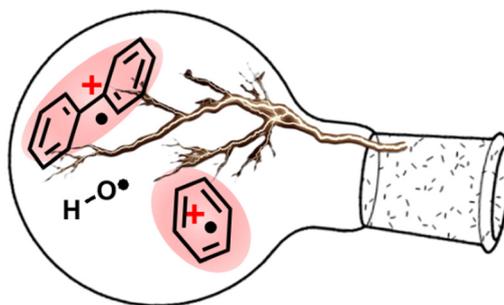
Xinming Zhang, Jing Lin* and Peng Huang*



3461

Transient methods for understanding the properties of strongly oxidizing radicals

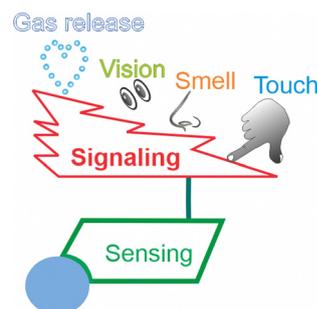
Dmitry E. Polyansky



3472

The outputs of molecular sensors detectable by human senses

Maria S. Rubel, Tatiana Zemerova and Dmitry M. Kolpashchikov*



COMMUNICATIONS

3484

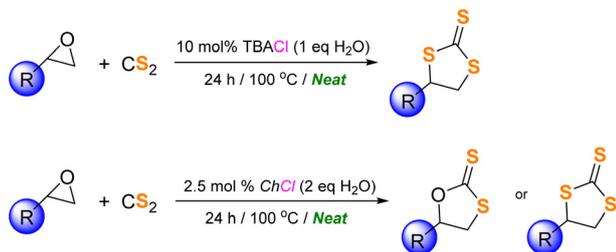
Fully bio-based cellulose ester synthesis from natural aldehydes via aerobic oxidation

Daisuke Hirose,* Daiki Ina, Akina Yoshizawa, Samuel Budi Wardhana Kusuma, Masaki Nishio, Naoki Wada and Kenji Takahashi*



COMMUNICATIONS

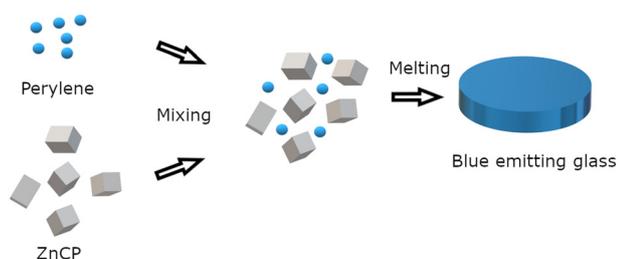
3488



Organocatalytic CS₂ insertion into epoxides in neat conditions: a straightforward approach for the efficient synthesis of Di- and tri-thiocarbonates

Marcos López-Aguilar, Nicolás Ríos-Lombardía, Miguel Gallegos, Daniel Barrena-Espés, Joaquín García-Álvarez,* Carmen Concellón* and Vicente del Amo*

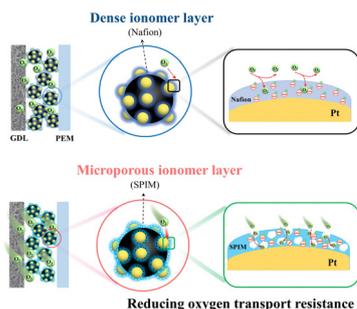
3492



Aggregation suppression and enhanced blue emission of perylene in zinc-based coordination polymer glass

Jaeho Lee, Zixi Xie,* Wengang Huang, Milton Chai, Xuemei Li, Bun Chan, Huiyuan Cheng, Dongxu He, EQ Han, Yuelei Chen, Vicki Chen, Lianzhou Wang and Jingwei Hou*

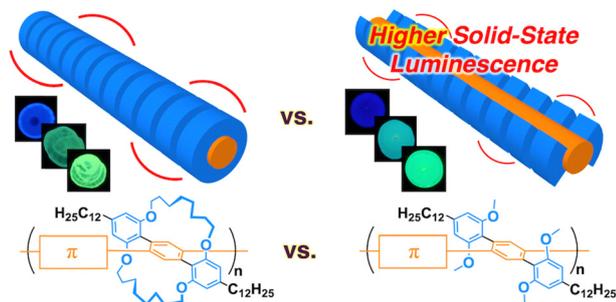
3496



Reducing oxygen-transport resistance within a catalyst layer for fuel cells by adopting an intrinsically microporous ionomer

