

# Journal of Materials Chemistry B

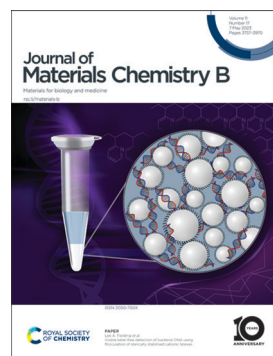
Materials for biology and medicine

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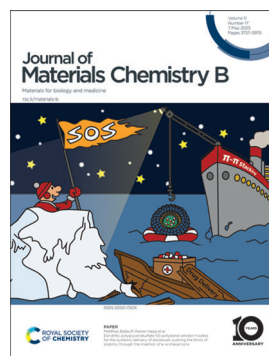
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### Inside cover

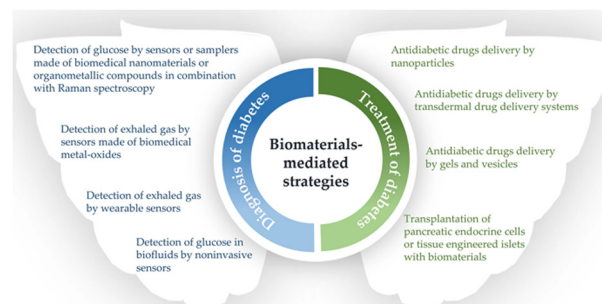
See Matthias Ballauff, Rainer Haag *et al.*, pp. 3797–3807. Image reproduced by permission of Daniel Braatz from *J. Mater. Chem. B*, 2023, 11, 3797.

## REVIEW

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### Biomaterial-mediated strategies for accurate and convenient diagnosis, and effective treatment of diabetes: advantages, current progress and future perspectives

Bingbing Xie, Kun Wang, Bingyan Li, Ruoyu Huang, Zhiwei Xu\* and Xiaoming Li

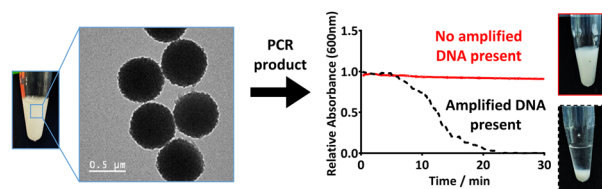


## PAPERS

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### Visible label-free detection of bacterial DNA using flocculation of sterically stabilised cationic latexes

Elisabeth Trinh, Kate L. Thompson, Shang-Pin Wen, Gavin J. Humphreys, Bianca L. Price and Lee A. Fielding\*



Sterically-stabilised cationic latex

Simple, rapid, detection of amplified DNA



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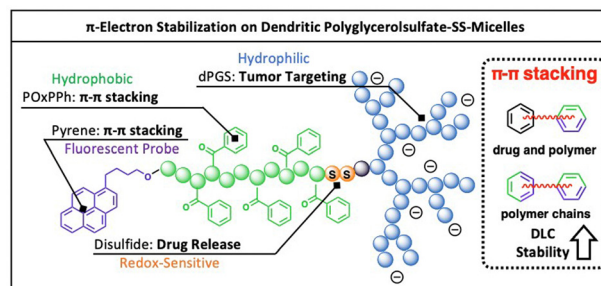
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### Dendritic polyglycerolsulfate-SS-poly(ester amide) micelles for the systemic delivery of docetaxel: pushing the limits of stability through the insertion of $\pi$ - $\pi$ interactions

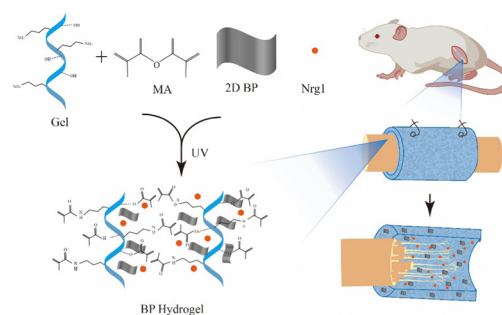
Daniel Braatz, Justus H. Peter, Mathias Dimde, Elisa Quaas, Kai Ludwig, Katharina Achazi, Michael Schirner, Matthias Ballauff\* and Rainer Haag\*



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### Phosphorene hydrogel conduits as “neurotrophin reservoirs” for promoting regeneration of peripheral nerves

