

# Journal of Materials Chemistry B

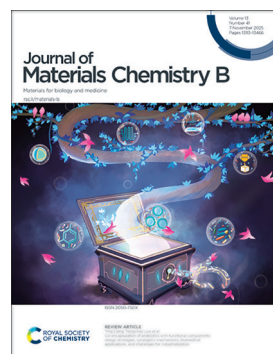
Materials for biology and medicine

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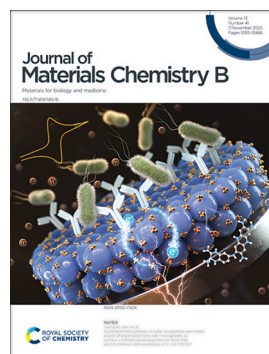
## IN THIS ISSUE

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### Cover

See Ying Liang, Yangchao Luo *et al.*, pp. 13122–13153. Image reproduced by permission of Ying Liang and Yangchao Luo from *J. Mater. Chem. B*, 2025, **13**, 13122.



### Inside cover

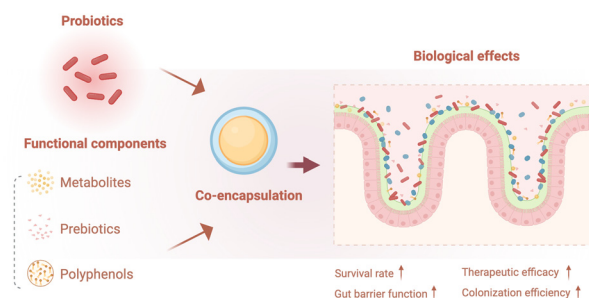
See Joong Ho Shin *et al.*, pp. 13256–13271. Image reproduced by permission of Joong Ho Shin from *J. Mater. Chem. B*, 2025, **13**, 13256.

## REVIEWS

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### Co-encapsulation of probiotics with functional components: design strategies, synergistic mechanisms, biomedical applications, and challenges for industrialization

Chenyang Ji, Danyuan Li, Ying Liang\* and Yangchao Luo\*



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### Emerging trends in wearable and non-invasive cortisol sensing technologies – a review

Sesuraj Balasamy, Raji Atchudan, Sandeep Arya and Ashok K. Sundramoorthy\*



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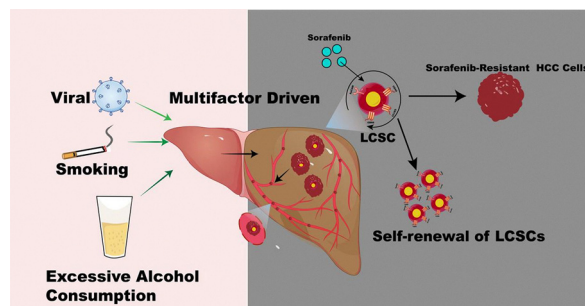


## REVIEWS

13184

**Engineered nanomedicine targets liver cancer stem cells to treat liver cancer disease**

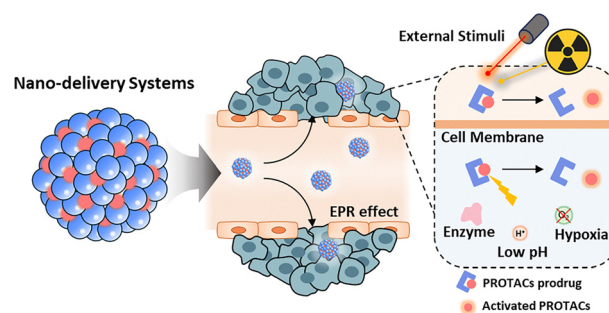
Fenglan Huang, Li Chen, Xin Zhang, Shengqian Tian, Yuxin Han, Minghui Hu, Lili He and Rong Luo\*



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**Nanotechnology-based strategies for overcoming clinical limitations of PROTACs in cancer therapy**

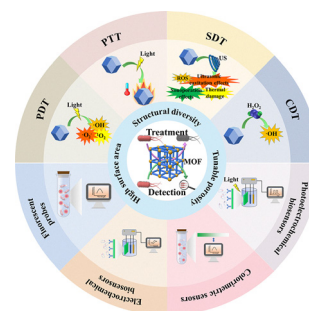
Hanhee Cho, Jinseong Kim, Hoyeon Lee, Hyein Kang and Kwangmeyung Kim\*



