

# Biomaterials Science

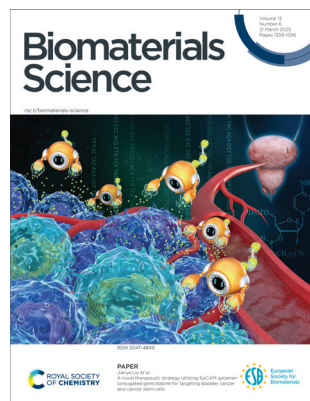
An international high impact journal exploring the underlying science behind the function, interactions and design of biomaterials

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## IN THIS ISSUE

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### Cover

See Jianye Liu *et al.*,  
pp. 1398–1413.

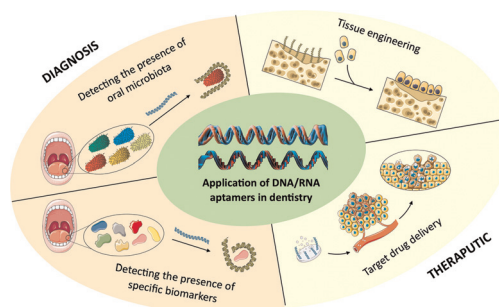
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*Biomater. Sci.*, 2025, **13**,  
1398.

## REVIEWS

1368

### Aptamers in dentistry: diagnosis, therapeutics, and future perspectives

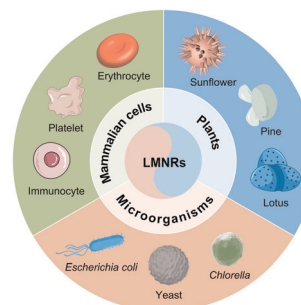
Yang Yang, Zhen Yang, Hao Liu\* and Yongsheng Zhou\*



1379

### Living material-derived intelligent micro/nanorobots

Shuhuai Wang, Ya Liu, Shuangjiao Sun, Qinyi Gui,  
Wei Liu\* and Wei Long\*





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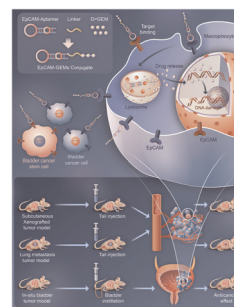


## PAPERS

1398

### A novel therapeutic strategy utilizing EpCAM aptamer-conjugated gemcitabine for targeting bladder cancer and cancer stem cells

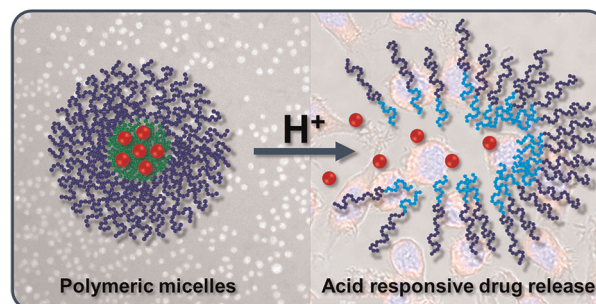
Jiahao Liu, Long Wang, Yongbo Peng, Shuyang Long, Hongliang Zeng, Minhua Deng, Wei Xiang, Biao Liu, Xing Hu, Xuewen Liu, Jianfei Xie, Weibin Hou, Jin Tang and Jianye Liu\*



1414

### Aliphatic polycarbonates with acid degradable ketal side groups as multi-pH-responsive immunodrug nanocarriers

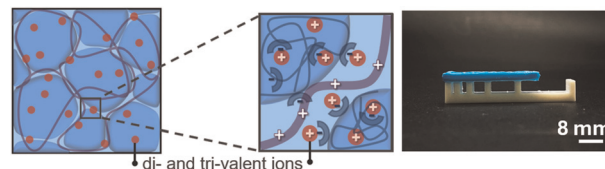
Adrian V. Hauck, Patric Komforth, Jessica Erlenbusch, Judith Stickdorn, Krzysztof Radacki, Holger Braunschweig, Pol Besenius, Simon Van Herck and Lutz Nuhn\*



1426

### Recyclable 3D printable single network granular hydrogels

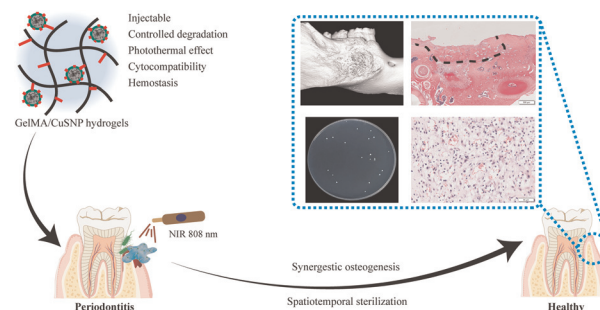
Gaia De Angelis, Gaia Dupont, Lorenzo Lucherini and Esther Amstad\*



