

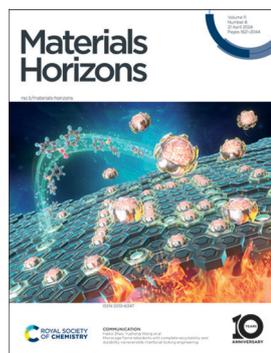
Materials Horizons

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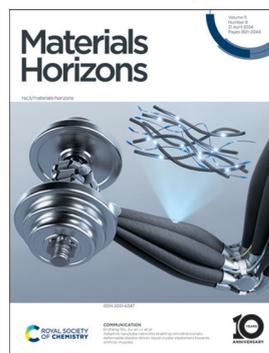
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ISSN 2051-6347 CODEN MHAOAL 11(8) 1821-2044 (2024)



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See Haibo Zhao, Yuzhong Wang *et al.*, pp. 1867–1876. Image reproduced by permission of Haibo Zhao from *Mater. Horiz.*, 2024, 11, 1867.



Inside cover

See Enzheng Shi, Jiu-an Lv *et al.*, pp. 1877–1888. Image reproduced by permission of Jiu-an Lv from *Mater. Horiz.*, 2024, 11, 1877.

EDITORIAL

1830

Materials Horizons Emerging Investigator Series: Professor Zhengbao Yang, Hong Kong University of Science and Technology

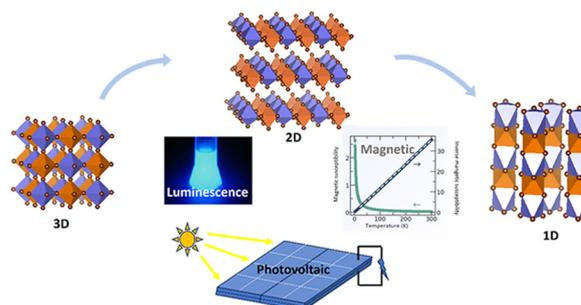


COMMENTARY

1832

A reflection on 'The synthesis, structure and electronic properties of a lead-free hybrid inorganic–organic double perovskite (MA)₂KBiCl₆ (MA = methylammonium)'

Anthony K. Cheetham,* Paul D. Bristowe, Satoshi Tominaka and Fengxia Wei



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Fundamental questions
Elemental answers

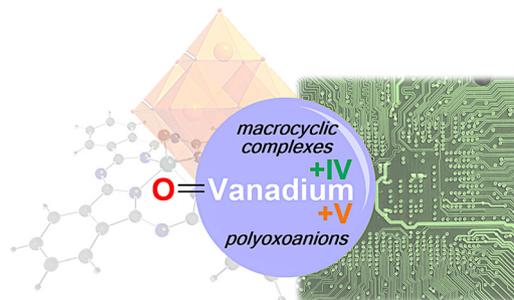


OPINION

1838

Oxovanadium electronics for in-memory, neuromorphic, and quantum computing applications

Kirill Yu. Monakhov*

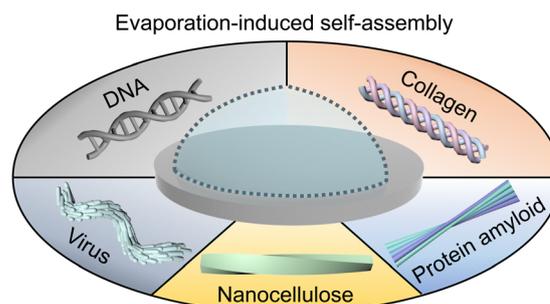


REVIEW

1843

Evaporation-induced self-assembly of liquid crystal biopolymers

Soon Mo Park and Dong Ki Yoon*

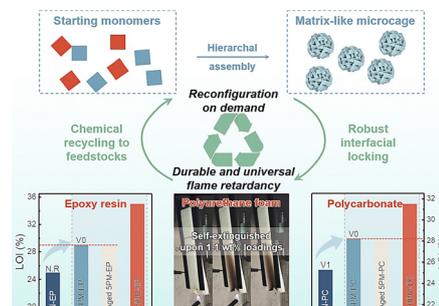


COMMUNICATIONS

1867

Microcage flame retardants with complete recyclability and durability via reversible interfacial locking engineering

