

# Journal of Materials Chemistry B

Materials for biology and medicine

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### Inside cover

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### Introduction to microneedles

Ryan Donnelly, Ester Caffarel-Salvador, Harvinder Gill and Hyungil Jung

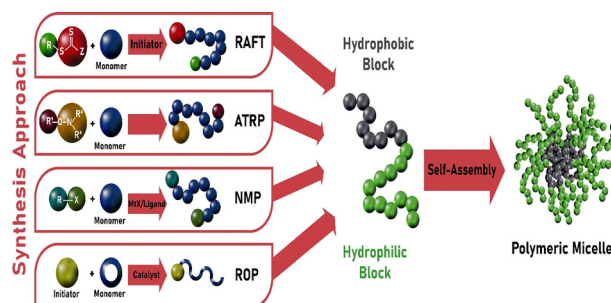


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Ali Aliabadi, Maliheh Hasannia, Masoume Vakili-Azghandi, Fatemeh Araste, Khalil Abnous, Seyed Mohammad Taghdisi, Mohammad Ramezani\* and Mona Alibolandi\*



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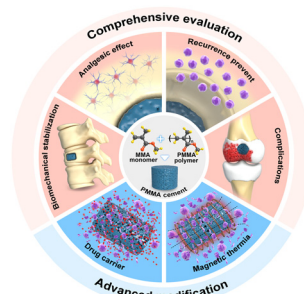


## REVIEWS

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### Comprehensive evaluation and advanced modification of polymethylmethacrylate cement in bone tumor treatment

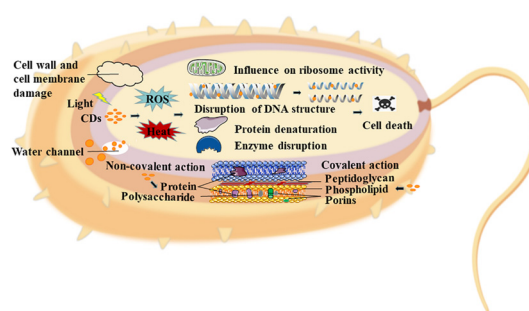
Bo Chao, Jianhang Jiao, Lili Yang, Yang Wang, Tong Yu, He Liu, Han Zhang, Mufeng Li, Wenjie Wang, Xiangran Cui, Shangyu Du, Zhonghan Wang\* and Minfei Wu\*



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### Antibacterial functionalized carbon dots and their application in bacterial infections and inflammation

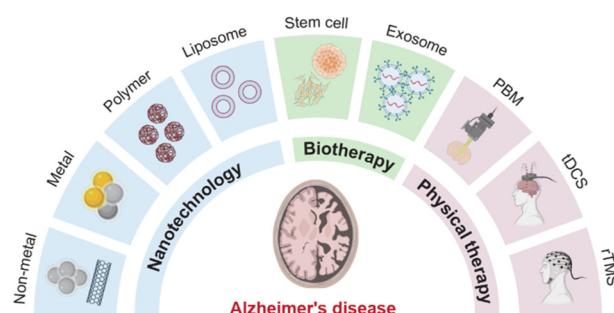
Meng Fang, Liping Lin,\* Muyue Zheng, Wei Liu and Rongguang Lin



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### Current emerging novel therapies for Alzheimer's disease and the future prospects of magneto-mechanical force therapy

Yajing Shen, Meng Wang, Shutang Li and Jinfei Yang\*

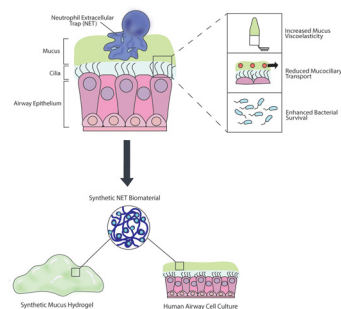


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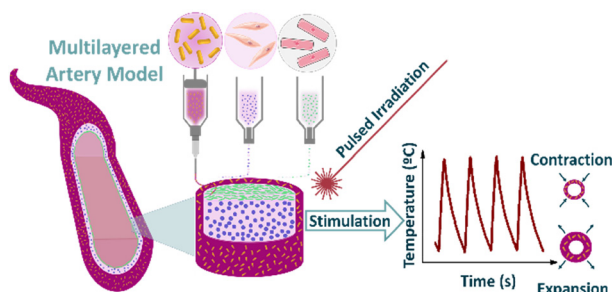
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### Engineering *in vitro* models of cystic fibrosis lung disease using neutrophil extracellular trap inspired biomaterials

