

# Journal of Materials Chemistry B

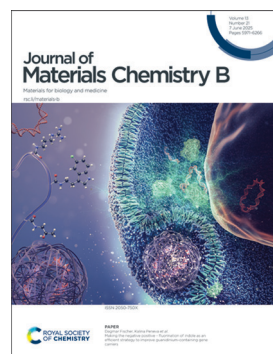
Materials for biology and medicine

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## IN THIS ISSUE

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### Cover

See Dagmar Fischer, Kalina Peneva *et al.*, pp. 6066–6076. Image reproduced by permission of Kalina Peneva from *J. Mater. Chem. B*, 2025, 13, 6066.



### Inside cover

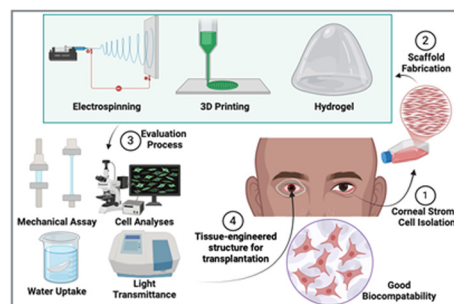
See Wendy Ortega-Lara, Narsimha Mamidi *et al.*, pp. 5980–6020. Image reproduced by permission of Wendy Ortega-Lara, Narsimha Mamidi, Amin Orash Mahmoud from *J. Mater. Chem. B*, 2025, 13, 5980.

## REVIEWS

5980

### Advanced 3D scaffolds for corneal stroma regeneration: a preclinical progress

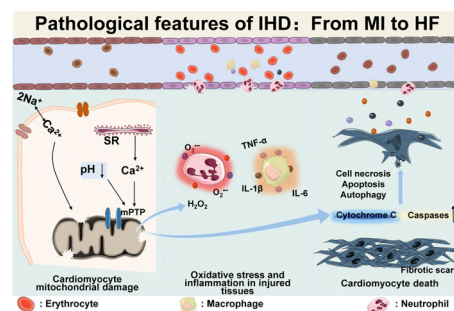
Amin Orash Mahmoudsalehi, Maryam Soleimani, Kevin Stalin Catzim Rios, Wendy Ortega-Lara\* and Narsimha Mamidi\*



6021

### Progress of nanomaterials in the treatment of ischemic heart disease

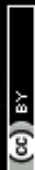
Nan Li, Yu Chen, Xue Xia, Chun Mao\* and Mimi Wan\*



# RSC Applied Polymers

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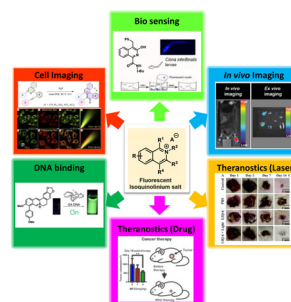
Fundamental questions  
Elemental answers

## REVIEWS

6044

## Synthesis of versatile fluorescent isoquinolinium salts and their applications

Ye Ri Han\* and Sang Bong Lee\*

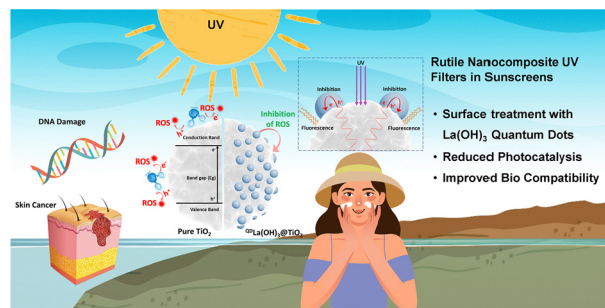


## COMMUNICATION

6061

## The inhibition of photocatalytic activity of rutile nanoparticles *via* surface encrustation with La(OH)<sub>3</sub> quantum dots

Nuwangi P. Cooray, Rajib Chandra Das, Philip J. Barker, Michael Lerch, Jung Ho Kim and Konstantin Konstantinov\*

