

ChemComm

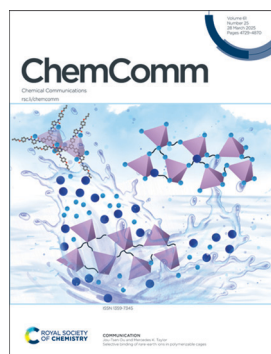
Chemical Communications

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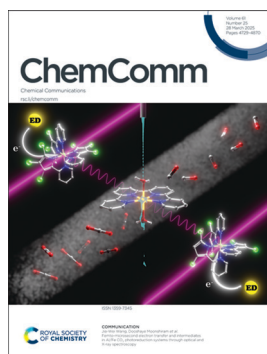
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ISSN 1359-7345 CODEN CHCOFS 61(25) 4729-4870 (2025)



Cover

See Jou-Tsen Ou and Mercedes K. Taylor, pp. 4784-4787. Image reproduced by permission of Jou-Tsen Ou from *Chem. Commun.*, 2025, 61, 4784.



Inside cover

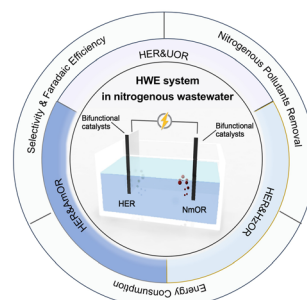
See Jia-Wei Wang, Dooshaye Moonshiram et al., pp. 4788-4791. Image reproduced by permission of Dooshaye Moonshiram from *Chem. Commun.*, 2025, 61, 4788.

HIGHLIGHT

4739

Bifunctional transition-metal catalysts for energy-saving hydrogen generation from nitrogenous wastewater

Yue Zhou, Liang Zhang, Xin Yang,* Guiyue Xu, Chao Meng,* Guoqiang Li, Yan Lin, Chongzheng Sun, Ning Zhang, Ran Yi,* Kun Zhang and Lichao Jia*

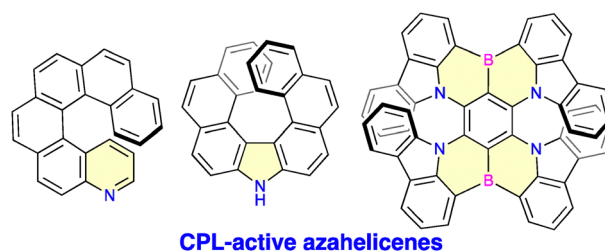


FEATURE ARTICLES

4757

Recent development of azahelicenes showing circularly polarized luminescence

Chihiro Maeda* and Tadashi Ema*



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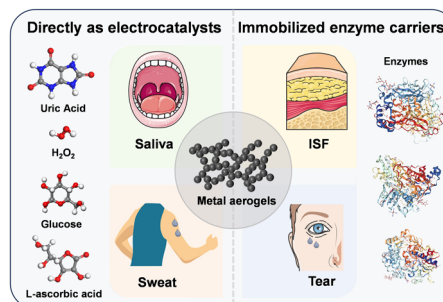
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FEATURE ARTICLES

4774

Functional design of metal aerogels for wearable electrochemical biosensing devices

Pengxin Xue, Shaokun Zhou, Guanglei Li* and Dan Wen*

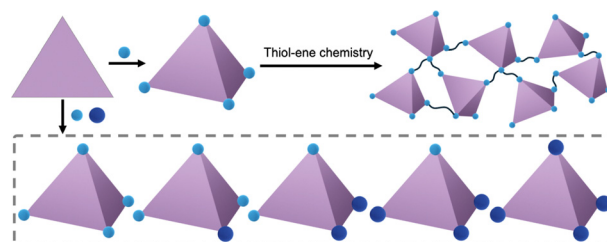


COMMUNICATIONS

4784

Selective binding of rare-earth ions in polymerizable cages

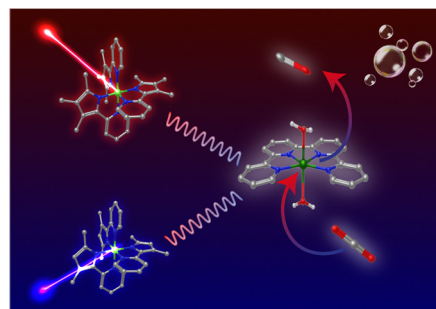
Jou-Tsen Ou and Mercedes K. Taylor*



4788

Femto-microsecond electron transfer and intermediates in Al/Fe CO₂ photoreduction systems through optical and X-ray spectroscopy