Allison Boboltz, Sydney Yang and Gregg A. Duncan\*



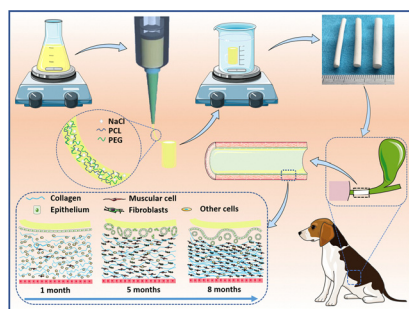
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### Remodeling arteries: studying the mechanical properties of 3D-bioprinted hybrid photoresponsive materials

Uxue Aizarna-Lopetegui, Clara García-Astrain, Carlos Renero-Lecuna, Patricia González-Callejo, Irune Villaluenga, Miguel A. del Pozo, Miguel Sánchez-Álvarez, Malou Henriksen-Lacey\* and Dorleta Jimenez de Aberasturi\*

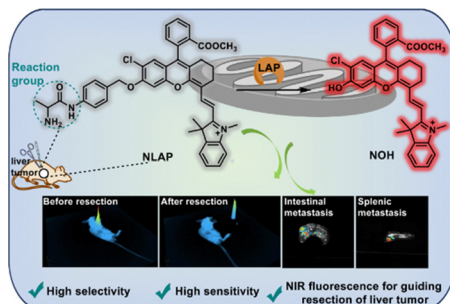
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### Fabrication of 3D printed PCL/PEG artificial bile ducts as supportive scaffolds to promote regeneration of extrahepatic bile ducts in a canine biliary defect model

Yu-Long Cai, Fang Nan, Guo-Tao Tang, Yuan Ma, Yi Ren, Xian-Ze Xiong, Rong-Xing Zhou, Fu-Yu Li, Nan-Sheng Cheng and Xia Jiang\*

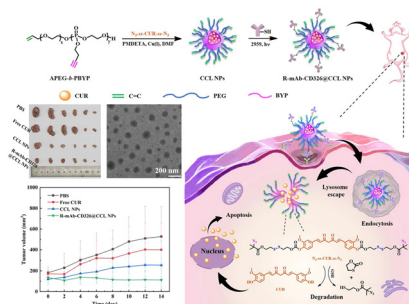
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### Engineering a near-infrared LAP fluorescent probe with high sensitivity and selectivity for surgical resection of liver cancer

Renfeng Jiang, Jiayu Zeng, Qian Liu, Songjiao Li,\* Longwei He\* and Dan Cheng\*

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### A CD326 monoclonal antibody modified core cross-linked curcumin-polyphosphoester prodrug for targeted delivery and cancer treatment

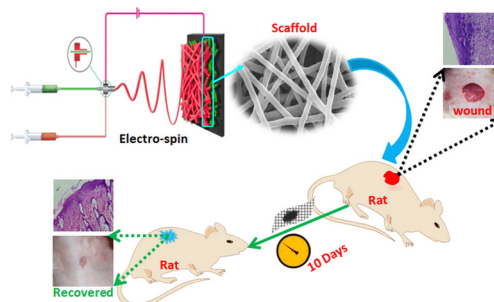
Haijiao Li, Mingzu Zhang, Jinlin He, Jian Liu, Xingwei Sun\* and Peihong Ni\*



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### Asymmetric fabrication and *in vivo* evaluation of the wound healing potency of electrospun biomimetic nanofibrous scaffolds based on collagen crosslinked modified-chitosan and graphene oxide quantum dot nanocomposites

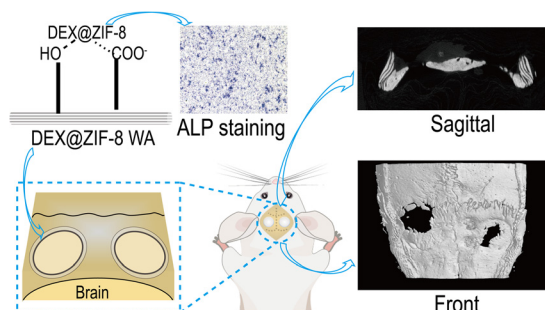
Koushik Dutta, Kunal Sarkar, Srikanta Karmakar, Bhuman Gangopadhyay, Arijita Basu, Sarbashri Bank, Sriparna De, Beauty Das,\* Madhusudan Das\* and Dipankar Chattopadhyay\*



