

# Journal of Materials Chemistry B

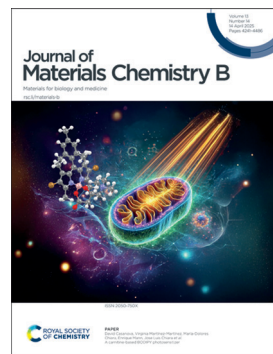
Materials for biology and medicine

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### Cover

See David Casanova, Virginia Martínez-Martínez, María-Dolores Chiara, Enrique Mann, Jose Luis Chiara *et al.*, pp. 4330–4340. Image reproduced by permission of Virginia Martínez-Martínez from *J. Mater. Chem. B*, 2025, 13, 4330.

## EDITORIAL

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### Introduction to materials chemistry of fluorescence bioimaging

Sijie Chen,\* Tony D. James,\* Apurba Lal Koner\* and Ben Zhong Tang\*

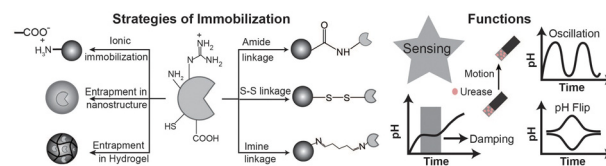


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### Urease-coupled systems and materials: design strategies, scope and applications

Shashikumar Haranal, Vinay Ambekar Ranganath and Indrajit Maity\*



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Elemental answers

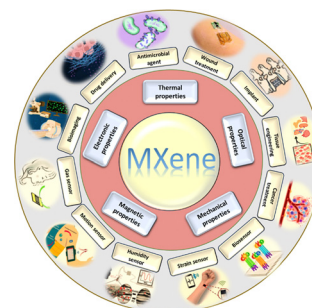


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## MXenes and MXene-based composites for biomedical applications

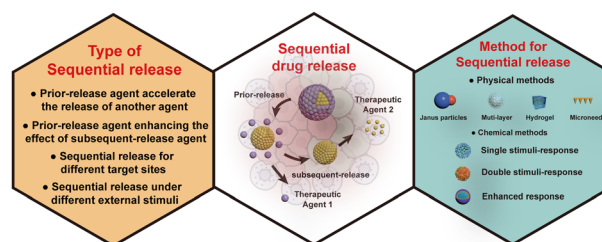
Taposhree Dutta, Parvej Alam\* and Satyendra Kumar Mishra\*



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## Sequential drug release nanocomposites for synergistic therapy in disease treatment

Siyuan Luo, Chenyu Zhao, Rong Wang and Daocheng Wu\*

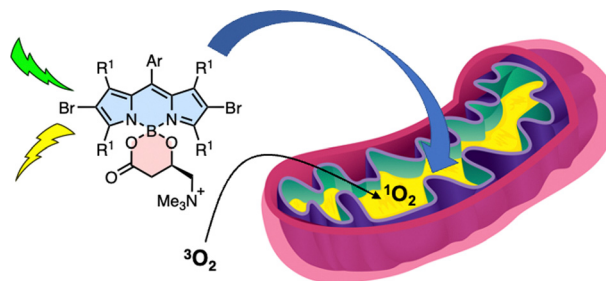


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## A carnitine-based BODIPY photosensitizer

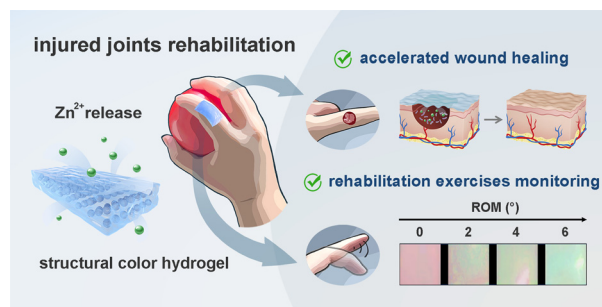
Larissa Maierhofer, Ruth Prieto-Montero, Tamara Cubiella, Aitor Diaz-Andrés, Noelia Morales-Benítez, David Casanova,\* Virginia Martínez-Martínez,\* María-Dolores Chiara,\* Enrique Mann\* and Jose Luis Chiara\*



