

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 12(32) 7661-7960 (2024)



Cover

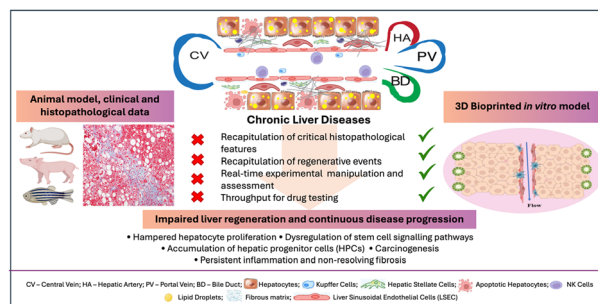
See Hung-Wei Yen,
Yi-Jie Kuo, Ren-Jei Chung
et al., pp. 7814–7825.
Image reproduced
by permission of
Ren-Jei Chung from
J. Mater. Chem. B,
2024, 12, 7814.

REVIEWS

7669

Building *in vitro* models for mechanistic understanding of liver regeneration in chronic liver diseases

Khushi Karnawat, Rithika Parthasarathy, Mesevilhou Sakhrie, Harikeshav Karthik, Konatala Vibhuvan Krishna and Gowri Manohari Balachander*



7692

Nanocellulose-based hydrogels as versatile materials with interesting functional properties for tissue engineering applications

Arnaud Kamdem Tamo



EES Catalysis

GOLD
OPEN
ACCESS

Exceptional research on energy and environmental catalysis

Open to everyone. Impactful for all

rsc.li/EESCatalysis

Fundamental questions
Elemental answers

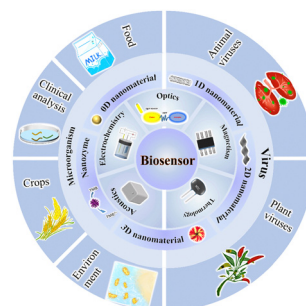


REVIEWS

7760

Nanomaterials revolutionize biosensing: 0D–3D designs for ultrasensitive detection of microorganisms and viruses

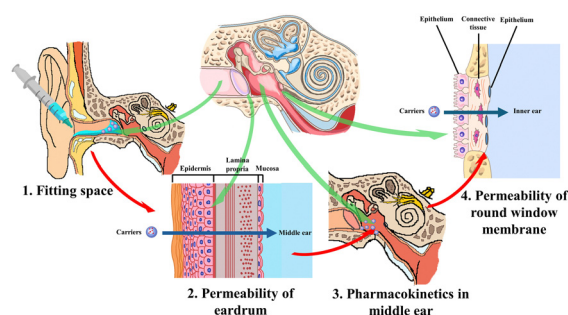
Haokun Tan, ZhiChao Wang, Rao Fu, Xiaoyuan Zhang* and Zhiqiang Su*



7787

Biomaterials for non-invasive trans-tympanic drug delivery: requirements, recent advances and perspectives

Yang Xu, Zhongwu Bei, Mei Li, Ke Qiu, Jianjun Ren, Bingyang Chu, Yu Zhao and Zhiyong Qian*

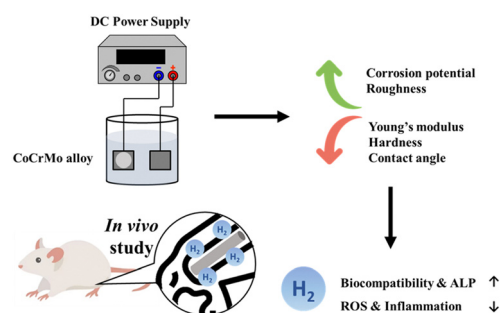


PAPERS

7814

Hydrogen-treated CoCrMo alloy: a novel approach to enhance biocompatibility and mitigate inflammation in orthopedic implants

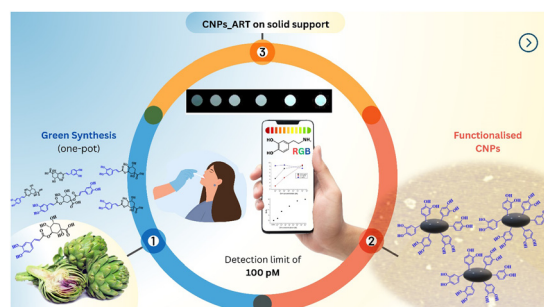
Yu-Chien Lin, Chih-Chien Hu, Wai-Ching Liu, Udesh Dhawan, Yu-Chieh Chen, Yueh-Lien Lee, Hung-Wei Yen,* Yi-Jie Kuo* and Ren-Jei Chung*