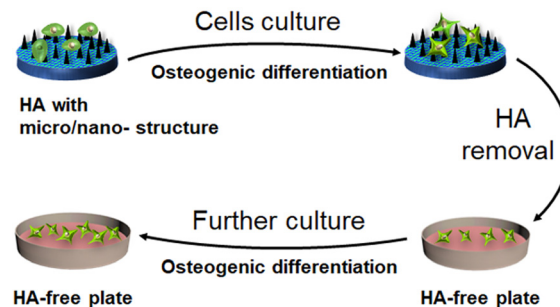
Tiankun Hui, Chen Wang, Liangmin Yu, Chuanli Zhou\* and Meng Qiu\*



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### The memory effect of micro/nano-structures activating osteogenic differentiation of BMSCs

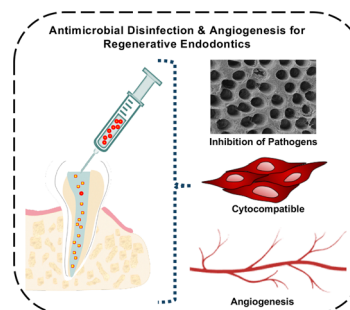
Cancan Zhao, Chen Yang, Qun Lou, Jiashu Yan, Xudong Wang\* and Jiang Chang\*



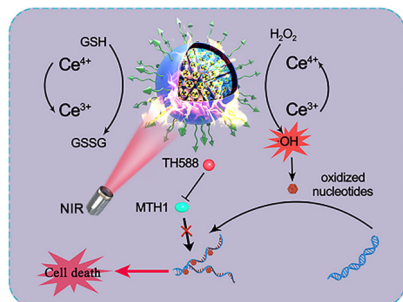
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### Gelatin methacryloyl hydrogel as an injectable scaffold with multi-therapeutic effects to promote antimicrobial disinfection and angiogenesis for regenerative endodontics

Nileshkumar Dubey, Juliana S. Ribeiro, Zhaocheng Zhang, Jinping Xu, Jessica A. Ferreira, Liu Qu, Ling Mei, J. Christopher Fenno, Anna Schwendeman, Steven P. Schwendeman, Jacques E. Nör and Marco C. Bottino\*



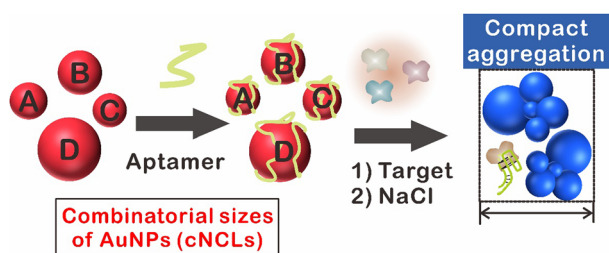
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### Amplification of oxidative stress with a hyperthermia-enhanced chemodynamic process and MTH1 inhibition for sequential tumor nanocatalytic therapy

Qingcheng Song, Yiran Zhang, Xiangtian Deng, Haiyue Zhao, Yueyao Zhang, Junyong Li, Wei Chen,\* Hongzhi Hu\* and Yingze Zhang\*

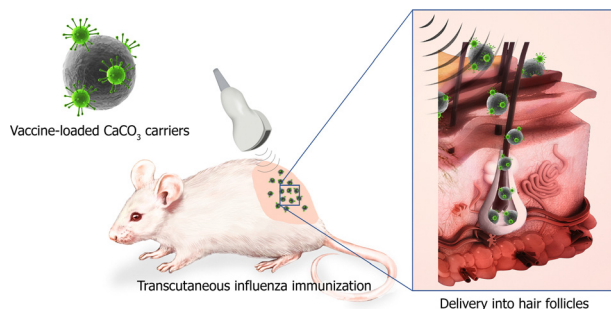
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### A simple strategy based on combinatorial gold nanoparticle sizes for enhanced sensitivity in colorimetric bioanalysis

Huan Du, Yanwen Jin, Xiaoke Zheng, Nansheng Cheng, Junbo Chen\* and Xiandeng Hou\*

