

Journal of Materials Chemistry B

Materials for biology and medicine

rsc.li/materials-b

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

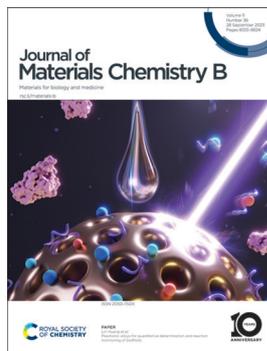
IN THIS ISSUE

ISSN 2050-750X CODEN JMCBDV 11(36) 8555-8824 (2023)



Cover

See Fengjin Zhou, Jiacan Su *et al.*, pp. 8565–8585. Image reproduced by permission of Biaotong Huang from *J. Mater. Chem. B*, 2023, 11, 8565.



Inside cover

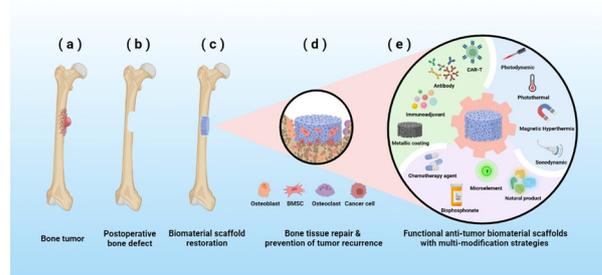
See Lin Huang *et al.*, pp. 8639–8648. Image reproduced by permission of Lin Huang from *J. Mater. Chem. B*, 2023, 11, 8639.

REVIEWS

8565

Functional anti-bone tumor biomaterial scaffold: construction and application

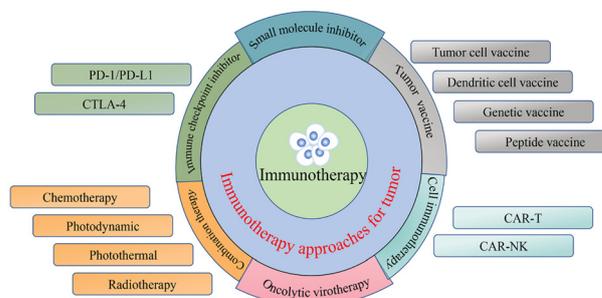
Biaotong Huang, Zhifeng Yin, Fengjin Zhou* and Jiacan Su*



8586

Immunotherapy: cancer immunotherapy and its combination with nanomaterials and other therapies

Yuanyuan Guo, Fengyuan Gao, Adeel Ahmed, Muhammad Rafiq, Bing Yu,* Hailin Cong* and Youqing Shen



Editorial Staff**Executive Editor**

Michaela Mühlberg

Deputy Editor

Geraldine Hay

Editorial Production Manager

Jonathon Watson

Senior Publishing Editor

Fiona Iddon

Development Editor

Natalie Cotterell

Publishing Editors

Eleanor Griffiths, Francesca Jacklin, Brian Li

Editorial Assistant

Daniel Smith

Publishing Assistant

Jane Paterson

Publisher

Sam Keltie

For queries about submitted papers, please contact Jonathon Watson, Editorial Production Manager in the first instance. E-mail: materialsB@rsc.org

For pre-submission queries please contact Michaela Mühlberg, Executive Editor. E-mail: materialsB-rsc@rsc.org

Journal of Materials Chemistry B (electronic: ISSN 2050-7518) is published

48 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

All orders, with cheques made payable to the Royal Society of Chemistry, should be sent to the Royal Society of Chemistry Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK
Tel +44 (0)1223 432398; E-mail orders@rsc.org

2023 Annual (electronic) subscription price: £2192; \$3516. Customers in Canada will be subject to a surcharge to cover GST. Customers in the EU subscribing to the electronic version only will be charged VAT.

If you take an institutional subscription to any Royal Society of Chemistry journal you are entitled to free, site-wide web access to that journal. You can arrange access via Internet Protocol (IP) address at www.rsc.org/ip

Customers should make payments by cheque in sterling payable on a UK clearing bank or in US dollars payable on a US clearing bank.