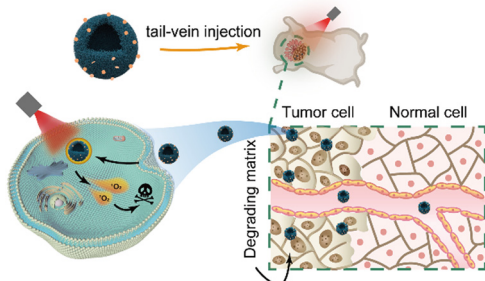
7826

Dopamine sensing by fluorescent carbon nanoparticles synthesized using artichoke extract

Roberta Puglisi, Laura Maria Mancuso, Rossella Santonocito, Antonino Gulino, Valentina Oliveri, Roberta Ruffino, Giovanni Li Destri, Vera Muccilli, Nunzio Cardullo, Nunzio Tuccitto, Andrea Pappalardo, Gianfranco Sfuncia, Giuseppe Nicotra, Manuel Petroselli, Francesco Pappalardo, Vincenzo Zaccaria and Giuseppe Trusso Sfrassetto*



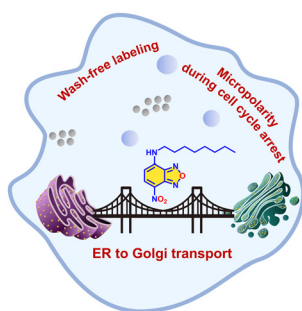
7837



Matrix-degrading soft-nanoplatform with enhanced tissue penetration for amplifying photodynamic therapeutic efficacy of breast cancer

Wei Lu, Ning Wang, Xiao Liu, Dong Chen, Qiang Li, Jianxin Rui, Weiqing Ning, Xuzhi Shi, Chang Li, Yatong Zhao, Ao He and Zhaogang Teng*

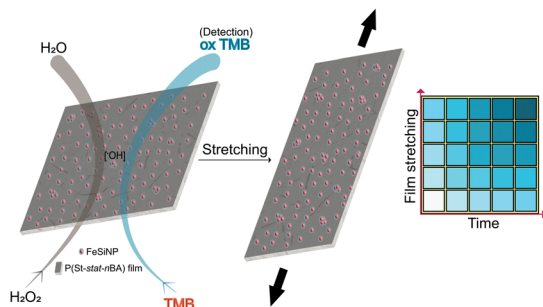
7848



A small-molecule probe to decipher stress-induced ER microenvironments and ER-Golgi communication

Tanoy Dutta,* Barsha Chakraborty, Aditya Nigam, Shilpi Minocha and Apurba Lal Koner*

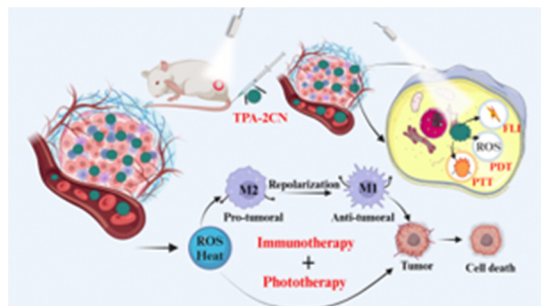
7858



On-demand activatable peroxidase-mimicking enzymatic polymer nanocomposite films

Md. Lutful Amin, Ayad Saeed, Le N. M. Dinh, Jiachen Yan, Haotian Wen, Shery L. Y. Chang, Yin Yao, Per B. Zetterlund, Tushar Kumeria* and Vipul Agarwal*

7870



Potentiating light-harvesting tactics through an A–D–A structure: repolarization of tumor-associated macrophages through phototherapy

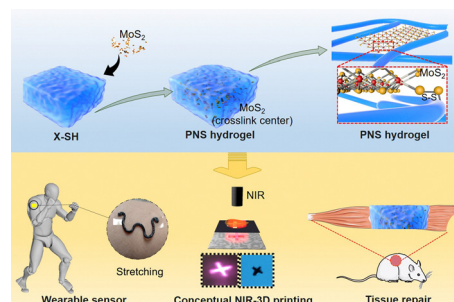
Pai Liu,* Xinyue Zhao, Jiayu Cao, Mengyan Tian, Yanning Li, Chunyan Ma, Tianyue Yang and Yi Liu*



