



GOLD  
OPEN  
ACCESS

# EES Solar

Exceptional research on solar  
energy and photovoltaics



Part of the EES family

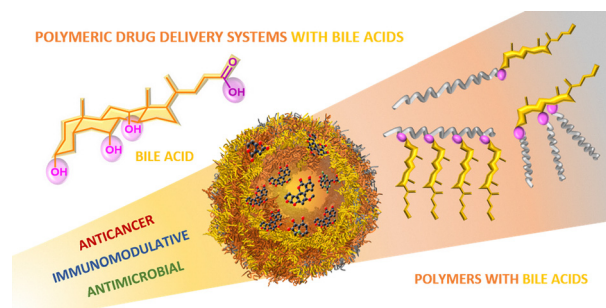
**Join** | Publish with us  
**in** | [rsc.li/EESSolar](https://rsc.li/EESSolar)

## REVIEWS

3947

### Therapeutic potential of bile acids and synthetic strategies of their incorporation into polymeric drug delivery systems

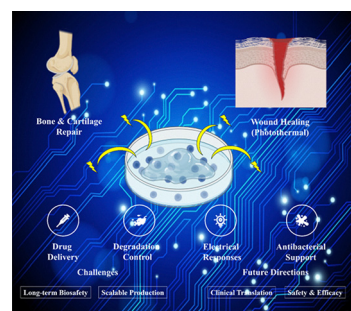
Dawid Szymczuk, Agnieszka Z. Wilczewska, Katarzyna Niemirowicz-Laskowska, Pawel Misiak, Ryszard Lazny and Karolina H. Markiewicz\*



3972

### MXene-loaded hydrogels for tissue regeneration: a review of recent advances and future perspectives

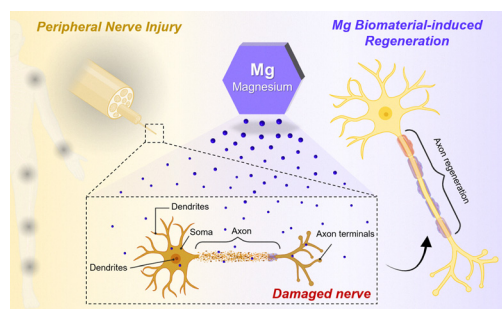
Satheesh Selvaraj, Rajasekaran Subbarayan, Ankush Chauhan,\* Majid Jabir and Suresh Ghotekar\*



3994

### The emerging role of magnesium in peripheral nerve regeneration: biomaterial design, mechanistic basis, and translational barriers

Khandoker Asiqur Rahaman, Yuna Jung, Md Lemon Hasan, Akhmad Irhas Robby, Shihab Uddin\* and Hyung-Seop Han\*

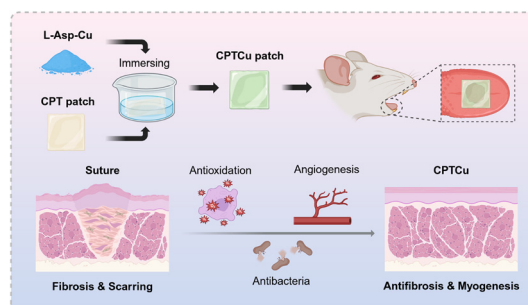


## PAPERS

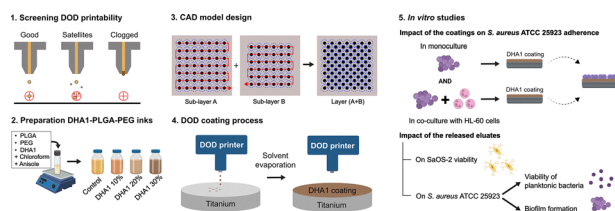
4018

### Sustained copper-releasing adhesive hydrogel patch promotes optimized scarless tongue wound healing via antioxidative, angiogenic and antifibrotic synergy

Yutang Ding, Kun Tang, Yuheng Zhang, Linxin Yang, Binjing Zhang, Xin Zhang\* and Jian Wang\*



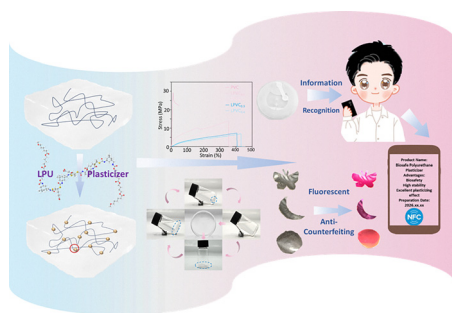
4037



## Drop-on-demand antimicrobial printed coatings loaded with a dehydroabiatic acid derivative to prevent orthopedic implant infections

David Martínez-Pérez, Inés Reigada, Jayendra Z. Patel, Jari Yli-Kauhaluoma, Leena Hanski, Michał Srebrzynski, Maciej Szychalski, Emilia Choińska, Adyary Fallarero and Wojciech Świążkowski\*

