

Journal of Materials Chemistry B

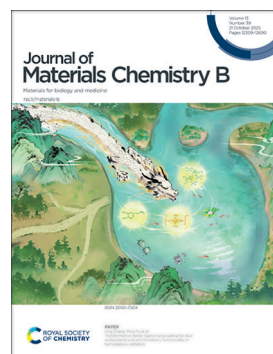
Materials for biology and medicine

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See Ling Zhang, Ping Fu *et al.*, pp. 12435–12447. Image reproduced by permission of Ling Zhang from *J. Mater. Chem. B*, 2025, 13, 12435.



Inside cover

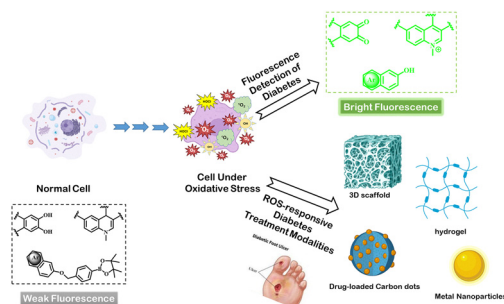
See Moumita Gangopadhyay *et al.*, pp. 12320–12348. Image reproduced by permission of Dr. Moumita Gangopadhyay from *J. Mater. Chem. B*, 2025, 13, 12320.

REVIEWS

12320

Application of nanomaterial-based fluorescent probes for diabetes detection and care triggered by reactive oxygen species

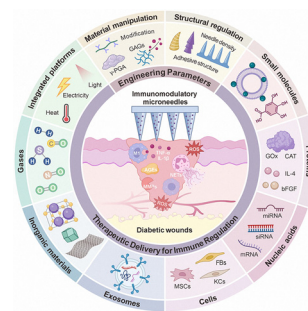
M. M. Sreejaya, Vaishnavi Mekkeparambath, Parvathi S. Pillai, Lina Anil Kumar, Kalyani P. M., Gauri V., Aswin Nair, Manoranjan Bera and Moumita Gangopadhyay*



12349

Advances in immunomodulatory microneedles for diabetic wound healing

Yixuan Han, Shengjie Ge, Hejiao Yin, Dazhong Han and Shenqiang Wang*



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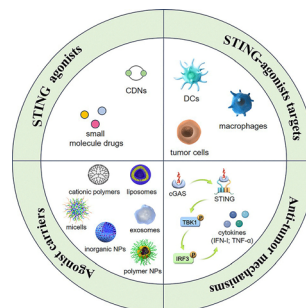
**Fundamental questions
Elemental answers**

REVIEWS

12382

Nanocarrier-enabled STING agonist delivery for enhanced cancer immunotherapy

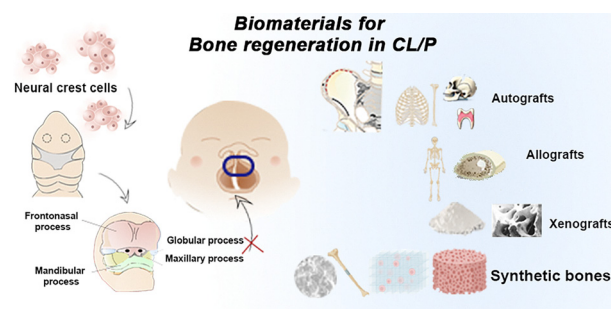
Yuxiang Wu and Qi Liu*



12402

Comprehensive overview of biomaterials for bone regeneration in cleft lip and palate

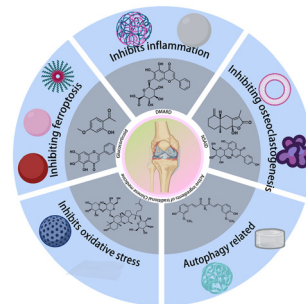
Zemin Hou, Yuyi Wang, Cong Feng, Chuyao Xu, Chenghao Li, Zhengyong Li,* Xiangfeng Li,* Xiangdong Zhu and Xingdong Zhang