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK, Telephone: +44 (0) 207 4378 6556.

Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017;

E-mail advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

Journal of Materials Chemistry B

rsc.li/materials-b

Journal of Materials Chemistry A, B & C cover high quality studies across all fields of materials chemistry. The journals focus on those theoretical or experimental studies that report new understanding, applications, properties and synthesis of materials. *Journal of Materials Chemistry B* covers materials with applications in biology and medicine.

Editorial Board**Editor-in-Chief**

Jeroen Cornelissen, University of Twente, The Netherlands

Associate EditorsKaushik Chatterjee, Indian Institute of Science, India
Elizabeth Cosgriff-Hernandez, The

University of Texas at Austin, USA

Gemma-Louise Davies, University of Birmingham, UK

Håkan Engqvist, Uppsala University, Sweden

Jian Ji, Zhejiang University, China
Shaoqin Liu, Harbin Institute of Technology, China
Yoshiko Miura, Kyushu University, Japan

Jessica Winter, The Ohio State University, USA

Chengzhong Yu, University of Queensland, Australia

Member

Claus Feldmann, Karlsruhe Institute of Technology, Germany

Advisory BoardD. Benoit, University of Rochester, USA
C. Bettinger, Carnegie Mellon University, USA

W. Chan, University of Toronto, Canada

J. Chang, Shanghai Institute of Ceramics, China

H. Cölfen, University of Konstanz, Germany

T. Da Ros, Trieste University, Italy

T. Davis, Monash University, Australia

T. Desai, University of California, San Francisco, USA

X. Deng, Peking University, China

E. Duguet, University of Bordeaux, France

C. Fan, Shanghai Jiao Tong University, China

Y. Fang, CNST, China

R. Forgan, University of Glasgow, UK

J. Fu, Ningbo Institute of Industrial Technology, Chinese Academy of Sciences, China

A. Gedanken, Bar-Ilan University, Israel

M. Grunlan, Texas A&M University, USA

Y. Gun'ko, Trinity College Dublin, Ireland

J. van Hest, Radboud University Nijmegen, The Netherlands

K. Hamad-Schifferli, University of Massachusetts Boston, USA

B. Harley, University of Illinois, USA

A. Higuchi, National Central University, Chinese Taipei, and Wenzhou Medical

University, China

S. Inal, KAUST, Saudi Arabia

Y. Ito, RIKEN, Japan

B. Keselowsky, University of Florida, USA

J. Khandare, MIT WPU Campus, India

A. Kloxin, University of Delaware, USA

N. Kotov, University of Michigan, USA

Z.-C. Li, Peking University, China

E. Lipke, Auburn University, USA

L. Liz-Marzan, CIC biomaGUNE, Spain

D. Lynn, University of Wisconsin, USA

E. D.-L. Ma, Hong Kong Baptist University, Hong Kong

G. Malliaras, University of Cambridge, UK

H.-Q. Mao, Johns Hopkins University, USA

S. Marchesan, University of Trieste, Italy

D. Martin, University of Delaware, USA

K. Masters, University of Wisconsin-Madison, USA

