

# Biomaterials Science

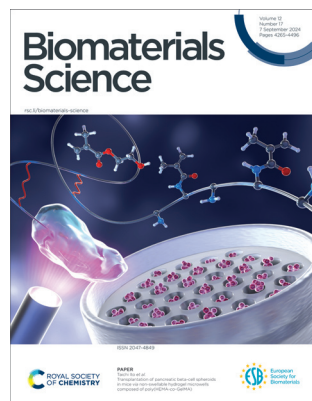
An international high impact journal exploring the underlying science behind the function, interactions and design of biomaterials

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## IN THIS ISSUE

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### Cover

See Taichi Ito *et al.*,  
pp. 4354–4362.

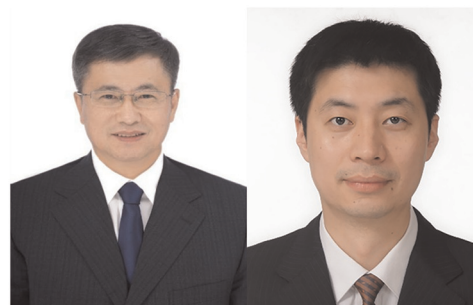
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*Biomater. Sci.*,  
2024, **12**, 4354.

## EDITORIAL

4273

### Introduction to “Biomedical Polymer Materials”

Huayu Tian\* and Xuesi Chen\*

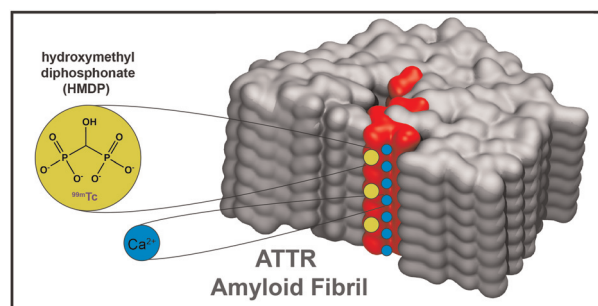


## MINIREVIEW

4275

### Molecular basis for non-invasive diagnostics of cardiac amyloids using bone tracers

Emily Lewkowicz, Shobini Jayaraman and Olga Gursky\*



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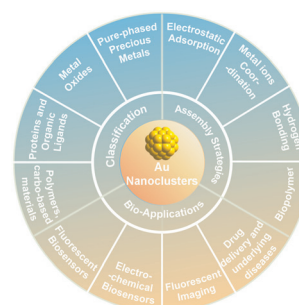


## REVIEWS

4283

### Functional structures assembled based on Au clusters with practical applications

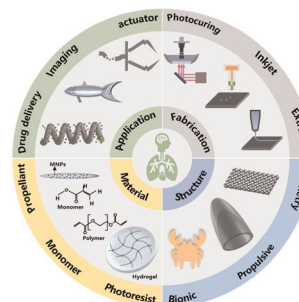
Hao Chen, Ligang Zou, Ekram Hossain, Yixin Li, Shaojun Liu, Yaoyang Pu and Xiang Mao\*



4301

### 3D-printed microrobots for biomedical applications

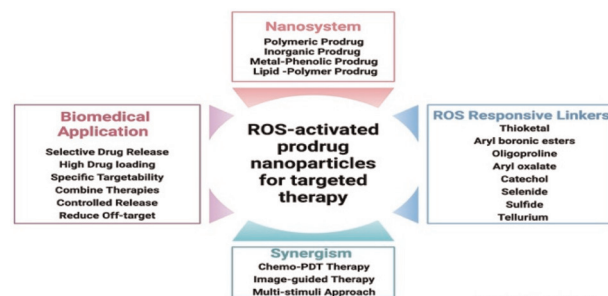
Kun Wei, Chenlong Tang, Hui Ma, Xingmiao Fang and Runhuai Yang\*



4335

### Reactive oxygen species driven prodrug-based nanoscale carriers for transformative therapies

Shyam Vasvani, Arathy Vasukutty, Rizia Bardhan, In-Kyu Park\* and Saji Uthaman\*



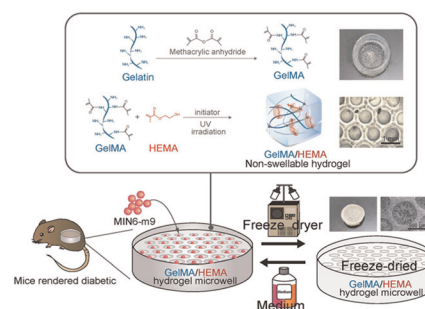
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## PAPERS

