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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 Nuria Oliva *et al.*, pp. 5797–5808.

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REVIEWS

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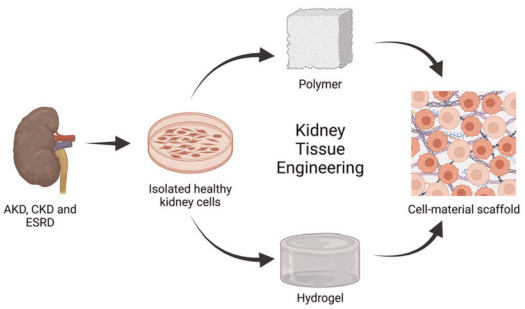
Renal tissue engineering for regenerative medicine using polymers and hydrogels

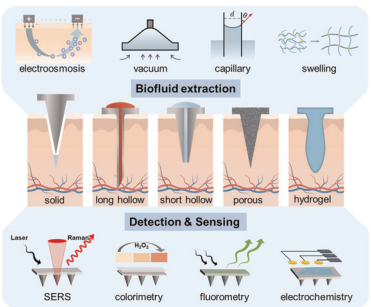
Syed Mohammad Daniel Syed Mohamed, Gavin I. Welsh and Ipsita Roy*



5727

Microneedle-based glucose monitoring: a review from sampling methods to wearable biosensors

Yan Wang, You Wu and Yifeng Lei*



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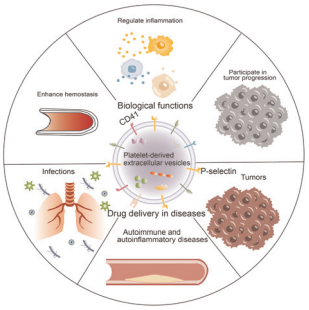
Platelet-derived extracellular vesicles for drug delivery

Chenlu Yao and Chao Wang*



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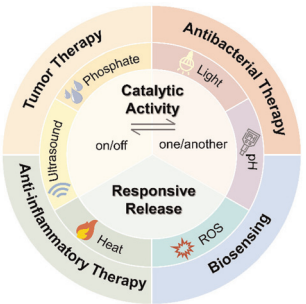
Stimuli-responsive nanozymes for biomedical applications

Mengli Zhang and Weijun Tong*



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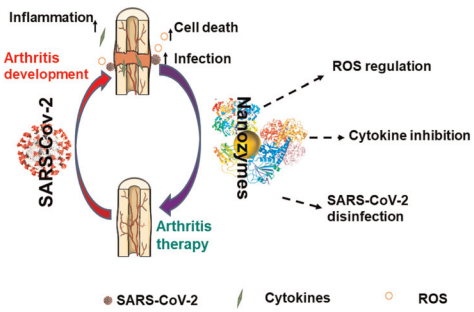
Development of nanozymes for promising alleviation of COVID-19-associated arthritis

Dan Li,* Baofeng Zhao, Pengfei Zhuang and Xifan Mei*



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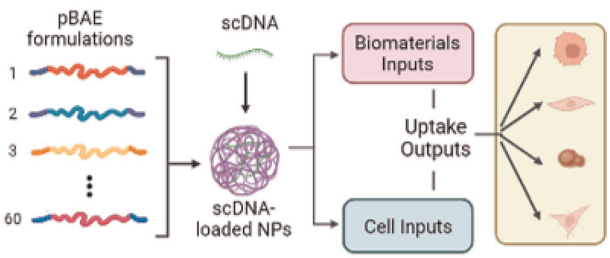
A machine learning approach to predict cellular uptake of pBAE polyplexes

Aparna Loecher, Michael Bruyns-Haylett, Pedro J. Ballester, Salvador Borros and Nuria Oliva*



