

Journal of Materials Chemistry B

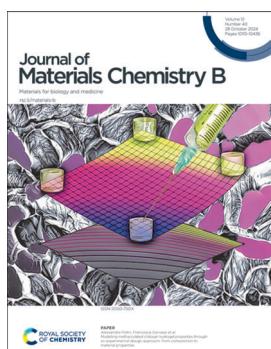
Materials for biology and medicine

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(40) 10113–10436 (2024)



Cover

See Alessandro Polini,
Francesca Gervaso *et al.*,
pp. 10221–10240.
Image reproduced
by permission of
Alessio Bucciarelli from
J. Mater. Chem. B,
2024, 12, 10221.

PROFILE

10123

Contributors to the *Journal of Materials Chemistry B*
Emerging Investigators 2024 collection

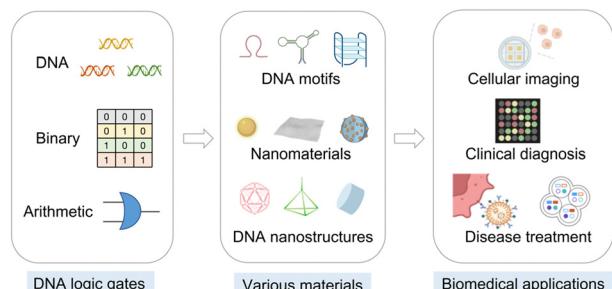


REVIEWS

10134

Advancements in DNA computing: exploring DNA logic systems and their biomedical applications

Yuewei Zhao, Xuelian Li, Yan Zhou, Xiaoting Tian,
Yayou Miao, Jiayi Wang,* Lin Huang* and Fanyu Meng*



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

Registered charity number: 207890

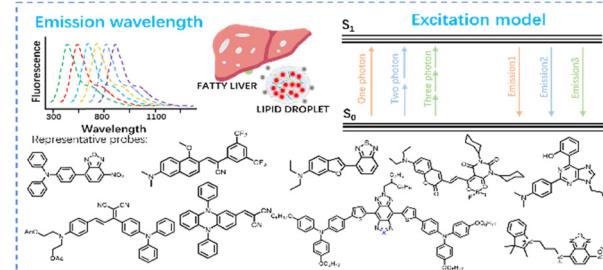


REVIEWS

10149

Recent advances in fluorescent probes for fatty liver imaging by detecting lipid droplets

Long He, Hang Li, Yao Tang, Tian-Bing Ren* and Lin Yuan

Lipid droplet fluorescent probes for assessing fatty liver

10163

Recent advances in sodium alginate-based dressings for targeted drug delivery in the context of diabetic wound healing

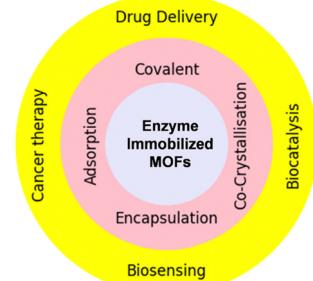
Mohammad Ebrahim Astaneh, Alireza Hashemzadeh and Narges Fereydouni*



10198

Exploring enzyme-immobilized MOFs and their application potential: biosensing, biocatalysis, targeted drug delivery and cancer therapy

Om Prakash,* Deepika Verma and Poonam C. Singh

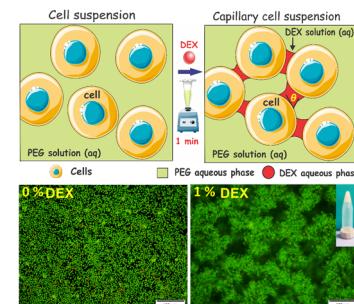


COMMUNICATION

10215

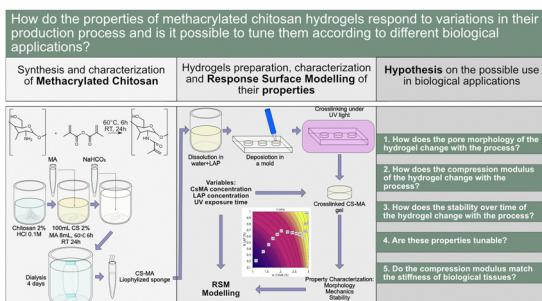
3D structured capillary cell suspensions aided by aqueous two-phase systems