13221

**Design of composite strategies for metal–organic frameworks in bacterial detection and antibacterial therapy: a review**

Wenyue Gao, Xiping Han, Ling Li, Yan Xu, Zhu Gao\* and Cuijuan Wang\*

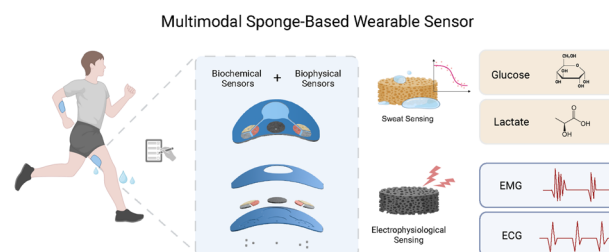


## PAPERS

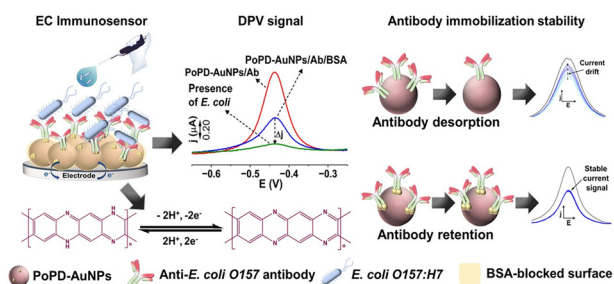
13245

**Multimodal sponge-based wearable sensor for continuous monitoring of electrochemical and electrophysiological signals during exercise**

Yue Li, Xuejie Wang, Yu-chun Lin, Asmita Veronica and Hnin Yin Yin Nyein\*



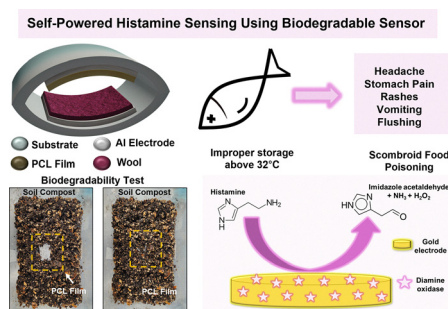
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### Surfactant-free synthesis of gold nanoparticle-decorated poly(*o*-phenylenediamine) sub-microspheres as surface-confined signaling probes for label-free electrochemical immunosensing of *E. coli* O157:H7

Balamurugan Thangavel, Juhee Lim, Minseon Kim and Joong Ho Shin\*

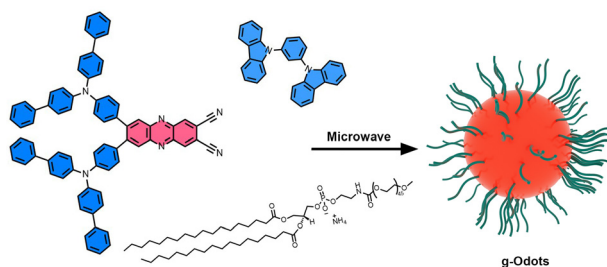
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### Detection of biogenic amine histamine using a triboelectric nanogenerator integrated biodegradable sensor

Swati Panda, Heewon Song, Sugato Hajra, Kyeong Jun Park, P. Ganga Raju Achary, Venkateswaran Vivekananthan and Hoe Joon Kim\*

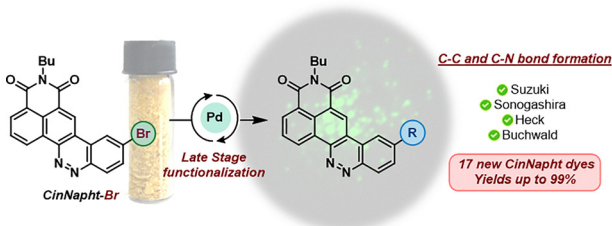
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### Glassy organic dots exhibiting near-infrared TADF with quantum yields >40% for cellular imaging

Xujun Qiu, André Jung, Angelica Sevilla-Pym, Peiqi Hu, Stefan Bräse\* and Zachary M. Hudson\*

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### Synthesis of $\pi$ -extended CinNapht fluorophores via late-stage Pd-catalyzed C–N and C–C bond formation and application for selective imaging of lipid droplets in living cells