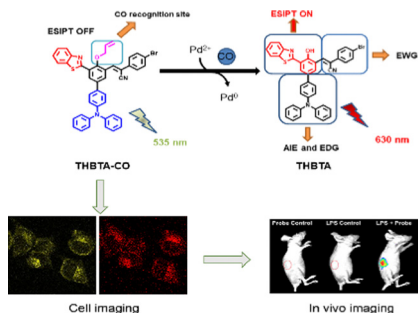
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### Non-invasive transcutaneous influenza immunization using vaccine-loaded vaterite particles

Yulia I. Svenskaya,\* Ekaterina V. Lengert, Yana V. Tarakanchikova, Albert R. Muslimov, Mariia S. Saveleva, Elina A. Genina, Igor L. Radchenko, Liudmila A. Stepanova, Andrey V. Vasin, Gleb B. Sukhorukov and Liudmila M. Tsybalova

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### A novel red AIE fluorescent probe for ratiometric detection of carbon monoxide *in vitro* and *in vivo*

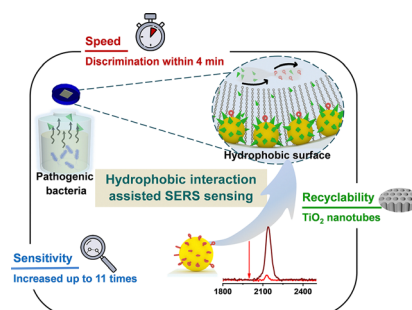
Shuai Huang, Xiaohui Liu, Jing Hou, Min Liu, Ting Luo, Xueyan Huang, Fei Chen, Jie Dong and Wenbin Zeng\*



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### Hydrophobic interaction enables rapid enrichment of volatile metabolites on Au/TiO<sub>2</sub> based SERS substrates for ultrasensitive bacteria detection

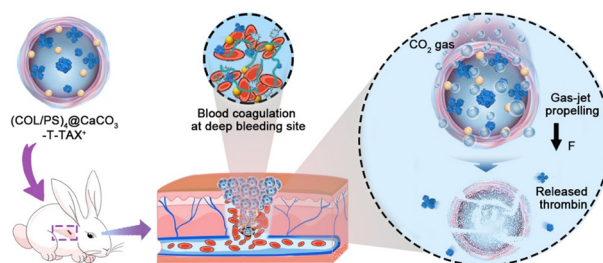
Junhan Li, Jingwen Xu, Yundian Liu, Jing Xu, Lingling Yang, Zhida Gao and Yan-Yan Song\*



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### Gas-jet propelled hemostats for targeted hemostasis in wounds with irregular shape and incompressibility

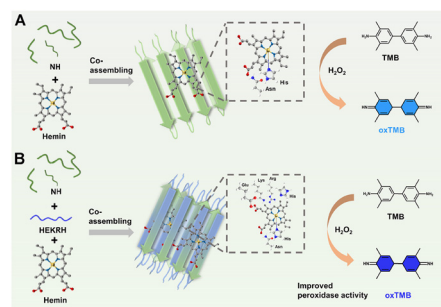
Guofang Zhou, Fei Lu, Songmin Shang, Dahua Shou, Wenyi Wang,\* Kun Yu, Ruiqi Xie, Guangqian Lan and Enling Hu\*



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### Molecular co-assembly of multicomponent peptides for the generation of nanomaterials with improved peroxidase activities

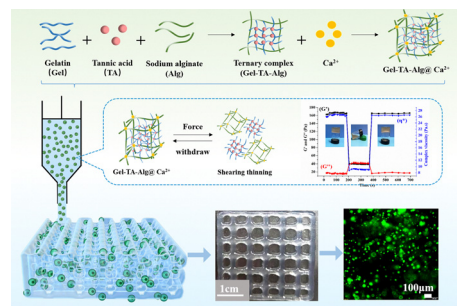
Yehao Zhang and Xinming Li\*



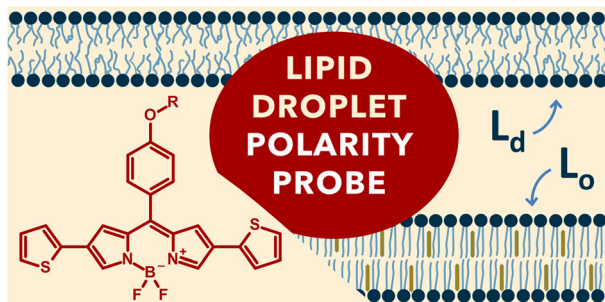
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### Natural polymer derived hydrogel bioink with enhanced thixotropy improves printability and cellular preservation in 3D bioprinting