Amro K. F. Dyab and Vesselin N. Paunov*



PAPERS

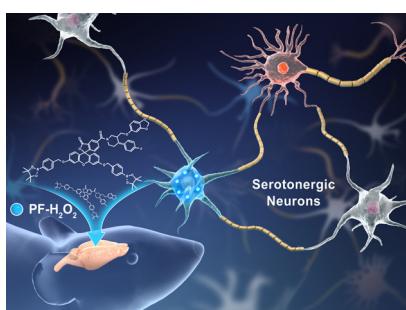
10221



Modelling methacrylated chitosan hydrogel properties through an experimental design approach: from composition to material properties

Alessio Bucciarelli, Nora Selicato, Chiara Coricciati, Alberto Rainer, Agostina Lina Capodilupo, Giuseppe Gigli, Lorenzo Moroni, Alessandro Polini* and Francesca Gervaso*

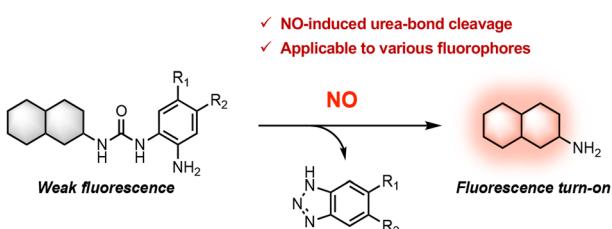
10241



A versatile fluorescent probe for hydrogen peroxide in serotonergic neurons of living brains of mice with depression

Feida Che, Xiaoming Zhao, Qi Ding, Xiwei Li, Wen Zhang, Ping Li,* Xin Wang* and Bo Tang

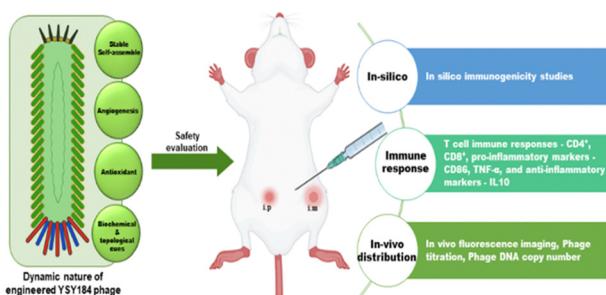
10248



Development of a urea-bond cleavage reaction induced by nitric oxide for fluorescence imaging

Yuqing Zhang, Shushu Wang, Lina Zhang and Tao Peng*

10258



In vivo safety evaluation and tracing of arginylglycylaspartic acid-engineered phage nanofiber in murine model

Kshitiz Raj Shrestha, Sehoon Kim, Anna Jo, Murali Ragothaman and So Young Yoo*

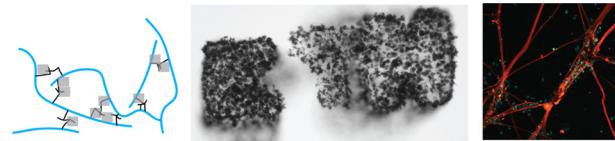


PAPERS

10272

Photopatterning of conductive hydrogels which exhibit tissue-like properties

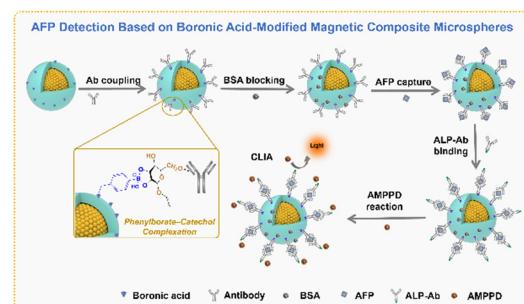
Léo Siflinger, Lina De Windt, Stéphane Bernhard, Giulia Amos, Blandine Clément, Jens Duru, Mark W. Tibbitt and Christina M. Tringides*