7879

A 3D printable near-infrared triggered hydrogel with MoS₂ as the crosslink center for tissue repair

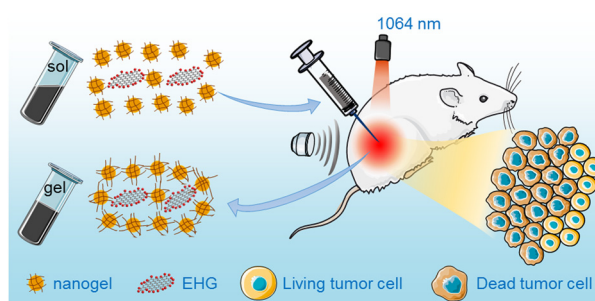
Lina Wu, Xuan Pei, Ping Song, Zhen Tan, Jiabao Nie, Wei Wei,* Changchun Zhou,* Zi Chen, Yujiang Fan and Xingdong Zhang



7892

New features of edge-selectively hydroxylated graphene nanosheets as NIR-II photothermal agent and sonothermal agent for tumor therapy

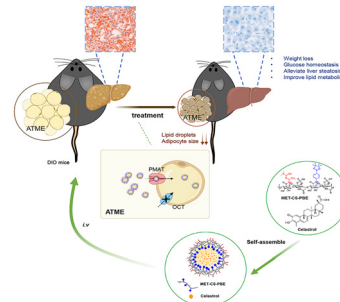
Wenqian Zhang, Man Fan, Ruchao Yang, Zhihao Li, Yuzhi Qiu, Mengna Dong, Peng Song, Nan Wang, Yajiang Yang and Qin Wang*



7905

Adipocyte-targeted celastrol delivery via biguanide-modified micelles improves treatment of obesity in DIO mice

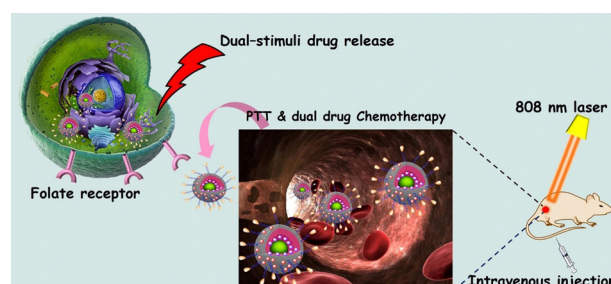
Hongling Ouyang, Yunxiao Zhang, Yueting Zhu, Tao Gong, Zhirong Zhang and Yao Fu*



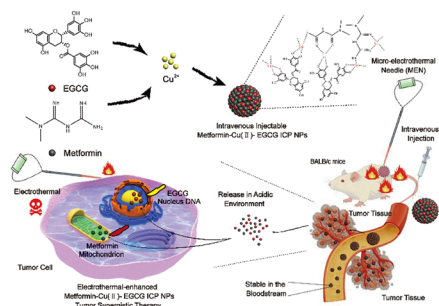
7915

Double-shelled, rattle-architecture covalent organic framework: harnessing morphological manipulation for enhanced synergistic multi-drug chemophotothermal cancer therapy

Nafiseh Rahmani Khalili, Alireza Badiei,* Zanyar Pirkani, Ghodsi Mohammadi Ziarani, Hossein Vojoudi, Amir Golmohamadi and Rajender S. Varma



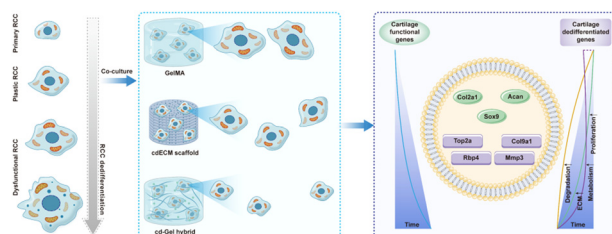
7934



Intravenous injectable metformin-Cu(II)-EGCG coordination polymer nanoparticles for electrothermally enhanced dual-drug synergistic tumor therapy

Jingran Di, Chenqi Huang, Chenyu Zhao, Siyuan Luo, Rong Wang, Shuai Zhang, Hongrui Zhu and Daocheng Wu*

7946



Multimodal effects of an extracellular matrix on cellular morphology, dynamics and functionality

Xin Chen, Wenhao Liu, Chi Su, Jianyang Shan, Xiang Li, Yimin Chai, Yaling Yu* and Gen Wen*

