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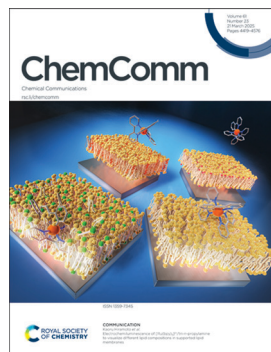
Chemical Communications

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IN THIS ISSUE

ISSN 1359-7345 CODEN CHCOFS 61(23) 4419-4576 (2025)



Cover

See Kaoru Hiramoto *et al.*, pp. 4495–4498. Image reproduced by permission of Kaoru Hiramoto from *Chem. Commun.*, 2025, 61, 4495.



Inside cover

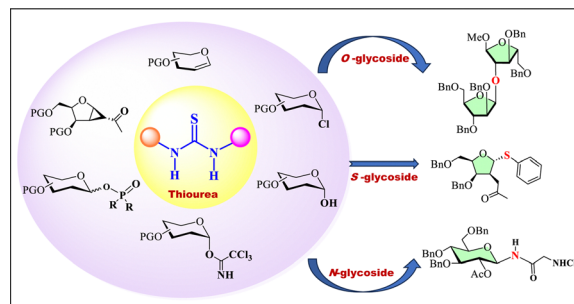
See Vaita Leamkaew and Daniel Crespy, pp. 4499–4502. Image reproduced by permission of Daniel Crespy from *Chem. Commun.*, 2025, 61, 4499. Background image designed by Freepik.

HIGHLIGHT

4429

Thiourea-catalyzed glycosylation: a breakthrough in stereoselective synthesis of oligosaccharides

Shubhi Dwivedi, Swati Thakur and Abhijit Sau*

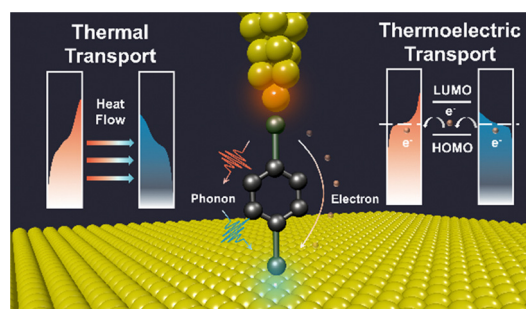


FEATURE ARTICLES

4447

Thermoelectric and thermal properties of molecular junctions: mechanisms, characterization methods and applications

Chao Fang, Yuting Li, Siwen Wang, Mingchen Liang, Chenshuai Yan, Junyang Liu* and Wenjing Hong*



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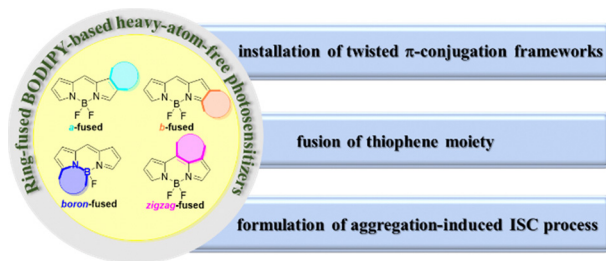


FEATURE ARTICLES

4465

Ring-fused BODIPY derived heavy-atom-free triplet photosensitizers

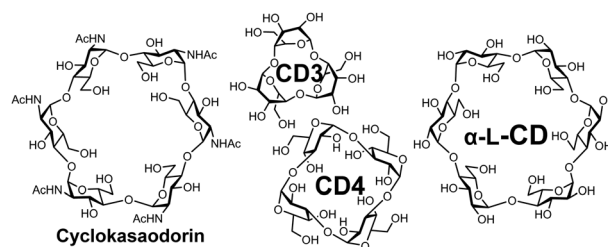
Jun Wang,* Wanwan Li, Lijuan Jiao* and Erhong Hao*



4483

Recent advancements in synthesis of cyclic oligosaccharides

Hirofumi Endo, Yu-Cong Sun, Norihiko Sasaki and Toshiki Nokami*

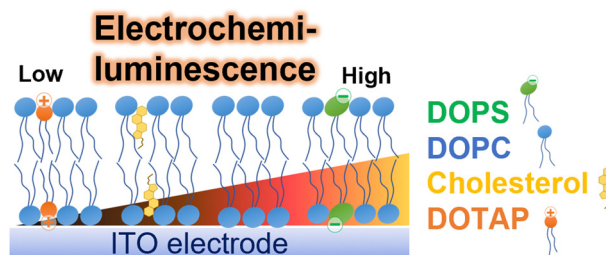


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4495

Electrochemiluminescence of $[\text{Ru}(\text{bpy})_3]^{2+}$ / tri-*n*-propylamine to visualize different lipid compositions in supported lipid membranes