4354

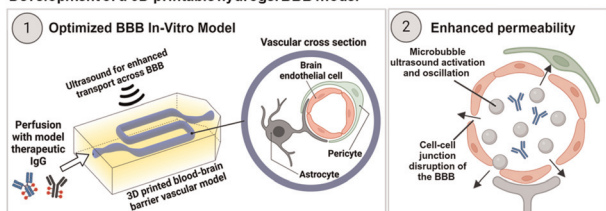
### Transplantation of pancreatic beta-cell spheroids in mice *via* non-swellable hydrogel microwells composed of poly(HEMA-co-GelMA)

Natsuko F. Inagaki, Yuichiro Oki, Shunsuke Ikeda, Sarun Tulakarnwong, Marie Shinohara, Fuyuki F. Inagaki, Seiichi Ohta, Norihiro Kokudo, Yasuyuki Sakai and Taichi Ito\*



4363

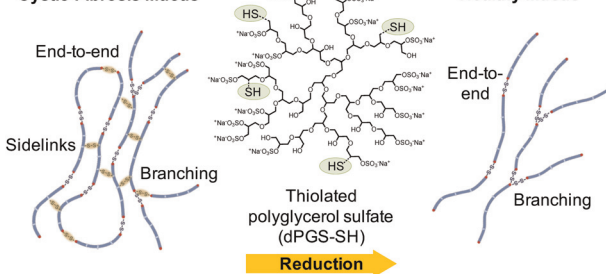
## Development of a 3D printable hydrogel BBB model

Development of a 3D printed perfusable *in vitro* blood–brain barrier model for use as a scalable screening tool

Madison K. Royse, Martha Fowler, A. Kristen Mai, Yufang He, Marc R. Durante, Nicole Buist, Adam Procopio, Jun Xu\* and Omid Veisheh\*

4376

## Cystic Fibrosis Mucus

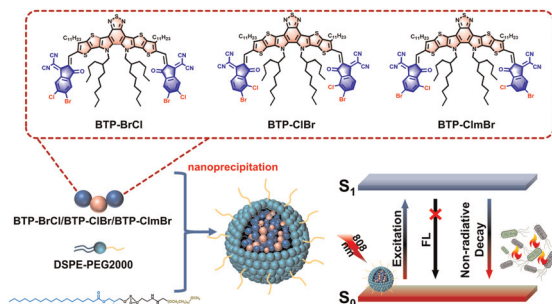


## Healthy Mucus

## Thiolated polyglycerol sulfate as potential mucolytic for muco-obstructive lung diseases

Justin Arenhoevel, Aditi Kuppe, Annalisa Addante, Ling-Fang Wei, Nico Boback, Cosmin Butnarusu, Yinan Zhong, Christine Wong, Simon Y. Graeber, Julia Duerr, Michael Gradzielski, Daniel Lauster,\* Marcus A. Mall\* and Rainer Haag\*

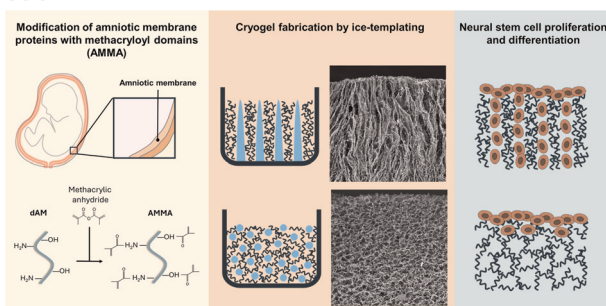
4386



## Halogen atom regulation of acceptor–donor–acceptor type conjugated molecules for photothermal antibacterial and antibiofilm therapy

Yue Zhao, Yuanyuan Cui, Shijie Xie, Ruilian Qi, Li Xu\* and Huanxiang Yuan\*

4393



## Comparative analysis of aligned and random amniotic membrane-derived cryogels for neural tissue repair

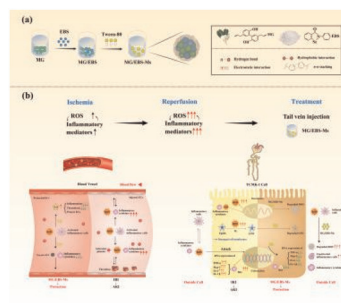
Joana P. M. Sousa,\* Inês A. Deus, Cátia F. Monteiro, Catarina A. Custódio, Emmanuel Stratakis, João F. Mano and Paula A. A. P. Marques\*