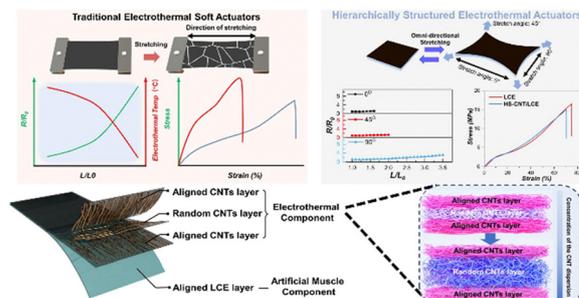
Furong Zeng, Lei He, Jianwen Ma, Danxuan Fang, Zhiwei Zeng, Tongyu Bai, Rong Ding, Bowen Liu, Haibo Zhao* and Yuzhong Wang*



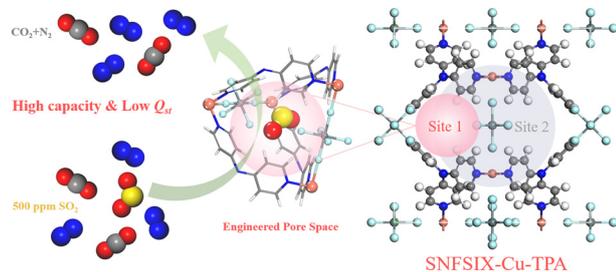
1877

Adaptive nanotube networks enabling omnidirectionally deformable electro-driven liquid crystal elastomers towards artificial muscles

Jiao Wang, Hao Zhou, Yangyang Fan, Wenhao Hou, Tonghui Zhao, Zhiming Hu, Enzheng Shi* and Jiu-an Lv*



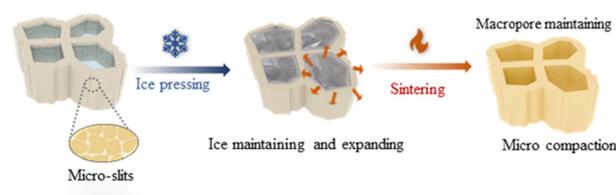
1889



Trace SO₂ capture within the engineered pore space using a highly stable SnF₆²⁻-pillared MOF

Weiwei Li, Can Cheng, Guanqun Gao, Haomiao Xu, Wenjun Huang, Zan Qu* and Naiqiang Yan

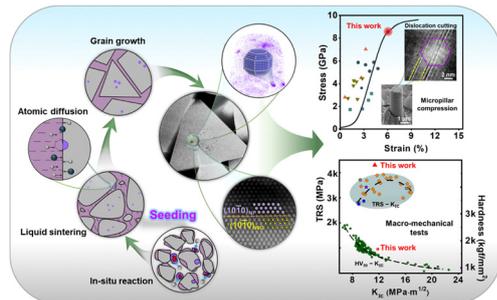
1899



Exploring the Mpemba effect: a universal ice pressing enables porous ceramics

Xiaodan Yang, Yao Shan, Ying Hong, Zhuomin Zhang, Shiyuan Liu, Xiaodong Yan, Xuetian Gong, Guangzu Zhang and Zhengbao Yang*

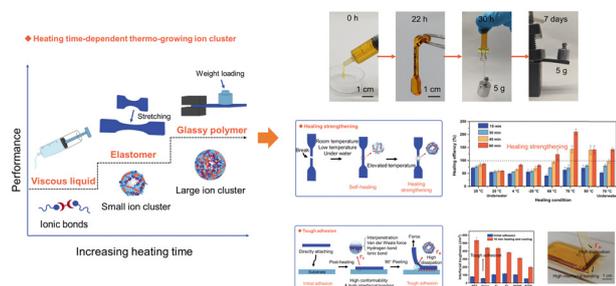
1908



Seeding ductile nanophase in ceramic grains

Chong Zhao, Hao Lu,* Haibin Wang, Xuemei Liu, Zhigang Zak Fang,* Chao Hou and Xiaoyan Song*

1923



Thermo-growing ion clusters enabled healing strengthening and tough adhesion for highly reliable skin electronics

