

# Biomaterials Science

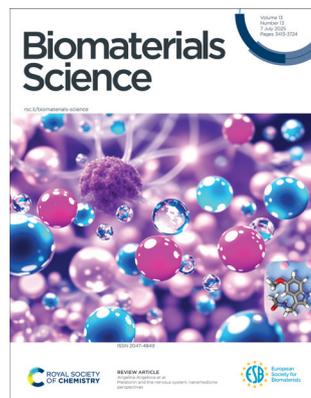
An international high impact journal exploring the underlying science behind the function, interactions and design of biomaterials

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### Cover

See Angelina Angelova *et al.*, pp. 3421–3446.

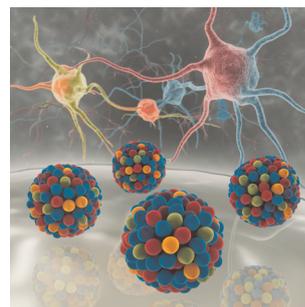
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## REVIEWS

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### Melatonin and the nervous system: nanomedicine perspectives

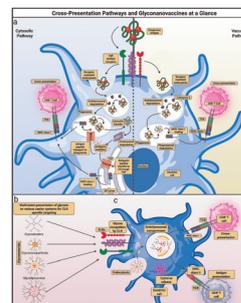
Fucen Luo, Yuru Deng, Borislav Angelov and Angelina Angelova\*



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Mannat Jain, Isha M. Jadhav, Suyash Vinayak Dangat, Srinivasa Rao Singuru, Gautam Sethi, Eiji Yuba\* and Rajesh Kumar Gupta\*



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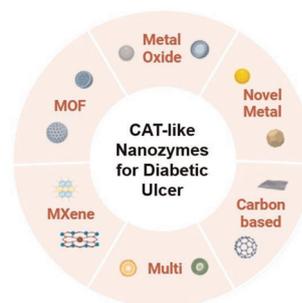
Fundamental questions  
Elemental answers

## MINIREVIEWS

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**Advances in oxygenation nanozymes for overcoming diabetic ulcers**

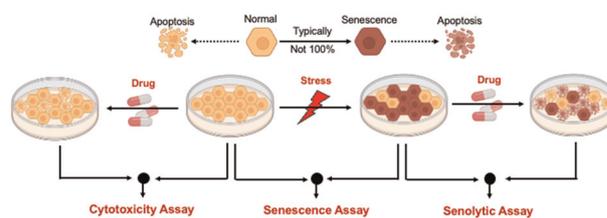
Sumi Choi, Minjeong Kim, Minjin Kim and Su-Hwan Kim\*



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**In vitro senescence and senolytic functional assays**

Patrick Ryan and Jungwoo Lee\*

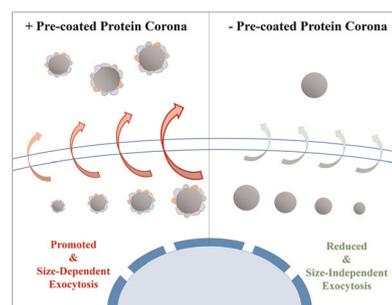


## COMMUNICATION

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**Plasma protein corona on silica nanoparticles enhances exocytosis**

Laura Dietz, Julia Simon, Kai R. Speth, Katharina Landfester\* and Volker Mailänder\*

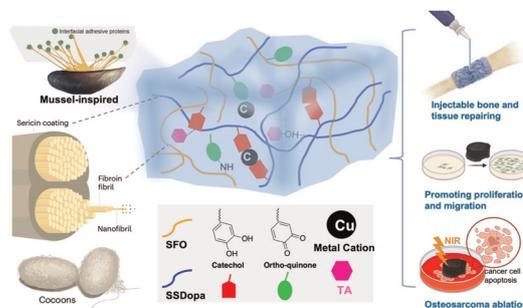


## PAPERS

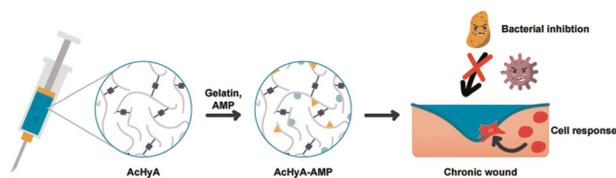
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**Theragenerative injectable bone-adhesive hydrogels for combined photothermal osteosarcoma therapy and bone repair**

