

Journal of Materials Chemistry B

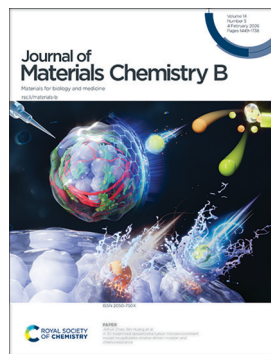
Materials for biology and medicine

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IN THIS ISSUE

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Cover

See Jichun Zhao, Bin Huang *et al.*, pp. 1522–1536. Image reproduced by permission of Jichun Zhao and Julin Wang from *J. Mater. Chem. B*, 2026, **14**, 1522.

EDITORIAL

1458

Introduction to engineering of soft materials for healthcare, energy, and environment

Kamlendra Awasthi,* Eduard Llobet,* Anjali Awasthi and Fatima Ezahra Annanouch

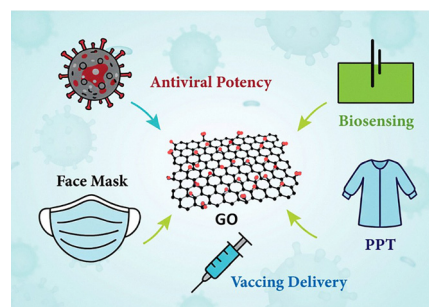


REVIEWS

1461

Graphene oxide in the fight against viruses: from biosensing and antiviral action to protective materials and vaccine delivery

Nawrin Kashfia, Md. Saidul Islam, Yoshihero Sekine and Shinya Hayami*



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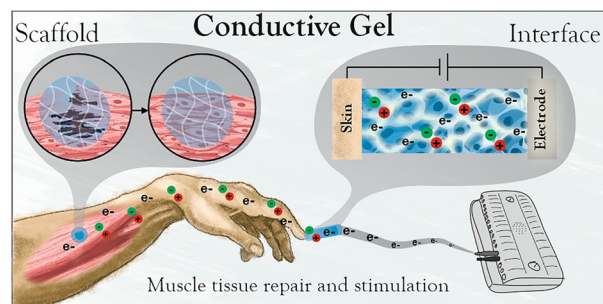


REVIEWS

1474

Conductive soft gels for skeletal muscle electrostimulation and repair: an overview

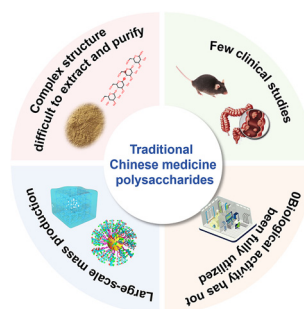
Sebastián Locatelli, Ludmila I. Ronco, Maurizio Prato, Roque J. Minari and Gisela C. Luque*



1494

Research progress on drug delivery systems based on traditional chinese medicine polysaccharides for the treatment of colon cancer

Liu Yu Rong, Zhan Yu, Liu Jing, Sun Chao and Tang Xue Gui*

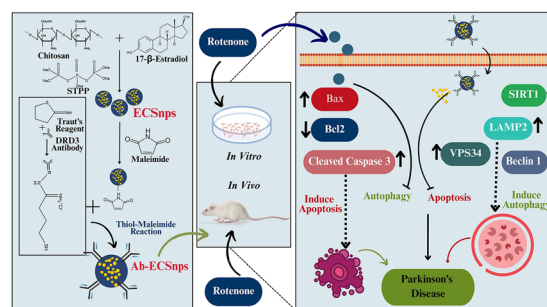


COMMUNICATION

1511

Chitosan-based nanoparticles for targeted delivery of 17 β -estradiol to enhance SIRT1-mediated autophagy and mitigate rotenone-induced Parkinson's disease

Liku Biswal, Mohd Ayoub, Devangi Ghosh, Vikas Kumar Sahu, Subhasree Roy Choudhury* and Surajit Karmakar*