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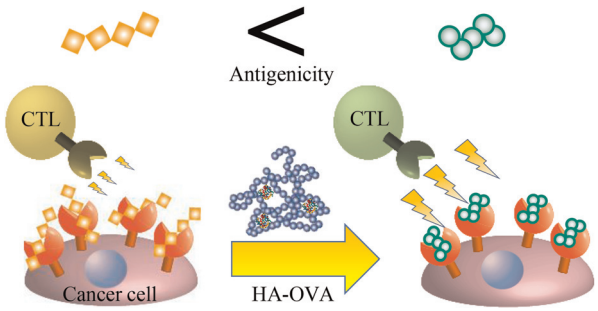

Modification of the antigenicity of cancer cells by conjugates consisting of hyaluronic acid and foreign antigens

Soichi Ogata, Reika Tsuji, Atsushi Moritaka, Shoya Ito and Shinichi Mochizuki*

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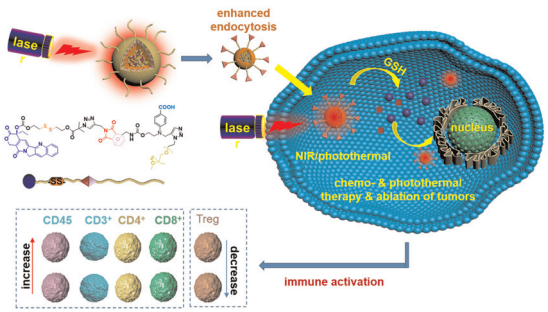

Synergistic chemo-photo anticancer therapy by using reversible Diels–Alder dynamic covalent bond mediated polyprodrug amphiphiles and immunoactivation investigation

Jinhao Yan, Wenlong Jiang, Guijie Kang, Qingjie Li, Longxiang Tao,* Xuefu Wang* and Jun Yin*

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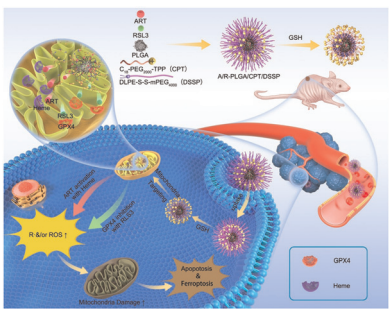

GPX4 inhibition synergistically boosts mitochondria targeting nanoartemisinin-induced apoptosis/ferroptosis combination cancer therapy

Hui Yu, Jia-Mi Li, Kai Deng, Wei Zhou, Kun-Heng Li, Cai-Xia Wang, Qian Wang, Meng Wu* and Shi-Wen Huang*

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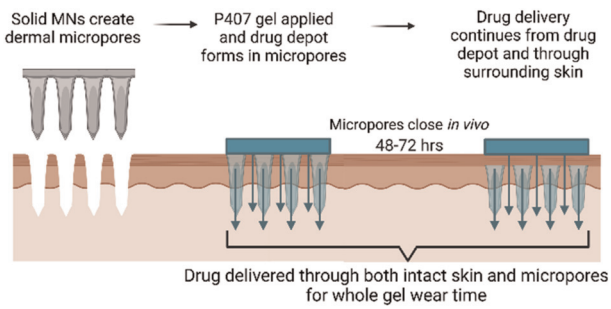

Thermosensitive biomaterial gels with chemical permeation enhancers for enhanced microneedle delivery of naltrexone for managing opioid and alcohol dependency

Kevin V. Tobin and Nicole K. Brogden*

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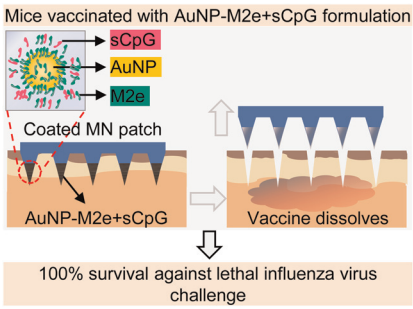
Delivery of gold nanoparticle-conjugated M2e influenza vaccine in mice using coated microneedles