Wei Yuan, Shimei Liang, Xiufang Zheng, Xuedong Zhang, Jianchuan Wang,* Xi Yin, Qiang Liao and Zidong Wei*

3500



Self-encapsulation or picket-fence? An answer to molecular designs of highly solid-state luminescent conjugated polymers

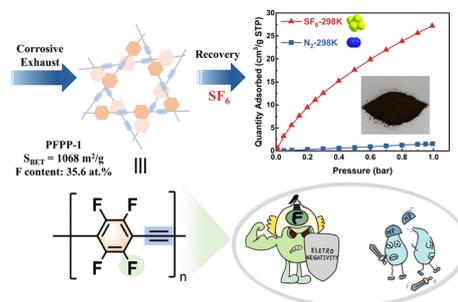
Tsuneaki Sakurai,* Kyota Ohkura, Teruyoshi Ikeda, Rin Terao, Yoshiki Kamimura, Mitsuo Hara and Masaki Shimizu



3504

A HF-resistant perfluorinated porous polymer for the separation of electronic specialty gases

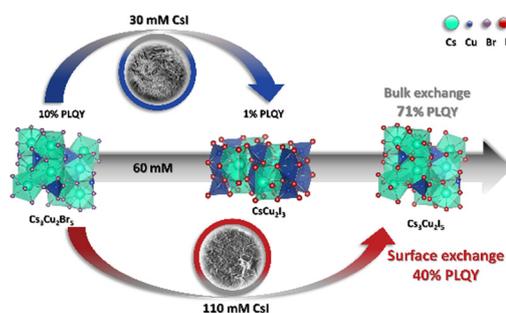
Weiwei Zhang, Hui Yin, Jiawu Huang, Xiaoying Zhou, Cuiting Yang, Zilu Zhang, Junjie Peng* and Jing Xiao*



3508

Solution triggered facile ion-exchange and phase transformation of ternary cesium-copper halide pseudo-perovskites

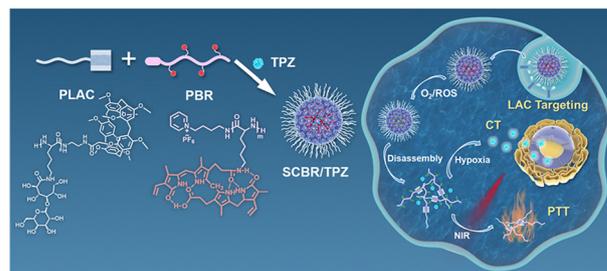
Cintia Hajdu, Tamás Sándor Zsigmond, Bence Kutus, Ditta Ungor, Edit Csapó, Csaba Janáky* and Gergely Ferenc Samu*



3512

Hypoxia-responsive bilirubin supramolecular nanoprodrugs for targeted photothermal-chemotherapy

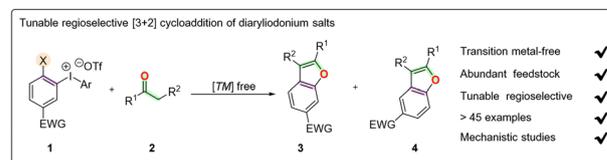
Yu Xie, Liangshun Zheng, Tingting Chen* and Yue Ding*



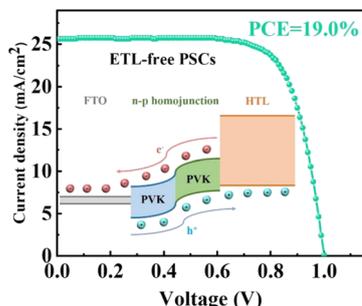
3516

Transition-metal-free tunable regioselective [3+2] cycloaddition of diaryliodonium salts with 1,3-dicarbonyl derivatives