10285

A chemiluminescence immunosensor for biomarker detection based on boronic acid-modified magnetic composite microspheres

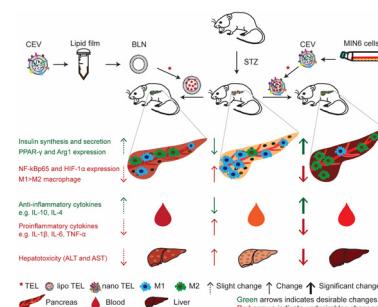
Xiuli Wang, Leyi He, Yaxia Li, Jia Guo and Changchun Wang*



10294

Encapsulation of telmisartan inside insulinoma-cell-derived extracellular vesicles outperformed biomimetic nanovesicles in modulating the pancreatic inflammatory microenvironment

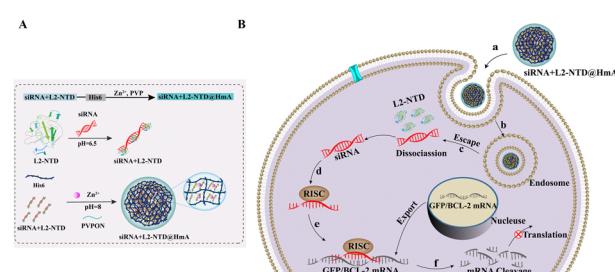
Anjali Singh, Subrata Kumar Pore and Jayanta Bhattacharyya*



10309

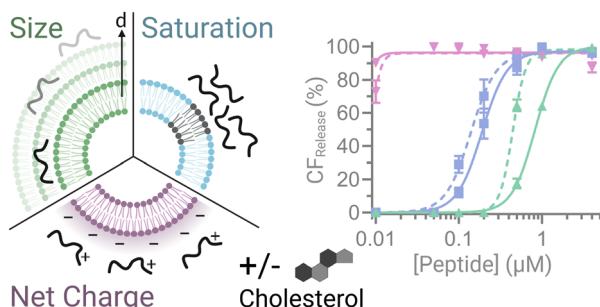
RNA-binding peptide and endosomal escape-assisting peptide (L2) improved siRNA delivery by the hexahistidine–metal assembly

Yan Zhang, Li-Miao Qin, Meng-Fan Feng, Xianghui Yu and Yuqing Wu*



PAPERS

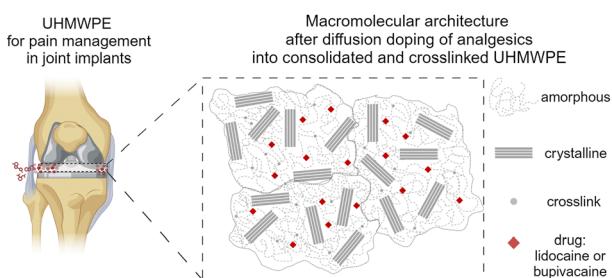
10320



Influence of lipid vesicle properties on the function of conjugation dependent membrane active peptides

Alexandra Iversen, Johanna Utterström, Lalit Pramod Khare and Daniel Aili*

10332



Diffusion doping of analgesics into UHMWPE for prophylactic pain management

Nicoletta Inverardi, Sashank Lekkala, Maria F. Serafim, Amita Sekar, Keith K. Wannomae, Brad Micheli, Hany Bedair, Orhun K. Muratoglu and Ebru Oral*

10346



Flexible and antibacterial conductive hydrogels based on silk fibroin/polyaniline/AgNPs for motion sensing and wound healing promotion under electrical stimulation

Ruiqi Liu, Siwei Bi, Linna Zhang, Xiaoyi Li, Kang Dai, Haibo Wang, Zhenyu Zhang* and Jun Gu*

10357



The heterogeneity of physiological activity for chiral carbon dots derived from L/D/DL-arginine

Fengyuan Liu, Jiashan Xia, Chun Tao, Changmei Chen, Xiangshu Cheng, Rongchun Yi, Lulu Wang, Yue Wang* and Tao Deng*