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Recent advances in natural product-based drug delivery systems for the treatment of osteoarthritis

Xiaoguang Xu, Yuhang Deng, Yong Zheng, Yu Zheng* and Weiwei He

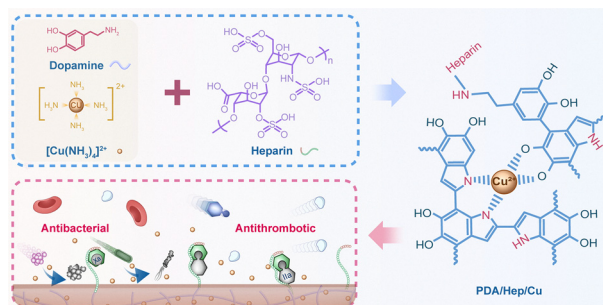


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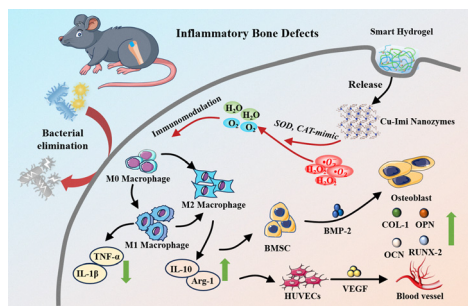
12435

Transformative metal–ligand nanocoating for dual antibacterial and antithrombotic functionality in hemodialysis catheters

Chen Liu, Zhi-Feng Zhou, Mao-Xia Ran, Yang Yang, Yu Chen, Ling Zhang* and Ping Fu*



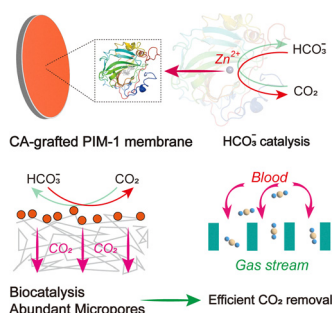
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Ligand-dependent activity engineering of Cu-MOFs based on biomimetic strategies for nanozyme-decorated smart hydrogels for therapy of inflammatory bone defects

Shaoxiong Feng, Xu Peng, Xu Wei, Yiqing Deng, Xinyun Pu, Xi Gao and Xixun Yu*

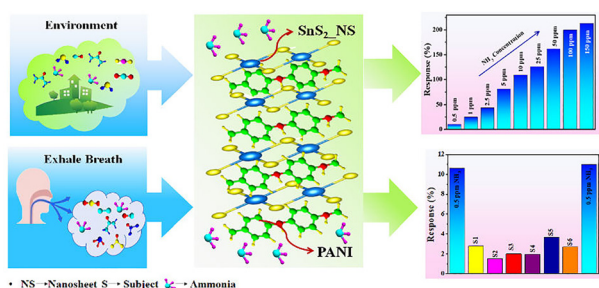
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Polymers of intrinsic microporosity (PIMs) with immobilized carbonic anhydrase (CA) for extracorporeal membrane oxygenation

Xingci Liu, Lunhao Zhi, Chong Cheng, Shudong Sun* and Changsheng Zhao*

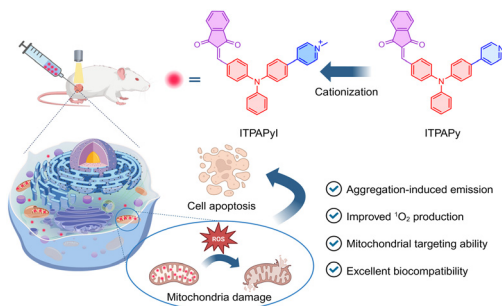
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Room-temp trace ammonia detection using SnS₂ nanosheets@PANI composite: a step towards ultrasensitive environment monitoring and non-invasive renal disease diagnosis

Monalisa Adhikari, Dipankar Chattopadhyay, Debdulal Saha* and Mrinal Pal*

12493



A cationization strategy to simultaneously enhance reactive oxygen species generation and mitochondria targeting ability for enhanced photodynamic therapy

