

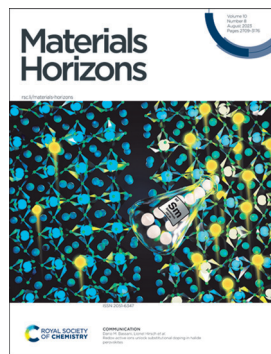
Materials Horizons

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ISSN 2051-6347 CODEN MHAOAL 10(8) 2709-3176 (2023)



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EDITORIALS

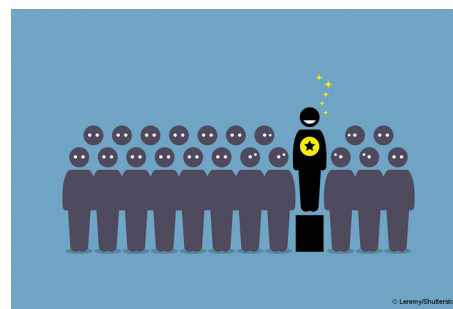
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Materials Horizons Emerging Investigator Series: Professor Derek Ho, City University of Hong Kong, China



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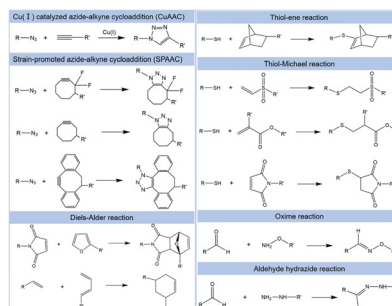


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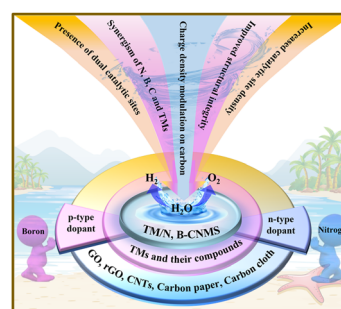
Lei Nie,* Yanfang Sun, Oseweuba Valentine Okoro, Yaling Deng,* Guohua Jiang and Amin Shavandi*



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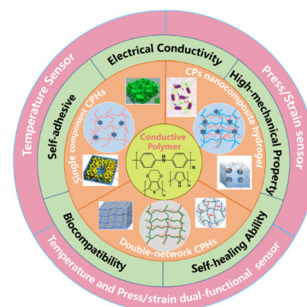
Ayaz Muzammil, Rizwan Haider, Wenrui Wei, Yi Wan, Muhammad Ishaq, Muhammad Zahid,* Waleed Yaseen and Xianxia Yuan*



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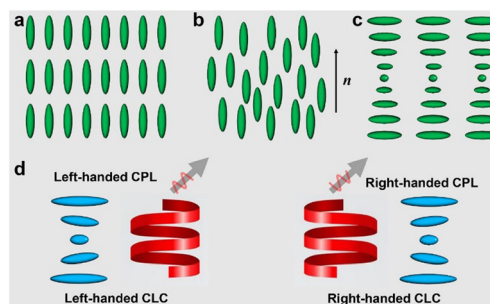
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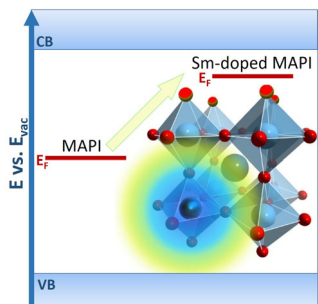
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Bioinspired humidity-responsive liquid crystalline materials: from adaptive soft actuators to visualized sensors and detectors

Ruochen Lan,* Wenbo Shen, Wenhuan Yao, Jingyu Chen, Xinyu Chen and Huai Yang*



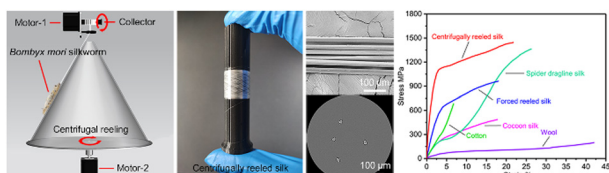
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Redox-active ions unlock substitutional doping in halide perovskites

Zuzanna Molenda, Bastien Politi, Raphaël Clerc, Mamatimin Abbas, Sylvain Chambon, Dario M. Bassani* and Lionel Hirsch*