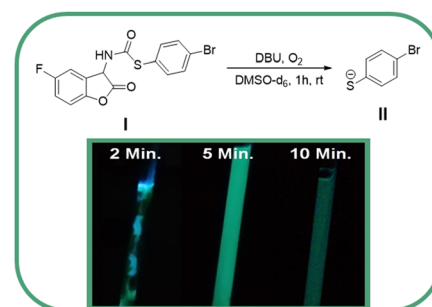
Maxime Sauvan, Ashok Ugale, Lucia Velasco, Asterios Charisiadis, Fan Ma, Xiaoyi Zhang, Jia-Wei Wang* and Dooshaye Moonshiram*



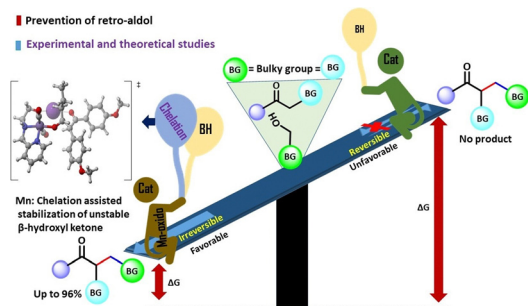
4792

Thiolate-CLPG (chemiluminescent protecting groups) based on coumaranone thiolcarbamates

Tim Lippold,* Julia Kosolapova, Niko T. Flosbach, Robert Herzhoff, Axel G. Griesbeck* and Mathias Wickleder



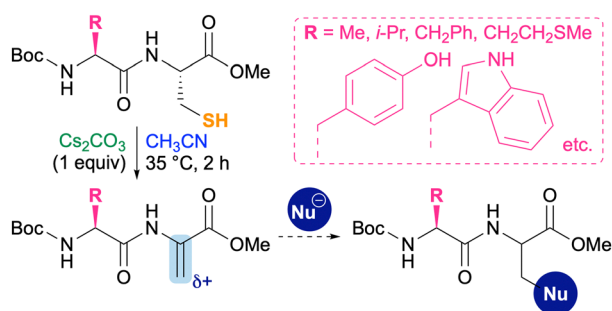
4796



Designing a NNO–manganese complex overcoming steric constraints in (de)hydrogenative coupling

Avijit Mondal, Hirak Jyoti Phukan, Kailash Mohar, Debjyoti Pal, Rahul Sharma, Siddhartha Purkayastha, Ankur Kanti Guha* and Dipankar Srimani*

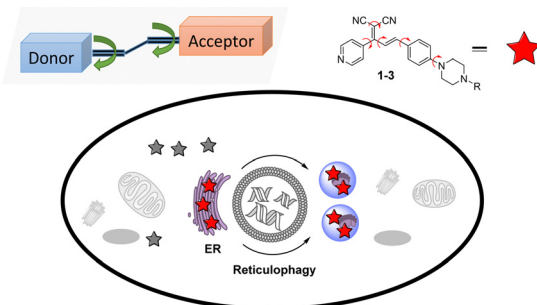
4800



Direct and chemoselective transformation of cysteine to dehydroalanine on peptides

Taiki Mori, Kazuki Sakata and Seiji Shirakawa*

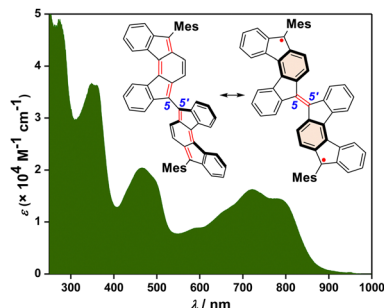
4804



Dynamic visualization of endoplasmic reticulum viscosity in living cells with a multirotor-based fluorescent probe

