

# Journal of Materials Chemistry B

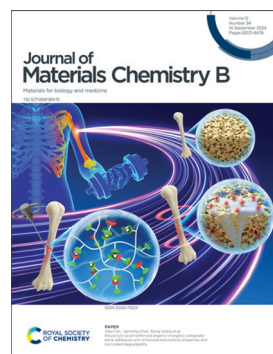
Materials for biology and medicine

[rsc.li/materials-b](https://rsc.li/materials-b)

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 2050-750X CODEN JMCBDV 12(34) 8203–8478 (2024)



### Cover

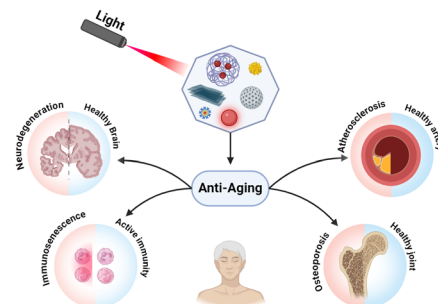
See Xiao Cen, Jianming Chen, Rong Wang *et al.*, pp. 8321–8334.  
Image reproduced by permission of Rong Wang from *J. Mater. Chem. B*, 2024, 12, 8321.

## REVIEWS

8212

### Light-responsive functional nanomaterials as pioneering therapeutics: a paradigm shift to combat age-related disorders

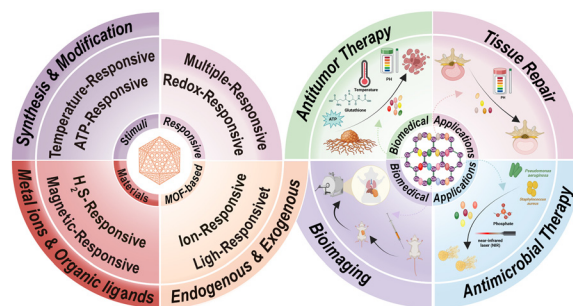
Shubham Kumar Singh, Shivay Parihar, Sanskar Jain, Ja-An Annie Ho and Raviraj Vankayala\*



8235

### Integrated design and application of stimuli-responsive metal–organic frameworks in biomedicine: current status and future perspectives

Hao Liu, Fei Xing, Peiyun Yu, Sujun Shakya, Kun Peng, Ming Liu, Zhou Xiang\* and Ulrike Ritz\*



# ChemComm

**Uncover new possibilities  
with outstanding  
preliminary research**

**Original discoveries, fuelling  
every step of scientific progress**



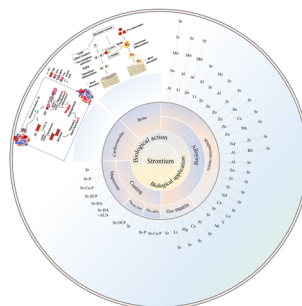
**[rsc.li/chemcomm](https://rsc.li/chemcomm)**