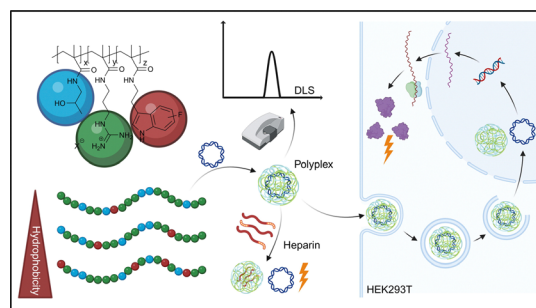


## PAPERS

6066

## Making the negative positive – fluorination of indole as an efficient strategy to improve guanidinium-containing gene carriers

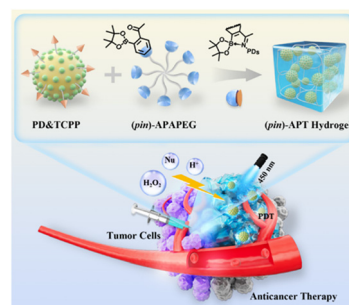
Markus Kötzsche, Jan Egger, Andreas Dzierza, Liën Sabrina Reichel, Ivo Nischang, Anja Traeger, Dagmar Fischer\* and Kalina Peneva\*



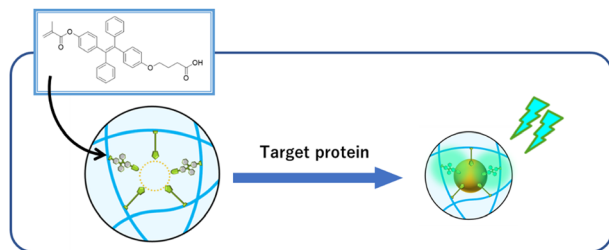
6077

## Smart polydopamine nanodot-knotted hydrogels for photodynamic tumor therapy

Zhan Li, Bo Liang, Jianhua Zhang, Tianyou Wang, Pengyu Liu, Zhipeng Gu, Lei Yang, Wei Zhang, Yiwen Li\* and Zhen Yang\*



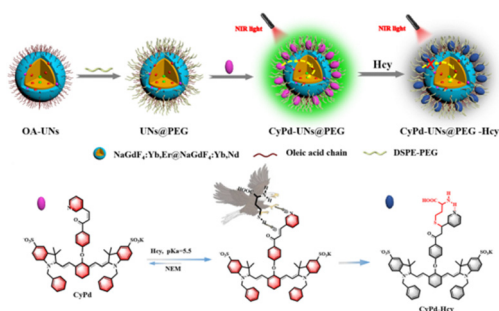
6086



### Selective fluorescence detection of proteins using molecularly imprinted hydrogels with aggregation-induced emission

Kankichi Kako, Eisuke Kanao, Yasushi Ishihama, Sayaka K.-Yamada and Takuya Kubo\*

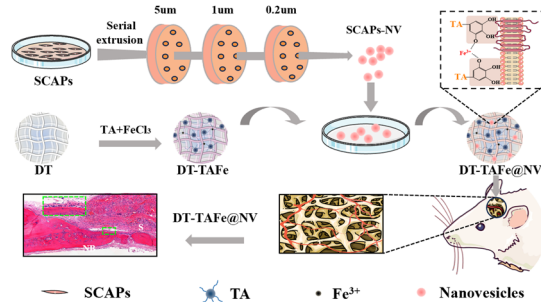
6093



### Dye-sensitized lanthanide-doped upconversion nanoprobe for homocysteine sensing in human serum and living cells via a spatial optimization strategy

Zi-Hang Zhang, Zuo-Qin Liang,\* Su-Hang Xu, Pu Wang, Guo-Liang Dai, Chang-Qing Ye and Dong-Mei Wang

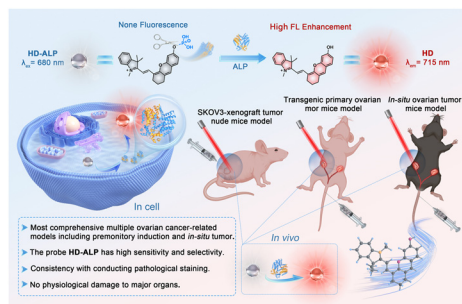
6101



### Metal-phenolic network coatings delivering stem cells from apical papilla derived nanovesicles for bone defect regeneration