Yuehua Zhang, Nuo Dong, Shiyu Nan, Huijie Dang, Yuan Cheng, Liqing Lu, Mei Wang, Pingzhu Zhang,* Hua Chen and Chao Wei*

4808



5,5'-Biindeno[2,1-c]fluorene: importance of C5–C5' linkage for an indeno[2,1-c]fluorene dimer exhibiting an open-shell ground state

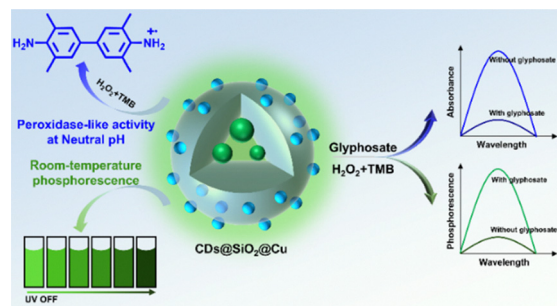
Neha Maurya, Palash Jana, Himanshu Sharma, Subhajit Bandyopadhyay and Soumyajit Das*



4812

Single-atom copper-activated carbon dots@silica nanozymes with neutral-pH peroxidase-like activity and room-temperature phosphorescence for dual-mode glyphosate detection

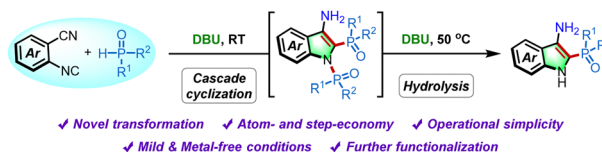
Meng-Xian Liu, Wen-Ye Liu, Hui-Yong Wang and Yong-Liang Yu*



4816

DBU-promoted cascade phosphorylation/cyclization for the synthesis of phosphorylated 3-aminoindoles

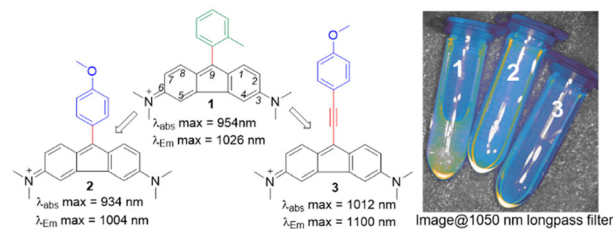
Dong-Ping Xu, Fei Huang, Li-Zhen Jin, Meng-Ya Huang and Wu Zhang*



4820

Small organic fluorophores with SWIR emission detectable beyond 1300 nm

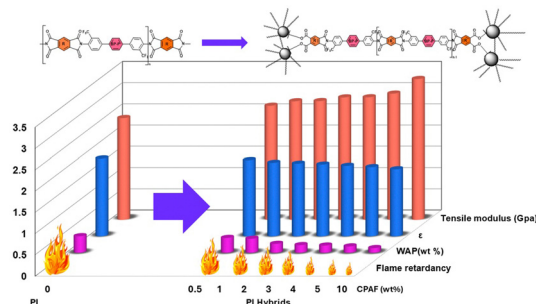
Michal Pieczykolan, Pierre Alix Dancer, Tjadina-Wencke Klein, Hubert Piwonski, Hannes Rolbieski, Bholanath Maity, Oliver T. Bruns, Luigi Cavallo, Fabian Kiessling, Magnus Rueping and Srinivas Banala*



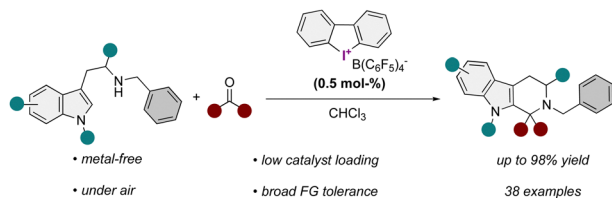
4824

Hybrid films of novel fluorinated polyimides and hyperbranched cyclotriphosphazene polymer for enhanced flame retardancy, thermomechanical properties, and reduced dielectric constant