A. Miserez, Nanyang Technological University, Singapore

R. O'Reilly, University of Birmingham, UK

M. in het Panhuis, University of Wollongong, Australia

A. Pannier, University of Nebraska, USA

J. Park, KAIST, Korea

S. Perrier, University of Warwick, UK

X. Qu, Changchun Institute of Applied

Chemistry, Chinese Academy of Sciences, China

M. Resmini, Queen Mary University of London, UK

K. Schenke-Layland, NMI Natural and Medical Sciences Institute, University of Tübingen, Reutlingen, Germany

C. Schmidt, University of Florida, USA

L. Segatori, Rice University, USA

T. Serizawa, Tokyo Institute of Technology, Japan

Y. Shen, Zhejiang University, China

S. Staniland, University of Sheffield, UK

N. Steinmetz, University of California, San Diego, USA

M. Stenzel, University of New South Wales, Australia

S. Stoll, Georgetown Washington, USA

L. Stugs, University of Texas at Austin, USA

M. Takai, University of Tokyo, Japan

J. Temenoff, Georgia Institute of Technology, USA

P. Théato, Karlsruhe Institute of Technology, Germany

R. Uljin, City University of New York, US

J. Zheng, University of Akron, USA

Information for Authors

Full details on how to submit material for publication in Journal of Materials Chemistry B are given in the Instructions for Authors (available from <http://www.rsc.org/authors>). Submissions should be made via the journal's homepage: rsc.li/materials-b. Submissions: The journal welcomes submissions of manuscripts for publication as Full Papers, Communications, Reviews, Highlights and Applications. Full Papers and Communications should describe original work of high quality and impact which must highlight the novel properties or applications (or potential properties/applications) of the materials studied.

Additional details are available from the Editorial Office or

<http://www.rsc.org/authors>

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of

Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)-Reproduced by permission of the Royal Society of Chemistry.

This journal is © The Royal Society of Chemistry 2023.

Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA.

Registered charity number: 207890

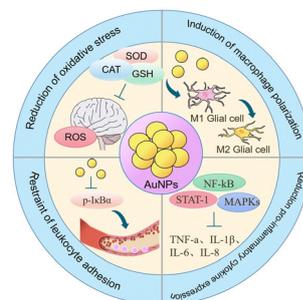


REVIEWS

8605

Anti-inflammatory role of gold nanoparticles in the prevention and treatment of Alzheimer's disease

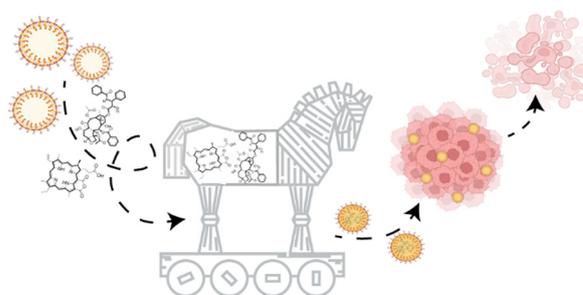
Munire Aili, Keping Zhou, Jun Zhan, Huaping Zheng and Feng Luo*



8622

A Trojan horse approach for efficient drug delivery in photodynamic therapy: focus on taxanes

Vladimíra Svobodová Pavličková, Jan Škubník, Tomáš Ruml and Silvie Rimpelová*

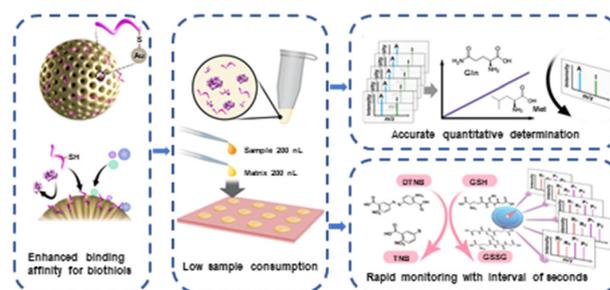


PAPERS

8639

Plasmonic alloys for quantitative determination and reaction monitoring of biothiols

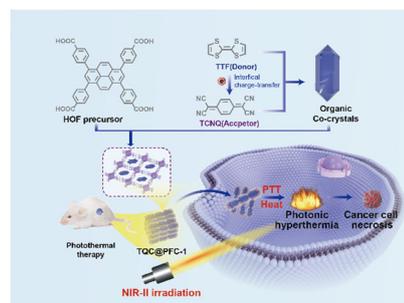
Yan Zhou, Xuelian Li, Yuewei Zhao, Shouzhi Yang and Lin Huang*