Yankai Huang, Chao Ji, Ben Zhong Tang and Guangxue Feng*

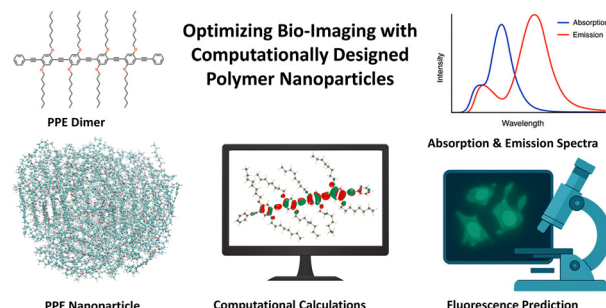


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12502

Optimizing bio-imaging with computationally designed polymer nanoparticles

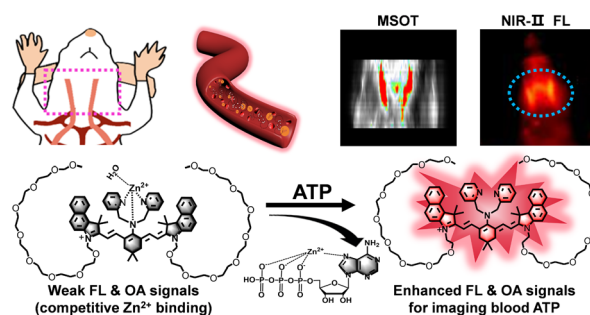
Anupom Roy and Conrard Giresse Tetsassi Feugmo*



12516

A water-soluble NIR-II fluorescent probe for non-invasive real-time detection of blood ATP via optoacoustic and fluorescence imaging

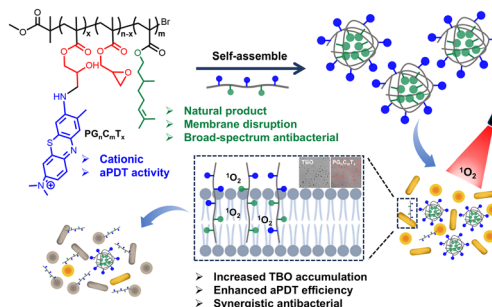
Yonghe Zhang, Fang Zeng* and Shuizhu Wu*



12523

Light-activated antimicrobial polymers with citronellol-enhanced bacterial accumulation for on-demand disinfection

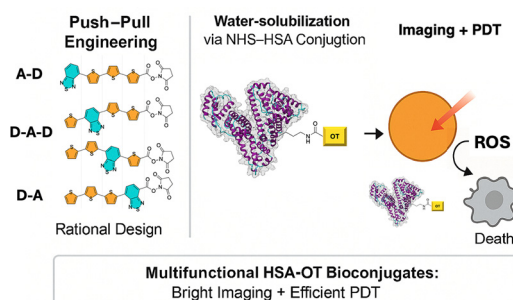
Jiahao Ling, Chuming Pang, Yingxin Tan and Liangzhi Hong*



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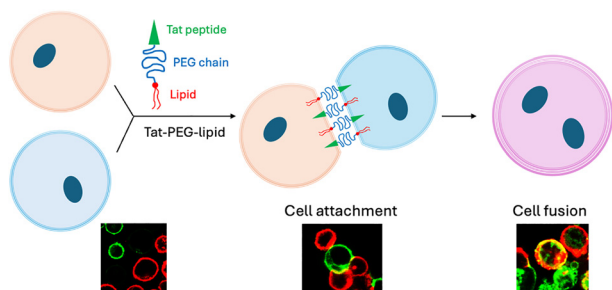
Oligothiophene-based photosensitizers with tunable push–pull architectures: design, synthesis and characterization

Soraia Flammini, Manuele Di Sante, Paolo Emidio Costantini, Edoardo Jun Mattioli, Alessia Marconi, Eleonora Turrini, Silvia la Rosa, Maria Montrone, Tainah Dorina Marforio, Michela Nigro, Nicol Spallacci, Alberto Zanelli, Mattia Zangoli, Alberto Danielli, Matteo Di Giosia,* Francesca Di Maria* and Matteo Calvaresi*



