

# Journal of Materials Chemistry B

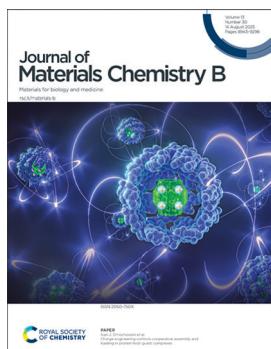
Materials for biology and medicine

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## IN THIS ISSUE

ISSN 2050-750X CODEN JMCBDV 13(30) 8943–9298 (2025)



### Cover

See Ivan J. Dmochowski et al., pp. 9051–9064.  
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### Inside cover

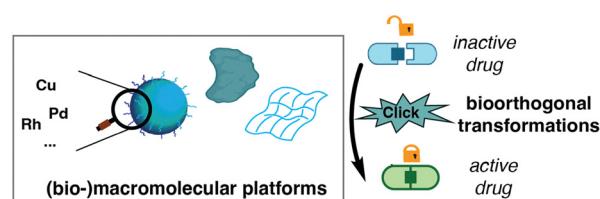
See Kevin J. Haworth et al., pp. 9065–9080.  
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## REVIEWS

8953

### From simple delivery to multimodal systems: the critical role of macromolecular platforms in bioorthogonal drug synthesis

Tieze van den Elsen and Kevin Neumann\*

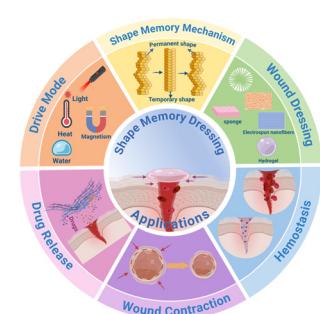


✓ biocompatibility ✓ catalyst activity ✓ targeting ✓ multimodality

8975

### Insights into advanced dressings based on shape memory materials for wound management

Tianran Song, Kun Li,\* Jingxi Wang, Xuemei Sun, Shuang Li, Chaojuan Yang and Ping Li\*





# RSC Applied Interfaces

GOLD  
OPEN  
ACCESS

## Interfacial and surface research with an applied focus

### Interdisciplinary and open access



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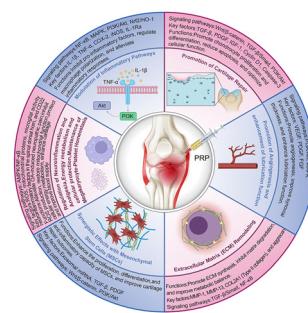
Fundamental questions  
Elemental answers

## REVIEWS

9001

**Recent advances in platelet-rich plasma therapy for osteoarthritis: mechanisms and clinical efficacy**

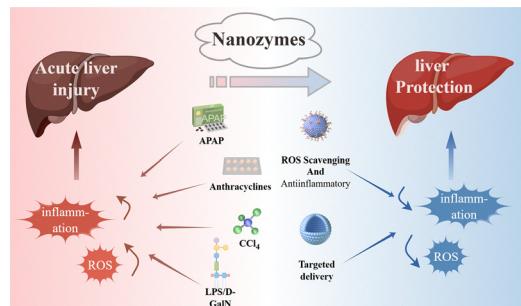
Liang Cai, Jiali Chen, Qiong Yuan, Weihua Zhuang, Gang Wang, Xuemei Xu,\* Yongchao Yao\* and Wenchuang (Walter) Hu\*



9023

**Nanozymes: new strategy for the management drug-induced acute liver injury**

Minrui Kan, Yanan Wang, Nan Cheng, Kunlun Huang and Xiaoyun He\*

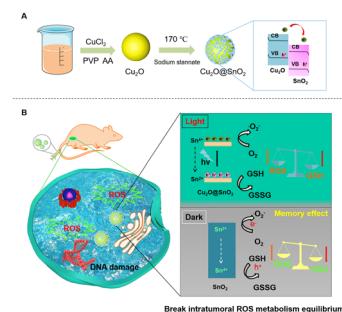


## COMMUNICATION

9043

**Near infrared light driven nanocatalyst with hole-mediated GSH-depletion for augmented memory therapy**

Zhiming Deng, Jialian Li, Chunqian Hu,\* Yiyu Tang, Jun Zhong, Hanlin Wei,\* Jiayou Tao\* and Qi Zheng\*