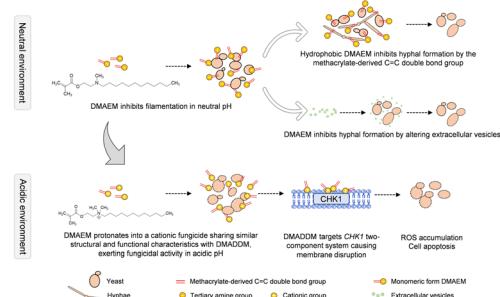


PAPERS

10367

A novel pH-responsive monomer inhibits *Candida albicans* via a dual antifungal mode of action

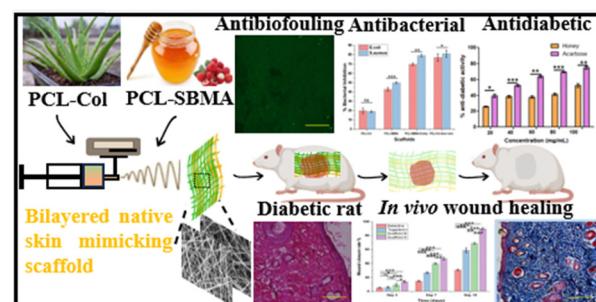
Hao Li, Yangyang Shi, Hui Chen, Jingou Liang, Shiyong Zhang, Bolei Li, Jing Chen, Mingyun Li, Xian Peng, Xuedong Zhou, Biao Ren* and Lei Cheng*



10383

Exploring the potential of an *Aloe vera* and honey extract loaded bi-layered nanofibrous scaffold of PCL-Col and PCL-SBMA mimicking the skin architecture for the treatment of diabetic wounds

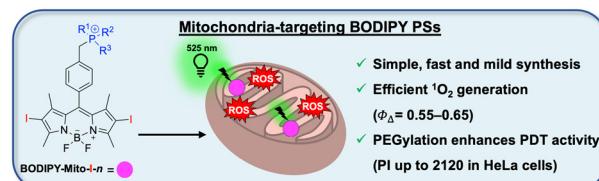
Megha Dhiman, Souvik Ghosh, Thakur Gurjeet Singh, Samrat Chauhan, Partha Roy and Debrupa Lahiri*



10409

Potent BODIPY-based photosensitisers for selective mitochondrial dysfunction and effective photodynamic therapy

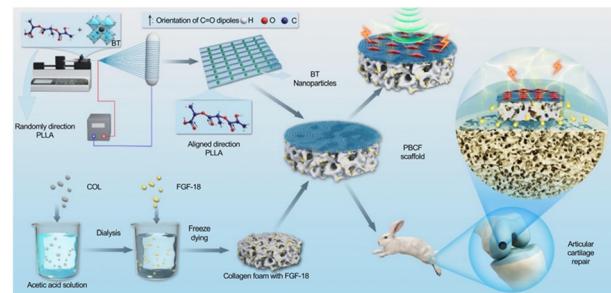
Edward R. H. Walter, Peter Kam-Keung Leung, Lawrence Cho-Cheung Lee, Kenneth Kam-Wing Lo* and Nicholas J. Long*



10416

Development and evaluation of 3D composite scaffolds with piezoelectricity and biofactor synergy for enhanced articular cartilage regeneration

Bowen Xie, Hebin Ma, Fengyuan Yang, Hongguang Chen, Ya'nan Guo, Hongxing Zhang, Tengfei Li, Xiaogang Huang, Yantao Zhao,* Xiaojie Li* and Junjie Du*



CORRECTION

10434

Correction: Selenium nanoparticle-functionalized injectable chitosan/collagen hydrogels as a novel therapeutic strategy to enhance stem cell osteoblastic differentiation for bone regeneration

Khaled Alajmi, Matthew Hartford, Nakka Sharmila Roy, Anamitra Bhattacharya, Santanu Kaity, Brenton L. Cavanagh, Subhadeep Roy,* Ciara M. Murphy* and Kulwinder Kaur*