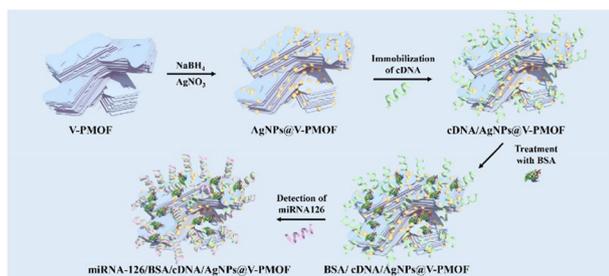
8649

Hydrogen-bonded organic framework-stabilized charge transfer cocrystals for NIR-II photothermal cancer therapy

Jiakang Tang, Leihou Shao, Ji Liu, Qizhen Zheng, Xinyi Song, Lanhua Yi* and Ming Wang*



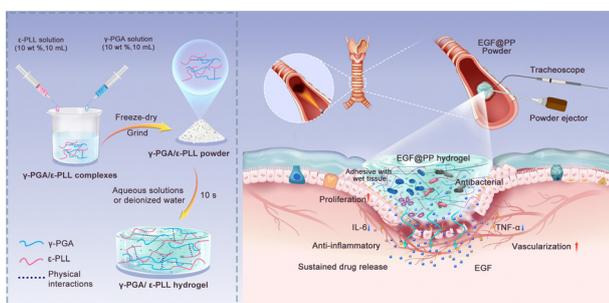
8657



A novel PEC and ECL bifunctional aptasensor based on V_2CT_x MXene-derived MOF embedded with silver nanoparticles for selectively aptasensing miRNA-126

Yu Li, Shuai Zhang, Mengfei Wang, Chuanpan Guo, Zhihong Zhang* and Nan Zhou*

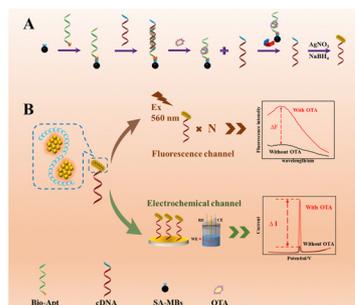
8666



Wet-adhesive γ -PGA/ ϵ -PLL hydrogel loaded with EGF for tracheal epithelial injury repair

Chuang Hu, Haoran Ji, Yan Gong, Xuhui Yang, Yunxuan Jia, Yuanhao Liu, Guangyu Ji,* Xiansong Wang* and Mingsong Wang*

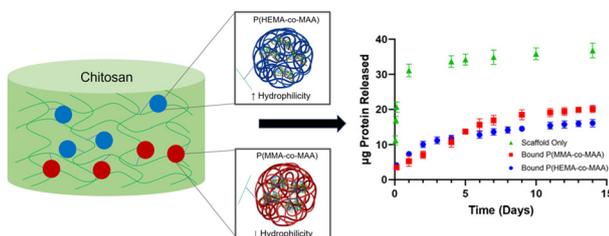
8679



Construction of an electrochemical–fluorescent dual-mode sensor with a dual-mode signal AgNC probe synthesized from cytosine-rich DNA for OTA detection

Zhiguang Suo,* Jiahui Liu, Beibei Feng, Yong Liu, Huali Jin and Min Wei*

8689

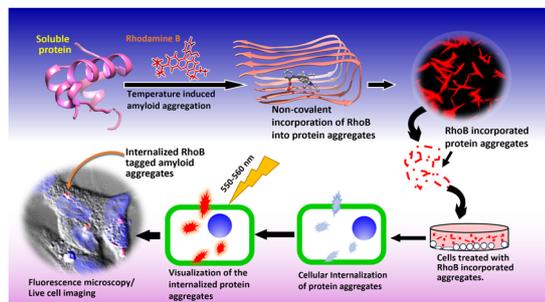


Two-phase matrices for the controlled release of therapeutic proteins

Mariya David, Avha R. Mohanty and Nicholas A. Peppas*



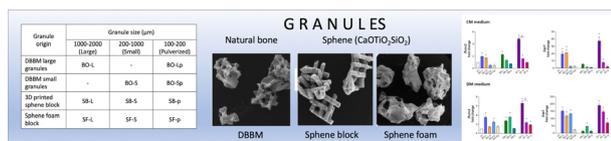
8765



A robust yet simple method to generate fluorescent amyloid nanofibers

Kailash Prasad Prajapati, Masihuzzaman Ansari, Deepak Kumar Yadav, Shikha Mittal, Bibin Gnanadhasan Anand and Karunakar Kar*