1434

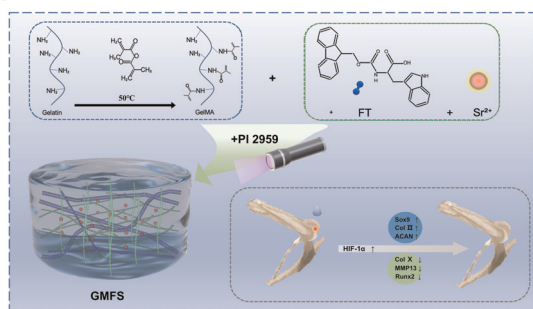
### Injectable hydrogels activated with copper sulfide nanoparticles for enhancing spatiotemporal sterilization and osteogenesis in periodontal therapy

Yuting Yang, Chunbin Xu, Shengqian Xu, Yan Li, Ke'er Chen, Tao Yang, Jiaqi Bao, Yajing Xu, Jingyao Chen, Chuanbin Mao,\* Lili Chen\* and Weilian Sun\*



## PAPERS

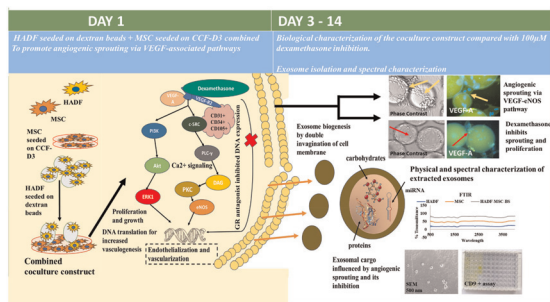
1449



### Construction of strontium-loaded injectable lubricating hydrogel and its role in promoting repair of cartilage defects

Congcong Duan, Hongyue Jiang, Shichen Zhang, Yixing Wang, Peng Liu, Bin Xu, Wenjing Tian\* and Bing Han\*

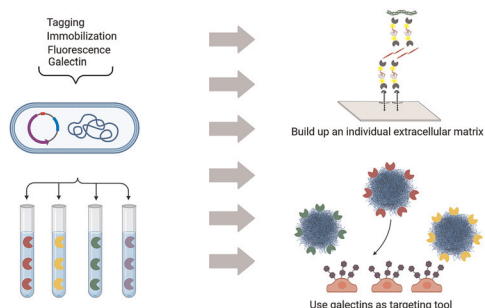
1464



### Coculture to vascularization transition in bioengineered skin grafts through VEGF-associated pathways tracked by exosomal biomarkers

Shalini Dasgupta and Ananya Barui\*

1482

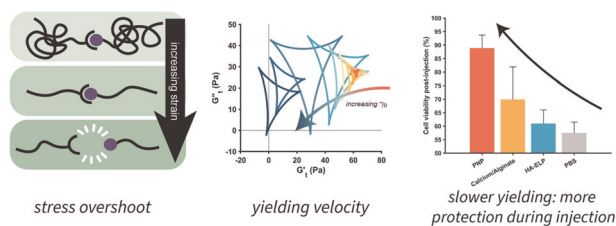


### Color-coded galectin fusion proteins as novel tools in biomaterial science

Carina Dey, Isabel K. Sommerfeld, Pavla Bojarová, Nikol Kodra, David Vrbata, Miluše Zimolová Vlachová, Vladimír Křen, Andriy Pich and Lothar Elling\*

1501

### Crosslink strength controls yielding behavior and cell viability during injection



### Crosslink strength governs yielding behavior in dynamically crosslinked hydrogels

Noah Eckman, Abigail K. Grosskopf, Grace Jiang, Krutarth Kamani, Michelle S. Huang, Brigitte Schmittlein, Sarah C. Heilshorn, Simon Rogers and Eric A. Appel\*

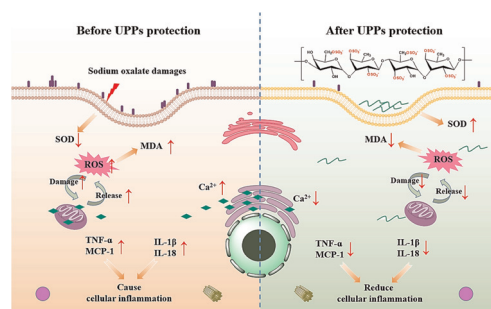


## PAPERS

1512

### Sulfated *Undaria pinnatifida* polysaccharides inhibit kidney stone formation through crystalline modulation and relieving cellular oxidative damage and inflammation