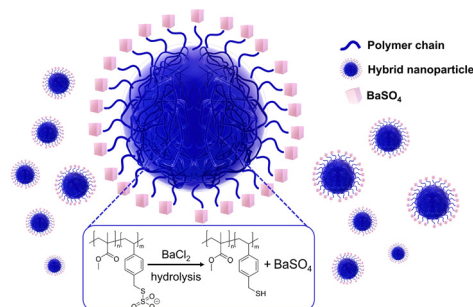
Kaoru Hiramoto,* Ayumi Hirano-Iwata, Kosuke Ino and Hitoshi Shiku



4499

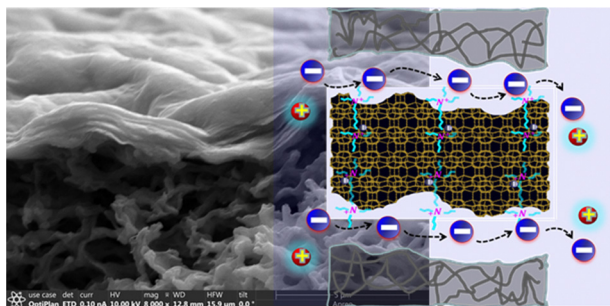
Preparation of barium sulfate/polymer hybrid nanoparticles from Bunte salt precursors

Vatita Leamkaew and Daniel Crespy*



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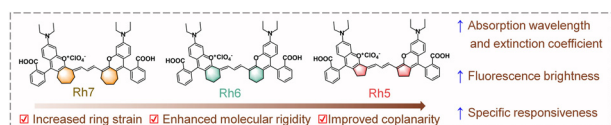
4503



An anion exchange membrane of layered silicalite nanosheets with surface quaternary ammonium cations

Yukta Sharma, Devraj Singh, Zishu Cao, Jan Gabski and Junhang Dong*

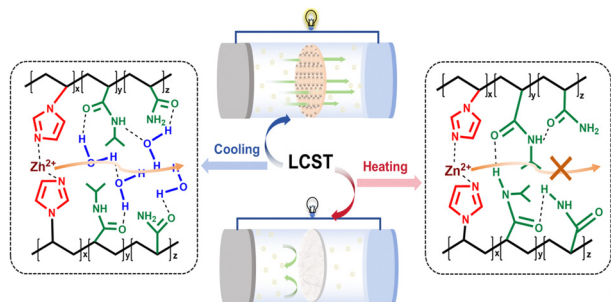
4507



Designing small organic molecular NIR-II fluorophores by ring strain modulation

Xingyu Wang, Tuanwei Li,* Xiaohu Yang, Xingyu Yang, Zhiwei Ma, Xiangyu Wu, Yejun Zhang, Guangcun Chen, Jiang Jiang and Chunyan Li*

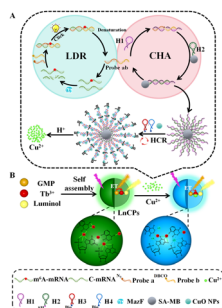
4511



Thermoresponsive gel polymer electrolytes for smart rechargeable zinc-ion batteries

Xintong Zhang, Na Sun, Jie Li, Lianwen He, Xia Li, Jiayi Li, Xiao Zhang, Hui Gu* and Fei Lu*

4515



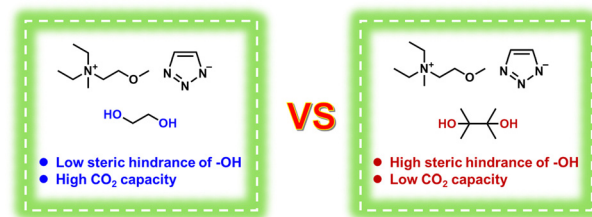
Integrating lanthanide coordination polymer ratiometric fluorescence biosensors with a concatenated DNA circuit for locus-specific N⁶-methyladenosine quantification

Ping Nie, Ke Chen, Guohui Cao, Ensheng Xu,* Pin Wang* and Qingwang Xue*

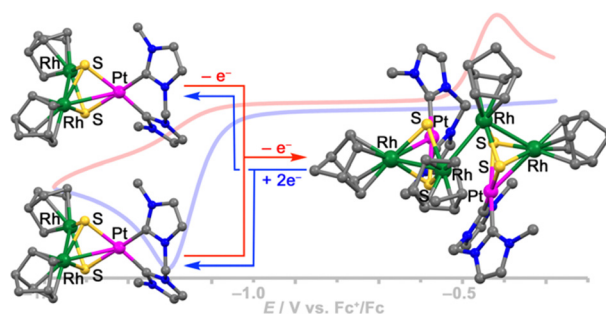


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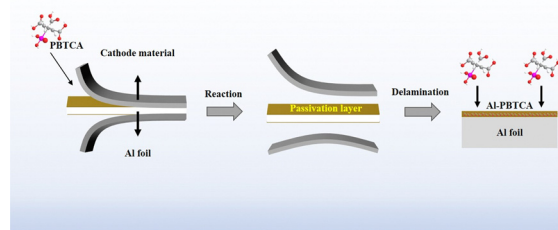
4519