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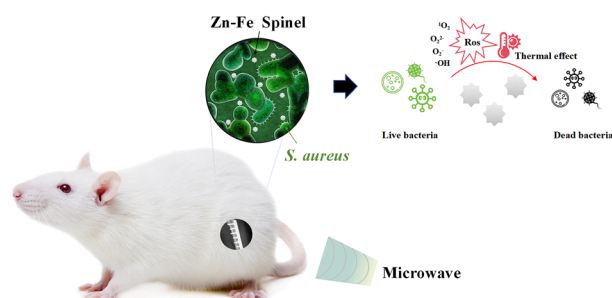
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Induction of intercellular interaction and cell fusion by cell-penetrating peptide-conjugated lipids

Yuya Sato, Ung-il Chung and Yuji Teramura*

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Oxygen vacancy-enhanced microwave catalysis of Zn-Fe spinel for implant-related infections

Jiale Zhang, Pengtao Chen, Jinlong Hu, Shuqing Wu, Yue Lin, Yao Lu, Junyu Xia, Jingcheng Wang,* Jie Li* and Yuan Liang*

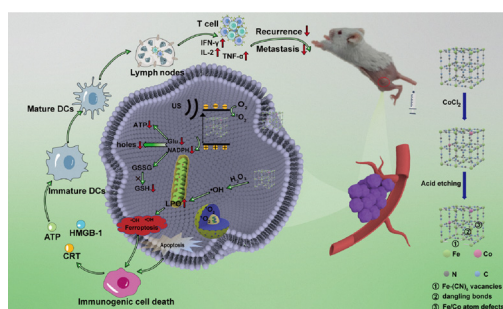
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Tailoring butane-1,2,3,4-tetraol-based maltosides (BTMs) via group-swapping and detergent unsymmetry: new detergent design strategies for membrane protein studies

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12579



Defect engineering in cobalt-doped prussian blue to enhance sonocatalytic activities for anticancer treatment

Jisen Guan, Rongrong Mu, Yajie Ma* and Huiming Lin*

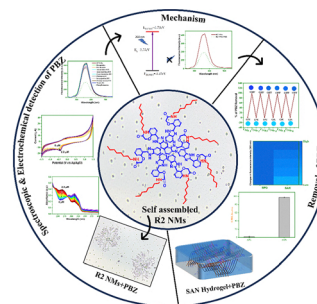


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A target responsive benzimidazole-based self-assembled micellar system embedded smart hydrogel: an integrated approach for quantification and removal of phenylbutazone

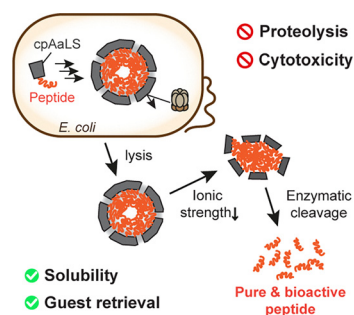
Radhika Sharma, Sanchit Kalra, Divya, Navneet Kaur* and Narinder Singh*



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Encapsidic production and isolation of degradation-prone polypeptides

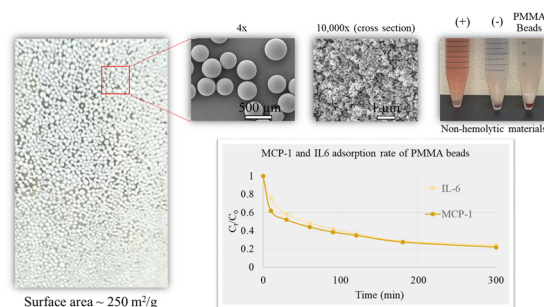
Agnieszka Gawin, Jędrzej Pankowski, Maria Zarechyńska, Dominika Kwasna, Damian Kłoska, Lukasz Koziej, Sebastian Glatt, Neli Kachamakova-Trojanowska and Yusuke Azuma*



