

# Journal of Materials Chemistry B

Materials for biology and medicine

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## IN THIS ISSUE

ISSN 2050-750X CODEN JMCBDV 12(47) 12127-12402 (2024)



### Cover

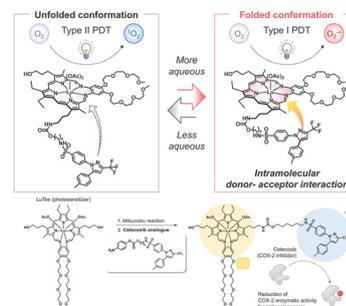
See Ashish Kalkal, Gopinath Packirisamy *et al.*, pp. 12207–12219. Image reproduced by permission of Gopinath Packirisamy from *J. Mater. Chem. B*, 2024, **12**, 12207. Created in BioRender.

## HIGHLIGHTS

12136

### Breakthrough in cancer therapy: lutetium texaphyrin–celecoxib conjugate for immune and photodynamic treatment

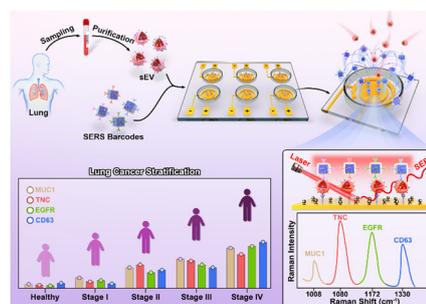
Qihang Ding, Yue Wang, Pengfei Zhang\* and Ling Mei\*



12139

### An innovative electrohydrodynamics-driven SERS platform for molecular stratification and treatment monitoring of lung cancer

Tuotuo Zhang, Biao Dong,\* Huiling Wang\* and Shuai Zhang\*



# RSC Applied Polymers

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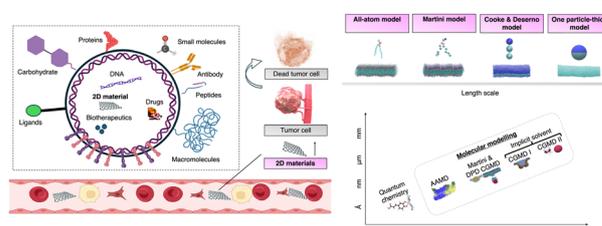
Fundamental questions  
Elemental answers

## REVIEWS

12141

## Nanomaterials and methods for cancer therapy: 2D materials, biomolecules, and molecular dynamics simulations

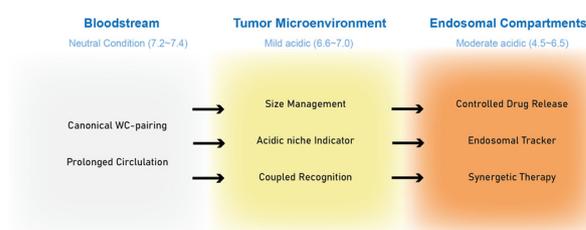
Welela M. Kedir, Lunna Li, Yaw Sing Tan, Natasa Bajalovic\* and Desmond K. Loke\*