Yixi Yang, Shaoqing Wang, Lin Wang, Na Dang, Tao Qin,* Heye Zhou and Bin Liu*



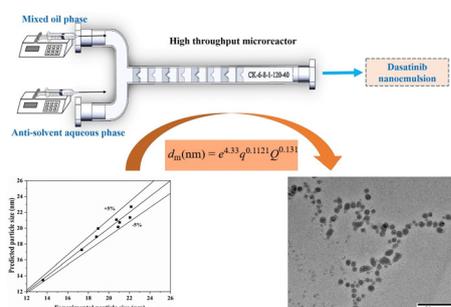
3520



Constructing bottom-up n-p perovskite homojunctions for enhanced performance of electron transport layer-free solar cells

Xi Chen, Jun-Xing Zhong, Wenhui Feng, Yujian Shen, Xueqing Chang and Wu-Qiang Wu*

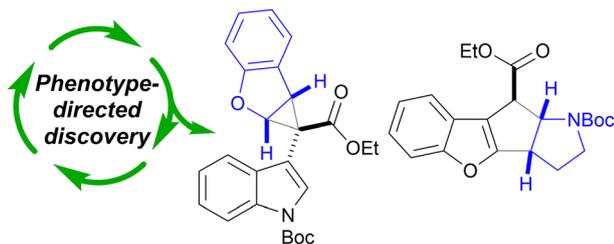
3524



Uniform and size-tunable dasatinib nanoemulsions synthesized by a high-throughput microreactor for enhanced temperature stability

Su Wang, Chao Li, Jiayang Zhang, Kaixuan Ma, Wanyao Zhang, Yan Gao, Xue Li, Jingsheng Zhang, Liang Guo, Yingying Nie, Yuguang Li, Ruiyan Sun, Ning Zhu, Wei He, Shuangfei Zhao* and Kai Guo*

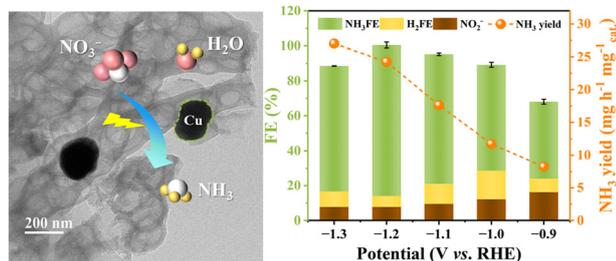
3528



Phenotype-directed discovery of diverse, biologically-relevant molecular scaffolds

Samuel D. Griggs, Amalia-Sofia Piticari, Samuel Liver, Chris Arter, Sonja Sievers, Stephen P. Marsden* and Adam Nelson*

3532



Carbon nanofiber-supported Cu nanoparticles for efficient nitrate reduction to ammonia

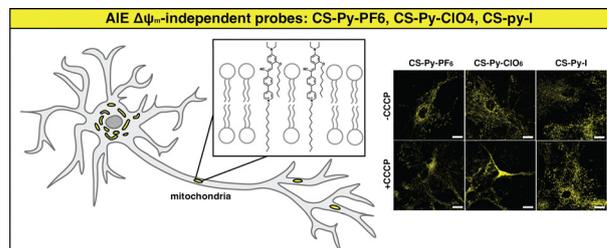
Tan Wang, Liyan Niu, Kaijie Zhang, Yasen Wang, Haoran guo,* Xuesong He, Haohong Xian and Tingshuai Li*



3536

Reaction-free mitochondrial membrane potential independent luminogens with aggregation-induced emission characteristics for live neuron imaging

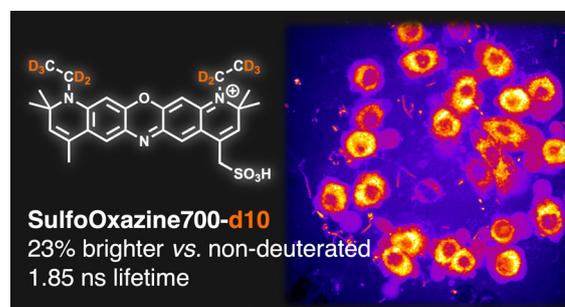
Hojeong Park, Guangle Niu, Alex Y. H. Wong, Eric Y. Yu, Ryan T. K. Kwok and Ben Zhong Tang*



3540

Deuterated oxazines are bright near-infrared fluorophores for mitochondrial imaging and single molecule spectroscopy

