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**Fundamental questions
Elemental answers**

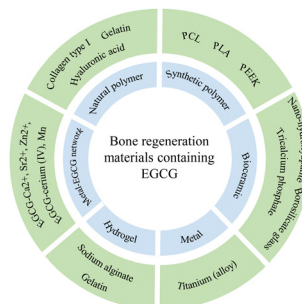


REVIEWS

9835

The recent progress of bone regeneration materials containing EGCG

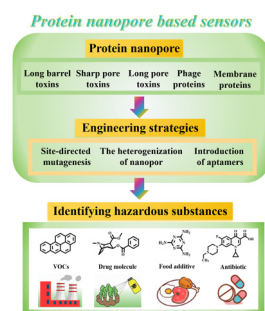
Yaoye Zhao, Guoding Cao, Zixin Wang, Desheng Liu, Liling Ren* and Dongyang Ma*



9845

Protein nanopore-based sensors for public health analyte detection

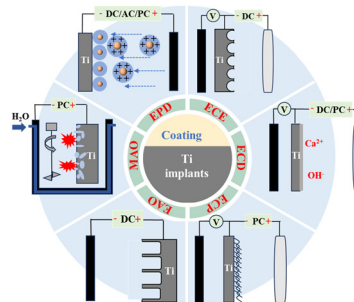
Yanhua Zhang, Chan Hu, Ronghui Liu,* Shujun He, Jie Yang, Wen Yao, Yi Li* and Xinrong Guo*



9863

Recent development and applications of electrodeposition biocoatings on medical titanium for bone repair

Jialong Yi, Ming Li, Jixiang Zhu, ZuHang Wang and Xiaoyan Li*

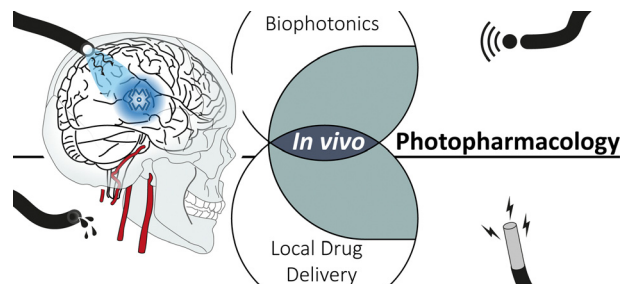


PERSPECTIVE

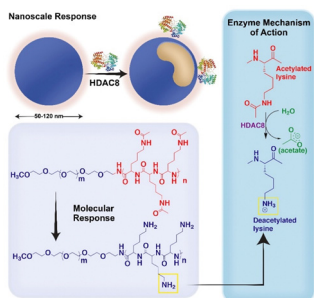
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In vivo photopharmacological inhibition of hippocampal activity via multimodal probes – perspective and opening steps on experimental and computational challenges

Johannes Gurke,* Alejandro Carnicer-Lombarte, Tobias E. Naegel, Anders K. Hansen and George G. Malliaras



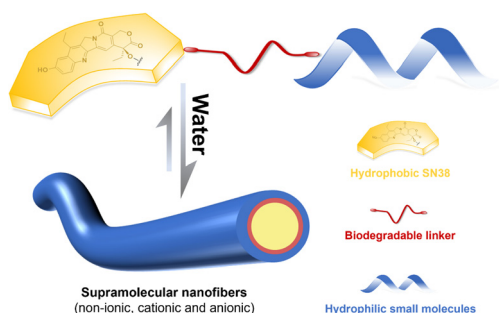
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Design and evaluation of nanoscale materials with programmed responsivity towards epigenetic enzymes

Priyanka Ray, Abbas Sedigh, Matthew Confeld, Lina Alhathooly, Kweeni Iduoku, Gerardo M. Casanola-Martin, Hai Pham-The, Bakhtiyor Rasulev, Yongki Choi, Zhongyu Yang, Sanku Mallik and Mohiuddin Quadir*