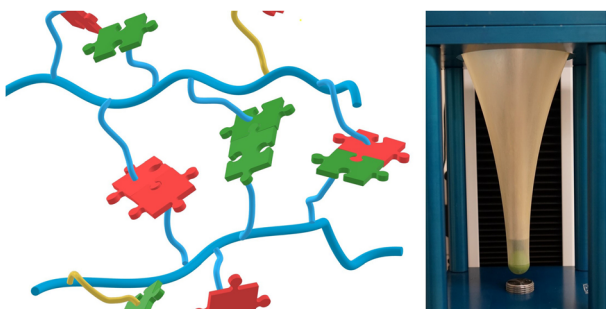
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High-performance artificially reeled silkworm silk via a multi-task and high-efficiency centrifugal reeling technique and its application in soft actuators

Teng Hou, Xianglong Li, Shu Liu, Jing Zhou, Yujing Bian, Lele Zhou, Mingbo Sun, Wenlong Zhou and Bin Yang*

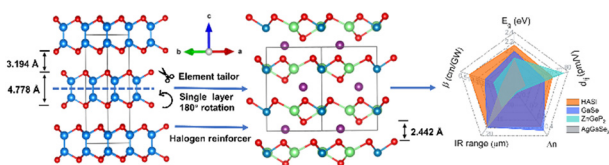
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Puncture-resistant self-healing polymers with multi-cycle adhesion and rapid healability

Bingrui Li, Sirui Ge, Sheng Zhao, Kunyue Xing, Alexei P. Sokolov, Peng-Fei Cao* and Tomonori Saito*

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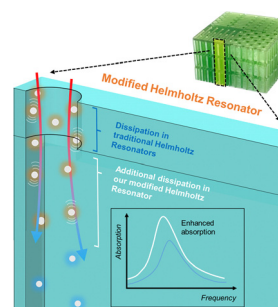
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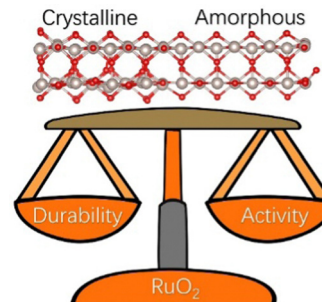
Xinwei Li, Xiang Yu, Jun Wei Chua and Wei Zhai*



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Order-disorder engineering of RuO₂ nanosheets towards pH-universal oxygen evolution

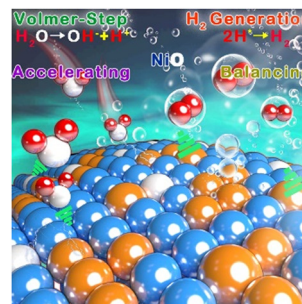
Yu Zhang, Yuefeng Zhang, Zhiyuan Zeng* and Derek Ho*



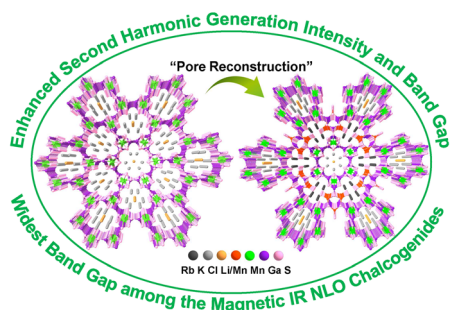
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Fei Guo, Zeyi Zhang, Runzhe Chen, Yangyang Tan, Wei Wu, Zichen Wang, Tang Zeng, Wangbin Zhu, Caixin Lin and Niancai Cheng*



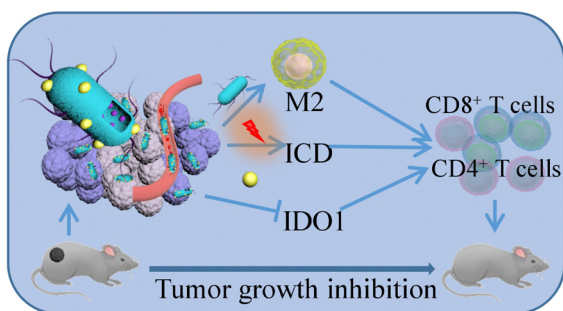
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Shao-Min Pei, Bin-Wen Liu,* Wen-Fa Chen, Xiao-Ming Jiang and Guo-Cong Guo*