Shiyi Chen, Nourhan Hassan, Alexander Kopp, Tatiane Eufrazio-da-Silva, Jihene Arfaoui, Benedetta Isella, Ziyaad Aytuna, Philipp Barnowski, Gerhard Sengle, Alireza Dolatshahi-Pirouz, Nadja Kröger and Hajar Homa Maleki\*



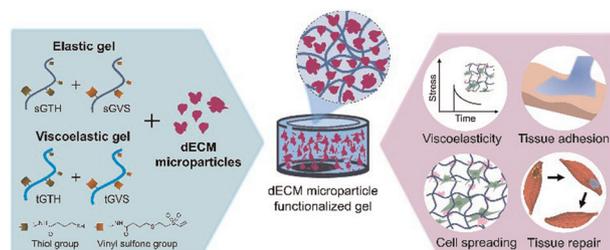
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### Development of a bioactive hyaluronic acid hydrogel functionalised with antimicrobial peptides for the treatment of chronic wounds

Noémie Petit, Ana Gomes, Yu-yin Joanne Chang, Jessica Da Silva, Ermelindo C. Leal, Eugénia Carvalho, Paula Gomes and Shane Browne\*

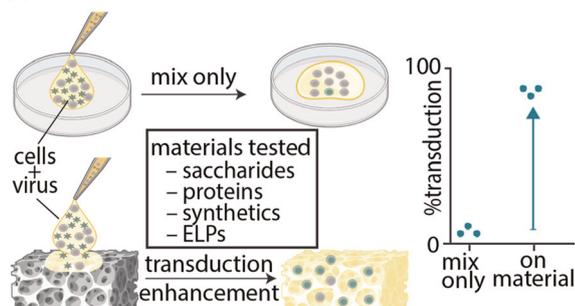
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### Functionalization of viscoelastic gels with decellularized extracellular matrix microparticles enhances tissue adhesion, cell spreading, and tissue regeneration

Debabrata Palai, Hana Yasue, Shima Ito, Hiyori Komatsu, Tetsushi Taguchi\* and Akihiro Nishiguchi\*

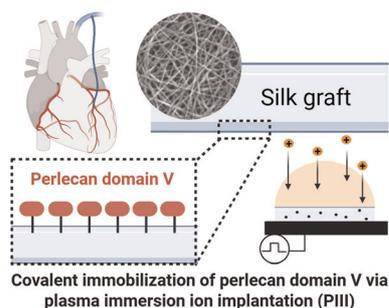
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### From saccharides to synthetics: exploring biomaterial scaffolds as cell transduction enhancers

Micah Mallory, Emma Grace Johnson, Soumen Saha, Sanika Pandit, Joshua T. McCune, Mengnan Dennis, Jessica M. Gluck, Craig L. Duvall, Ashley C. Brown, Ashutosh Chilkoti and Yevgeny Brudno\*

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### Biofunctionalization of electrospun silk scaffolds with perlecan for vascular tissue engineering

Shouyuan Jiang, Anyu Zhang, Behnam Akhavan, John Whitelock, Marcela M. Bilek, Steven G. Wise, Megan S. Lord\* and Jelena Rnjak-Kovacina\*

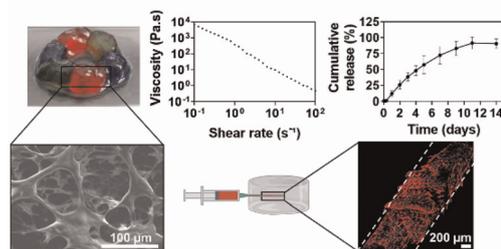


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### Injectable and self-healable supramolecular hydrogels assembled by quaternised chitosan/alginate polyelectrolyte complexation for sustained drug delivery and cell encapsulation

Cristiana F. V. Sousa, João Borges\* and João F. Mano\*

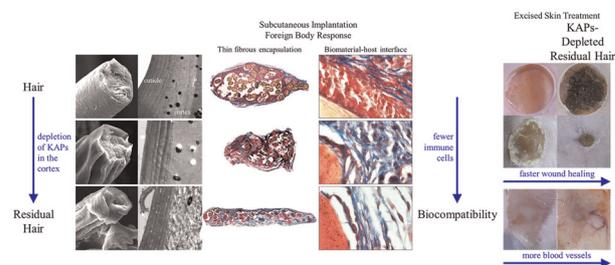
#### Injectable and self-healable supramolecular hydrogels based on HTCC/ALG polyelectrolyte complexation