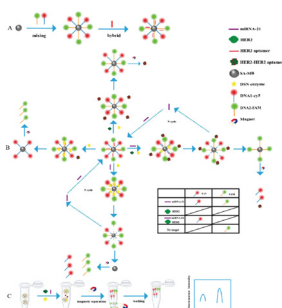
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Spontaneous assembly of a class of small molecule prodrugs directed by SN38

Zhenhai Tang, Wenning Lan, Kaiying Wen, Wenting Li, Tao Wang,* Dongdong Zhou* and Hao Su*

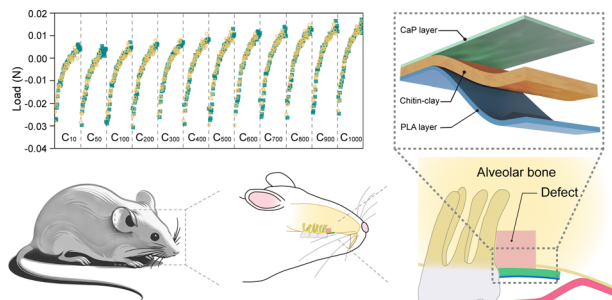
9930



Simultaneous detection of breast cancer biomarkers HER2 and miRNA-21 based on duplex-specific nuclease signal amplification

Miao He, Zhiqiang Hou, Feifan Yin, Wenting Cheng, Yang Xiang* and Zhongyun Wang*

9938



Bioinspired triple-layered membranes for periodontal guided bone regeneration applications

Yang Yang, Deng-Cheng Yang, Xian-Yan Long, Xiang Liu, Jing-Wen Lu, Zhou-Jing Zhang, Qian-Qian Shi, Yong Zhou* and Duo-Hong Zou*

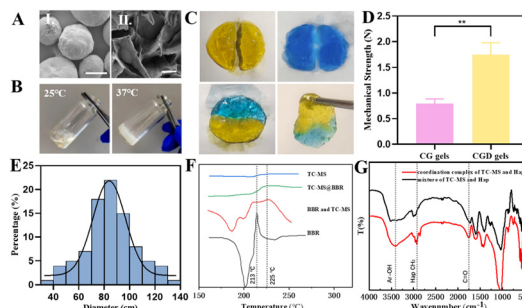


PAPERS

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Dental cementum anchored microspheres embedded in a self-healing hydrogel for the antibacterial, anti-inflammation, osteogenic, and anti-osteoclastic management of periodontitis disease

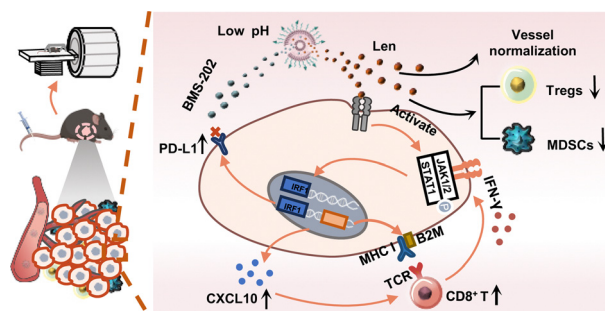
Li Mi, Jiachen Li, Adric Ru Khiing Hii, Zhenhao Zuo, Ya Tang, Wei Zhou,* Zhenghong Wu* and Xiaole Qi*



9963

iRGD-mediated liposomal nanoplateforms for improving hepatocellular carcinoma targeted combination immunotherapy and monitoring tumor response via IVIM-MRI

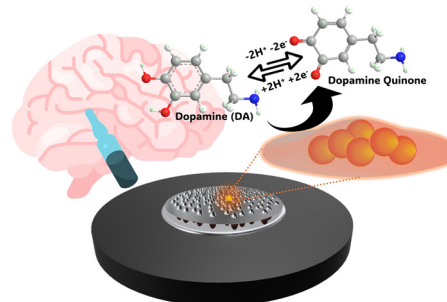
Jiamin Li, Ruili Wei, Wang Yao, Xinrui Pang, Nianhua Wang, Shengsheng Lai, Xinhua Wei, Youyong Yuan,* Xinqing Jiang* and Ruimeng Yang*