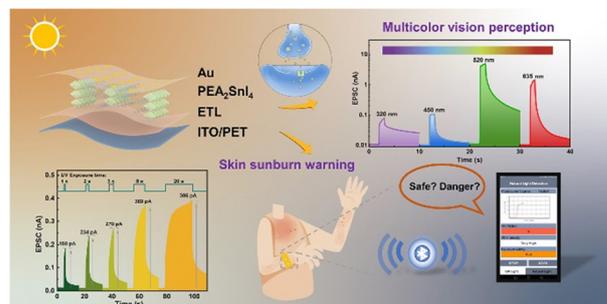
Song Chen, Xinyu Chen, Kaiying Luo, Wenwei Yang, Xueling Yan and Lan Liu*



1934

Multicolor vision perception of flexible optoelectronic synapse with high sensitivity for skin sunburn warning

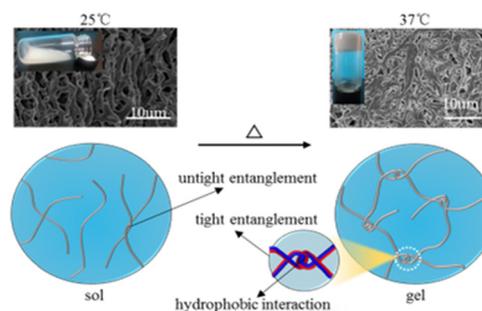
Yaqian Yang, Ying Li,* Di Chen and Guozhen Shen*



1944

Injectable extracellular matrix-mimetic hydrogel based on electrospun Janus fibers

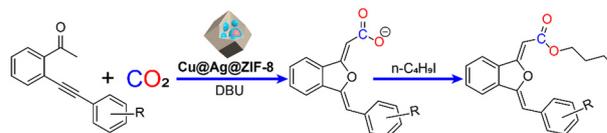
Jinzhong Zhang, Xiaolong Zha,* Gengxin Liu, Huipeng Zhao, Xiaoyun Liu* and Liusheng Zha*



1957

Hierarchical surface-modification of nano-Cu toward one pot H-transfer-coupling–cyclization–CO₂ fixation tandem reactions

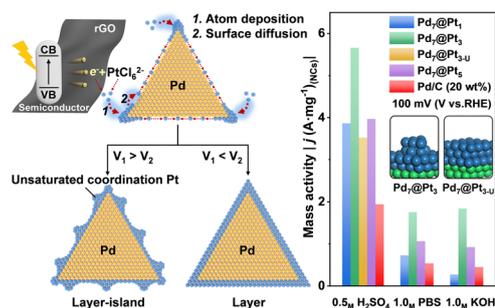
Zhi-Qiang Wang, ChengHua Deng, Bo Li, Hai-Qiang Luo, Peng Hao, Xiao Liu,* Jian-Gong Ma* and Peng Cheng



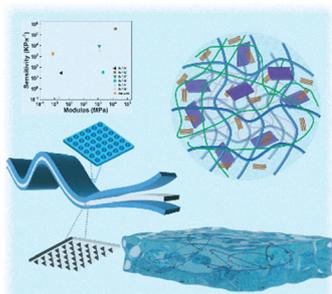
1964

Photochemical engineering unsaturated Pt islands on supported Pd nanocrystals for a robust pH-universal hydrogen evolution reaction

Yidan Liu, Nuttapon Yodsin, Ting Li, Haocheng Wu, Rongrong Jia, Liyi Shi,* Zhuangchai Lai,* Supawadee Namuangruk* and Lei Huang*



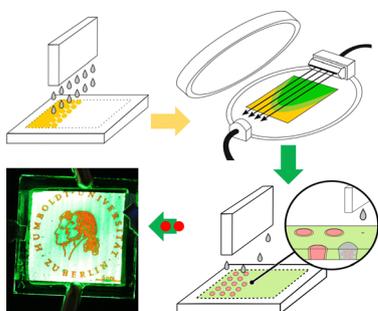
1975



An ultra-soft conductive elastomer for multifunctional tactile sensors with high range and sensitivity

Ao Yin, Ruiguang Chen, Rui Yin, Shiqiang Zhou, Yang Ye, Yuxin Wang, Peike Wang, Xue Qi, Haipeng Liu, Jiang Liu, Suzhu Yu* and Jun Wei*

