

# Journal of Materials Chemistry B

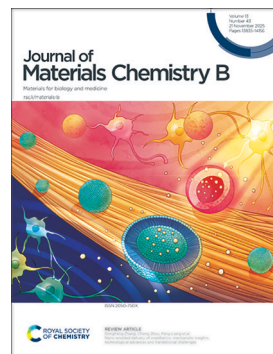
Materials for biology and medicine

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### Cover

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### Inside cover

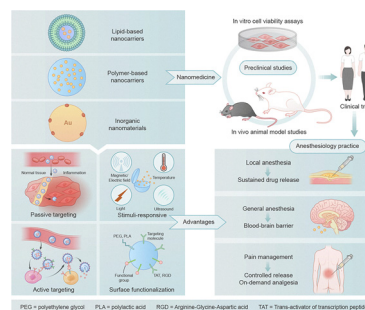
See Faheem Hassan Akhtar *et al.*, pp. 13954–13971. Image reproduced by permission of Faheem Hassan Akhtar from *J. Mater. Chem. B*, 2025, 13, 13954.

## REVIEWS

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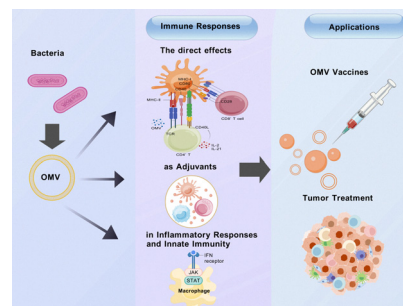
Xiangyu Hu, Tao He, Donghang Zhang,\* Cheng Zhou\* and Peng Liang\*



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### Bacterial outer membrane vesicles in immune modulation: from mechanisms to applications

Yueqing Wang, Runhan Yang, Jun Luo, Jianshu Li, Bo Huang\* and Jiaojiao Yang\*



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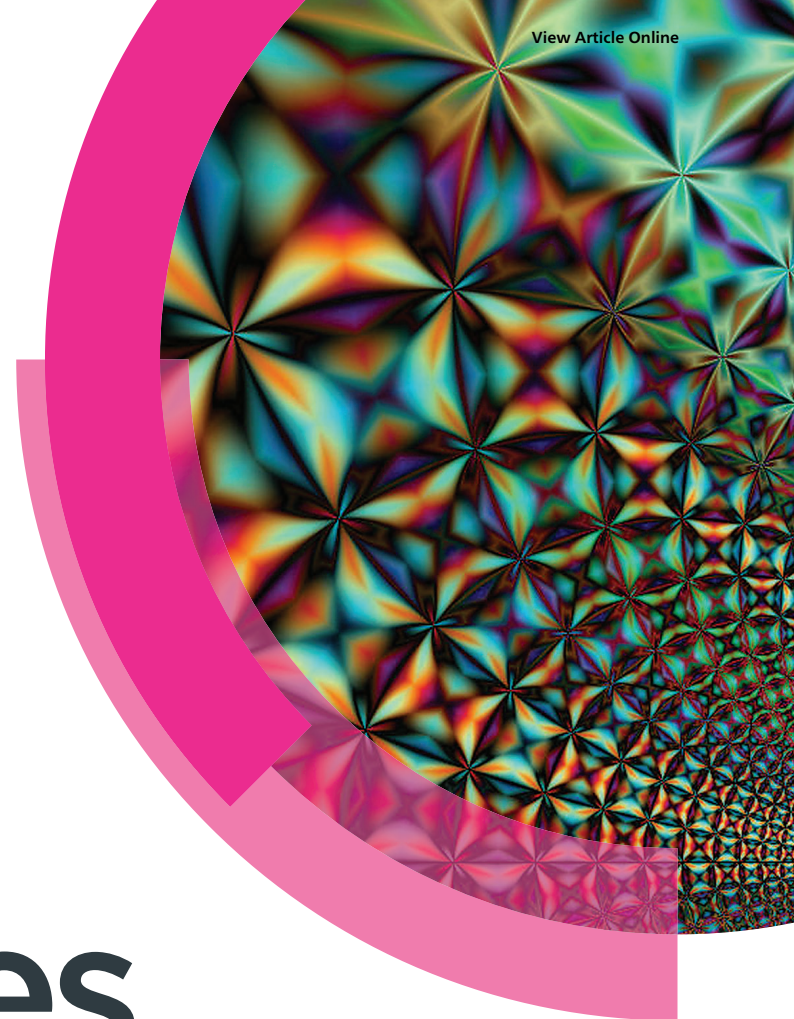