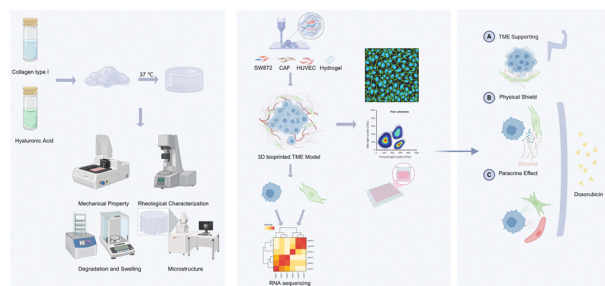


PAPERS

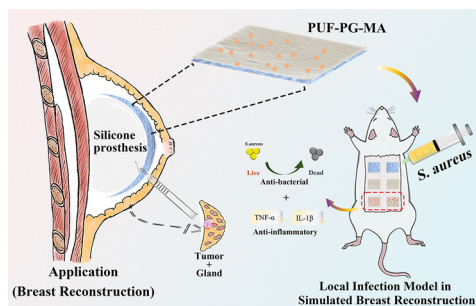
1522

A 3D bioprinted liposarcoma tumor microenvironment model recapitulates stroma-driven invasion and chemoresistance

Julin Wang, Yujiao Peng, Tianyu Miao, Yang Li, Yiyuan Li, Zhuoxu He, Jichun Zhao* and Bin Huang*



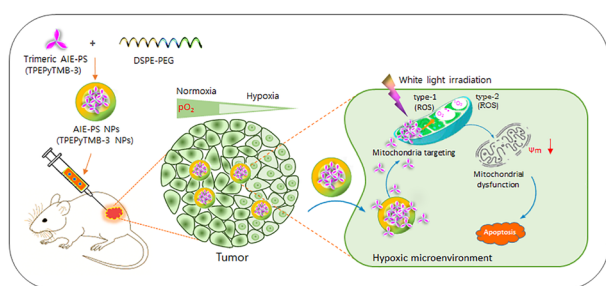
1537



Shape-memory polyurethane foam integrated with nanofiber technology: synergistic efficacy in reducing the risk of capsular contracture and infection in breast reconstruction applications

Kawun Chung, Lunqiang Jin,* Qiang Zhang, Lin Tan and Zhenggui Du*

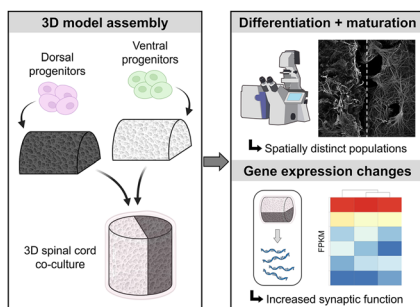
1549



Molecular engineering of aggregation-induced emission enhanced photosensitizers to boost the theranostic performance in photodynamic therapy

Sauraj, Ji Hee Kang, O Hyun Lee, Anindita De, Dongyun Shin and Young Tag Ko*

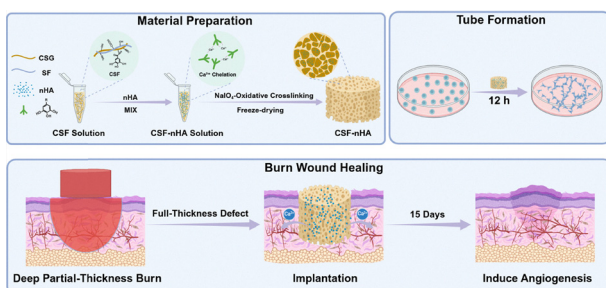
1562



A modular silk–collagen scaffold to model dorsoventral spinal cord organization using human pluripotent stem cells

Marly Coe, Emily L. Pallack, Diya D. Patel, David L. Kaplan and Nisha R. Iyer*

1574



Polycationic silk fibroin chelating nano-hydroxyapatite promotes angiogenesis for burn wound healing

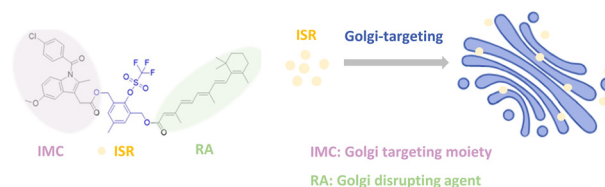
Gong Li, Yuxiang Wang, Birui Yang, Yaping Zou, Xiaolin Xiao, Zhimeng Deng, Ruitao Ren, Li Jiang* and Yong Sun*