**Fundamental questions  
Elemental answers**

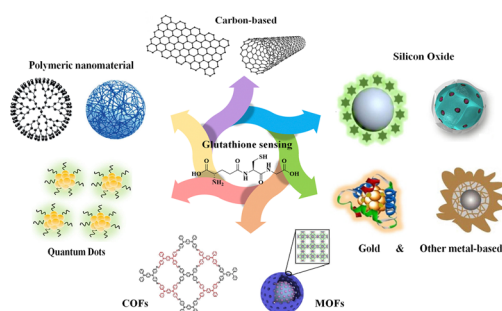


Huafang Li\* and Luling Ma

Huafang Li\* and Luling Ma

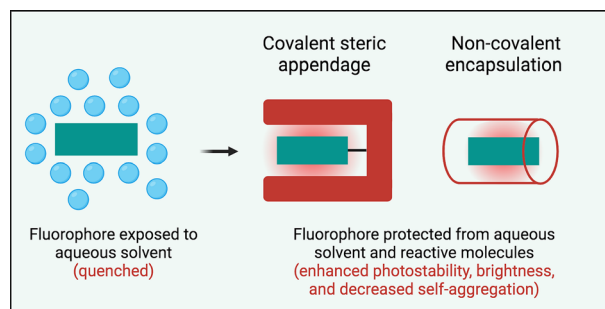


## Saman Bagherpour and Lluïsa Pérez-García\*



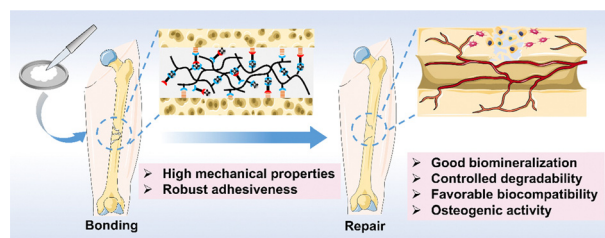
## 8310

Sai Shradha Reddy Kommidi, Kirk M. Atkinson and  
Bradley D. Smith\*



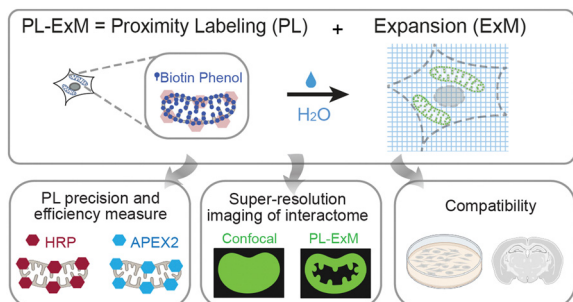
## 8321

Pianpian Zheng, Junjie Deng, Lei Jiang, Ning Ni,  
Xinqi Huang, Zhihe Zhao, Xiaodong Hu, Xiao Cen,\*  
Jianming Chen\* and Rong Wang\*



## PAPERS

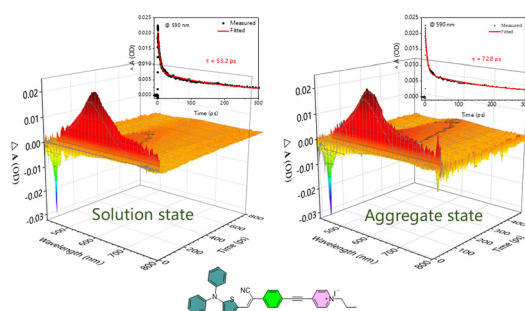
8335



### Proximity labeling expansion microscopy (PL-ExM) evaluates interactome labeling techniques

Sohyeon Park, Xiaorong Wang, Yajin Mo, Sicheng Zhang, Xiangpeng Li, Katie C. Fong, Clinton Yu, Arthur A. Tran, Lorenzo Scipioni, Zhipeng Dai, Xiao Huang, Lan Huang and Xiaoyu Shi\*

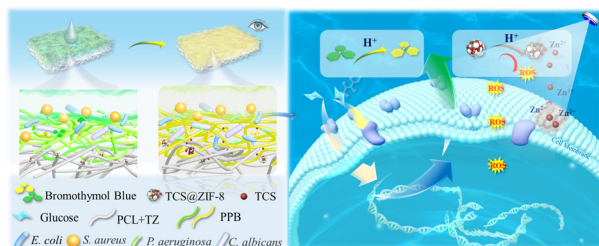
8349



### Study of transient absorption spectroscopy of a D- $\pi$ -A structure aggregation-induced emission luminogen and its photodynamic therapy application

Siwei Zhang, Junqiao Wang, Zaiyu Wang, Ming Shao, Chen Zhang, Xinmeng Chen, Jianwei Sun, Ryan Tsz Kin Kwok,\* Jacky Wing Yip Lam\* and Ben Zhong Tang\*

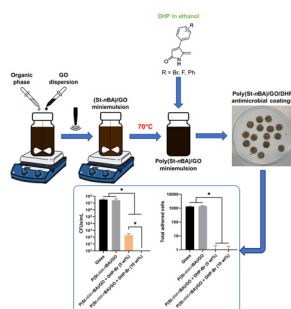
8357



### Bacteria-responsive functional electrospun membrane: simultaneous on-site visual monitoring and inhibition of bacterial infection

Min Wang, Yuanzhang Jiang, Kaiwen Zhuang\* and Lin Tan\*

8366



### Quorum sensing inhibiting dihydropyrrol-2-ones embedded polymer/graphene oxide nanocomposite waterborne antimicrobial coatings

Renxun Chen,\* Namrata Maslekar, Sudip Chakraborty, Le N. M. Dinh, Yin Yao, Per B. Zetterlund, Naresh Kumar and Vipul Agarwal\*

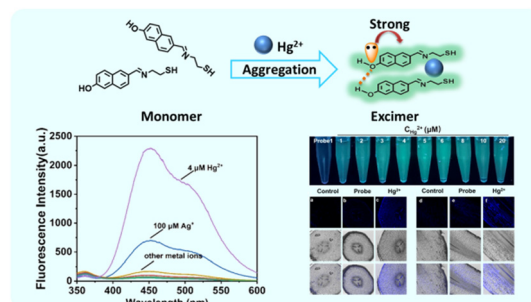


## PAPERS

8376

# An excimer process induced a turn-on fluorescent probe for detection of ultra-low concentration of mercury ions

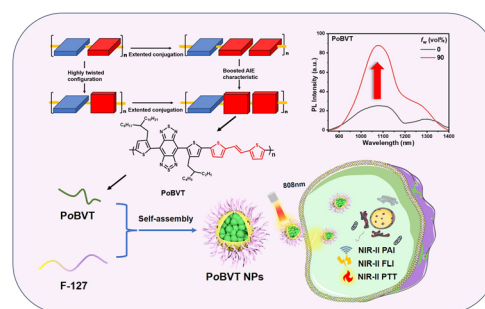
Shujing Fang, K. M. K. Swamy, Wen-Yan Zan, Juyoung Yoon\* and Shudi Liu\*