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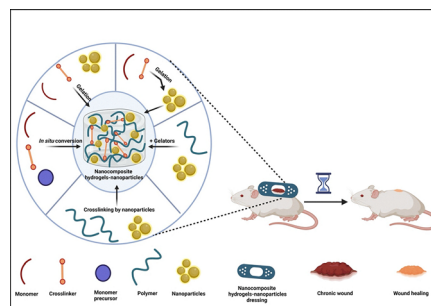


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### Staying one step ahead of chronic wounds by designing symbiotic, responsive functionality into dynamic nanohydrogels

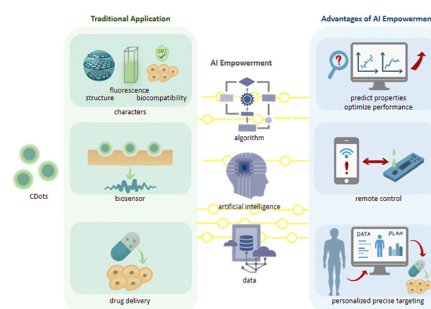
Ayushi Priyam,\* Lilith M. Caballero Aguilar,\*  
Negar Mahmoudi, Colin J. Barrow, David R. Nisbet and  
Richard J. Williams



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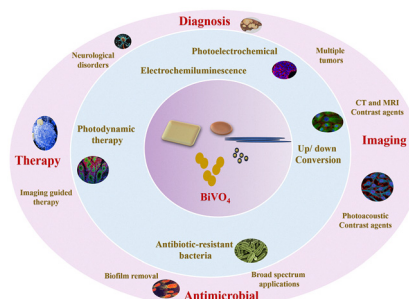
Yalei Guo, Yige Liu, Jiabin Yang, Yulu Wu, Haosen Lian,  
Xiufa Tang, Chunjie Li, Weitong Cui\* and Zhiyong Guo\*



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Karthik Sujith, Anjali Paravannoor, Priyanka Ganguly and  
Baiju Kizhakkelikoodayil Vijayan\*

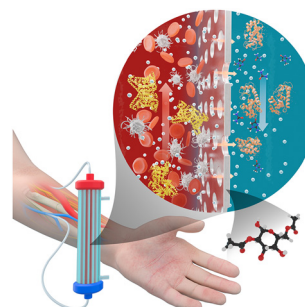


## PAPERS

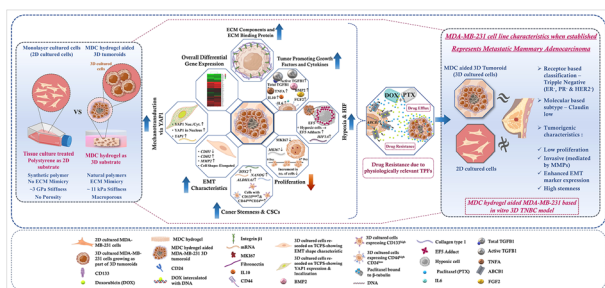
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### Scalable synthesis of asymmetric hemodialysis membranes to enhance performance and biocompatibility in flat sheet and hollow fiber configurations

Aniza Nasir, Abdul Waseh, Tahir Ahmad, Arshad Hussain  
and Faheem Hassan Akhtar\*



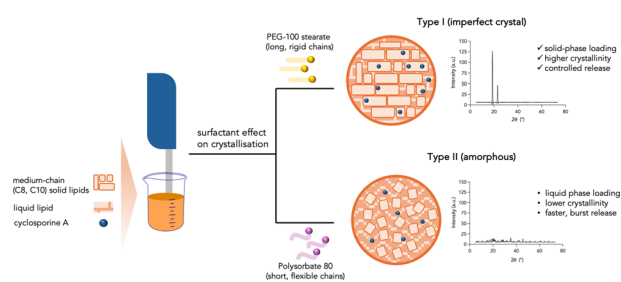
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## An oxidized dextran and thiolated chitosan-based hydrogel driven biomimetic triple negative breast cancer 3D *in vitro* model for cancer progression and therapeutic studies