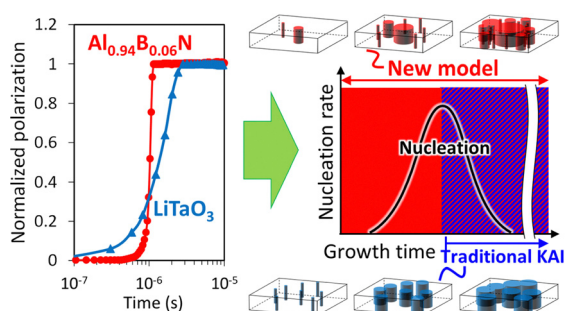
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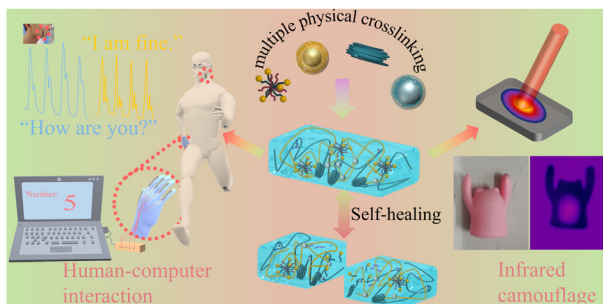
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Keisuke Yazawa,* John Hayden, Jon-Paul Maria, Wanlin Zhu, Susan Trolier-McKinstry, Andriy Zakutayev and Geoff L. Brennecke*

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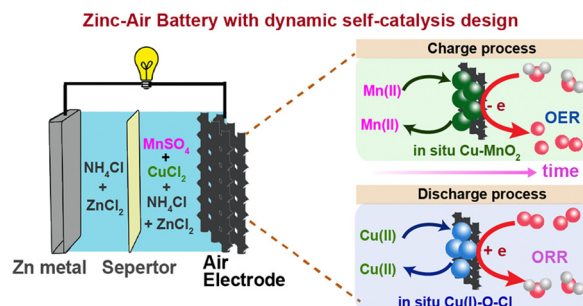


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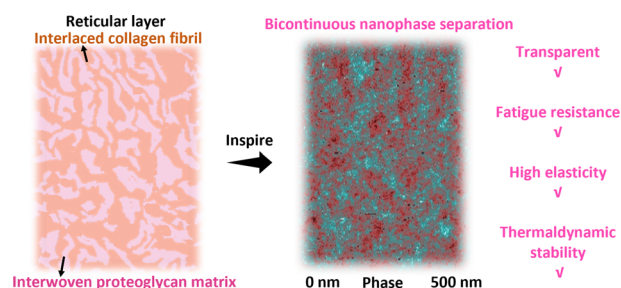
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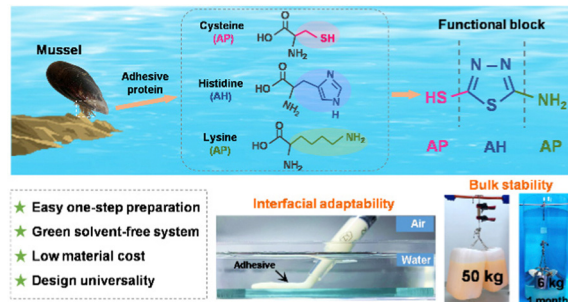
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Achieving strong, stable, and durable underwater adhesives based on a simple and generic amino-acid-resembling design

Feng Li, Jiaying Mo, Zhicheng Zhang, Sheldon. Q. Shi, Jianzhang Li,* Jinfeng Cao* and Zuankai Wang*

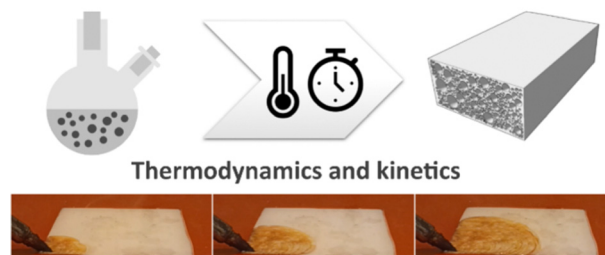


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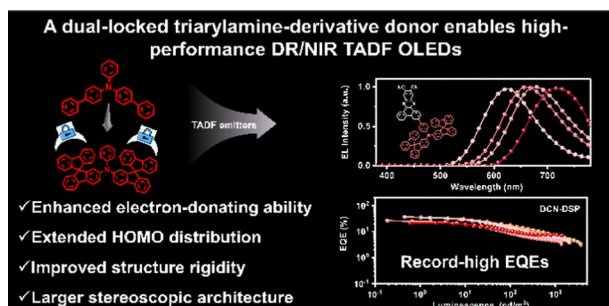
Frontally polymerized foams: thermodynamic and kinetical aspects of front hindrance by particles

