

# Nanoscale Horizons

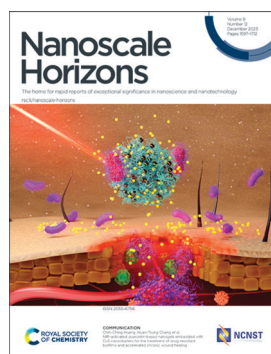
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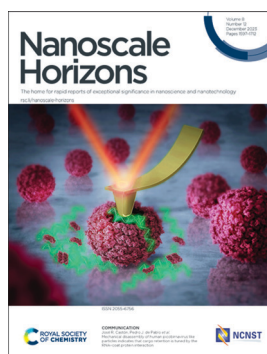
## IN THIS ISSUE

ISSN 2055-6756 CODEN NHAOAW 8(12) 1597–1712 (2023)



### Cover

See Chih-Ching Huang, Huan-Tsung Chang *et al.*, pp. 1652–1664. Image reproduced by permission of Chih-Ching Huang from *Nanoscale Horiz.*, 2023, 8, 1652.



### Inside cover

See José R. Castón, Pedro J. de Pablo *et al.*, pp. 1665–1676. Image reproduced by permission of María J. Rodríguez Espinosa and Pedro J. de Pablo from *Nanoscale Horiz.*, 2023, 8, 1665.

## EDITORIALS

1604

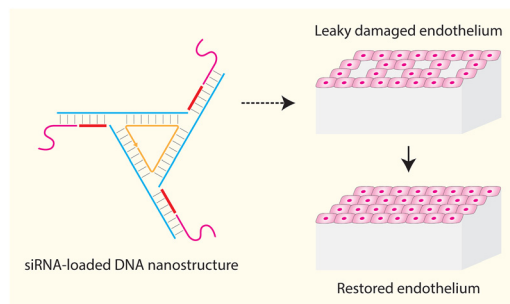
**Nanoscale Horizons Emerging Investigator Series:**  
Dr Ahu Gümrah Dumanli-Parry, University of Manchester, UK



1606

**siRNA-loaded DNA nanostructures restore endothelial leakiness**

Arun Richard Chandrasekaran\*



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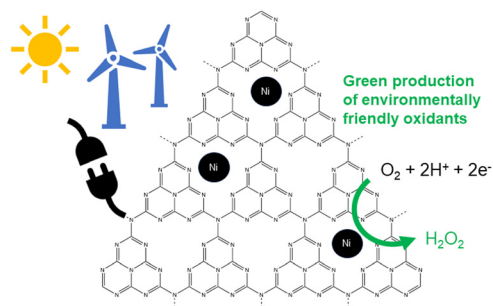


## EDITORIALS

1608

**Electrifying  $\text{H}_2\text{O}_2$  synthesis with g- $\text{C}_3\text{N}_4$ -based single atom catalysts**

Jungki Ryu\*

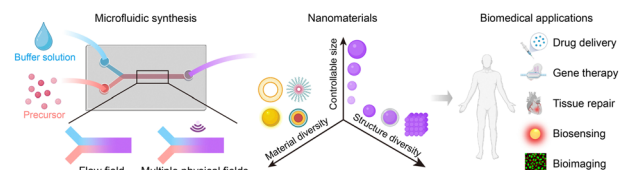


## REVIEWS

1610

**Microfluidic synthesis of nanomaterials for biomedical applications**

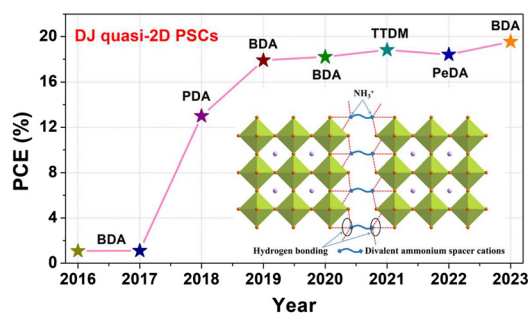
Yanjuan Huang, Chao Liu, Qiang Feng\* and Jiashu Sun\*