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Facile stoichiometric interfacial surface bonded cerium oxide and graphene oxide heterostructure for efficient electrochemical non-enzymatic detection of dopamine

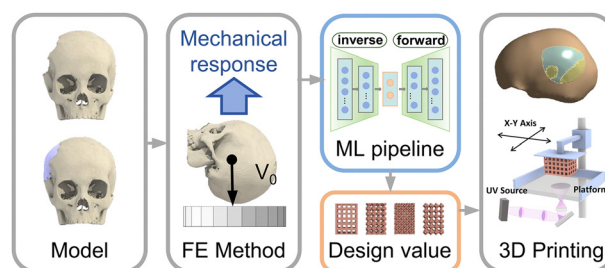
Hemarani Annadurai, Renganathan Vengudusamy, Shen-Ming Chen* and C. R. Kao*



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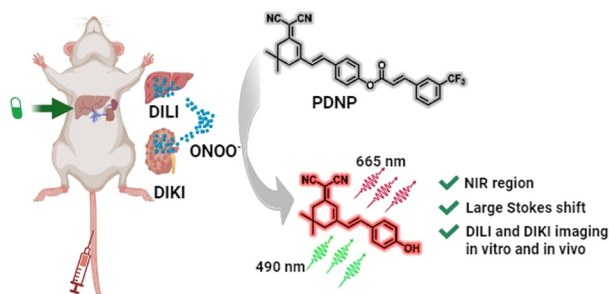
Inverse design of skull osteoinductive implants with multi-level pore structures through machine learning

Jixin Zhang, Yan Zhuang, Cong Feng, Xiangfeng Li,* Ke Chen,* Lin Han, Yilei Wang, Xiangdong Zhu, Mingli Yang, Guangfu Yin, Jiangli Lin* and Xingdong Zhang



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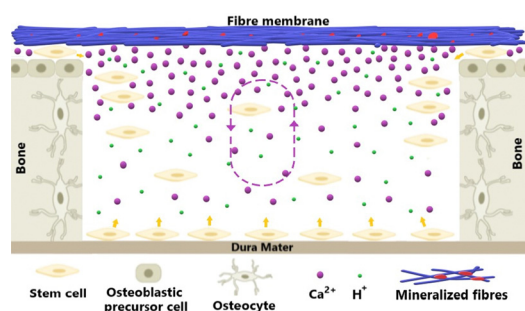
10004



Imaging of ONOO^- fluctuations during drug-induced liver/kidney injury *in vitro* and *in vivo* via a dicyanoisophorone-based NIR fluorescent probe with a large Stokes shift

Fei Kong, Hengqing Liu, Jie Huang and Jingcan Qin*

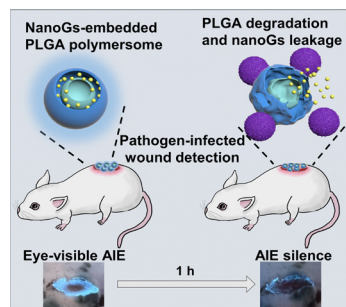
10012



Simulation of the bone remodelling microenvironment by calcium compound-loaded hydrogel fibrous membranes for *in situ* bone regeneration

Yanmei Wu, Zhen Wu, Zhe Li and Youliang Hong*

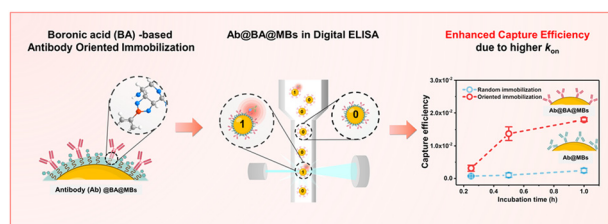
10028



Aggregation-induced emission silence-mediated pathogen detection using a rapidly degradable nanographene-embedded polymersome

Chia-Yi Cheng, Eldhose V. Varghese, Wen-Jyun Wang, Chia-Yu Yao, Chia-Hsiang Chen* and Wei-Peng Li*