Petr Lepcio, John Daguerre-Bradford, Anna Maria Cristadoro, Markus Schuette and Alan J. Lesser*

Particles hindering front propagation in foams



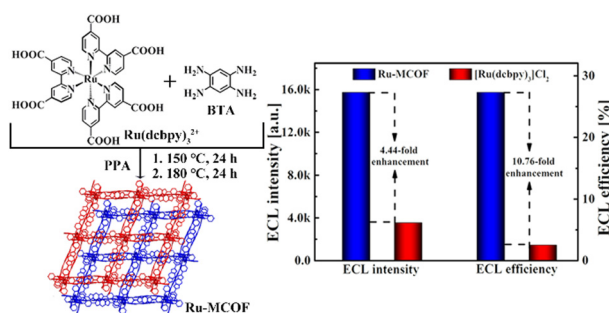
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A dual-locked triarylamine donor enables high-performance deep-red/NIR thermally activated delayed fluorescence organic light-emitting diodes

Hui Wang, Jia-Xiong Chen, Lu Zhou, Xi Zhang, Jia Yu, Kai Wang* and Xiao-Hong Zhang*

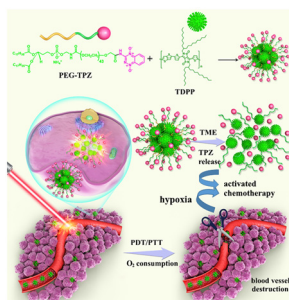
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Highly stable Ru-complex-based metal-covalent organic frameworks as novel type of electrochemiluminescence emitters for ultrasensitive biosensing

Yang Yang, Haicheng Jiang, Jialu Li, Jialing Zhang, Shu-Zhen Gao, Mei-Ling Lu, Xin-Yue Zhang, Wenbin Liang, Xiaoqin Zou,* Ruo Yuan* and Dong-Rong Xiao*

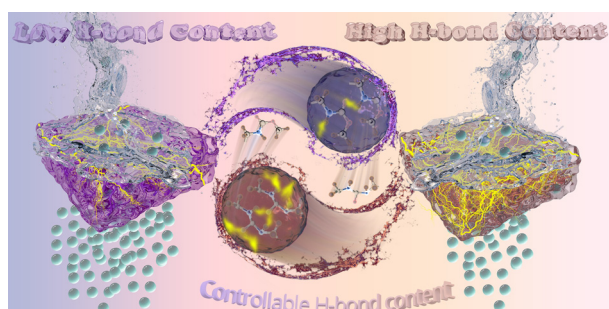
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Tumor-microenvironment-responsive poly-prodrug encapsulated semiconducting polymer nanosystem for phototherapy-boosted chemotherapy

Jianwei Zhu, Yuning Zhang, Zheng Li, Xiaowen Bao, Yanfeng Zhou, Bo Ma, Ying Xie, Peiyu Yan, Zimei Wu,* Qi Zhang,* Jianhua Zou* and Xiaoyuan Chen*

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Controllable hydrogen-bonded poly(dimethylsiloxane) (PDMS) membranes for ultrafast alcohol recovery

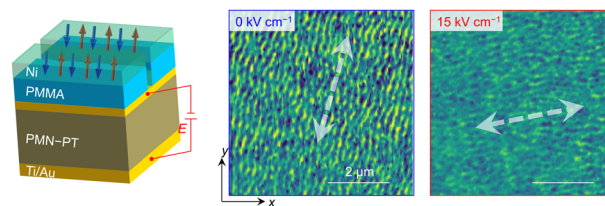
Tengyang Zhu, Jiayu Dong, Huan Liu and Yan Wang*



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Switching magnetic strip orientation using electric fields

