

# Journal of Materials Chemistry B

Materials for biology and medicine

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### Cover

See Pawet Misiak, Anna Ignaczak, Agnieszka Z. Wilczewska *et al.*, pp. 7063–7075. Image reproduced by permission of Agnieszka Zofia Wilczewska from *J. Mater. Chem. B*, 2024, 12, 7063.



### Inside cover

See Antonio Guerra-Contreras *et al.*, pp. 7076–7089. Image reproduced by permission of Abygail Camacho Ramirez and Antonio Guerra-Contreras from *J. Mater. Chem. B*, 2024, 12, 7076.

## EDITORIAL

6993

### Introduction to stimuli responsive materials for biomedical applications

Mary Beth B. Monroe,\* N. D. Pradeep Singh\* and Yanli Zhao\*

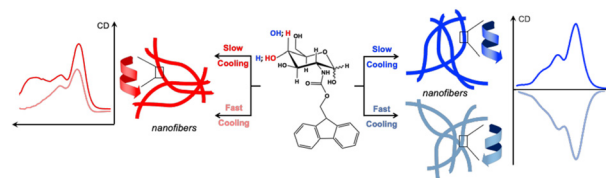


## COMMUNICATION

6996

### Cooling rate uncovers epimer-dependent supramolecular organization of carbohydrate amphiphiles

Vânia I. B. Castro, Yuting Gao, Alexandra Brito, Jie Chen, Rui L. Reis, Iva Pashkuleva\* and Ricardo A. Pires\*



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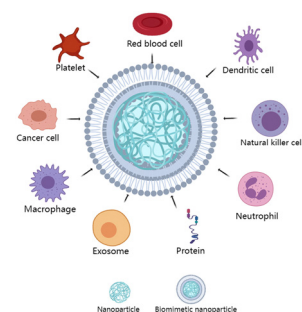


## REVIEWS

7001

## Advances in biomimetic nanomaterial delivery systems: harnessing nature's inspiration for targeted drug delivery

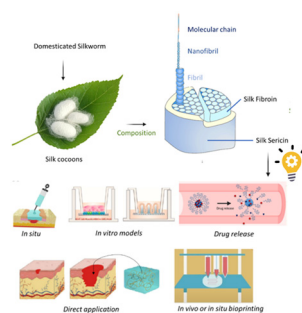
Wei qi Kang, Zhe Xu, Haiying Lu, Siwei Liu, Jianshu Li, Chunmei Ding\* and Yongping Lu\*



7020

## Expanding the boundaries of silk sericin biomaterials in biomedical applications

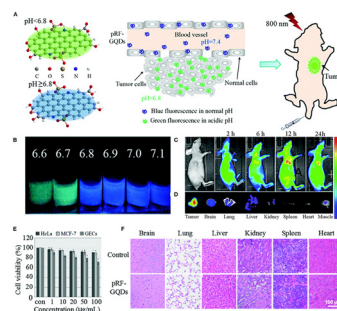
Anabela Veiga, Olivia Foster, David L. Kaplan and Ana Leite Oliveira\*



7041

## Recent breakthroughs in graphene quantum dot-enhanced sonodynamic and photodynamic therapy

Seyyed Mojtaba Mousavi, Masoomeh Yari Kalashgrani, Negar Javanmardi, Mohsen Riazi, Muhammad Hussnain Akmal, Vahid Rahmanian, Ahmad Gholami\* and Wei-Hung Chiang\*

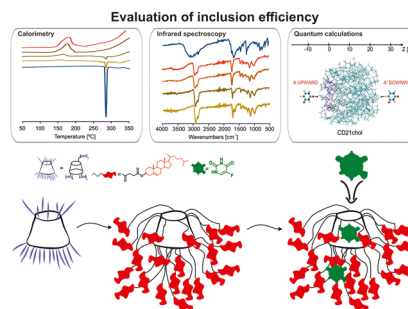


## PAPERS

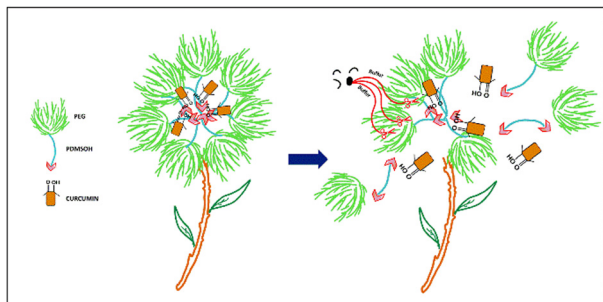
7063

## Encapsulation of 5-fluorouracil in cholesteryl-modified cyclodextrin: thermal, spectral, and computational assessment of drug inclusion efficiency