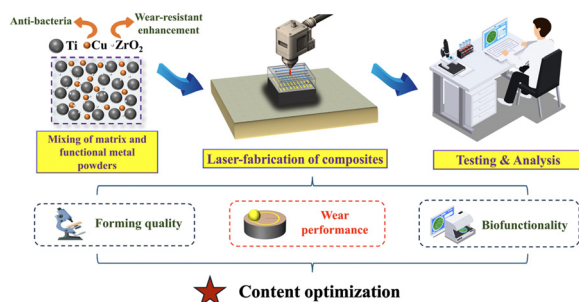
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## Towards injured joint rehabilitation: structural color hydrogels for accelerated wound healing and rehabilitation exercise monitoring

Xiaoning Sun, Dengfeng Lu, Jing Cheng, Zixin Shu, Chunmei Ding,\* Meng Qin\* and Jianshu Li\*



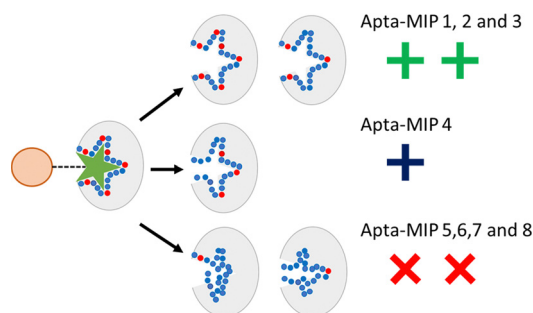
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**Insights into nano-ZrO<sub>2</sub> reinforced self-antibacterial Ti–3Cu composites via laser metal deposition: content-optimized bioactive nano-ZrO<sub>2</sub> integrated for wear resistance, *in vitro* antibacterial and biological properties**

Ming-Chun Zhao, Zhiyong Shi, Xin Li, Chaochun Zhao, Wenze Wang,\* Dengfeng Yin and Andrej Atrns

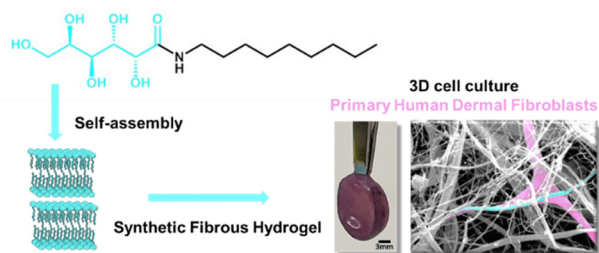
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**Incorporation of polymerizable linkers into aptamers for high-affinity nanoscale molecularly imprinted polymer hybrids: analysis of positional selectivity**

Mark V. Sullivan, Francia Allabush, Paula M. Mendes, James H. R. Tucker and Nicholas W. Turner\*

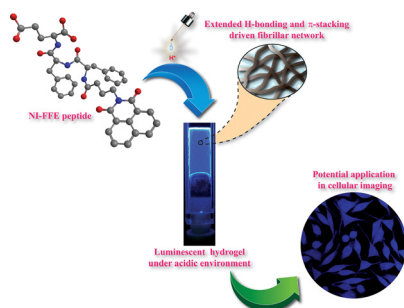
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**The potential of carbohydrate supramolecular hydrogels for long-term 3D culture of primary fibroblasts**

Nadia Kasmi, Laetitia Pieruccioni, Eve Pitot, Isabelle Fourquaux, Alexandre Wodrinski, Laure Gibot and Juliette Fitremann\*

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**Luminescent ultrashort peptide hydrogelator with enhanced photophysical implications and biocompatibility**