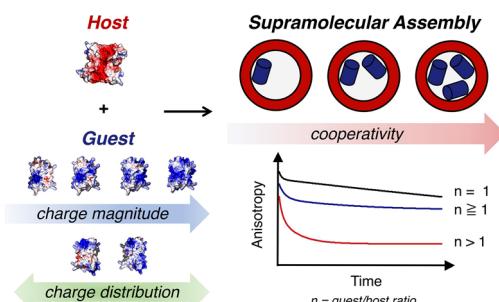


## PAPERS

9051

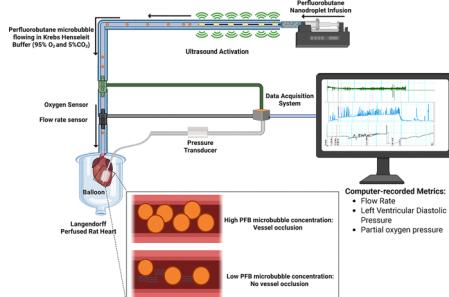
**Charge engineering controls cooperative assembly and loading in protein host–guest complexes**

Zhiheng Wang, Dai-Bei Yang, Joshua A. Bulos, Rui Guo, Thomas Troxler, Sergei Vinogradov, Jeffery G. Saven and Ivan J. Dmochowski\*



## PAPERS

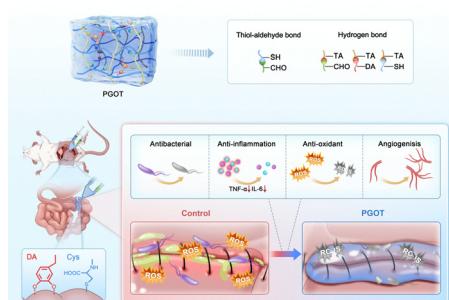
9065



## Assessing the oxygen scavenging capacity and myocardial gas embolization risk of ultrasonically activated phase shift perfluorobutane droplets

Nour Al Rifai, Kateryna Stone, Bin Bo, Bin Zhang, Diviyashree Kasiviswanathan, Andrew N. Redington and Kevin J. Haworth\*

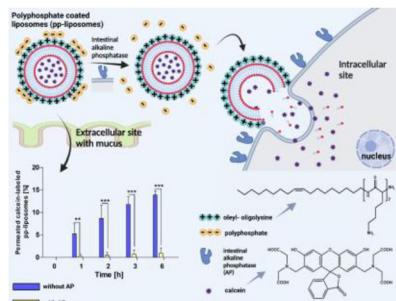
9081



## Tissue-adhesive, antibacterial, and macrophage-reprogramming hydrogel for sealing colorectal anastomotic leakage and promoting healing

Yuzhou Zhu, Zhongwu Bei, Tianying Luo, Ziqiang Wang and Zhiyong Qian\*

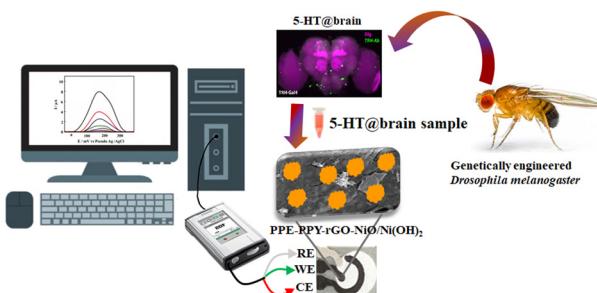
9100



## Addressing the polycation dilemma in drug delivery: charge-converting liposomes

Martyna Truszkowska, Ahmad Saleh, Melanie Lena Ebert, Gergely Kali and Andreas Bernkop-Schnürch\*