Aitian Chen, Hong-Guang Piao,* Chenhui Zhang, Xiao-Ping Ma, Hanin Algaidi, Yinchang Ma, Yan Li, Dongxing Zheng, Ziqiang Qiu and Xi-Xiang Zhang*

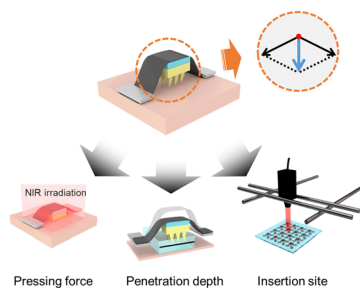


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Microneedle system with light trigger for precise and programmable penetration

Weijiang Yu, Jieze Shen, Chong Ji, Peng Zhang, Hao Chang, Youxiang Wang* and Jian Ji*

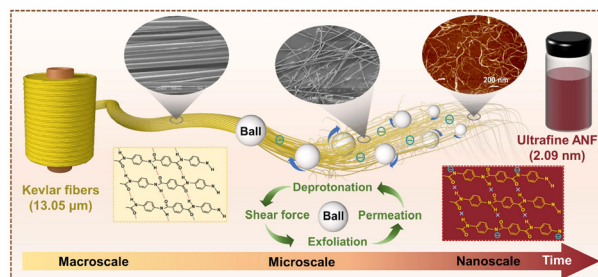
light-triggered microneedle system for controllable insertion



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Ultrafine aramid nanofibers prepared by high-efficiency wet ball-milling-assisted deprotonation for high-performance nanopaper

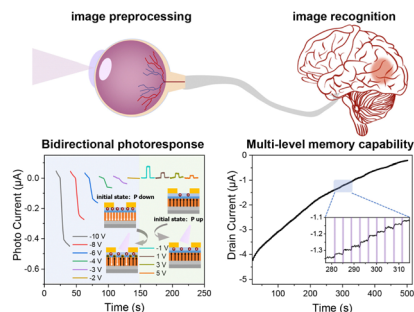
Gaojie Han, Bing Zhou, Zhaoyang Li, Yuezhan Feng,* Chuntai Liu* and Changyu Shen



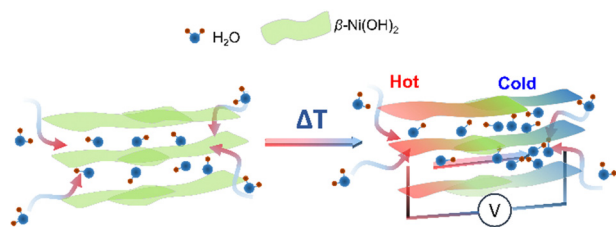
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Integration of image preprocessing and recognition functions in an optoelectronic coupling organic ferroelectric retinomorphing neuristor

Qinyong Dai, Mengjiao Pei, Jianhang Guo, Qijing Wang, Ziqian Hao, Hengyuan Wang, Yating Li, Longfei Li, Kuakua Lu, Yang Yan, Yi Shi* and Yun Li*



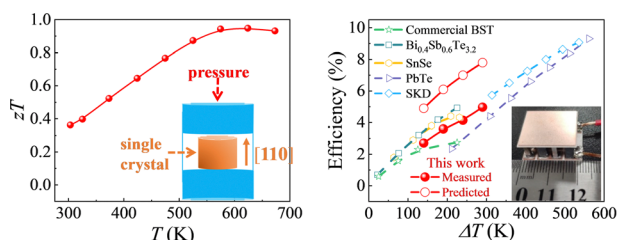
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Application of lamellar nickel hydroxide membrane as a tunable platform for ionic thermoelectric studies

Raktim Gogoi, Arnab Ghosh, Priyamjeet Deka, K. K. R. Datta and Kalyan Raidongia*

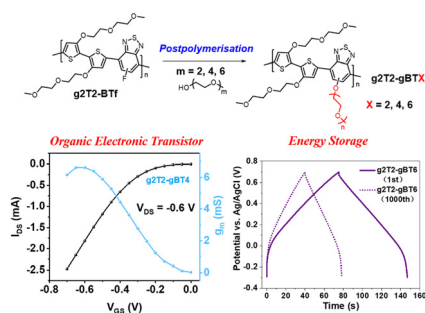
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A boost of thermoelectric generation performance for polycrystalline InTe by texture modulation