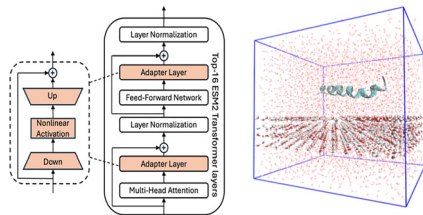
4048



## Bio-based macromolecular polythiourethane plasticizers enable sustainable and migration-resistant flexible films for intelligent packaging

Hong-Long Zheng, Wen-Tao Wang, Ting Liu, Ke Ma, En Zheng, Wen-Wu Zhang, Ke-Zheng Chen\* and Sheng-Lin Qiao\*

4059

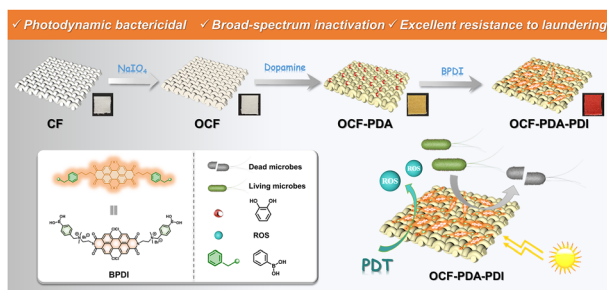


Integrate protein language model & molecular dynamics simulations to discover antifreezing peptides

## Discovering naturally occurring antifreeze peptides from microbiome by integrating protein language models and molecular dynamics simulation

Ibrahim A. Imam, Trevor Morey, Yuexu Jiang, Duolin Wang, Dong Xu and Qing Shao\*

4070



## Antimicrobial cotton fabrics modified with a cationic perylene diimide derivative for durable and superior sterilization

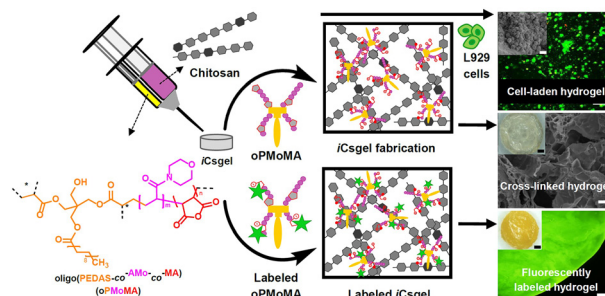
Jia Yin, Yuanyuan Zhu, Meiqi Li, Yuxin Ren, Yuze Wang, Wenhua Jia, Jiaying Miao, Ling Li\* and Yanli Tang\*



4080

## Injectable oligomer-cross-linked chitosan hydrogels for biomedical applications

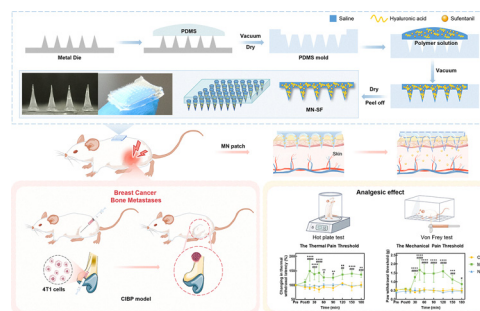
Iram Maqsood,\* Hafiz Awais Nawaz, Ketpat Vejjasilpa, Caroline Kohn-Polster, Jan Krieghoff, Alexandra Springwald, Michaela Schulz-Siegmund and Michael C. Hacker\*



4098

## Construction of soluble sufentanil microneedles and their analgesic effects in a mouse model of cancer pain

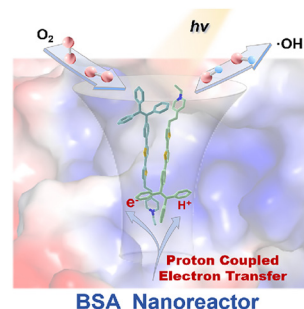
Ayang Zhao, Yueyue Gao, Ao Zhang, Yuting Rong, Guibo Fan, Rui Xin, Sixun Chen, Liangcan He\* and Sihua Qi\*



4113

## BSA-mediated proton-coupled electron transfer to unlock the photogeneration of hydroxyl radicals in cancer cells

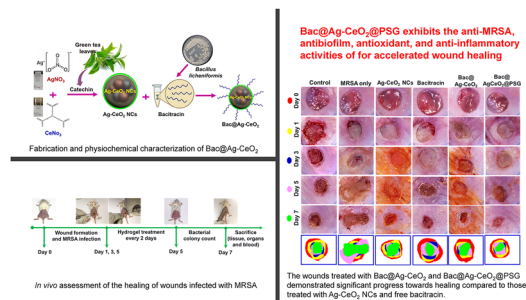
Guiyan Xu, Yingyong Ni,\* Xiaojiao Zhu,\* Xuan Zhao, Ting Wang, Shengyu Shi, Jianhua Yu, Qiong Zhang, Xingxing Chen and Hongping Zhou\*