Paweł Misiak,\* Bartosz Maliszewski, Zuzanna Pawłowska, Anna Ignaczak\* and Agnieszka Z. Wilczewska\*



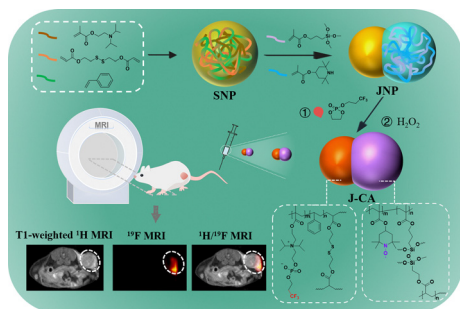
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### One-step synthesis of amphiphilic copolymers PDMS-*b*-PEG using tris(pentafluorophenyl)borane and subsequent study of encapsulation and release of curcumin

Abygail Camacho-Ramírez, Miguel Meléndez-Zamudio, Jorge Cervantes, Gabriela Palestino and Antonio Guerra-Contreras\*

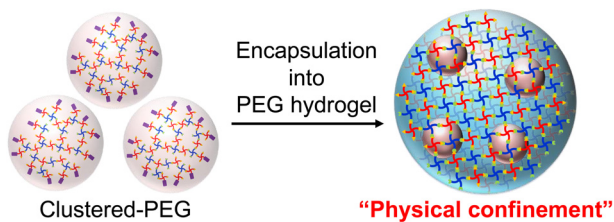
7090



### A polymeric $^1\text{H}/^{19}\text{F}$ dual-modal MRI contrast agent with a snowman-like Janus nanostructure

Ziwei Duan, Jialei Han, Yadong Liu, Xinyu Zhao, Bo Wang, Shuaishuai Cao\* and Dalin Wu\*

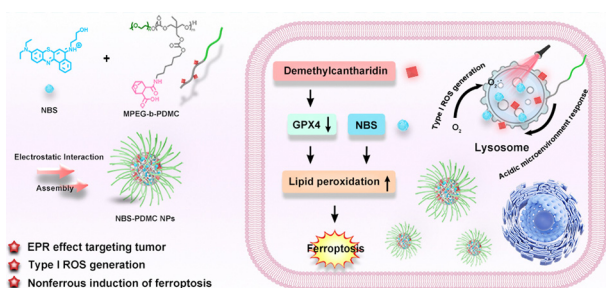
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### Enhancing cell adhesion in synthetic hydrogels via physical confinement of peptide-functionalized polymer clusters

Shohei Ishikawa,\* Hiroyuki Kamata\* and Takamasa Sakai

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### Charge-reversal polymeric nanomodulators for ferroptosis-enhanced photodynamic therapy

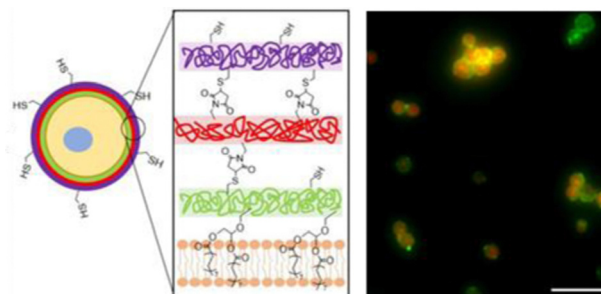
Xuelong Yang, Maomao He,\* Yinghua Li, Tian Qiu, Jiexuan Zuo, Yixiao Jin, Jiangli Fan, Wen Sun\* and Xiaojun Peng



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### Conformal encapsulation of mammalian stem cells using modified hyaluronic acid

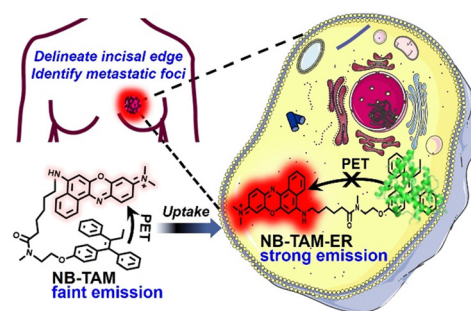
Jack Whitewolf and Christopher B. Highley\*