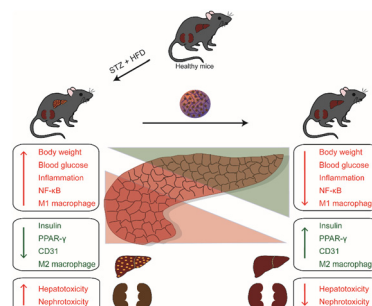
Aanchal Kumari, Gitanjali Bangal, Basab Kanti Das, Malay Kumar Baroi, Mamta Kumari, Priyanka Das, Kolimi Prashanth Reddy, Rakibul Islam, Devendra Kumar Dhaked, Bapan Pramanik, Subhadeep Roy\* and Sahnawaz Ahmed\*



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### A glucose-responsive alginate-based hydrogel laden with modified GLP-1 and telmisartan ameliorates type 2 diabetes and reduces liver and kidney toxicities

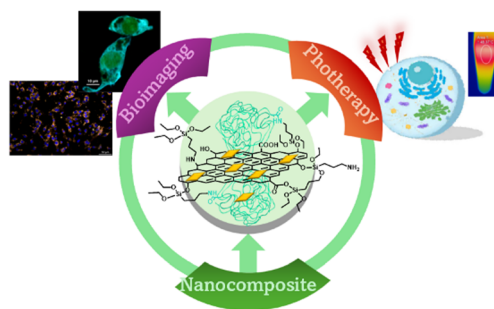
Anjali Singh, Khushboo, Monu Pandey, Shria Mattoo, Subrata Kumar Pore and Jayanta Bhattacharyya\*



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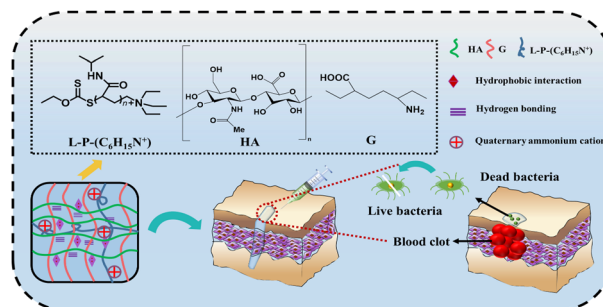
Daria Stoia, Enza Fazio, Carmelo Corsaro, Andreea Campu, Olga Soritau, Ana Maria Craciun, Gabriela Chereches, Monica Focsan,\* Giulia Neri\* and Anna Piperno



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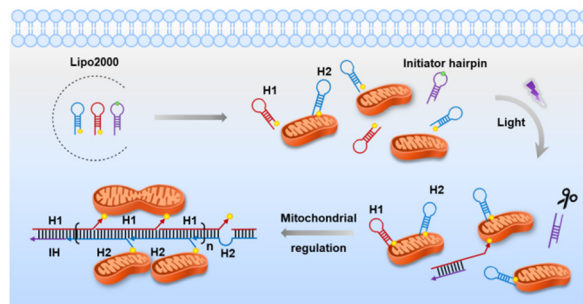
Yaozhen Yang, Xue Wang, Wenye Zhai, Jing Xu,\* Zhaosheng Hou, Pengbo She, Xiuxiu Li, Xuanxuan Ma, Xiaolong Wang and Wentao Liu\*



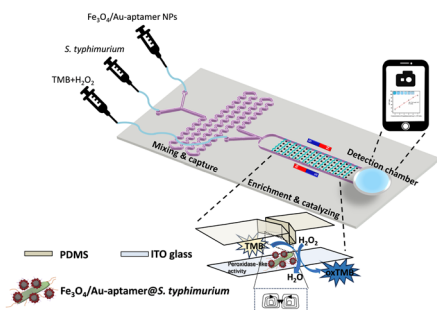
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### Controllable mitochondrial regulation based on photo-triggered DNA circuitry

Songyuan Du, Longyi Zhu, Xinyi Ge, Shengyuan Deng\* and Kewei Ren\*



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Ming-Yue Gao, Meng Wang, Yong-Tao Wang and Zhi-Ling Zhang\*