CO₂ capture by anion-functionalized deep eutectic solvents: the effect of steric hindrance of –OH groupsMingzhe Chen, Shaoyu Zhang, Qingqing Mei,*
Huacong Zhou* and Dezhong Yang*

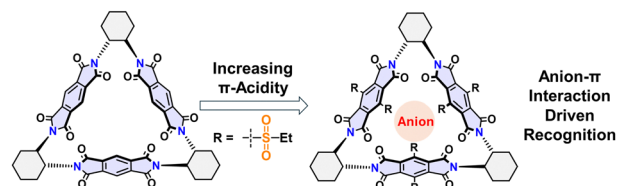
4523

Aerobic oxidation-induced virtual radical coupling of mixed-metal PtRh₂ trinuclear complexes accompanied by the formation of a Rh–Rh bondAmiru Yokoyama, Hiroshi Nakajima and
Takanori Nishioka*

4527

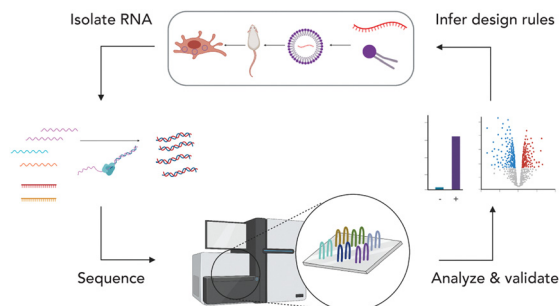
Organophosphonic acid-assisted efficient delamination of spent lithium-ion battery cathodes for regenerationCheng Gong, Shiwen Zhang,* Qin Liu, Jia Yi and
Wentuan Bi*

4531

A sulfone-functionalized molecular triangle as a strong anion receptor driven by anion– π interactionsYifan Ma, Zihang Song, Sidan Guo, Han Han and
Kang Cai*

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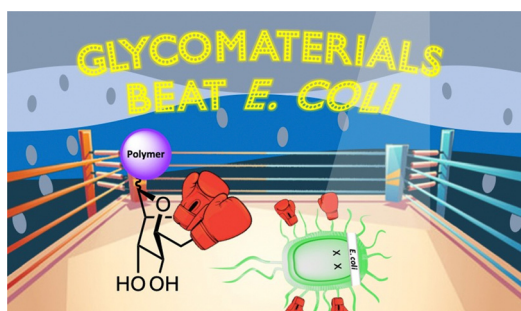
4535



The time course of *in vivo* cellular responses to LNPs

David Loughrey,* Kalina Paunovska, Elisa Schrader Echeverri, Karen E. Tiegreen and James E. Dahlman*

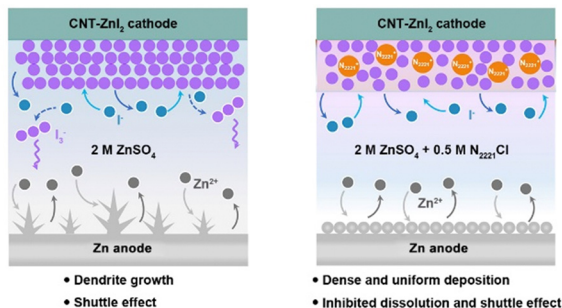
4539



Inherent antibacterial properties of mannose-containing polynorbornene glycomaterials

Brady A. Hall, Ophelia J. Wadsworth, Logan M. Breiner, Jacob C. Chappell, Andrew S. Brenner, Jennifer P. McCord, Andrew N. Lowell* and Michael D. Schulz*

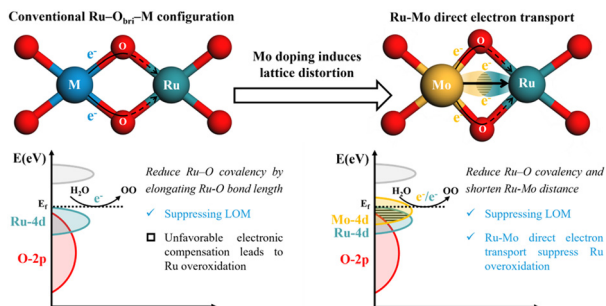
4543



Triethyl methyl ammonium ionic liquid as an effective electrolyte additive for high-performance zinc–iodine batteries