12174

## Functionalities of pH-responsive DNA nanostructures in tumor-targeted strategies

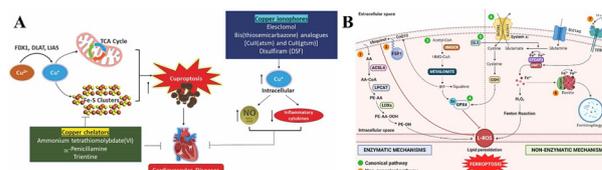
Liyue Wen and Min Wang\*



12191

## Cuproptosis in cancer therapy: mechanisms, therapeutic application and future prospects

Jiawei Hu, Junfei Zhu, Tao Chen, Yudie Zhao, Qingwen Xu\* and Yan Wang\*

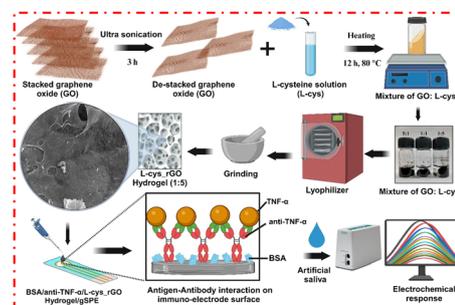


## PAPERS

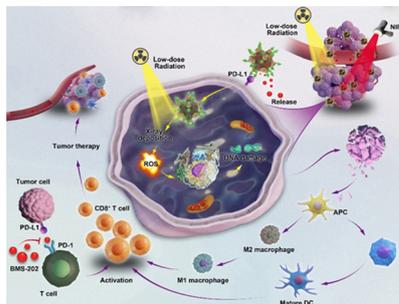
12207

## A bioinspired porous and electroactive reduced graphene oxide hydrogel based biosensing platform for efficient detection of tumor necrosis factor- $\alpha$

Parth Kapil, Damini Verma, Rangadhar Pradhan, Ashish Kalkal\* and Gopinath Packirisamy\*



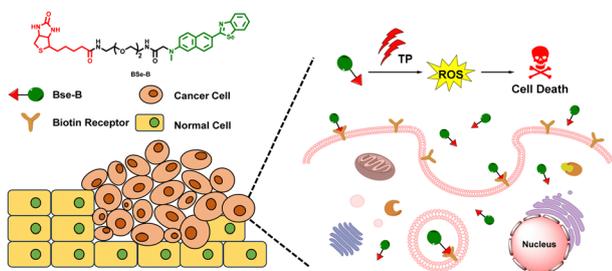
12220



### Radiation-activated PD-L1 aptamer-functionalized nanoradiosensitizer to potentiate antitumor immunity in combined radioimmunotherapy and photothermal therapy

Bo Chen, Yinbo He, Long Bai, Shulin Pan, Yinggang Wang, Min Mu, Rangrang Fan, Bo Han, Peter Ernst Huber, Bingwen Zou\* and Gang Guo\*

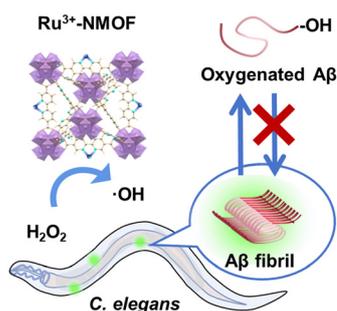
12232



### Development of a small molecule-based two-photon photosensitizer for targeting cancer cells

Dong Joon Lee, Yu Cao, Vinayak Juvekar, Sauraj, Choong-Kyun Noh, Sung Jae Shin,\* Zhihong Liu\* and Hwan Myung Kim\*

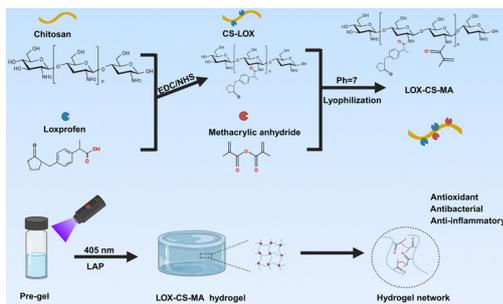
12239



### A Ru<sup>3+</sup>-functionalized-NMOF nanozyme as an inhibitor and disaggregator of $\beta$ -amyloid aggregates

Wan-Chun Luo, Li-Na Bao, Yu Zhang, Zi-Tong Zhang, Xi Li, Meng-Meng Pan, Jin-Tao Zhang, Kun Huang,\* Yu Xu\* and Li Xu\*

12251



### A photocrosslinkable and anti-inflammatory hydrogel of loxoprofen-conjugated chitosan methacrylate

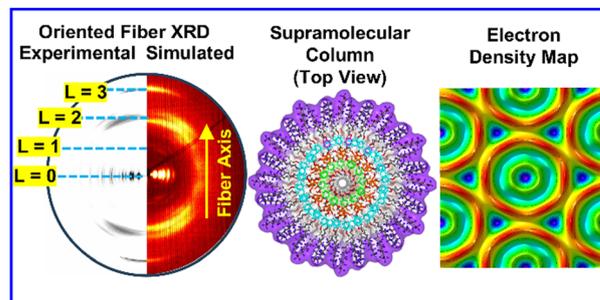
Xiangheng Guan, Xin-Gang Wang, Binbin Sun, Hongsheng Wang, Mohamed EL-Newehy, Meera Moydeen Abdulhameed, Xiumei Mo, Bei Feng\* and Jinglei Wu\*