Jiuzhi Ma, Qi Feng, Zhipeng Sun, Manru Wang, Qiyuan Dai, Yue Huang,\* Xiaodong Cao\* and Qingtao Li\*

6117



### HD-ALP fluorescent probe: a high-sensitivity tool for alkaline phosphatase imaging and preclinical diagnosis in three ovarian cancer models

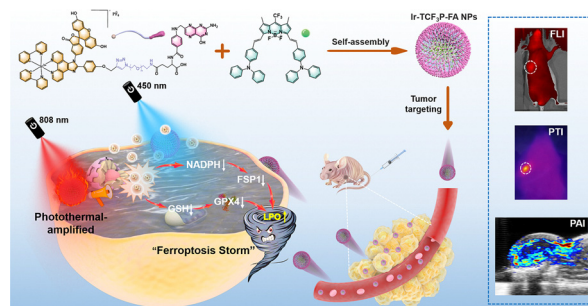
Yingxian Shi, Ruirui Dong, Huan Huang, Gaoying Wang, Jianyi Gao, Kai Wang\* and Ting Zhang\*



6128

## A cascaded amplification carrier-free nanoplatform for synergistic photothermal/ferroptosis therapy via dual antioxidant pathway disruption in cervical cancer

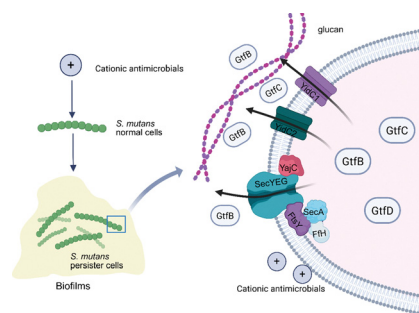
Dihai Gu, Xiao Liang,\* Zitong Shao, Haonan He, Lin Zhu, Shali Qiu,\* Zhen Liu, Senlin Wang, Haijiao Chen, Shusheng Ci, Hongshuai Wu\* and Yihong Wang\*



6144

## The Sec secretion system enhances GtfB secretion and exopolysaccharide production to promote the formation of *Streptococcus mutans* persisters induced by cationic antimicrobials

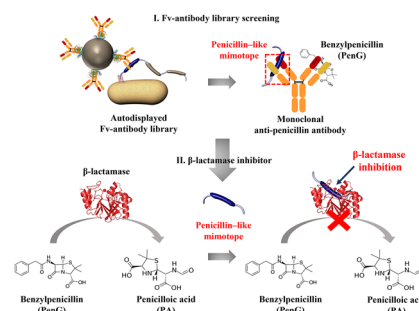
Yuyao Huang, Yawen Zong, Yaling Jiang, Junzhuo Lu, Ge Yang, Hao Li, Zheng Wang, Yuan Zhou, Ga Liao, Lei Cheng\* and Biao Ren\*



6154

## Penicillin-like mimotopes from autodisplayed Fv-antibody library inhibiting $\beta$ -lactamase activity

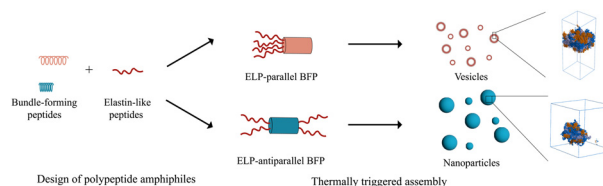
Hyung Eun Bae, Jaeyong Jung, Jeong Soo Sung, Soonil Kwon, Min-Jung Kang, Joachim Jose and Jae-Chul Pyun\*