Unnati Modi, Pooja Makwana, Bindiya Dhimmam, Soundharya Ramu, Mohit Kumar Jolly and Rajesh Vasita\*

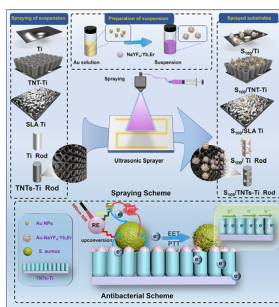
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## Exploiting supercooled medium-chain lipids and surfactant combinations for solid-phase dominant nanostructured lipid carrier production

Daniel Sedough-Abbasian, Jiaming Mu, Jerin George Joseph, Gavin P. Andrews and Sheiliza Carmali\*

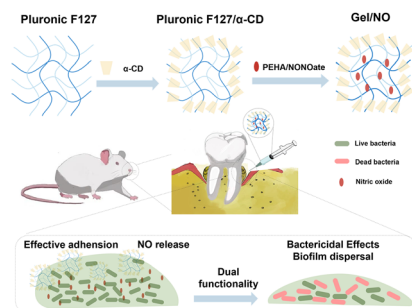
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## Sprayed antibacterial layer on titanium implants to eradicate biofilms by photoelectrons under near-infrared light

Junyu Dong, Shuqi Feng, Kai Wang, Yufei Tang, Keyi Yao, Sze Wing Cheung, Lin Xiang\* and Xuemei Zhou\*

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## Dual antibacterial and antibiofilm strategy based on an injectable NO-releasing supramolecular hydrogel for periodontitis treatment

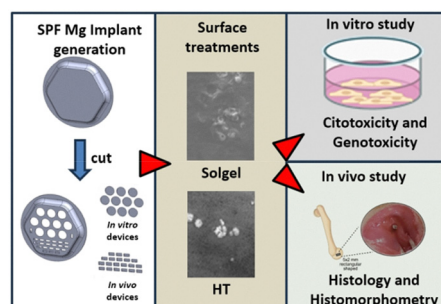
Lili Wang, Hong Chen, Dongna Xie, Jiale Wan, Weinan Ren, Dong Ma,\* Guowei Li\* and Wu Zhang\*



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### *In vitro* and *in vivo* characterization of novel magnesium alloy implants enhanced by hydrothermal and sol-gel treatments for bone regeneration

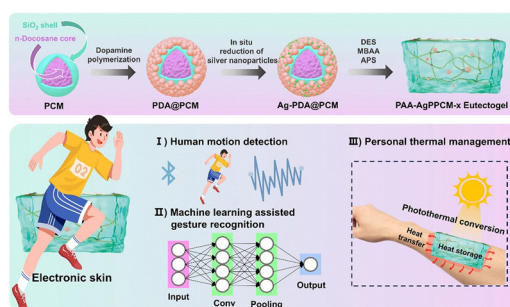
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### Multifunctional Ag-PDA@PCM composite eutectogel based electronic skin for personal thermal management and a machine learning assisted wearable sensor

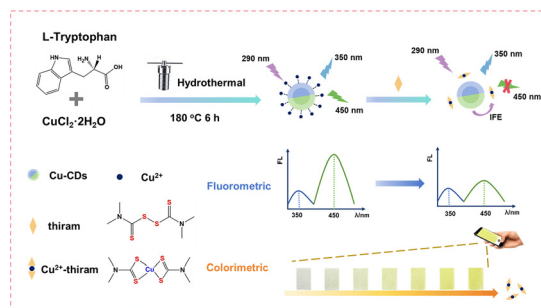
Junjie Gong, Yi Chen, Dandan Liu, Huawei Cai,\* Lisha Jiang\* and Haibo Wang