9112



## Conductive nano nickel oxide/hydroxide paper electrochemical sensor for serotonin detection in genetically engineered *Drosophila*

Sharmila Prashanth, Manvitha Kadandelu, Shamprasad Varija Raghu, K. Sudhakara Prasad\* and Airody Vasudeva Adhikari\*

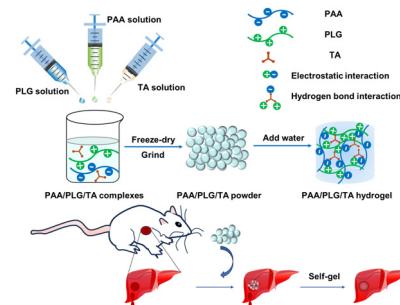


## PAPERS

9126

## A self-gelling hemostatic powder driven by hydrogen bonding and electrostatic interactions with antibacterial and antioxidant properties

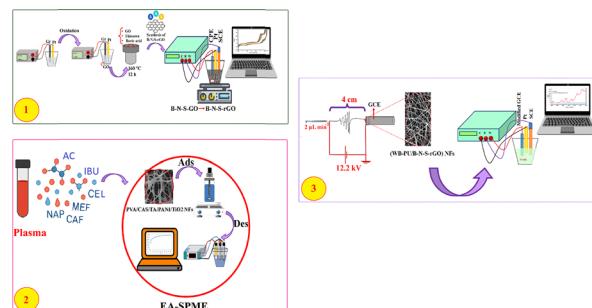
Cheng Cao, Qi Yang, Liming Chen, Xiuqiang Li, Jiazhuo Gong, Lei Liang, Chaojie Yu, Bingyan Guo, Xueyu Wang, Zhongming Zhao, Yuwei Qiu, Fanglian Yao,\* Junjie Li\* and Hong Zhang\*



9142

## Concurrent analysis of six NSAIDs in human plasma using polyurethane/B–N–S-co-doped rGO nanofiber-modified glassy carbon electrode followed by EA-SPME

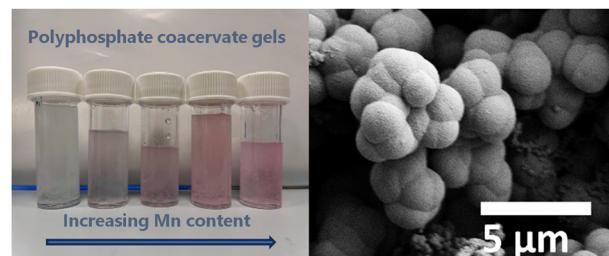
Fatemeh Nejabati and Homeira Ebrahimzadeh\*



9153

## Polyphosphate coacervate gels for manufacturing of manganese loaded glass powders and fibres: structural, cytocompatibility and surface bioactivity study

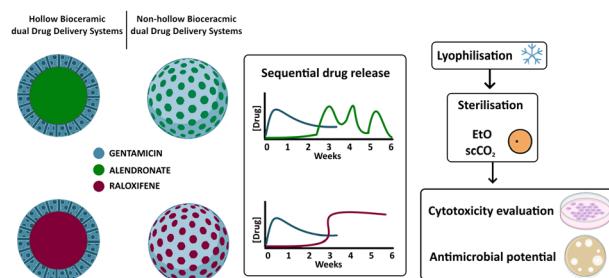
Chiara Cavazzoli, Roberto Di Pasquale, Zarrin Moghaddam, Hongjuan Zhao, Agron Hoxha, Lauren Lewendon, Monica Felipe-Sotelo, Carol Crean, Alfonso Zambon, Gigliola Lusvardi, Jorge Merino-Gutierrez and Daniela Carta\*