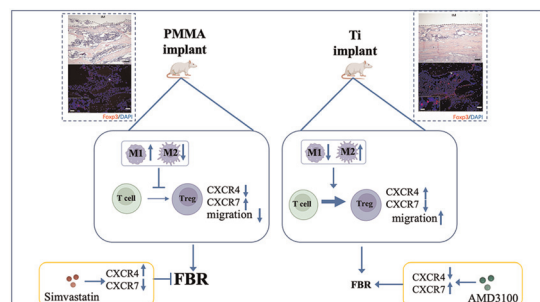
Xue-Wu Chen, Jun Long, Quan Zhang, Ling-Hong Huang\* and Xin-Yuan Sun\*



1529

### Modulation of biomaterial-induced foreign body response by regulating the differentiation and migration of Treg cells through the CXCL12–CXCR4/7 axis

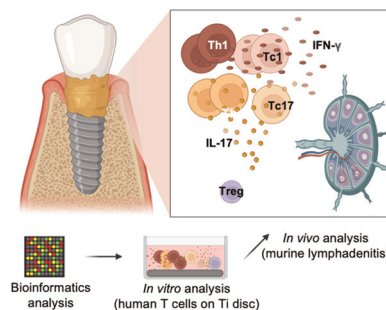
Siyi Yu, Yuan You, Lan Liu, Xinjie Cai\* and Cui Huang\*



1543

### Titanium implants trigger extra-periodontal T cell-mediated immunity

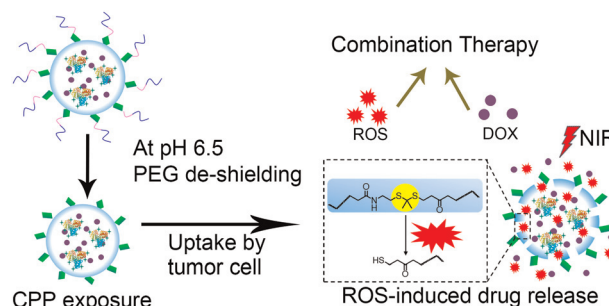
Li-Tzu Wang, Sin-Ei Juang, Chi-Lun Lan, Hsuan-Hao Chang, Ai-Chia He, Wei-An Chen, Yu-Wen Huang, Thomas E. Van Dyke,\* Yi-Wen Chen\* and Kevin Sheng-Kai Ma\*



1554

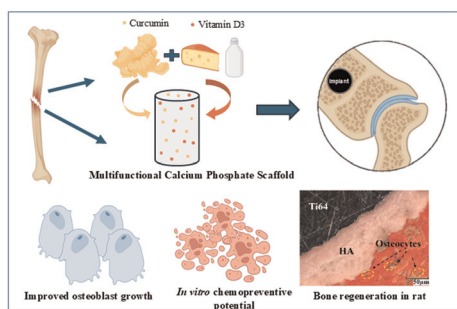
### Enhanced combination therapy through tumor microenvironment-activated cellular uptake and ROS-sensitive drug release using a dual-sensitive nanogel

Jianming Yuan, Qinfeng Chen, Mingxiang Zuo, Xiaoxia Li, ChiYi Ou, Qinghua Chen, Dongsheng Yu, Haowen Li, Chenhui Hao, Jing Yang, Shuang Liu and Du Cheng\*



## PAPERS

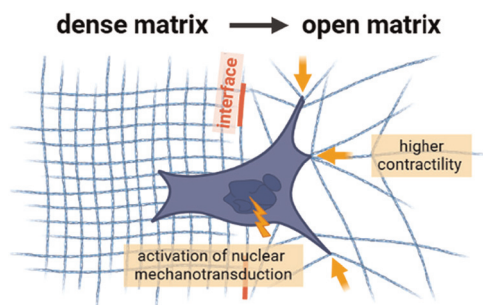
1568



### Curcumin and vitamin D3 release from calcium phosphate enhances bone regeneration

Yongdeok Jo, Priya Kushram and Susmita Bose\*

1578



### Matrix deformation and mechanotransduction as markers of breast cancer cell phenotype alteration at matrix interfaces

Cornelia Clemens, Rosa Gehring, Philipp Riedl and Tilo Pompe\*

## CORRECTIONS

1590

### Correction: Synthesis of poly-tetrahydropyrimidine antibacterial polymers and research of their basic properties

Taimin Xu, Wenlong Li, Rong Zhang, Shuaibing Guo, Bing Yu, Hailin Cong\* and Youqing Shen

1591

### Correction: D–A–D organic fluorescent probes for NIR-II fluorescence imaging and efficient photothermal therapy of breast cancer

Jie Gao, Lin Yuan, Yu Min, Bing Yu,\* Hailin Cong\* and Youqing Shen



## CORRECTIONS

1593

**Correction: Photothermal-responsive Prussian blue nanocages loaded with thrombin for tumor starvation therapy and photothermal therapy**

Yang Liu, Bingjie Yue, Ranran Wang, Hailin Cong, Hao Hu,\* Bing Yu\* and Youqing Shen