Lazar D. Nesovic, Carsen J. Roach, Gaurav Joshi and Harvinder Singh Gill*



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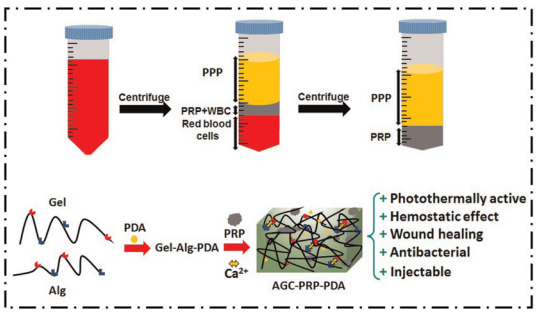
Engineering a platelet-rich plasma-based multifunctional injectable hydrogel with photothermal, antibacterial, and antioxidant properties for skin regeneration

Vajihe Alinezhad, Kimia Esmaeilzadeh, Hadi Bagheri, Habib Zeighami, Ali Kalantari-Hesari, Rahim Jafari, Pooyan Makvandi, Yi Xu, Hamidreza Mohammadi, Mohammad-Ali Shahbazi and Aziz Maleki*



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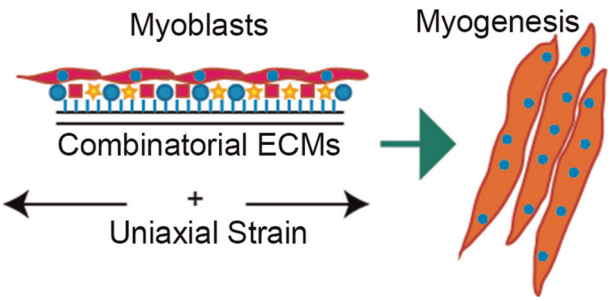
Combinatorial extracellular matrix cues with mechanical strain induce differential effects on myogenesis *in vitro*

Alex H. P. Chan, Ishita Jain, Beu P. Oropeza, Tony Zhou, Brandon Nelsen, Nicholas A. Geisse and Ngan F. Huang*



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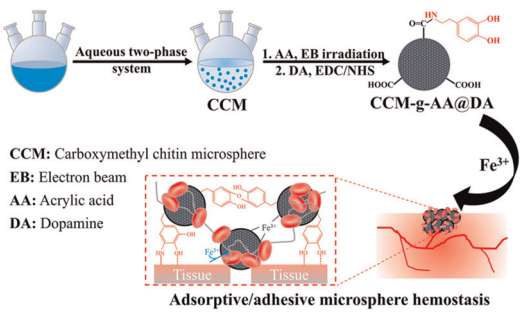
Electron beam irradiation modified carboxymethyl chitin microsphere-based hemostatic materials with strong blood cell adsorption for hemorrhage control

Fan Leng, Taotao Li, Tongfei Li, Cong Xie* and Xulin Jiang*



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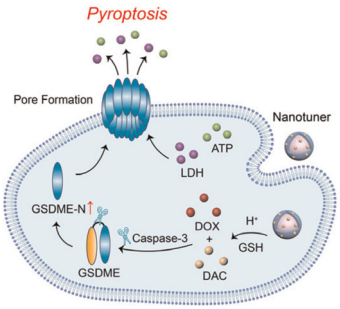

Metal–organic-framework-based pyroptosis nanotuner with long blood circulation for augmented chemotherapy

Weichu Zhu, Jian Xu, Xianxian Yao, Shuting Mai, Dan Shu and Wuli Yang*

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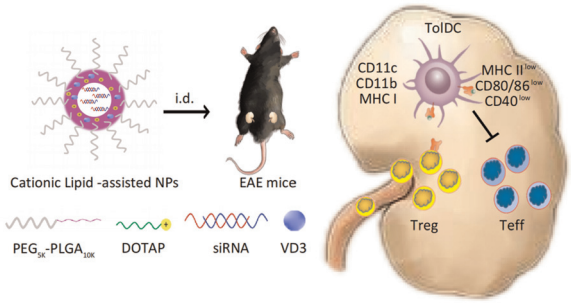