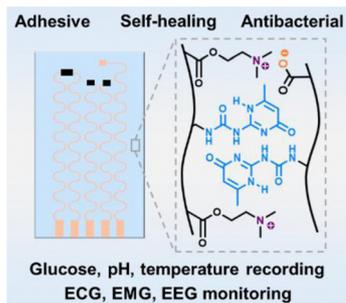
1989



Bicolour, large area, inkjet-printed metal halide perovskite light emitting diodes

Vincent R. F. Schröder, Nicolas Fratzscher, Nicolas Zorn Morales, Daniel Steffen Rühl, Felix Hermerschmidt,* Eva L. Unger and Emil J. W. List-Kratochvil*

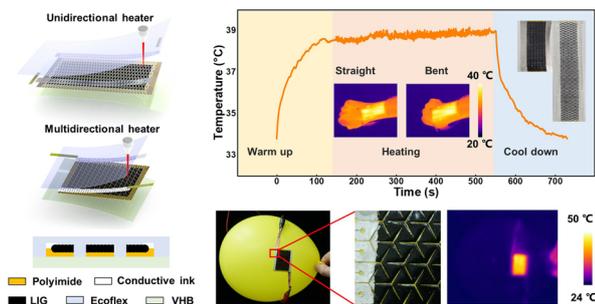
1997



Skin-adhesive and self-healing diagnostic wound dressings for diabetic wound healing recording and electrophysiological signal monitoring

Zishuo Hou, Tengjiao Wang,* Lei Wang, Junjie Wang, Yong Zhang, Qian Zhou, Zhengheng Zhang, Peng Li* and Wei Huang*

2010



Kirigami-enabled stretchable laser-induced graphene heaters for wearable thermotherapy

Junyu Chen, Yichao Shi, Binbin Ying, Yajie Hu, Yan Gao, Sida Luo* and Xinyu Liu*

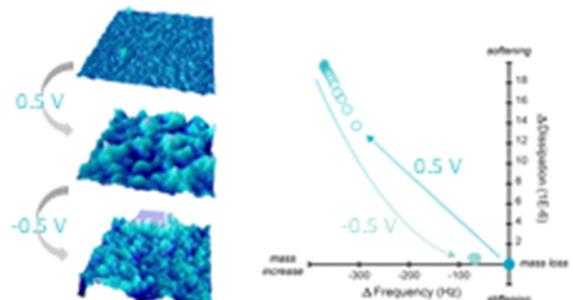


COMMUNICATIONS

2021

Electrochemical modulation of mechanical properties of glycolated polythiophenes

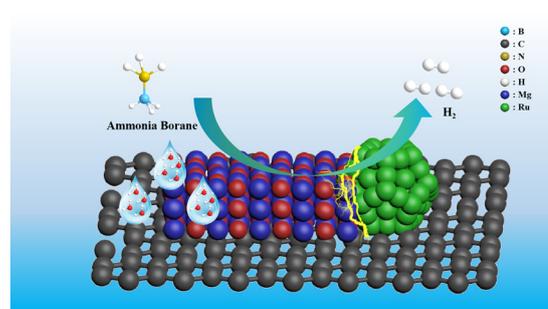
Ilaria Abdel Aziz, Johannes Gladisch, Chiara Musumeci, Maximilian Moser, Sophie Griggs, Christina J. Kousseff, Magnus Berggren, Iain McCulloch and Eleni Stavrinidou*



2032

Engineering a hollow bowl-like porous carbon-confined Ru–MgO hetero-structured nanopair as a high-performance catalyst for ammonia borane hydrolysis

Jialei Yang, Zhenyu Yang, Jiafu Li, Hao Gang, Donghai Mei, Dongming Yin, Ruiping Deng, Yifeng Zhu, Xingyun Li,* Ning Wang,* Sameh M. Osman and Yusuke Yamauchi



CORRECTION

2041

Correction: Exploring the Mpemba effect: a universal ice pressing enables porous ceramics

Xiaodan Yang, Yao Shan, Ying Hong, Zhuomin Zhang, Shiyuan Liu, Xiaodong Yan, Xuétian Gong, Guangzu Zhang and Zhengbao Yang*