10041



Revolutionizing the capture efficiency of ultrasensitive digital ELISA via an antibody oriented-immobilization strategy

Yutong Zhang, Xiaojun Kuang, Jingwei Yi, Tong Sun, Qingsheng Guo, Hongchen Gu and Hong Xu*

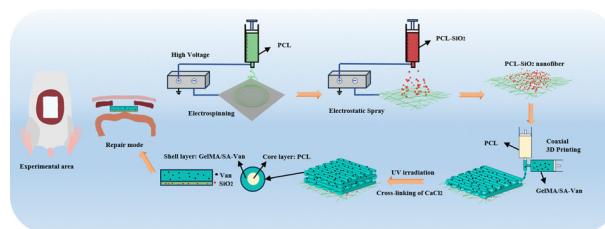


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3D printing/electrospinning of a bilayered composite patch with antibacterial and antiadhesive properties for repairing abdominal wall defects

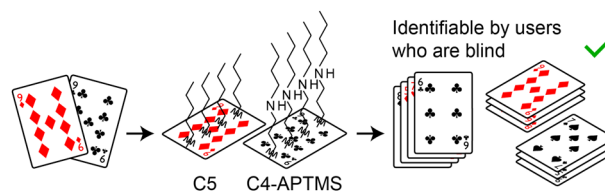
Qingxi Hu, Yu Zhang, Yongteng Song, Hekai Shi, Dongchao Yang, Haiguang Zhang* and Yan Gu*



10068

Self-assembled thin films as alternative surface textures in assistive aids with users who are blind

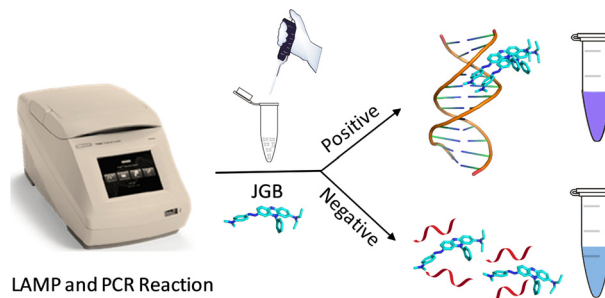
Zachary Swain, Maryanne Derkaloustian, Kayla A. Hepler, Abigail Nolin, Vidhika S. Damani, Pushpita Bhattacharyya, Tulaja Shrestha, Jared Medina, Laure V. Kayser and Charles B. Dhong*



10082

New insights into the photophysical properties and interaction mechanisms of Janus green blue dye with polyanions and its applications in colorimetric visualization of loop-mediated isothermal amplification and polymerase chain reaction

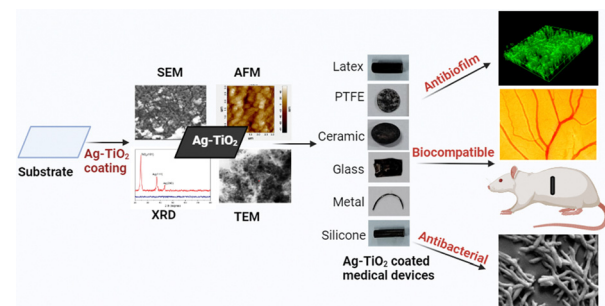
Arumugam Selva Sharma, Sung Min Ryou, Ji Hyeok Lee and Nae Yoon Lee*



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Surface modification of medical grade biomaterials by using a low-temperature-processed dual functional Ag–TiO₂ coating for preventing biofilm formation

Lipi Pradhan, Sobhan Hazra, Satya Veer Singh, Bajrang, Anjali Upadhyay, Bhola Nath Pal* and Sudip Mukherjee*



CORRECTION

10110

Correction: Surface modification of medical grade biomaterials by using a low-temperature-processed dual functional Ag–TiO₂ coating for preventing biofilm formation

Lipi Pradhan, Sobhan Hazra, Satya Veer Singh, Bajrang, Anjali Upadhyay, Bhola Nath Pat* and Sudip Mukherjee*