Co-delivery of vitamin D3 and Lkb1 siRNA by cationic lipid-assisted PEG-PLGA nanoparticles to effectively remodel the immune system *in vivo*

Haochuan Liu, Yuning Zhang, He Li, Xue Gao, Jialiang Wang, Xiuxiu Cong, Yanbao Xin, Qingsan Zhu, Bing Chen,* Yong-Guang Yang and Tianmeng Sun*

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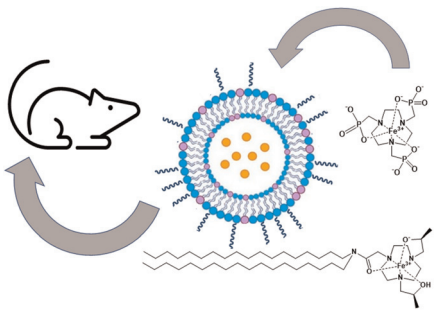

Liposomal MRI probes containing encapsulated or amphiphilic Fe(III) coordination complexes

Md Saiful I. Chowdhury, Elizabeth A. Kras, Steven G. Turowski, Joseph A. Spernyak and Janet R. Morrow*

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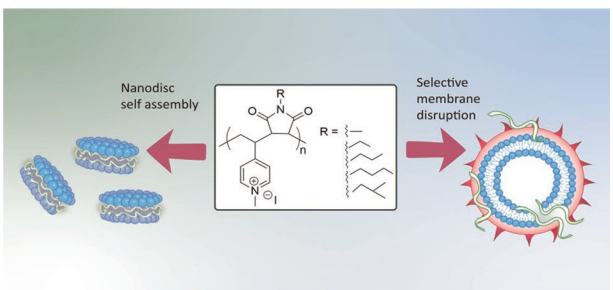

Membrane interaction and selectivity of novel alternating cationic lipid-nanodisc assembling polymers

Michelle D. Farrelly, Jiali Zhai, Alice Y. J. Tiong, Leonie van 't Hag, Heidi H. Yu, Jian Li, Lisandra L. Martin* and San H. Thang*

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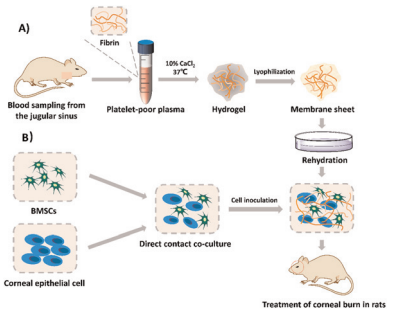
Plasma fibrin membranes loaded with bone marrow mesenchymal stem cells and corneal epithelial cells promote corneal injury healing *via* attenuating inflammation and fibrosis after corneal burns

Liqun Song, Xue Yang and Huifei Cui*



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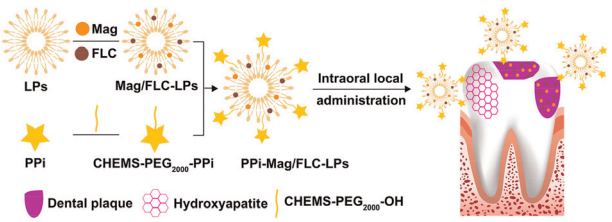
Biomineral-binding liposomes with dual antibacterial effects for preventing and treating dental caries

Zhongling Luo, Yan Lin, Xiaoling Zhou, Lingling Yang, Zijun Zhang, Zerong Liu, Meiling Zhou, Jun Jiang, Jianming Wu, Zhongbing Liu,* Pei Jing* and Zhirong Zhong*



PPi-Mag/FLC-LPs : PPi-modified biomineral-binding liposomes co-loaded with Mag and FLC