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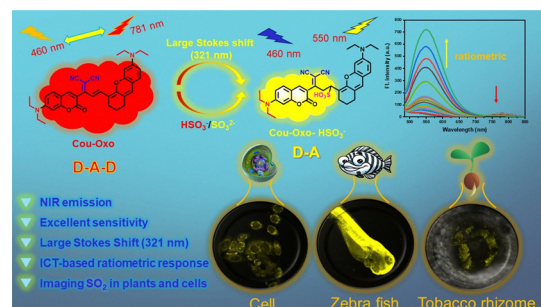
Tingting Lei, Yating Xu, Yuanyu Tang, Siyi Tan, Jiafu Xiao,\* Shaojing Zhao\* and Minhuan Lan\*



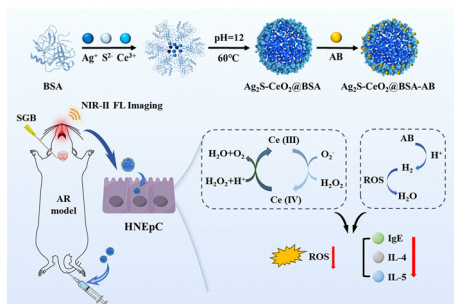
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### Constructing near-infrared dyes with D-A-D-type Stokes shifts based on asymmetric electron-donating properties and their applications

Ying-Kun Liu, Mao-Hua Wang, Li-Rui Huo and Jian-Yong Wang\*



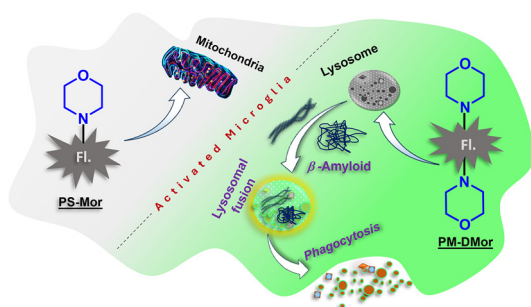
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### A multifunctional theranostic nanoagent for precise NIR-II FL imaging and synergistic chemodynamic/H2/SGB therapy of allergic rhinitis

Weiwei Zhang, Lin Chen, Chunmei Jiang, Shutong Wu, Zhigan Lv, Ning Zhang, Wenjing Cui, Qin Liu, Rong Dai, Ziliang Zheng\* and Ruiping Zhang\*

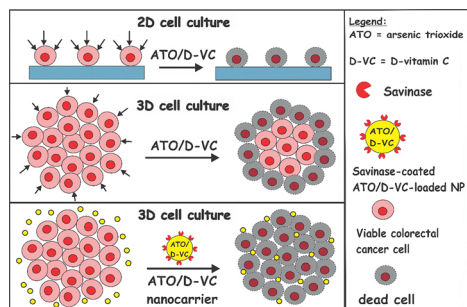
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### Engineering fluorescent probes for tracking lysosomal pH in $\beta$ -amyloid-induced microglial activation and phagocytosis

Subrata Munan,\* Abir Mondal, Shraddha Tiwari, Rashmi Yadav, Niharika Pareek and Animesh Samanta\*

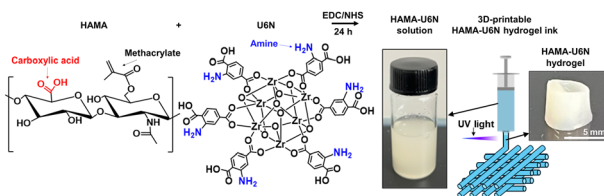
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### Savinase-functionalised oxidative drug-loaded nanocarriers enhance the treatment of solid colorectal tumours in a 3D cell culture model

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### 3D printable hydrogel inks with metal-organic frameworks for sustained small drug delivery in wound healing

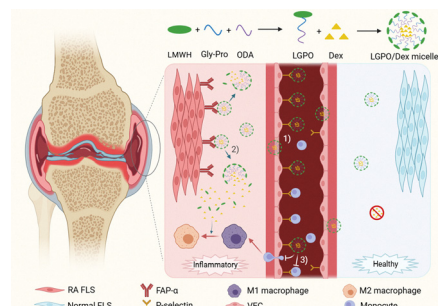
Youbin Park, Subin Jin, Se-Na Kim, Chun Gwon Park and Mikyung Shin\*



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## Treating rheumatoid arthritis using fibroblast-activated protein- $\alpha$ -responsive micelles through a cascade control program

Yu Li, Pei Xie, Ruixin Gong, Junlong Chen, Yaxue Liu and Zongning Yin\*



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