Xin Wu, Wei Wei, Xue Yang,* Le Yu* and Xiao Chun Chen*

4547



Constructing weak Ru–Mo metallic bonds to suppress Ru overoxidation for durable acidic water oxidation

Yongduo Liu, Runxu Deng, Yang Song, Weiling Tan, Xiongxin Tao, Shijian Luo, Daojun Long,* Siguo Chen* and Zidong Wei

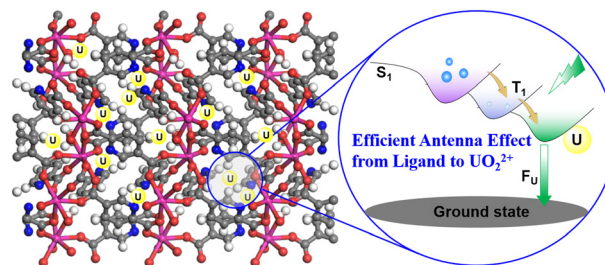


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4551

Ultra-selective recognition of UO_2^{2+} via triggering its intrinsic luminescence using a precisely designed europium metal–organic framework

Yuan-Jun Tong, Qian Liu, Shiyu Peng, Ran Tao, Kexuan Li, Xinying Gong, Dongmei Wang and Zhengjun Gong*

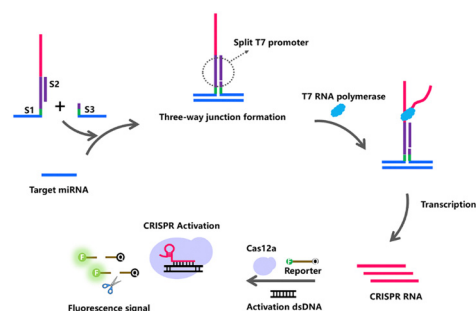


✓ Suitable Energy Level & Coordination Conformation

4555

A sensitive miRNA detection method based on a split-T7 switch modulating CRISPR/Cas12a system

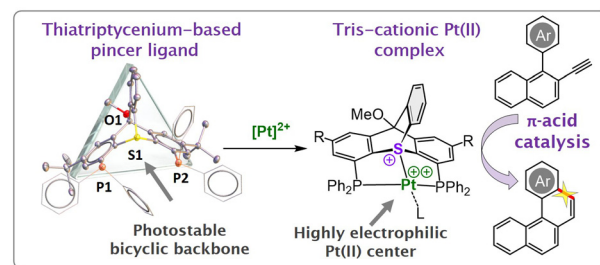
Dayong Li, Wenting Cheng, Feifan Yin, Yanheng Yao, Zhongyun Wang* and Yang Xiang*



4559

Bicyclic sulfonium pincer ligand with a thiatriptycenium backbone-synthesis and applications in π -acid catalysis

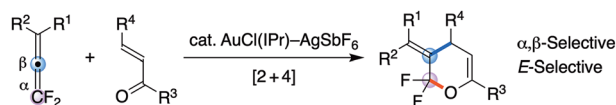
Mohammad Zafar, Donia Shamali, Nitsan Barel, David Danovich and Yuri Tulchinsky*



4563

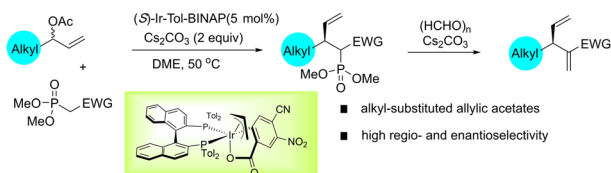
Gold(I)-catalysed [2+4] cycloaddition of 1,1-difluoroallenes with conjugated enones: synthesis of ring-difluorinated dihydro-2*H*-pyrans

Daisuke Miyazaki, Reo Eto, Junji Ichikawa and Kohei Fuchibe*



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4567



Synthesis of vinyl, alkyl-substituted chiral acrylates via Krische iridium complex-catalysed allylic phosphonation

Yuan-Yuan Zhang, Yi Deng, Kun Wei and Yu-Rong Yang*

CORRECTIONS

4571

Correction: Macrocyclic peptides as inhibitors of WDR5–lncRNA interactions

Jen-Yao Chang, Cora Neugebauer, Stefan Schmeing, Gulshan Amrahova and Peter 't Hart*

4573

Correction: Synthesis of U_3Se_5 and U_3Te_5 type polymorphs of Ta_3N_5 by combining high pressure–temperature pathways with a chemical precursor approach

Ashkan Salamat,* Katherine Woodhead, S. Imran U. Shah, Andrew L. Hector* and Paul F. McMillan*