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### Porous helical supramolecular columns self-organized via the fluorophobic effect of a semifluorinated tapered dendron

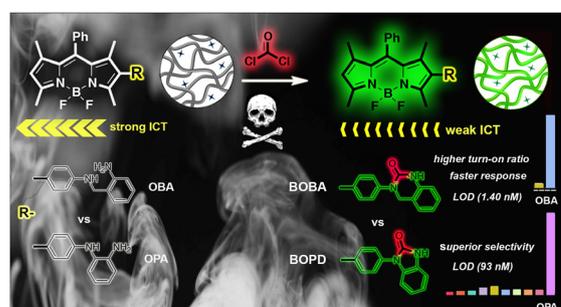
Dipankar Sahoo, Mihai Peterca, Mohammad R. Imam, Devendra S. Maurya and Virgil Percec\*



12282

### Tailored BODIPY-based fluorogenic probes for phosgene detection: a comparative evaluation of recognition sites

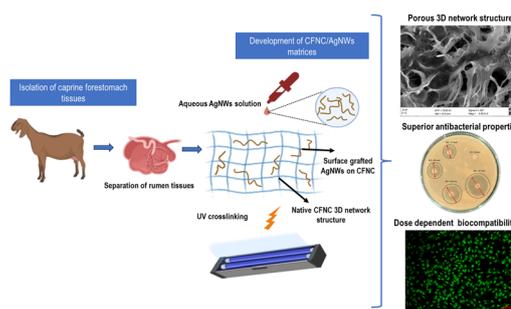
Suay Dartar,\* Beraat Umur Kaya, Yankı Öncü Yayak, Ezgi Vural and Mustafa Emrulloğlu



12291

### Decellularization of caprine forestomach rumen tissue modified with silver nanowires as an antibacterial skin substitute scaffold in wound care therapeutics

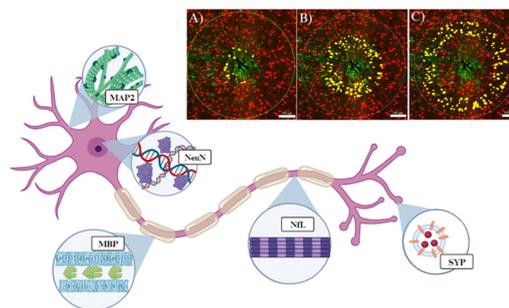
Athmana P. A., Asna Jaleel K. I., Sinduja Malarkodi Elangovan, Riza Paul, Naveen Subbaiyan, Parthiban Shanmugam and Gopal Shankar Krishnakumar\*



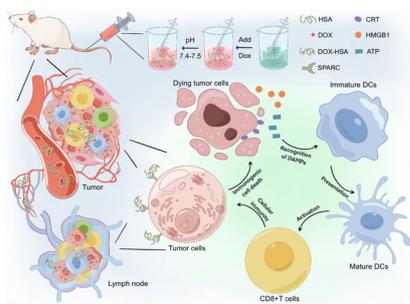
12307

### Cell-specific spatial profiling of targeted protein expression to characterize the impact of intracortical microelectrode implantation on neuronal health

Lindsey N. Druschel, Niveda M. Kasthuri, Sydney S. Song, Jaime J. Wang, Allison Hess-Dunning, E. Ricky Chan and Jeffrey R. Capadona\*



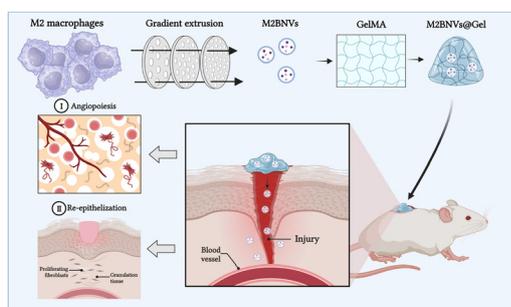
12320



### A biomimetic solution, albumin–doxorubicin molecular complex, targeting tumor and tumor-draining lymph nodes

Rui Guo, Lanlan Zhong, Sirui Ma, Bokai Gong, Chen Shen, Zijun Wang, Li Deng, Dong Zhao, Huile Gao and Tao Gong\*