9166

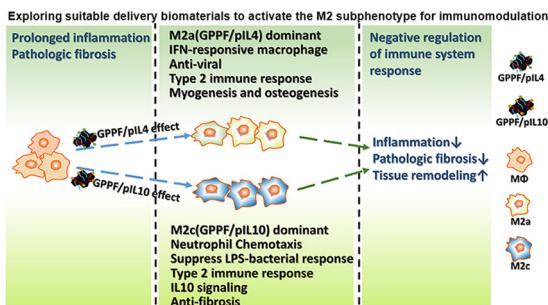
## Dual and sequential drug delivery systems with antimicrobial and bone regenerative therapeutic effects

Miguel A. Rodrigues, Carla Ferreira, João P. Borges, Beatriz G. Bernardes, Ana L. Oliveira, José D. Santos and Maria A. Lopes\*



## PAPERS

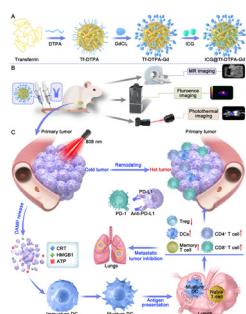
9182



## Dual-functionalized graphene oxide induces M2a and M2c macrophage polarization to orchestrate inflammation and tissue remodeling

Hui Li, Hefeng Yang, Bo Ma, Jia Qiao, Fanfan Chen, Pinwen Wang, Riyue Yu,\* Jingjing Sun\* and Yuanwei Chen\*

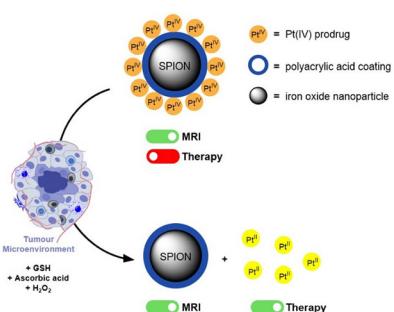
9203



## Multifunctional nanodrug-enabled mild photothermal therapy for enhanced immunotherapy in triple-negative breast cancer

Xinyue Du, Ying Zhang, Bingxin Gu, Ziyi Yang, Xiaoping Xu, Haibao Peng,\* Shaoli Song\* and Zhongyi Yang\*

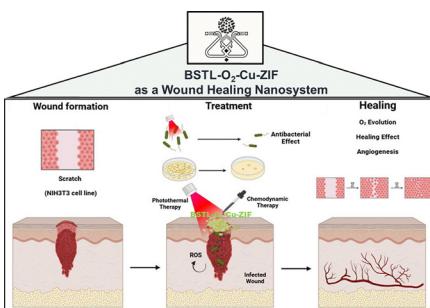
9217



## Pt(IV)-functionalised polyacrylic acid-coated iron oxide magnetic nanoparticles as redox-responsive cancer theranostics

Beatriz Brito, Thomas W. Price, Cátia V. Rocha, Manuel Bañobre-López, Graeme J. Stasiuk\* and Juan Gallo\*

9228



## An intelligent ZIF-based nanoplatform for photothermal/chemodynamic-induced combination therapy with O<sub>2</sub> evolution properties for improved infected wound regeneration

Rezvaneh Azizi, Mehraneh Kermanian, Vajihe Alinezhad, Ali Kalantari-Hesari, Satar Yousefiasl, Lidia Maeso, Gorka Orive, Abbas Mohammadi, Kimia Esmaeilzadeh, Mohammad Seyedhamzeh, Faezeh Almasi and Aziz Maleki\*