Sivangani Reddy Nagella and Chang-Sik Ha*



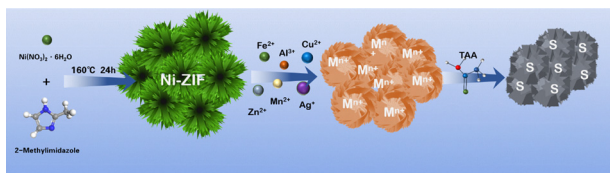
4828



Halogen bond-catalyzed Pictet–Spengler reaction

Mattis Damrath, Alessandra Döring and Boris J. Nachtsheim*

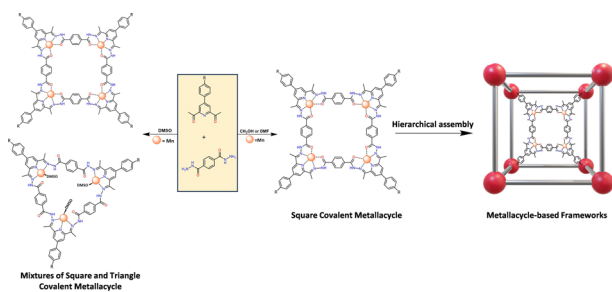
4832



Partially sulfurized NiMn-ZIF with high stability for aqueous nickel–zinc batteries

Yiluo Tian, Yichun Su, Qian Li, Wanchang Feng, Meifang Yang, Zheng Liu* and Huan Pang*

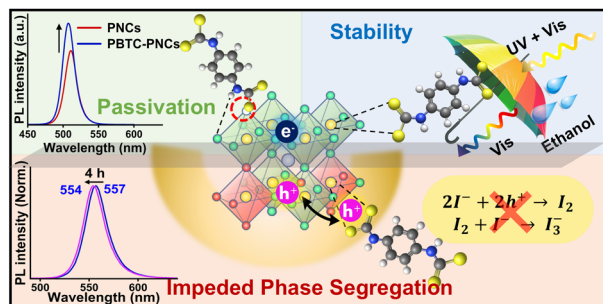
4836



Solvent-mediated subcomponent self-assembly of covalent metallacycles for hierarchical porous materials synthesis

Zhi-Wei Li,* Anlian Huang, Zhenguo Wang, Rui Gao, Bang Lan,* Guosheng Chen* and Gangfeng Ouyang

4840



Dual-locking strategy with a charge-delocalizing ligand for stable perovskites

Pooja Aggarwal, Harsh Patel, Shivani Gupta, Soumyadeep De and Vishal Govind Rao*

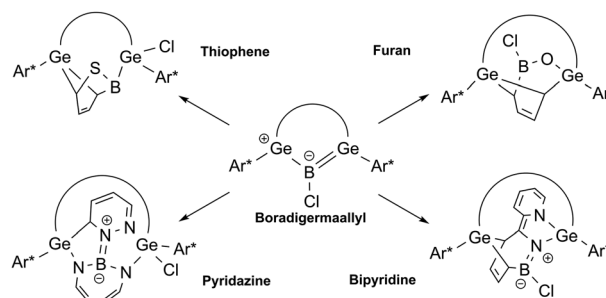


COMMUNICATIONS

4844

Heterocycles in reactions with boradigermaallyl

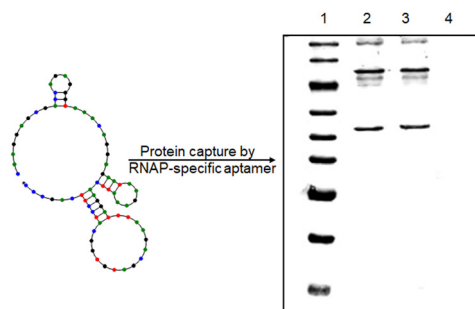
Ralf H. Kern, Paul L. Schmiedel, Hartmut Schubert and Lars Wesemann*