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Hemoperfusion adsorbents from porous PMMA microspheres: synthesis approaches and their cytokine removal efficiency

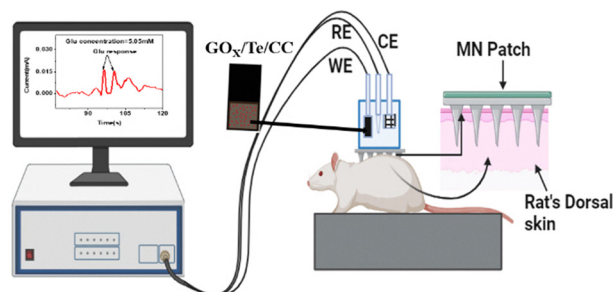
Apakorn Phasuk, Nuchanon Putthabucha, Thunnalin Winuprasith, Nattachai Srisawat and Piyachai Khomein*



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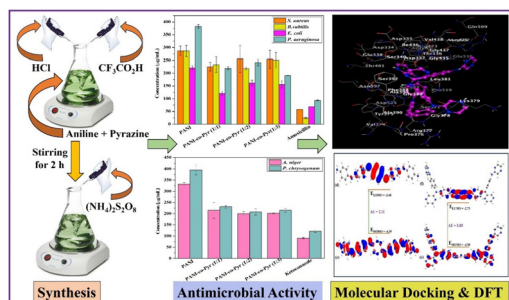
Microneedle-assisted interstitial fluid extraction combined with a 2D tellurene-based glucose sensor for personal diabetes management

Isha Basumatary, Shreya Shashank Chauhan, Venkata Vamsi Krishna Venuganti and Parikshit Sahatiya*



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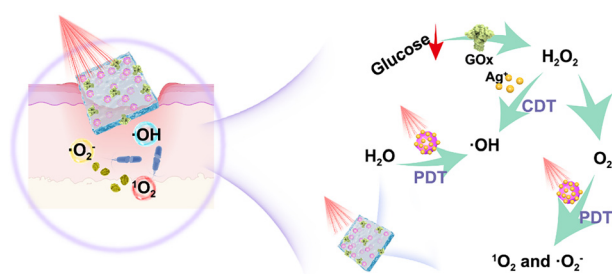
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Impact of pyrazine doping on the electrical conductance and antimicrobial behaviour of novel one-pot synthesized polyaniline-co-pyrazine: DFT and molecular docking

Chetna Kumari, Gulshan Kumar, Sapana Jadoun and Nirmala Kumari Jangid*

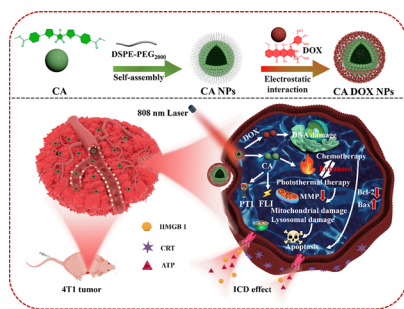
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Glucose microenvironment-primed nanocatalytic membranes for rapid bacterial eradication and infected diabetic wound regeneration

Qi Liu, Lu Xie, Wenxuan He, Yuan Gao, Yi Deng, Chao Wu* and Song Wang*

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NIR nanoadjuvant-mediated synergistic chemo/photothermal therapy with self-amplified immunogenic cell death to augment antitumor efficiency

Guangyong Geng, Gege Zhang, Mi Zou, Qiong Huang, Yajie Sui, Shuang Wu, Yanling Zhang, Yi Zheng, Tao Guo* and Pingping Liang*

CORRECTIONS

12682

Correction and Removal of 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*



CORRECTIONS

12684

Correction: Titanium dioxide/graphene oxide blending into polyethersulfone hollow fiber membranes improves biocompatibility and middle molecular weight separation for bioartificial kidney and hemodialysis applications

Nidhi Pandey and Jayesh Bellare*