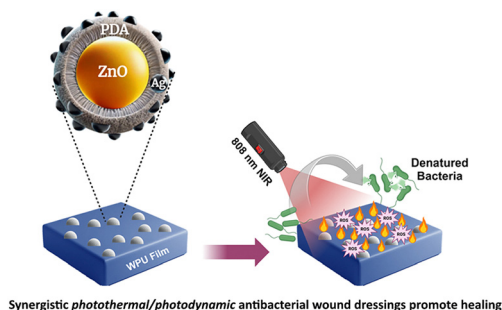
6164

## Architectural control of rod-coil block polypeptide thermoresponsive self-assembly via *de novo* design of coiled-coil orientation

Bin Wang, Weiran Xie, Tianren Zhang, Darrin J. Pochan, Jeffery G. Saven and Kristi L. Kiick\*



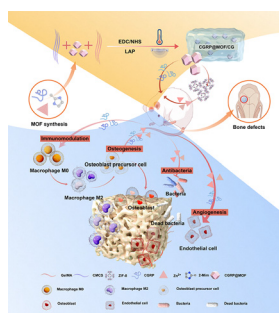
6177



### Synergistic photothermal and photodynamic therapy to promote bacteria-infected wound healing using ZnO@PDA/Ag-integrated waterborne polyurethane films

Negar Salehi, Abbas Mohammadi,\* Vajihe Alinezhad, Shayesteh Bochani, Ali Kalantari-Hesari, Fakhri Haghi, Francisco Javier Sierra Valdez, Tomás Jafed Buenfil-Chi, Aziz Maleki\* and Saeed Beigi-Boroujeni\*

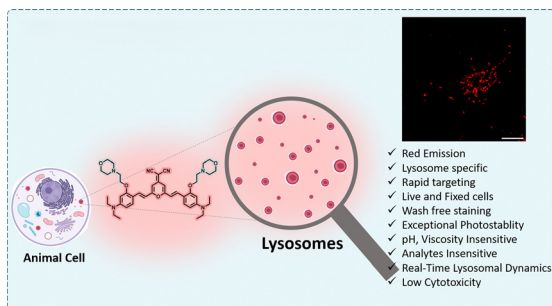
6199



### Angiogenesis–osteogenesis coupling and immunomodulatory CGRP@nano MOF-loaded CMCS/GelMA hydrogel for bone regeneration

Rong Luo, Zhao Chen, Man Zhe, Wenting Wu, Yuzhen Xiao, Jiabao Jiang, Hao Liu, Ming Liu and Fei Xing\*

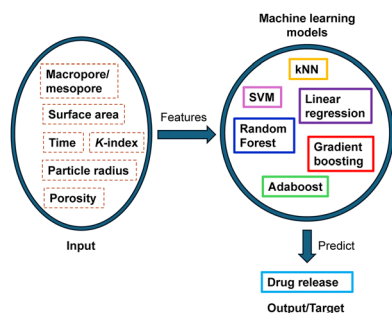
6219



### A red-emitting, microenvironment-insensitive fluorophore for lysosome-specific imaging in live cells

Shabnam Mansuri, Subhadra Ojha and Sriram Kanvah\*

6233



### Machine learning predictions of drug release from isocyanate-derived aerogels

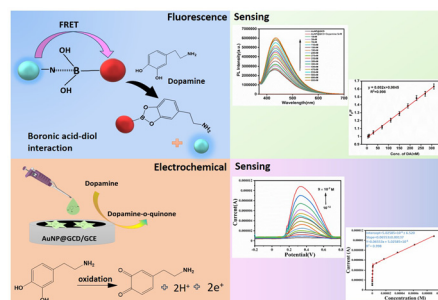
Stephen Yaw Owusu,\* Mark Amo-Boateng and Rushi U. Soni



6246

## Hybrid AuNP@GCD nanosensor for dual-mode dopamine detection and imaging in the *Drosophila* brain

Lingaraj Behera, Lopamudra Mishra, Monalisa Mishra and Sasmita Mohapatra\*



6256

## Modulating the anti-cancer photodynamic efficiency of molybdenum-iodide nanoclusters via ligand design

Tomáš Příbyl,\* Karel Škoch, Dmytro Bovol, Ivana Křížová, Jaroslav Zelenka, Tomáš Ruml, Kamil Lang and Kaplan Kirakci\*