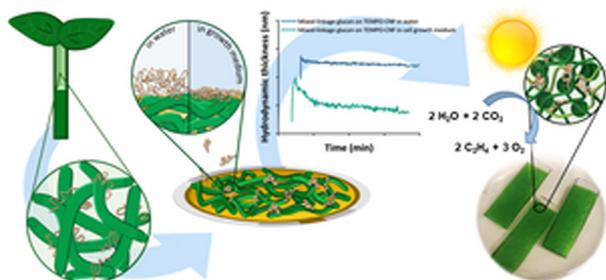
8775



In vitro evaluation of granules obtained from 3D sphene scaffolds and bovine bone grafts: chemical and biological assays

Stefano Sivoella*, Giulia Brunello, Ervin Nika, Denis Badocco, Paolo Pastore, Sara M. Carturan, Enrico Bernardo, Hamada Elsayed, Lisa Biasetto and Paola Brun

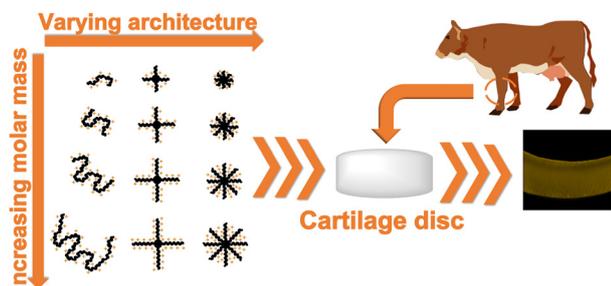
8788



Bioinspired mechanically stable all-polysaccharide based scaffold for photosynthetic production

Tuuli Virkkala, Sergey Kosourov, Ville Rissanen, Vilja Siitonen, Suvi Arola, Yagut Allahverdiyeva* and Tekla Tammelin*

8804



Designing polymers for cartilage uptake: effects of architecture and molar mass

Jue Gong, Jordan Nhan, Jean-Philippe St-Pierre* and Elizabeth R. Gillies*



CORRECTIONS

8817

Correction: Folic acid as a versatile motif to construct molecular hydrogelators through conjugations with hydrophobic therapeutic agents

Xingyi Li, Chengbiao Yang, Zhaoliang Zhang, Zhidan Wu, Yun Deng, Gaolin Liang, Zhimou Yang and Hao Chen*

8818

Correction: A novel PEC and ECL bifunctional aptasensor based on V₂CT_x MXene-derived MOF embedded with silver nanoparticles for selectively aptasensing miRNA-126

Yu Li, Shuai Zhang, Mengfei Wang, Chuanpan Guo, Nan Zhou* and Zhihong Zhang*

EXPRESSION OF CONCERNS

8819

Expression of concern: *In vitro* and *in vivo* evaluation of xanthan gum–succinic anhydride hydrogels for the ionic strength-sensitive release of antibacterial agents

Bailiang Wang,* Yuemei Han, Quankui Lin, Huihua Liu, Chenghui Shen, Kaihui Nan and Hao Chen*

8820

Expression of concern: Bacterial infection microenvironment-responsive enzymatically degradable multilayer films for multifunctional antibacterial properties

Qingqing Yao, Zi Ye, Lin Sun, Yingying Jin, Qingwen Xu, Mei Yang, Yi Wang, Yunlong Zhou, Jian Ji, Hao Chen* and Bailiang Wang*



8821

Expression of concern: Poly(lactide-co-glycolide) grafted hyaluronic acid-based electrospun fibrous hemostatic fragments as a sustainable anti-infection and immunoregulation material

Wen Liu, Guanghui Xi, Xiao Yang, Xiao Hao, Mingshan Wang, Yakai Feng,* Hao Chen* and Changcan Shi*

