

# Biomaterials Science

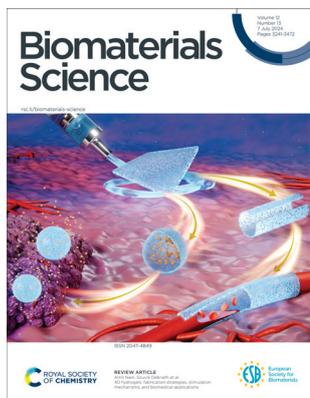
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ISSN 2047-4849 CODEN BSICCH 12(13) 3241-3472 (2024)



### Cover

See Amit Nain,  
Souvik Debnath *et al.*,  
pp. 3249–3272.

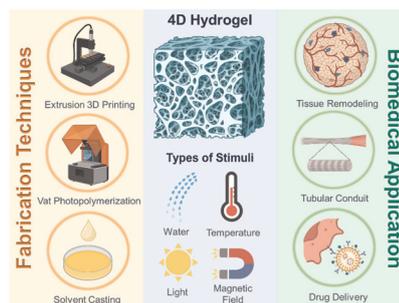
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Souvik Debnath and  
Amit Nain from  
*Biomater. Sci.*, 2024, **12**,  
3249.

## REVIEWS

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### 4D hydrogels: fabrication strategies, stimulation mechanisms, and biomedical applications

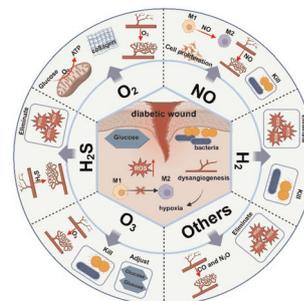
Amit Nain,\* Srishti Chakraborty, Nipun Jain, Saswat Choudhury, Suravi Chattopadhyay, Kaushik Chatterjee and Souvik Debnath\*



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### Gases and gas-releasing materials for the treatment of chronic diabetic wounds

Shuming Ye, Neng Jin, Nan Liu, Feixiang Cheng, Liang Hu, Guiyang Zhang,\* Qi Li\* and Juehua Jing\*



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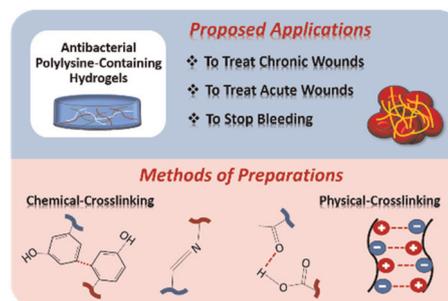
Fundamental questions  
Elemental answers

## REVIEWS

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### Antibacterial polylysine-containing hydrogels for hemostatic and wound healing applications: preparation methods, current advances and future perspectives

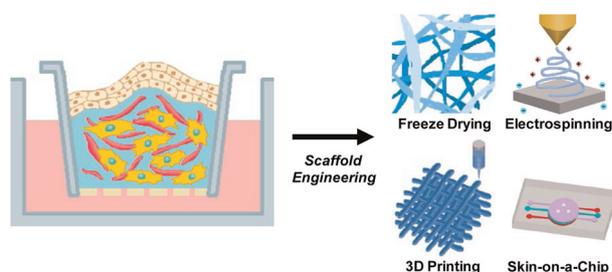
Sara Pourshahrestani,\* Ehsan Zeimaran and Mh Busra Fauzi\*



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### Artificial keloid skin models: understanding the pathophysiological mechanisms and application in therapeutic studies

Soo hyun Kwon, Jongmin Lee, Jin Yoo and Youngmee Jung\*

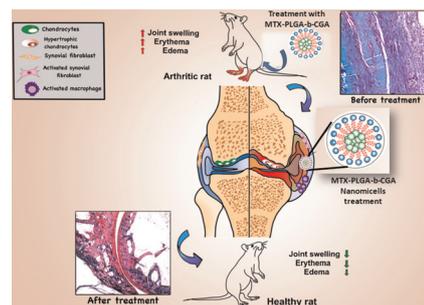


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### A chlorogenic acid-conjugated nanomicelle attenuates disease severity in experimental arthritis