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### Clearly fluorescent delineating ER+ breast tumor incisal edge and identifying tiny metastatic tumor foci at high resolution

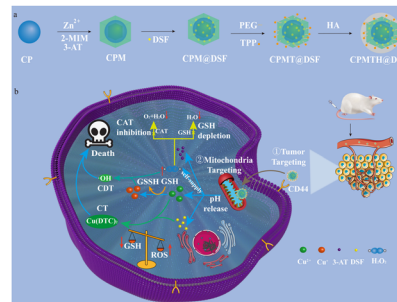
Changle Li, Changyu Zhang,\* Wenkai Liu, Jia Liu, Wanying Ma, Chengyuan Lv, Zhuoran Xia, Yingchao Chen, Hua Gu, Wen Sun, Jianjun Du, Jiangli Fan\* and Xiaojun Peng



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### Engineering of a double targeting nanoplatform to elevate ROS generation and DSF anticancer activity

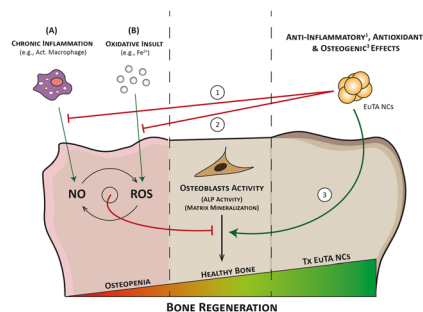
Wenqiu Li, Haowu Huang, Shunyu Yao, Yiwang Zhao, Mingxing Liu, Xiaoqing Liu and Huiling Guo\*



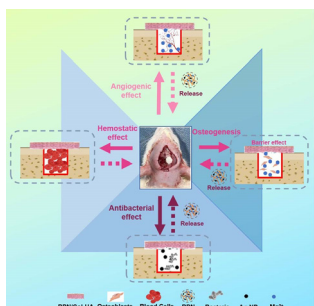
7153

### Europium–tannic acid nanocomplexes devised for bone regeneration under oxidative or inflammatory environments

Daniel Fernández-Villa, María Rosa Aguilar and Luis Rojo\*



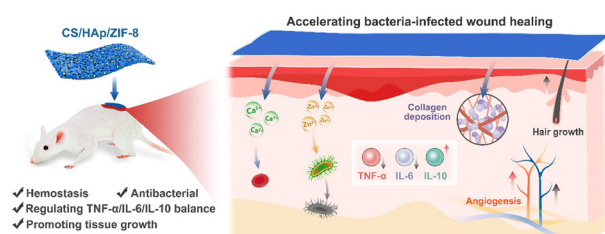
7171



### A multifunctional collagen-base bilayer membrane integrated with a bimetallic/polydopamine network for enhanced guided bone regeneration

Dou Huang, Die Yang, Kaide Li, Jiran Wang, Xiaohui Zheng, Jie Long and Lei Liu\*

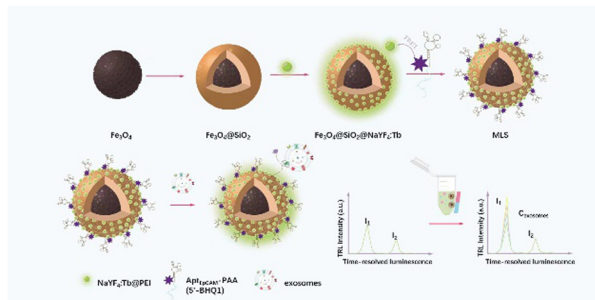
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### A multifunctional chitosan based porous membrane for pH-responsive antibacterial activity and promotion of infected wound healing

Shan Pu, Jiale Zhang, Chaoting Shi, Xiandeng Hou, Ka Li, Jinhua Feng\* and Lan Wu\*

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### Magnetic lanthanide sensor with self-ratiometric time-resolved luminescence for accurate detection of epithelial cancerous exosomes

Yating Zeng, Xuekang Wang, Nanhang Zhu, Yue Yu, Xingyou Wang, Ke Kang, Yao Wu and Qiangying Yi\*