12338

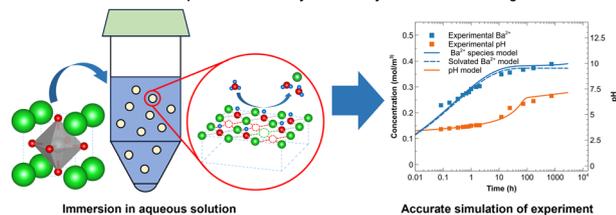


### Bioinspired nanovesicles derived from macrophage accelerate wound healing by promoting angiogenesis and collagen deposition

Tingrui Zhang, Zongguang Tai, Fengze Miao, Yingchao Zhao, Weifan Wang, Quangang Zhu\* and Zhongjian Chen\*

12349

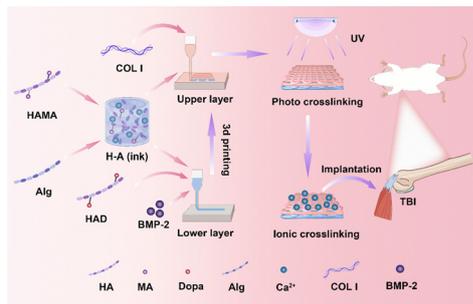
$\text{BaTiO}_3$  leaches continuously up to 31 days in aqueous solution, and  $\text{BaCO}_3$  formation contributes to the dissolution behavior. The process is accurately described by an Unreacted Shrinking Core model.



### Long-term leaching kinetics and solution chemistry of aqueous $\text{BaTiO}_3$ powder suspensions: a numerical model supported experiment

Marcus Bentzen,\* Vojtěch Lindauer, Pavel Mokry, Ragnhild Elizabeth Aune and Julia Glaum

12365



### 3D-printed biomimetic scaffolds loaded with ADSCs and BMP-2 for enhanced rotator cuff repair

Zhonglian Wu, Jian Yang, Hui Chong,\* Xiaomei Dai, Haidi Sun, Junli Shi, Meijuan Yuan, Dianwei Liu, Mengbo Dang, Hang Yao\* and Wenyong Fei\*

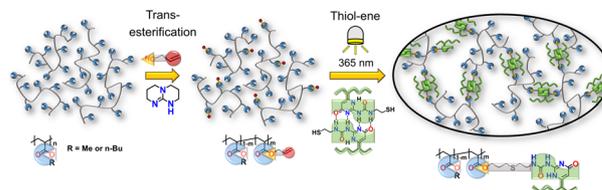


## PAPERS

12378

### Physically crosslinked polyacrylates by quadruple hydrogen bonding side chains

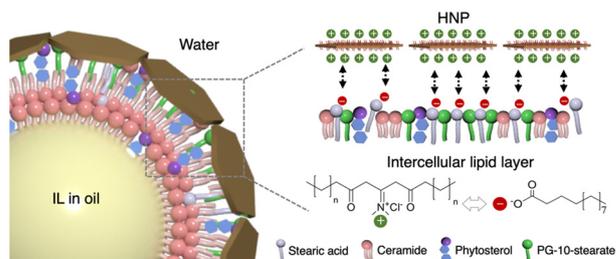
Jente Verjans, Alexis André, Tomáš Sedláčik, Resat Aksakal, Evelyne van Ruymbeke\* and Richard Hoogenboom\*



12390

### Intercellular lipid-cored, hectorite nanoplatelet-armored pickering emulsions with enhanced transdermal delivery and epidermal hydration

Boryeong Lee, Lakshmishri Prabakaran, Minkyong Jang, Song Hua Xuan, Kyounghee Shin, Sung Ho Lee\* and Jin Woong Kim\*



## CORRECTION

12400

### Correction: Understanding selective sensing of human serum albumin using a D- $\pi$ -A probe: a photophysical and computational approach

Anamika Bandyopadhyay and Anupam Bhattacharya\*