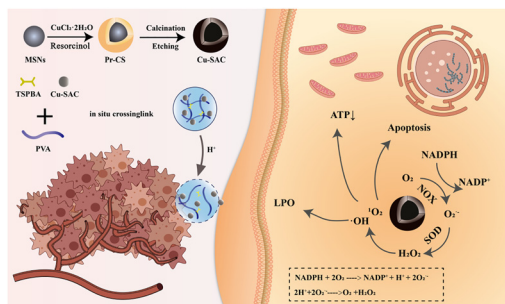
4125

## Green synthesis of a bacitracin@Ag-CeO<sub>2</sub> nanocomposite@hydrogel for dual antibiofilm and anti-inflammatory therapy against MRSA wound infections

Raman Krishnamoorthi, Chien-Yu Hsiao, Yi-Ping Chou, Abdullah Alshetaili, Pambayan Ulagan Mahalingam and Jia-You Fang\*



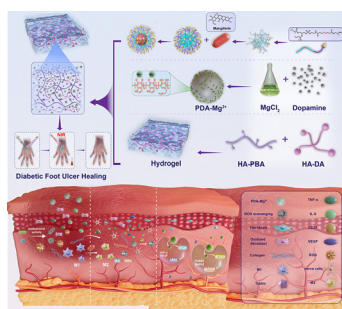
4144



### A dual responsive hydrogel with a single-atom copper nanodrug for precision and sustained tumor therapy

Zhaomin Tang,\* Yaning Ou, Yudong Wang, Kanglin Chen, Wenxin Liao, Junbo Song, Yuhua Xiang, Pinjia Zhong, Dongliang He, Donglian Liu\* and Qiuye Jin\*

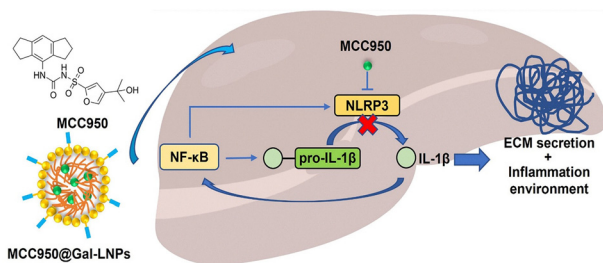
4158



### A microenvironment-responsive hydrogel with photothermal, antioxidant, and neuroregenerative functions for diabetic chronic infectious wound healing

Zan Chen, Ye Wu, Heng Gong, Yunfeng Tang, Dong Wang, Zhen Wang, Ye Wang, Guanglin Wang, Wei Lin, Renliang Zhao,\* Cheng Zheng\* and Xiangtian Deng\*

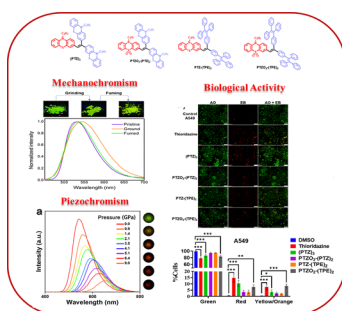
4173



### Galactose-decorated lipid nanoparticle-mediated delivery of a selective NLRP3 inhibitor attenuates hepatic inflammation in metabolic dysfunction-associated steatotic liver disease

Chunyan Niu,\* Wen Gao, Mei Tan, Yue Chen, Yongqiang Shi, Yan Geng, Huayi Tao, Zhenjiang Xu, Tingting Zhang and Jinming Yang\*

4183



### Stimuli-responsive phenothiazine–tetraphenyl-ethylene hybrid luminogens: mechano- and piezochromic properties with anticancer applications

Ramakant Gavale, Siddharth Singh, Faizal Khan, Srima Mukherjee, Jiayi Yang, Guanjuan Xiao,\* Bo Zou, Hem Chandra Jha\* and Rajneesh Misra\*



## CORRECTIONS

4195

**Correction: Au/Mn nanodot platform for *in vivo* CT/MRI/Fl multimodal bioimaging and photothermal therapy against tongue cancer**

Zhe Yang, Yueqi Zhao, Yang Li, Lei Song, Yangliu Lin, Kaimeng Liu, Yujia Zhang, Andrei V. Zvyagin, Linan Fang,\* Yuanqing Sun,\* Bai Yang and Quan Lin\*

4197

**Correction: Biodegradable polyurethane nerve conduits functionalized with NDP-MSH-loaded self-assembling peptide hydrogels for peripheral nerve regeneration**

Junhong Li, Jinghan Wang, Xirui Long, Jingjing Lin, Mi Su, Chang Ding, Rongxu Lin, Feng Luo, Jiehua Li, Yanhui Liu, Yanchao Wang\* and Hong Tan