4848

DNA aptamers targeting *P. aeruginosa* RNAP

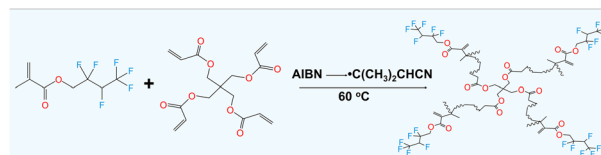
Hari Timilsina, Dmytro Kompaniiets, Satya Prakash Arya, Rick Mason Postema, Raunak Jahan, Andrew Michael Reynolds, Siddhartha Kalpa Samadhi Thennakoon, Bin Liu* and Xiaohong Tan*



4852

A fluorine-rich and flame-retardant gel polymer electrolyte enables thermal polymerization of fluorinated acrylates for stable quasi-solid-state Na-ion batteries

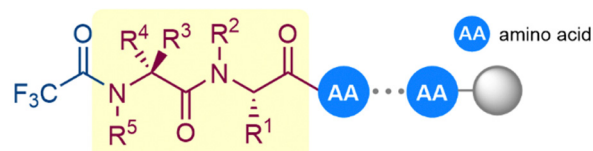
Ganlong Hu, Zhou Xu and Zhiyu Wang*



4856

Preparation of sterically hindered peptides using trifluoroacetyl protection: incorporation of *N*-alkyl- α,α -dialkyl amino acids into *N*-alkyl amino acids

Kenichi Nomura,* Hidekazu Hochido, Yuya Morita, Satoshi Hashimoto and Hatsuo Kawada



Preparation of Sterically Hindered Peptides !

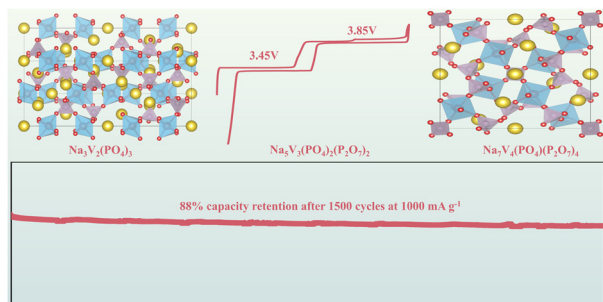
Using Tfa protection

- 1) enhancing the electrophilicity of α,α -dialkyl amino acid
- 2) on-resin *N*-alkylation by using enhanced acidity of Tfa amide



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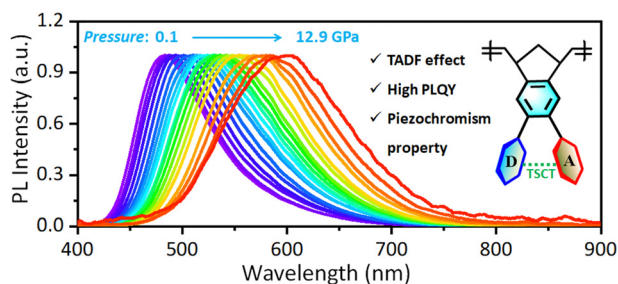
4860



Ultrafast biphasic $\text{Na}_5\text{V}_3(\text{PO}_4)_2(\text{P}_2\text{O}_7)_2/\text{C}$ composite cathode for sodium-ion batteries

Yu Bai, Yunyun Liu, Yangyang Zhang, Ruisi Jiang and Xingde Xiang*

4864



Through-space charge-transfer polybenzonorbornenes with thermally activated delayed fluorescence and full-color piezochromism

Qiang Li, Fangfang Huang, Xiaofan Xu, Xingdong Wang, Zhihua Ma, Zewei Quan,* Jize Liu, Hui Tong, Shiyang Shao* and Lixiang Wang*

CORRECTION

4868

Correction: Single crystal formation in core–shell capsules

Marie Mettler, Adrien Dewandre, Nikolay Tumanov, Johan Wouters and Jean Septavaux*