1586

A superoxide anion radical-activatable Golgi-targeting prodrug-based albumin complex for synergistic chemo-immunotherapy of triple-negative breast cancer

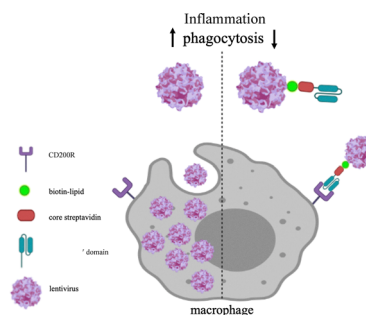
Yulian Jia, Jing Yang, Yanzhi Zhou, Peihong Xiao, Zhenlei Song, Xiaoli Yi, Huile Gao, Jianxia Dong* and Tao Gong*



1603

Engineering viral vectors with CD200 enhances anti-inflammatory and phagocytosis resistance

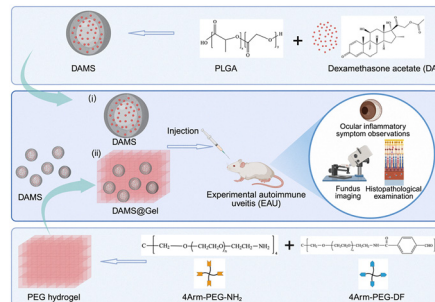
Esmael M. Alyami, Ian Peng, Sharjeel Jokhio and Ching-An Peng*



1615

Microenvironment-responsive hydrogels with drug-loaded microspheres for sustained dexamethasone acetate release and experimental autoimmune uveitis suppression

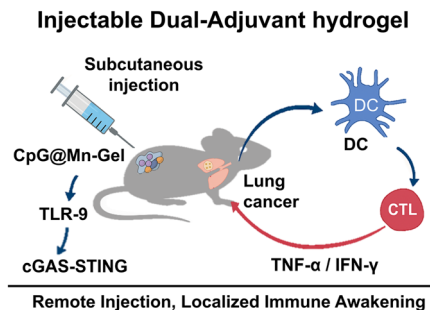
Xue Wu, Lianyi Yang, Qing Chen, Ruijin Ran, Jun Cao* and Ming Zhang*



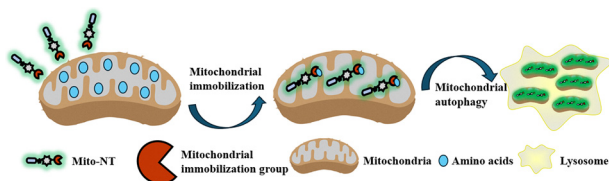
1630

A Mn²⁺-crosslinked dual-adjuvant hydrogel for spatiotemporal immune activation in lung cancer therapy

Bo Yin, Qian Zhang, Shuaijun Xiao, Yuanyuan Bao, Xuanchi Luo, Munaiwaier Sabier, Zhouping Zhao, Youlan Yang, Mengling Wu, Xuebo Yan* and Jiong Wang*



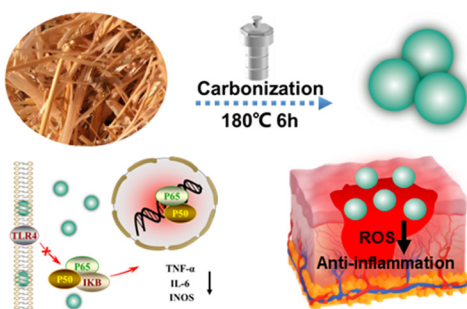
1641



Naphthylimide-based mitochondrial immobilized probes for polarity-specific imaging of mitochondrial autophagy in cells and mouse cardiac tissue