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### Biocompatibility and wound-healing prospect of KAPs-depleted residual hair biomaterial

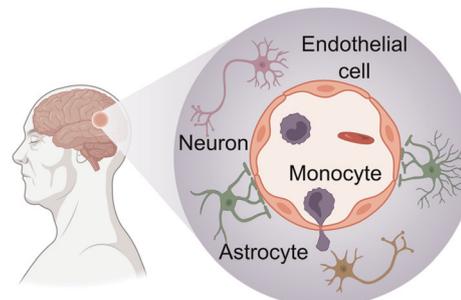
Allison Meer, Aidan Mathews, Mariana Cabral, Andrew Tarabokija, Evan Carroll, Henna Chaudhry, Michelle Paszek, Nancy Radecker, Thomas Palaia, Hazel Consunji de Guzman and Roche C. de Guzman\*



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### Engineering blood–brain barrier microphysiological systems to model Alzheimer's disease monocyte penetration and infiltration

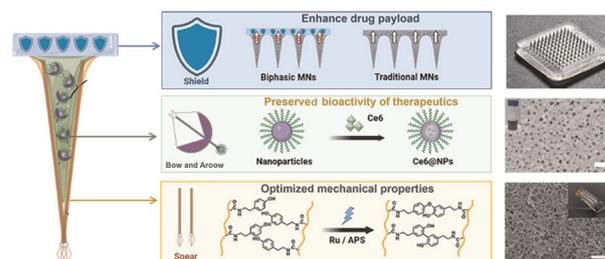
Longjun Gu, Xiangdi Mao, Chunhui Tian, Yang Yang, Kaiyuan Yang, Scott G. Canfield, Donghui Zhu, Mingxia Gu and Feng Guo\*



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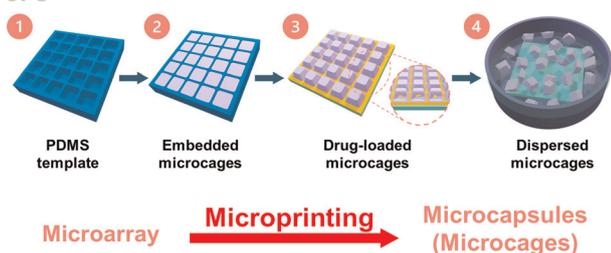
### A core–shell structured biphasic microneedle system as an elite squad for combating melanoma with “three-in-one” therapeutic power

Qiling Jin, Ying Wang, Wenwen Lei, Shuyao Zhou, Tingting Zhang, Keqiang Lu, Lingzhi Zhao,\* Wenyong Zhong\* and Keming Xu\*



## PAPERS

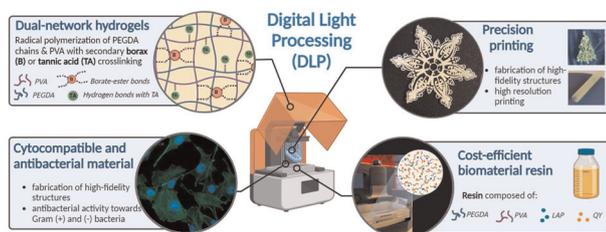
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### Fabrication of uniform biodegradable microcages with predesigned shape printed from microarrays for sustained release of small hydrophilic molecules

Jiaxin Zhang,\* Rui Sun, Valeriya Kudryavtseva, David J. Gould and Gleb B. Sukhorukov

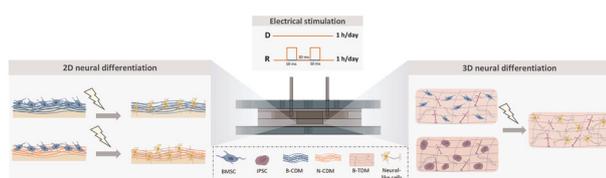
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### Borax - and tannic acid-based post-3D-printing treatment to tune the mechanical properties of scaffolds

Julia Simińska-Stanny, Parinaz Hobbi, Pejman Ghaffari-Bohlouli, Man Li, Adam Junka, Hafez Jafari, Christine Delporte, Lei Nie and Armin Shavandi\*

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### Dual role of electrical stimulation and a biomimetic matrix in neural differentiation within a microfluidic platform

Utku Devamoglu, Yagmur Arslan, Leila Sabour-Takanlou, Cigir Biray-Avci and Ozlem Yesil-Celiktas\*