Rongwei Cui, Sumei Li, Taiyi Li, Xue Gou, Tao Jing, Guowei Zhang, Guihua Wei, Zhongmin Jin, Xiong Xiong\* and Shuxin Qu\*



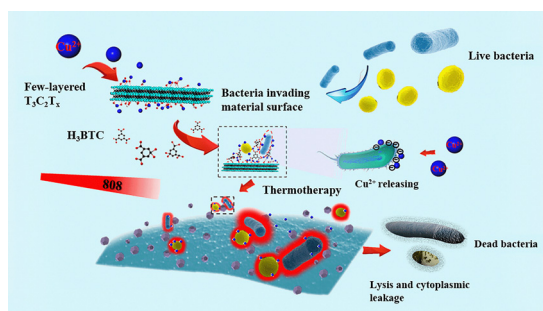
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### A red-emitting thiophene-modified BODIPY probe for fluorescence lifetime-based polarity imaging of lipid droplets in living cells

Rokas Žvirblis, Karolina Maleckaitė, Jelena Dodonova-Vaitkūnienė, Džiugas Jurgutis, Rugilė Žilėnaitė, Vitalijus Karabanovas, Sigitas Tumkevičius and Aurimas Vyšniauskas\*

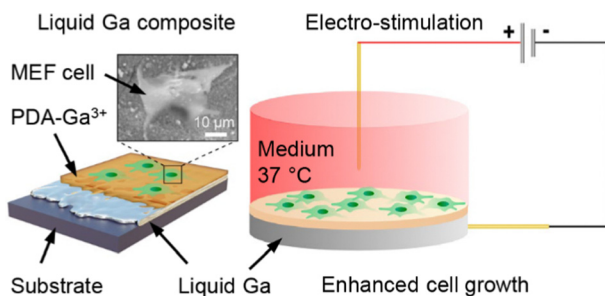
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### HKUST-1 loaded few-layer $Ti_3C_2T_x$ for synergistic chemo-photothermal effects to enhance antibacterial activity

Lei Fang, Yingjie Chen, Wei Shan, Tiankun Hui, Mokni Ilham, Jie Wu, Chuanli Zhou,\* Liangmin Yu\* and Meng Qiu\*

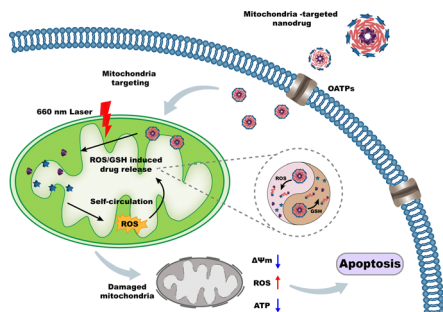
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### A liquid metal–polydopamine composite for cell culture and electro-stimulation

Francois-Marie Allieux,\* Salma Merhebi, Li Liu, Franco Centurion, Roozbeh Abbasi, Chengchen Zhang, Jake Ireland, Joanna M. Biazik, Mohammad Mayyas, Jiong Yang, Maedehsadat Mousavi, Mohammad B. Ghasemian, Jianbo Tang, Wanjie Xie, Md. Arifur Rahim and Kourosh Kalantar-Zadeh\*

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### A mitochondria-targeting self-assembled carrier-free lonidamine nanodrug for redox-activated drug release to enhance cancer chemotherapy

Ting Yang, Xianfen Zhang, Xing Yang, Ying Li, Jingjing Xiang, Chunbai Xiang, Zhongke Liu, Luo Hai, Saipeng Huang,\* Lihua Zhou,\* Ruijing Liang\* and Ping Gong\*



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## Controlling the structure of supramolecular fibre formation for benzothiazole based hydrogels with antimicrobial activity against methicillin resistant *Staphylococcus aureus*

Kira L. F. Hilton, Antonis A. Karamalegkos, Nyasha Allen, Lauren Gwynne, Bree Streater, Lisa J. White, Karen B. Baker, Samantha A. Henry, George T. Williams, Helena J. Shepherd, Mark Shepherd, Charlotte K. Hind, Mark J. Sutton, Toby A. Jenkins,\* Daniel P. Mulvihill,\* Jennifer M. A. Tullet,\* Marina Ezcurra\* and Jennifer R. Hiscock\*