8383

# Fabrication of conjugated polymers with aggregation-induced near-infrared-II emission for efficient phototheranostics

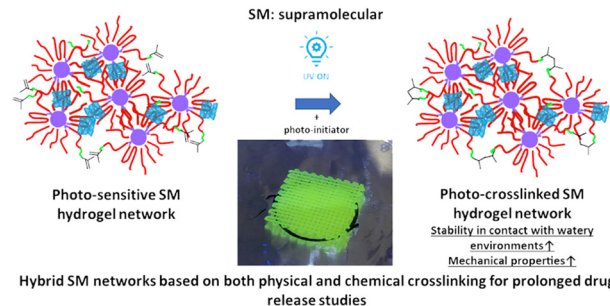
Hui Han, Yuwen Xue, Yafeng Yang, Kai Chen, Pengfei Sun,\* Qingming Shen\* and Quli Fan\*



8389

# Double-crosslinkable poly(urethane)-based hydrogels relying on supramolecular interactions and light-initiated polymerization: promising tools for advanced applications in drug delivery

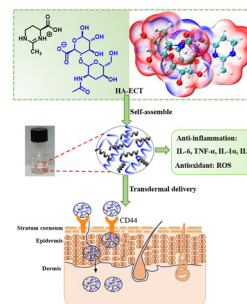
Alessandro Torchio, Monica Boffito,\* Rossella Laurano, Claudio Cassino, Mario Lavella and Gianluca Ciardelli\*



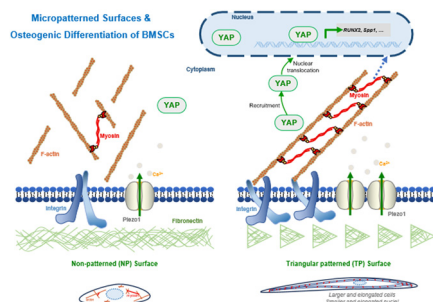
8408

# Anti-inflammatory and antioxidant effects on skin based on supramolecular hyaluronic acid–ectoin

Beibei Lu, Siran Zhao, Jichuan Zhang, Jingbo Zhan, Jianglin Zhang,\* Zhe Liu\* and Jiaheng Zhang\*



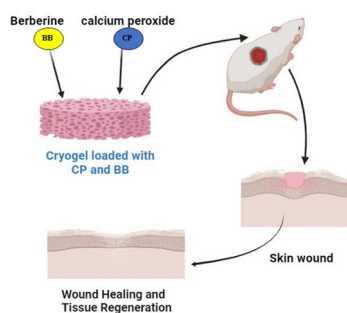
8420



## Osteogenic differentiation of bone mesenchymal stem cells on linearly aligned triangular micropatterns

Ye Zeng,\* Junyi Shen, Xintong Zhou, Zhi Ouyang, Jian Zhong, Yixue Qin, Linlu Jin, Xueling He, Liang Li, Jing Xie and Xiaoheng Liu

8431



## Fabrication and characterization of calcium peroxide and berberine loaded cryogels for enhanced wound healing

Lateef Ahmad Dar, Tasaduq Manzoor, Sabeeha Shafi, Ashok Kumar and Syed Mudassir Ahmad\*

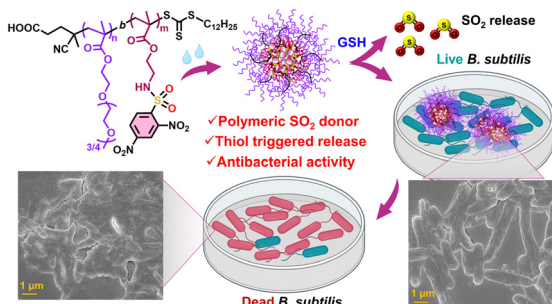
8444



## A broad-spectrum antibacterial hydrogel based on the synergistic action of Fmoc-phenylalanine and Fmoc-lysine in a co-assembled state

Bodhisattwa Das Gupta, Arpita Halder, Thangavel Vijayakanth, Nandita Ghosh, Ranik Konar, Oindrilla Mukherjee, Ehud Gazit\* and Sudipta Mondal\*

8454



## A chemically engineered water-soluble block copolymer for redox responsive SO<sub>2</sub> release in antibacterial therapy

Anushree Mondal, Tanushree Mondal, Sayan Chattopadhyay, Subhamoy Jana, Arindam Banerjee\* and Priyadarsi De\*



8465

## Inhalable mucin-permeable nanomicelles deliver antibiotics for effective treatment of chronic pneumonia

Zitong Jiang, Shaohu Huo, Lei Qiao, Paiyu Lin, Ling Fu, Yaling Wu, Wenhong Li, Chenrong Bian, Yaoyao Li, Nan Li, Haiyan Cheng, Xuan Nie\* and Shenggang Ding\*