1628

**The rise of quasi-2D Dion–Jacobson perovskites for photovoltaics**

Jieyi Chen, Zihao Zhai,\* Qi Liu and Huiqiong Zhou\*

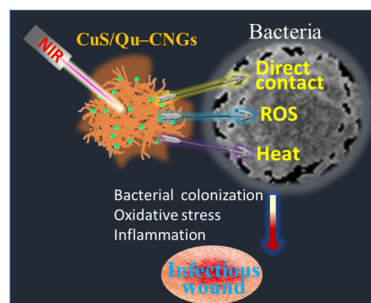


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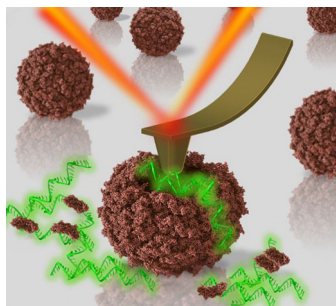
1652

**NIR-activated quercetin-based nanogels embedded with CuS nanoclusters for the treatment of drug-resistant biofilms and accelerated chronic wound healing**

Amit Nain, Yu-Ting Tseng, Akash Gupta, Yu-Feng Lin, Sangili Arumugam, Yu-Fen Huang, Chih-Ching Huang\* and Huan-Tsung Chang\*



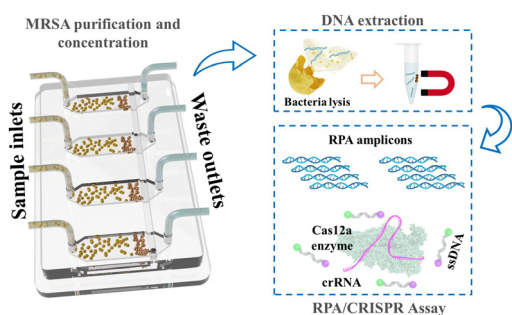
1665



### Mechanical disassembly of human picobirnavirus like particles indicates that cargo retention is tuned by the RNA-coat protein interaction

María J. Rodríguez-Espinosa, Javier M. Rodríguez, José R. Castón\* and Pedro J. de Pablo\*

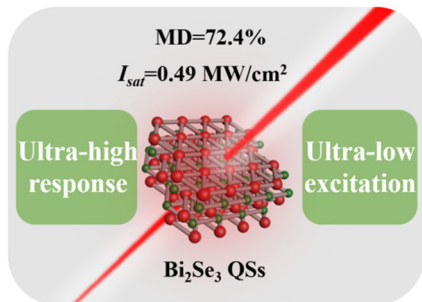
1677



### Pneumatic nano-sieve for CRISPR-based detection of drug-resistant bacteria

Ruonan Peng, Xinye Chen, Fengjun Xu, Richard Hailstone, Yujie Men and Ke Du\*

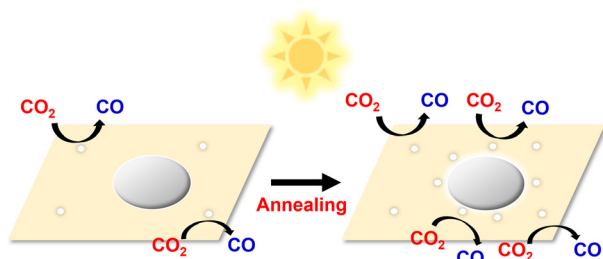
1686



### Quantum-sized topological insulators/semimetals enable ultrahigh and broadband saturable absorption

Zhexue Chen, Xinyu Sui, Zhangqiang Li, Yueqi Li, Xinfeng Liu and Yong Zhang\*

1695



### Defect engineering enhances plasmonic-hot electrons exploitation for CO<sub>2</sub> reduction over polymeric catalysts

Hang Yin, Zhehao Sun, Kaili Liu, Ary Anggara Wibowo, Julien Langley, Chao Zhang, Sandra E. Saji, Felipe Kremer, Dmitri Golberg, Hieu T. Nguyen, Nicholas Cox and Zongyou Yin\*



1700

# A selenoureido-iminoglycolipid transported by zeolitic-imidazolate framework nanoparticles: a novel antioxidant therapeutic approach

Fátima Guerrero, Andrés Carmona, Victoria Vidal, Ana Franco, Alejandro Martín-Malo, Elena M. Sánchez-Fernández\* and Carolina Carrillo-Carrión\*