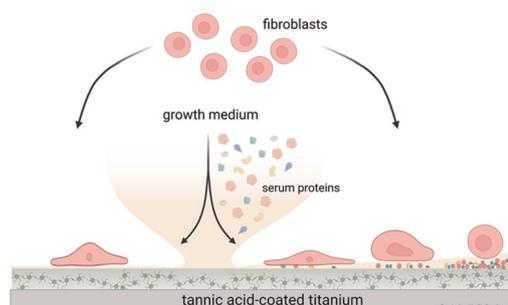
Akshay Vyawahare, Chandrashekhar Jori, Jattin Kumar, Kanika, Mohammad Fareed, Nemat Ali, Kaushik Parida and Rehan Khan\*



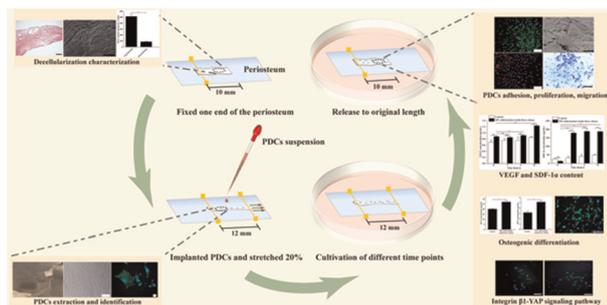
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### Combining QCM-D with live-cell imaging reveals the impact of serum proteins on the dynamics of fibroblast adhesion on tannic acid-functionalised surfaces

Agnes Rogala, Daria Zaytseva-Zotova, Enrique Oreja, Alejandro Barrantes and Hanna Tiainen\*



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### Regulatory effects of stress release from decellularized periosteum on proliferation, migration, and osteogenic differentiation of periosteum-derived cells

Gangli Dong, Jinsong Wang, Zhongmin Chen, Fuping Wang, Bin Xia\* and Guobao Chen\*

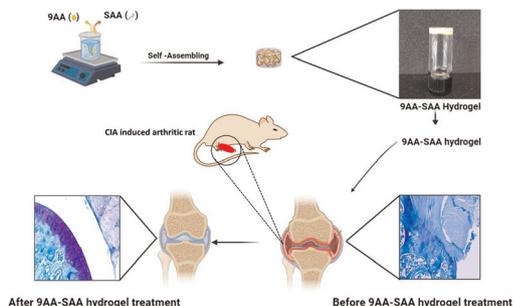
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### Design, clinical applications and post-surgical assessment of bioresorbable 3D-printed craniofacial composite implants

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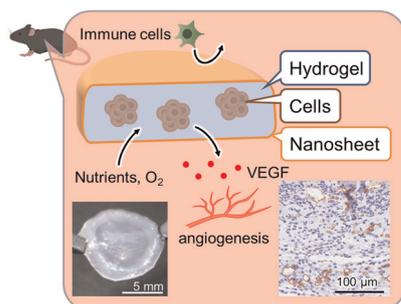
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### A bioactive and biodegradable vitamin C stearate-based injectable hydrogel alleviates experimental inflammatory arthritis

Aneesh Ali, Chandrashekar Jori, Kanika, Ajay Kumar, Akshay Vyawahare, Jattin Kumar, Bhuvnesh Kumar, Anas Ahmad, Mohammad Fareed, Nemat Ali, Umashanker Navik and Rehan Khan\*

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### An intrinsically semi-permeable PDMS nanosheet encapsulating adipose tissue-derived stem cells for enhanced angiogenesis

Megumi Takuma, Hajime Fujita, Nanami Zushi, Hisato Nagano, Ryuichi Azuma, Tomoharu Kiyosawa and Toshinori Fujie\*