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### Green synthesis of metal–organic framework loaded dexamethasone on wood aerogels for enhanced cranial bone regeneration

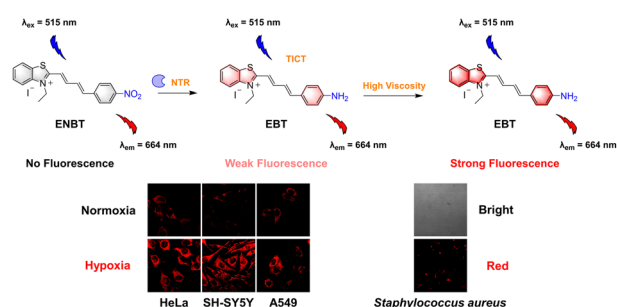
Zheng-Yang Chen, Rui-Deng Wang, Shi-Long Su, You-Liang Hao\* and Fang Zhou\*



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### A fluorescent probe for imaging nitroreductase with signal amplification in high-viscosity environments

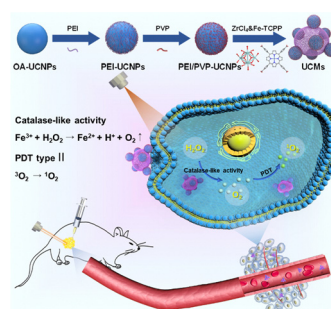
Yunfan Liu, Jiaying Li, Hongjin Huang and Yang Shu\*



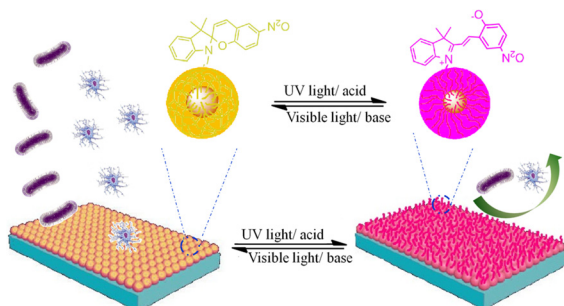
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### Dual ligand-assisted assembly of metal–organic frameworks on upconversion nanoparticles for NIR photodynamic therapy against hypoxic tumors

Xinyue Zhang, Jiasen Cui, Jinhui Liu, Xi Chen, Mingli Chen\* and Jianhua Wang\*



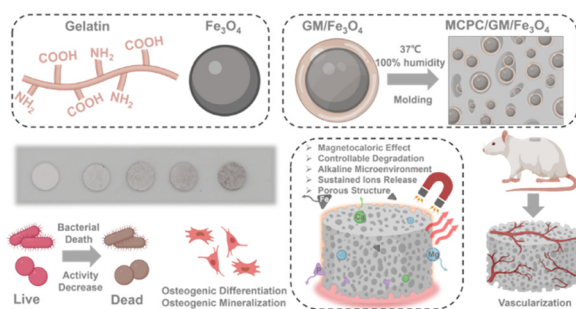
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### A spiropyran-decorated nanocoating for dynamically regulating bacteria/cell adhesion and detachment

Jie Li, Zhuang Ma, Anran Li, Siyuan Huang, Yufei Zhang, Yun Xue, Xianhui Song, Ye Zhang, Shihao Hong, Mo Wang,\* Zhongming Wu\* and Xinge Zhang\*

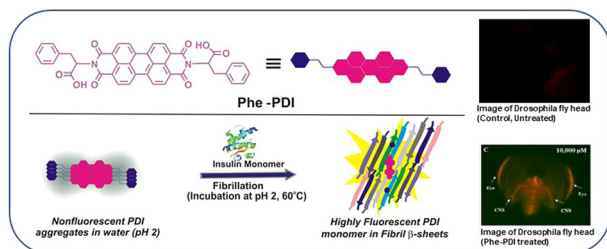
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### Multifunctional magnetocaloric bone cement with a time-varying alkaline microenvironment for sequential bacterial inhibition, angiogenesis and osteogenesis

Xiaokang Yao, Yanan Zhao, Wen Hou, Kai Huang, Manqi Yan, Rong Tu, Takashi Goto and Honglian Dai\*

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### Spectroscopic features of a perylenediimide probe for sensing amyloid fibrils: *in vivo* imaging of A $\beta$ -aggregates in a *Drosophila* model organism

Nilotpal Barooah, Puja Karmakar, M. K. Sharanya, Monalisa Mishra,\* Achikanath C. Bhasikuttan\* and Jyotirmayee Mohanty\*

