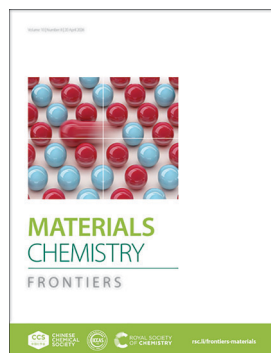


### IN THIS ISSUE

ISSN 2052-1537 CODEN MCFAC5 10(8) 1183-1344 (2026)



#### Cover

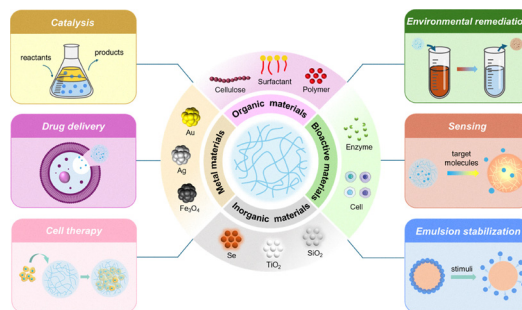
See Masahiro Yoshizawa-Fujita *et al.*, pp. 1242–1255. Image reproduced by permission of Masahiro Yoshizawa-Fujita from *Mater. Chem. Front.*, 2026, **10**, 1242. Cover image created using Adobe Firefly.

### REVIEWS

1190

#### Engineering hybrid microgels: from rational design to next-generation smart materials

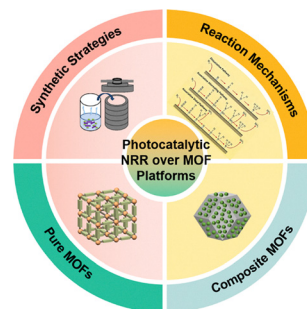
Hao Chang, Yue Zheng, Mo Zhu, Lianwei Li\* and Xin Guan\*



1212

#### Emerging metal–organic framework-based materials for photocatalytic nitrogen reduction reactions

Liting Chen, Longqi Li, Yaqin Yu, Xinyu Luo, Yuanyuan Gao, Yipeng Chen, Yin Xiao, Shixiang Feng,\* Li Shuai\* and Guangfu Liao\*



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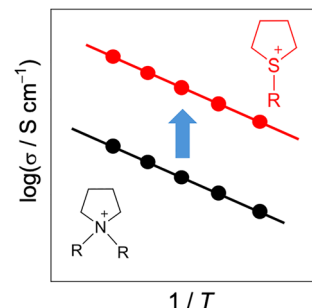
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## RESEARCH ARTICLES

1242

## Organic ionic plastic crystals composed of tetrahydrothiophenium cation with high conductivity

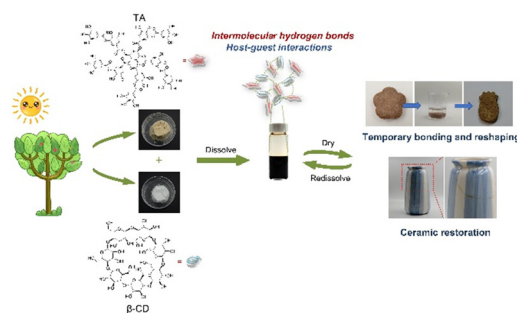
Keita Inoue, Yoshifumi Hirotsu, Yuko Takeoka, Masahiro Rikukawa and Masahiro Yoshizawa-Fujita\*



1256

## Fully recyclable and regeneratable plant-based adhesives

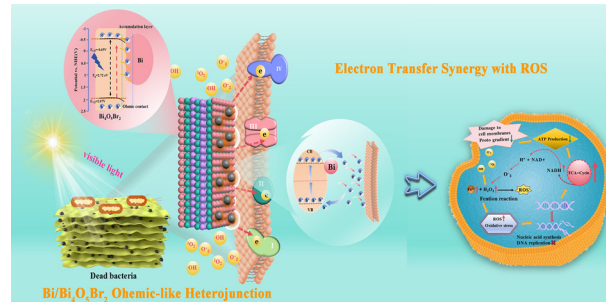
Qiuyu Wang, Mengnan Lai, Yao Zhou, Shiyang Shi, Pengyu Chen, Shuning Li, Qiqi Huang, Dingling Zhong, Yaokang Zhang\* and Xuechang Zhou



1265

Bi/Bi<sub>4</sub>O<sub>5</sub>Br<sub>2</sub> Ohmic-like heterojunction drives enhanced photocatalytic antibacterial action via electron transfer and ROS

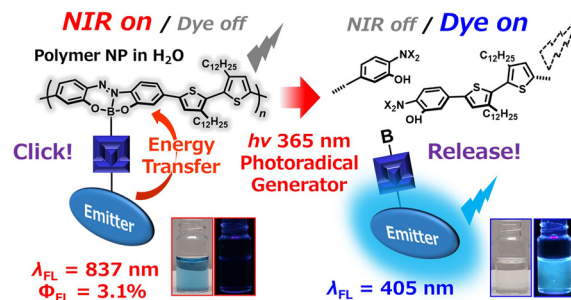
Yan Liu, Xiaomeng Liu, Ruixuan Yang, Zhiguo Song, Yongjin Li,\* Qiyang Li\* and Jie Pan\*



1278

## Post-polymerization modification and release of functional groups based on an NIR light-emitting organoboron π-conjugated polymer

Masashi Nakamura, Masayuki Gon and Kazuo Tanaka\*





1334

## Interlayer acid-engineered 3D graphene oxide membranes with efficient proton transport and enhanced fuel cell performance

Hafijul Islam, Md. Saidul Islam,\* Lutfia Isna Ardhayanti, Kashfia Nawrin, Sayan Saha, Satsuki Tomatsu, Yoshihiro Sekine, Shintaro Ida and Shinya Hayami\*