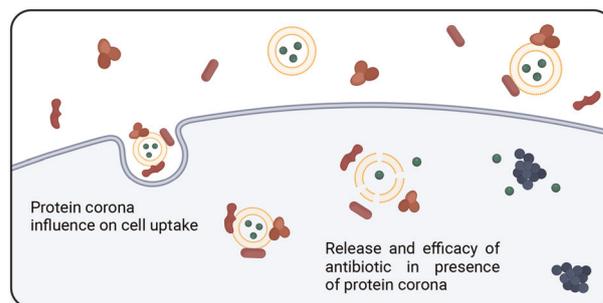


## PAPERS

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### Cellular uptake and *in vitro* antibacterial activity of lipid-based nanoantibiotics are influenced by protein corona

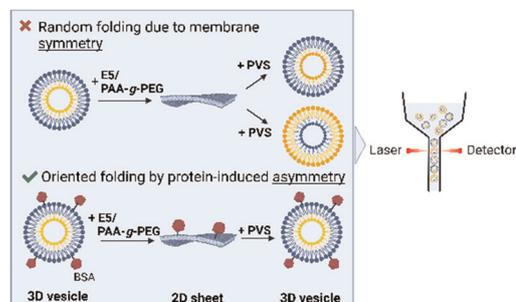
Santhni Subramaniam, Paul Joyce, Charlotte E. Conn and Clive A. Prestidge\*



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### Characterization and regulation of 2D–3D convertible lipid membrane transformation

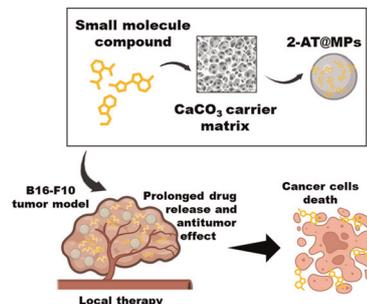
Wancheng Zhang, Yuta Uei, Tomoaki Matsuura\* and Atsushi Maruyama\*



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### Encapsulation of a small-molecule drug based on substituted 2-aminothiophenes in calcium carbonate carriers for therapy of melanoma

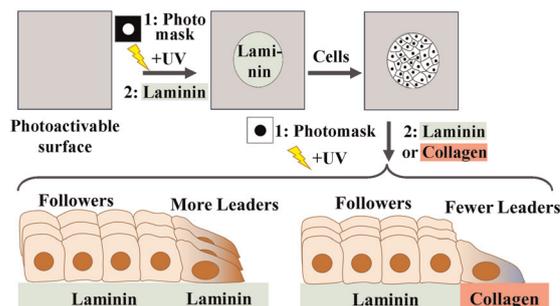
Timofey E. Karpov,\* Anna Rogova, Darya R. Akhmetova, Yulia A. Tishchenko, Anastasia V. Chinakova, Dmitriy V. Lipin, Nina V. Gavrilova, Irina A. Gorbunova, Sergei A. Shipilovskikh\* and Alexander S. Timin\*

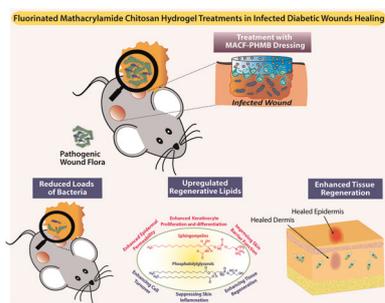


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### Photoactivatable substrates show diverse phenotypes of leader cells in collective migration when moving along different extracellular matrix proteins

Shimaa A. Abdellatef,\* Francesca Bard and Jun Nakanishi\*





## Chitosan-based multifunctional oxygenating antibiotic hydrogel dressings for managing chronic infection in diabetic wounds

Shahrazad Abri, Hannah Durr, Hazel A. Barton, Kayla Adkins-Travis, Leah P. Shriver, Dipak D. Pukale, Judith A. Fulton and Nic D. Leipzig\*