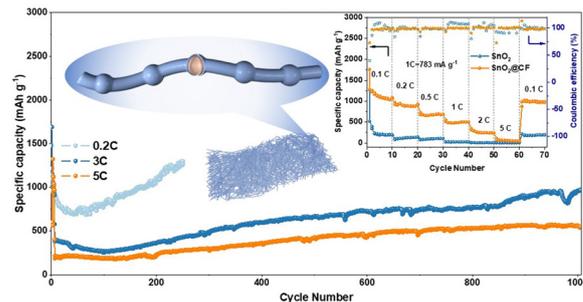
Blaise Gatin-Fraudet,* Julius Seifert, Kris Sarach, Christina Holmboe Olesen, Ramona Birke, Sigrid Milles, Melissa Birol, Martin Lehmann and Johannes Broichhagen*



3544

Reticulated carbon nanofiber-encapsulated SnO₂ hollow spheres as high performance anode material for lithium-ion batteries

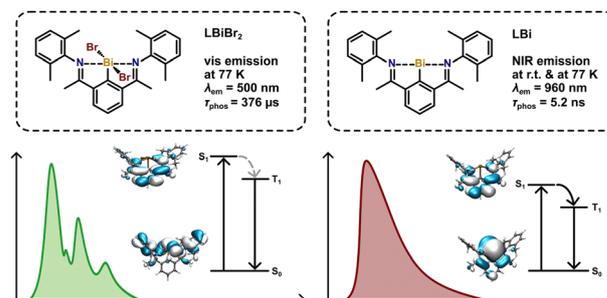
Ya Chen, Lingling Wang, Bozhi Yang, Jiapeng Lu, Minghao Fang, Wei Wang, Bin Ma and Xin Min*



3548

Room-temperature near-infrared phosphorescence of a bismuthinidene N,C,N pincer complex

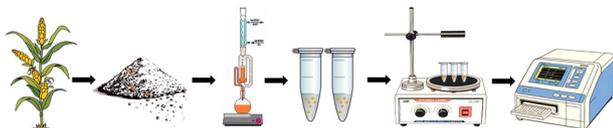
Katharina L. Deuter, Daisy J. J. Balaba, Michael Linseis and Rainer F. Winter*



3552

NaOH/urea aqueous solution facilitates spectroscopic quantitation of lignin in corn stalk

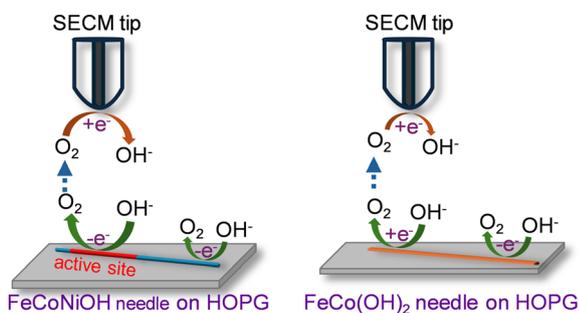
Kexin Yan, Nan Li, Qifan Tian, Zijian Tan, Qingchen Qin, Jinao Duan, Leilei Zhu* and Haifeng Liu*



3556

Probing the catalytic heterogeneity of single FeCo and FeCoNi hydroxide nanoneedles by scanning electrochemical microscopy

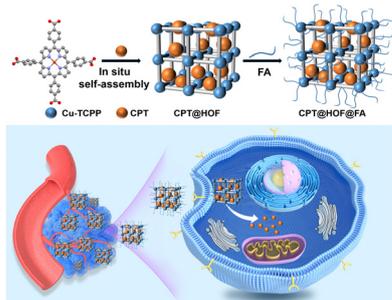
A. Anto Jeffery, Tianyu Bo, Gaukhar Askarova and Michael V. Mirkin*



3560

Construction of a hydrogen-bonded organic framework-based therapeutic platform by one-pot method

Yan Wang, Jiarui Qiao, Wenjing Wei, Meng Liu, Xianhao Wei, Luwen Zhang, Junhe Ou, Tingyan Jiang and Maolin Pang*



3564

Engineering a dual-porous Li-rich carbon-coated Si/SiO_x nanosphere as a high-performance Li-ion battery anode

Yajun Zhu, Hui Zhang, Xiangbing Zeng, Tianli Han, Meizhou Qi, Wentuan Bi* and Jinyun Liu*