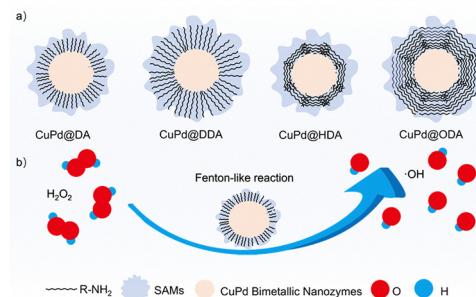


## PAPERS

9243

## Enhancing Fenton-like biocatalysis of CuPd bimetallic nanozymes by alkylamine ligand self-assembled monolayers

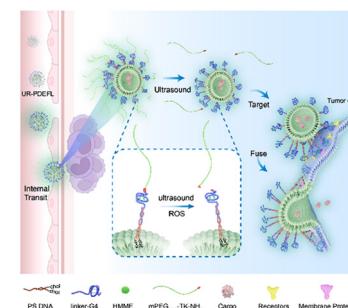
Fangming Zhang, Jingxia Xu, Zhuyuan Peng, Guofeng Li, Lingyun Zhao, Wensheng Xie\* and Xing Wang\*



9252

## Phosphorothioated DNA engineered fusion liposomes for ultrasound-responsive targeted intracellular protein delivery

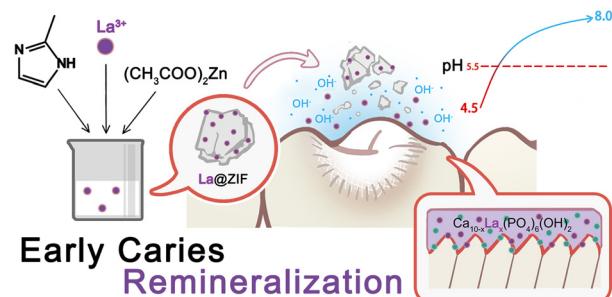
Danchu Gong, Dajiang Du\* and Di Li\*



9260

## Lanthanum-loaded ZIF nanomaterials for caries prevention

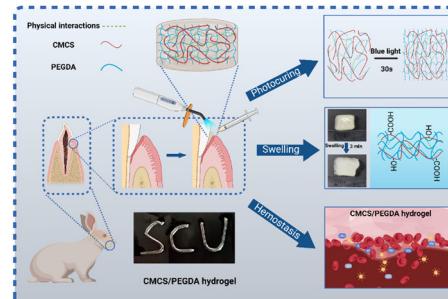
Han Xiao, Yuping Qian, Lijun Zhao, Yiman Tang, Yuan Pan, Yunzi Long, Shihan Li, Yukun Chen, Jiale Sun, Chao Yuan,\* Ludan Zhang\* and Wenshu Ge\*



9271

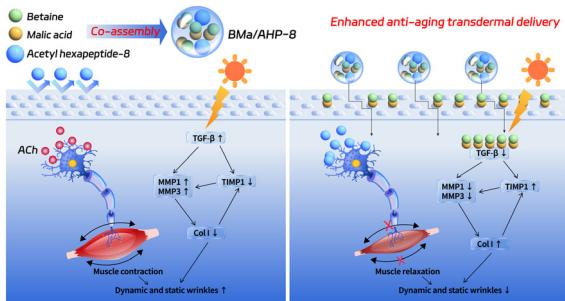
## CMCS/PEGDA-based photoresponsive hydrogel with high efficiency for gingival retraction and rapid hemostasis

Jiaxin Wu, Yi Liang, Ruyi Li, Mingxin Qiao, Xibo Pei, Xue Yuan, Qianbing Wan\* and Jian Wang\*



## PAPERS

9286



**Dual-function supramolecular system of  $\alpha$ -hydroxy acid-based ionic liquids and peptides for enhanced anti-aging transdermal delivery**

Zhenyuan Wang, Lu Zhang, Biao Wang, Mi Wang\* and Jiaheng Zhang\*

## CORRECTION

9294

**Correction: Charge engineering controls cooperative assembly and loading in protein host–guest complexes**

Zhiheng Wang, Dai-Bei Yang, Joshua A. Bulos, Rui Guo, Thomas Troxler, Sergei Vinogradov, Jeffery G. Saven and Ivan J. Dmochowski\*