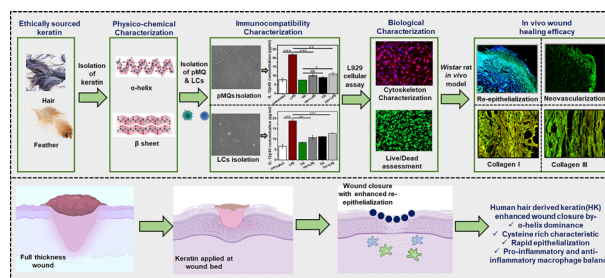
Eléonore Tacke, Philippe Durand and Arnaud Chevalier\*



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## Immunological and wound healing properties of keratin and its conformational variants extracted from ethically derived bio-resources

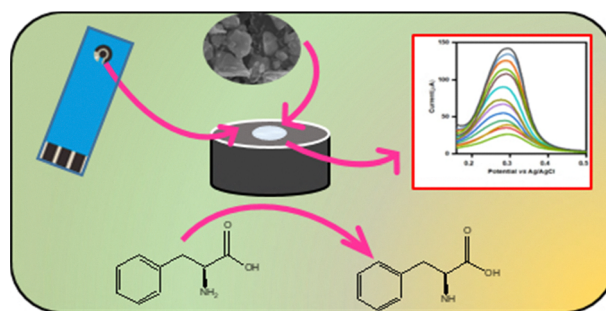
Krishna Dixit, Linto John, Hema Bora, Anita Hansda, Baisakhee Saha, Rituparna Chakrabarti, Nantu Dogra, Praphulla Chandra Shukla, Gayatri Mukherjee\* and Santanu Dhara\*



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## A non-enzymatic electrochemical biosensor for the detection of phenylalanine using bismuth telluride nanosheets

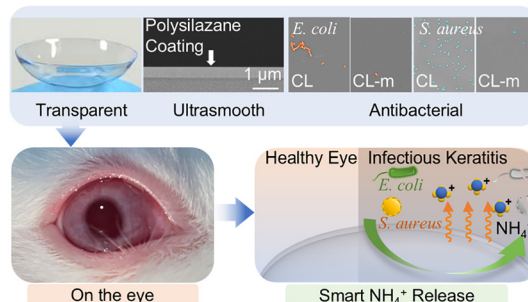
Priyadarshini Sriram, John Bosco Balaguru Rayappan,\* Ahmed M. Fouda and Mani Govindasamy\*



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## Smart invisible shield: colorless, durable and self-defending contact lens nanocoating combats keratitis on demand

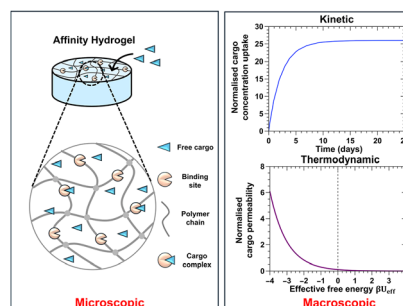
Chenwei Sun, Lin Li, Zeyu Yang, Yi Guo, Jieyu Zhang, Xuefeng Hu\* and Yunbing Wang



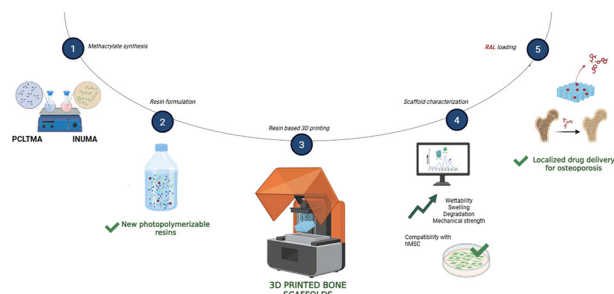
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## Theoretical framework for the kinetics and thermodynamics of cargo loading into affinity hydrogels

Ruhanesh Suthan, Ian Keen Koo, Xin Wang and K. B. Goh\*



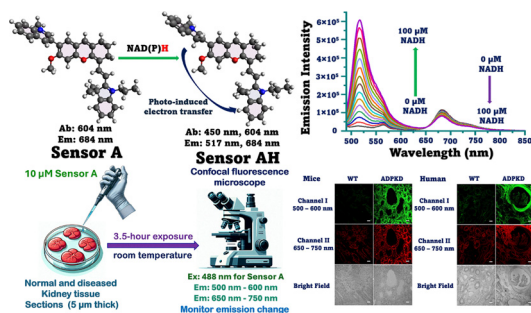
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## Hybrid methacrylated PCL/inulin photosensitive resins for 3D printing: a step forward in bone tissue engineering