Yukun Zhang, Lie Li, Ruiyuan Liu* and Jinqing Qu*

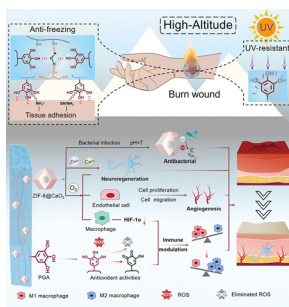
1649



Green synthesis of corn stalk-derived carbon dots for enhanced wound healing

Yuan Zhang, Ruinan Wang, Hengping Wang, Haiming Cheng and Huiyan Wang*

1657

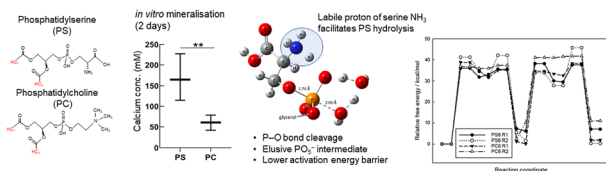


Polyphenol-enhanced extreme-environment adaptive hydrogels for high-altitude burn wound repair

Shengxi Jiang, Yujia Zheng, Peiji Yang, Huabin Liu, Wei Zhang, Yanan Jiang, Liwei Yan, Jie Weng, Feng Lin,* Hongyu Sun,* Xiong Lu* and Chaoming Xie*

1671

in vitro/in silico investigation of phospholipid mineralization



Multi-step mechanisms of early phospholipid hydrolysis and mineralisation unveiled through combined quantum chemical calculations and experimental analysis

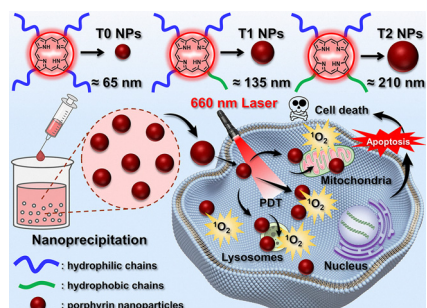
Keisuke Shibata, Takahumi Shiotani, Yunhao Chen, Reina Kurihara, Katsunori Yamaguchi, Emilio Satoshi Hara* and Nilson Kuniوشي*



1682

Carrier-free water-soluble porphyrin nanoparticles as highly effective photosensitizers for photodynamic therapy

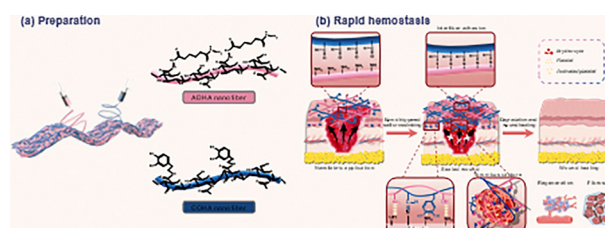
Jiajun Chen, Chenyang Zhang, Jun Wang, Hongchao Li, Yinghua Jin, Xiaohua Jian,* Qi Zhou* and Wenwu Cao*



1692

Hyaluronic acid-based fabric with blood induced network densification and tissue adhesion for bleeding control

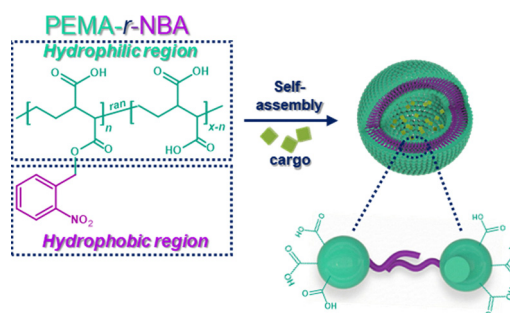
Zhibo Xu, Linyu Wang, Xinwei Zheng, Ziyang Wang, Yunxiang Weng, Qinhui Chen, Haiqing Liu* and Yan Fang*



1708

Photoresponsive polymersomes for nanoencapsulation of multiple cargoes as a potential theranostic strategy

Elisa Hernández Becerra, Jennifer Quinchia, Maritza Londoño, Marlon Osorio, Giuseppe Battaglia, José Muñoz López, Cristina Castro and Jahir Orozco*



1722

pH-Triggered antibiotic release from nanofiber-hydrogel hybrid dressings for infected wound healing

Ruohong Yu, Fanying Zeng, Zhenyu Xiang, Mengyuan Dai, Guolin He, Jing Shi* and Jiaojiao Shang*