4407

### Ultrasmall magnolol/ebesen nanomicelles for preventing renal ischemia/reperfusion injury

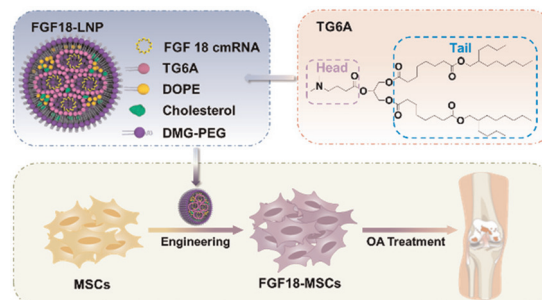
Chang Liu, Linhua Li, Li Li, Qingyin Li, Jing Liu, Chunle Zhang, Zhengjiang Cao, Liang Ma, Xiaoxi Zeng\* and Ping Fu\*



4427

### FGF18 encoding circular mRNA-LNP based on glycerolipid engineering of mesenchymal stem cells for efficient amelioration of osteoarthritis

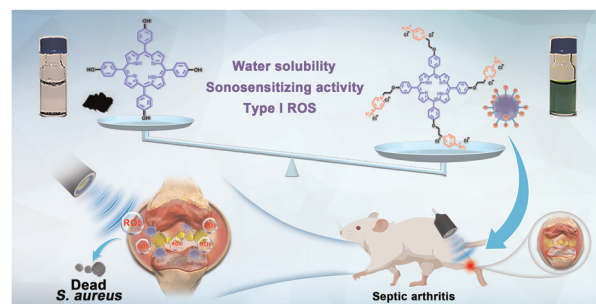
Ke Huang, Xiaoyun Liu, Haitang Qin, Yingwen Li, Jiafeng Zhu, Bo Yin, Qijun Zheng, Chijian Zuo,\* Hui Cao,\* Zhenbo Tong\* and Zhenhua Sun\*



4440

### Tuning molecular assembly behavior to amplify the sonodynamic activity of porphyrins for efficient antibacterial therapy

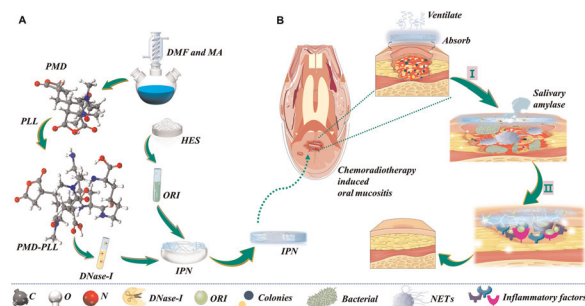
Yunxia Wang, Yicheng Xu, Rui Zhang, Jing Li, Yujie Cong, Ruipeng Li, Xiaoyu Wang, Hu Shi,\* Shaowei Wang\* and Liheng Feng\*



4452

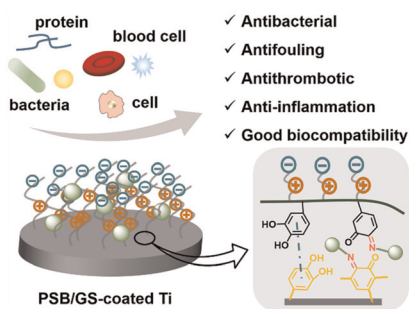
### Effects of a semi-interpenetrating network hydrogel loaded with oridonin and DNase-I on the healing of chemoradiotherapy-induced oral mucositis

Yuxue Pan, Mengyuan Wang, Peng Wang, Hongliang Wei, Xiangjuan Wei, Dongmei Wang, Yongwei Hao, Yongxue Wang\* and Hongli Chen\*



## PAPERS

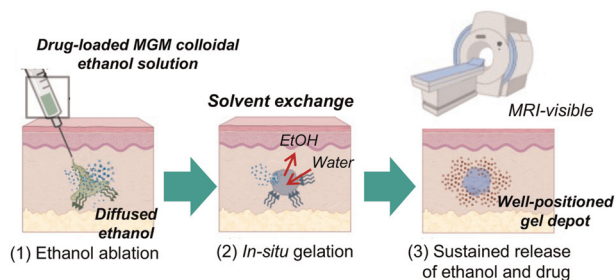
4471



### Smart zwitterionic coatings with precise pH-responsive antibacterial functions for bone implants to combat bacterial infections

Qinsheng Hu, Yangrui Du, Yangjing Bai, Dandan Xing, Chengcheng Wu, Kaijun Li, Shiyong Lang, Xiaoyan Liu\* and Gongyan Liu\*

4483



### Development of injectable colloidal solution forming an *in situ* hydrogel for tumor ablation

Seong Jin Choi, Sanghee Lee, Hyunjun Choi, Min Jun Ko, Donghwan Kim\* and Dong-Hyun Kim\*

## CORRECTION

4493

### Correction: Self-assembled methodologies for the construction of DNA nanostructures and biological applications

Rui Ye, Yuqi Wang,\* Yan Liu, Ping Cai and Jie Song\*