Carmela Tommasino, Carla Sardo, Angiola Guidone, Maria Grazia Raucci, Anna Mariano, Alessandra Soriente, Rita Patrizia Aquino, Matthew P. Wylie, Giulia Auriemma\* and Dimitrios A. Lamprou\*

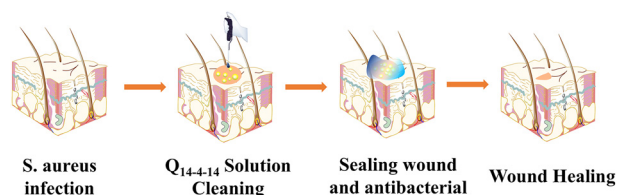
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## Methylquinolinium-enhanced near-infrared hemicyanine dye for ratiometric NAD(P)H sensing in live cells via carbon-carbon bond conjugation

Sushil K. Dwivedi, Adonis Amoli, Mahmood Norouzi, Alicia Guo, Henry Lanquaye, Tyler Gregersen, Yan Zhang,\* Micaela Geborkoff, Athar Ata,\* Thomas Werner and Haiying Liu\*

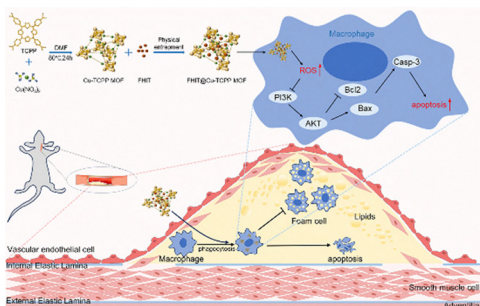
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## Degradable gemini quaternary ammonium salts for wound sterilization: an antibiotic-free strategy

Yuansong Sun, Yue Su, Zhengyang Zhou, Huan Zhou\* and Pengpeng Chen\*

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## A metal-organic framework-based co-delivery system for atherosclerosis therapy via macrophage regulation

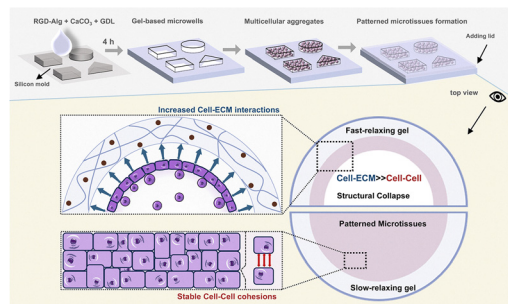
Xiaodong Wu, Huihua Shi, Bo Li, Bo Dong,\* Xiaoyu Wu,\* Ran Lu,\* Chaowen Yu and Xinwu Lu\*



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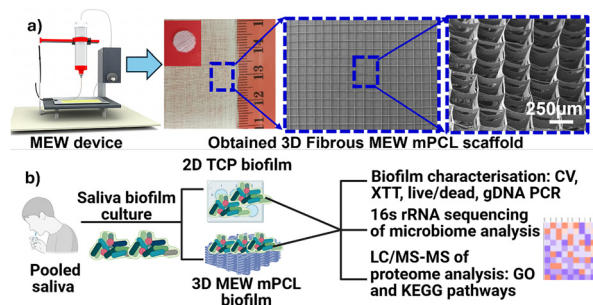
Longjie Li, Weiran Qin and Jing Xie\*



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## Proteome and microbiome profiles of polymicrobial salivary biofilms on 3D MEW fibrous scaffolds: biomimetic ECM-inspired structures

Pingping Han, Chun Liu, Abdala Abdal-hay, Sarah Reed, Andrew Liaw, Jenny Wang, Yang Ning\* and Sašo Ivanovski\*



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## Biomimetic MnO<sub>2</sub> micromotors with asymmetric sea urchin architecture for synergistic mechano-chemical eradication of endodontic biofilms

Yaping Huang, Jie Li, Qianyang Zhang, Jiaqi Kong, Yunfei Xia, Yingjie Wu,\* Narisu Hu\* and Sen Mu\*



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## A ratiometric fluorescent probe with dual red/near-infrared emissions for monitoring lysosomal pH fluctuations

Huiying Mu, Ryo Tanaka, Ryo Kubota, Koji Miki and Kouichi Ohe\*