Jianghe Feng, Menghui Zhou, Juan Li, Guoying Dong, Shufang Gao,* Erbiao Min, Chuang Zhang, Jiaqing He,* Rong Sun and Ruiheng Liu*

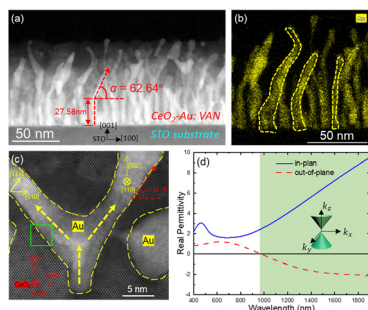
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Tunable control of the performance of aqueous-based electrochemical devices by post-polymerization functionalization

Shengyu Cong, Junxin Chen, Bowen Ding, Liuyuan Lan, Yazhou Wang, Chaoyue Chen, Zhengke Li, Martin Heeney* and Wan Yue*

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Abnormal in-plane epitaxy and formation mechanism of vertically aligned Au nanopillars in self-assembled CeO₂-Au metamaterial systems

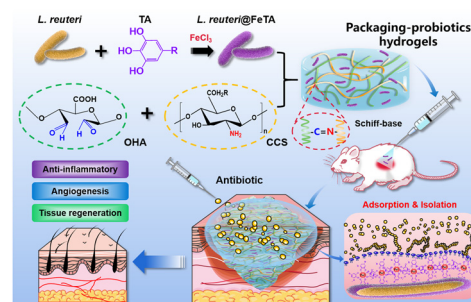
Juanjuan Lu, Di Zhang, Robynne L. Paldi, Zihao He, Ping Lu, Julia Deitz, Ahmad Ahmad, Hongyi Dou, Xuejing Wang, Juncheng Liu, Zedong Hu, Bo Yang, Xinghang Zhang, Anter A El-Azab and Haiyan Wang*



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Metal-phenolic self-assembly shielded probiotics in hydrogel reinforced wound healing with antibiotic treatment

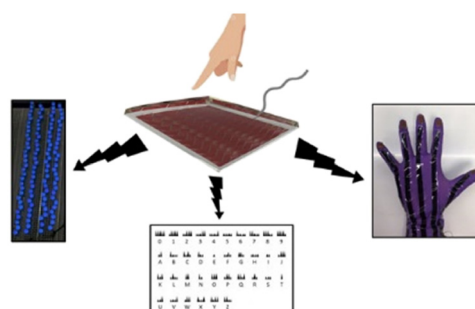
Chen Zhou, Yaping Zou, Ruiling Xu, Xiaowen Han, Zhen Xiang, Hao Guo, Xing Li, Jie Liang, Xingdong Zhang, Yujiang Fan* and Yong Sun*



3124

Flexible triboelectric nanogenerators using transparent copper nanowire electrodes: energy harvesting, sensing human activities and material recognition

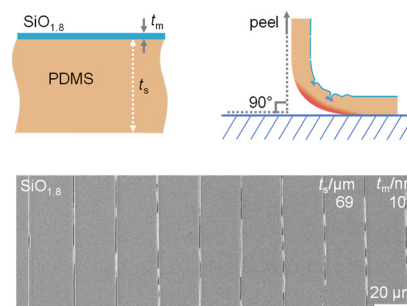
Biswajoy Bagchi, Priyanka Datta, Carmen Salvadores Fernandez, Priya Gupta, Shireen Jaufuraully, Anna L. David, Dimitrios Siassakos, Adrien Desjardins and Manish K. Tiwari*



3135

Periodic fracture behaviour of nanomembranes

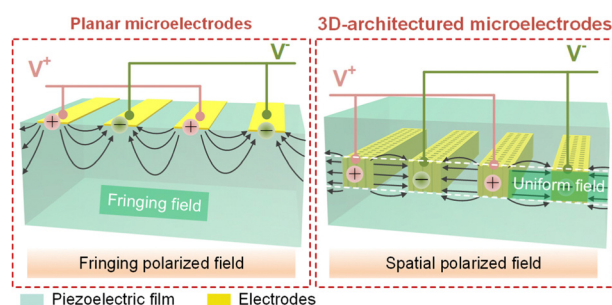
Yancheng Meng, Jianqiang Zhang, Baowen Li, Luxian Li, Qin Wang and Wanlin Guo*



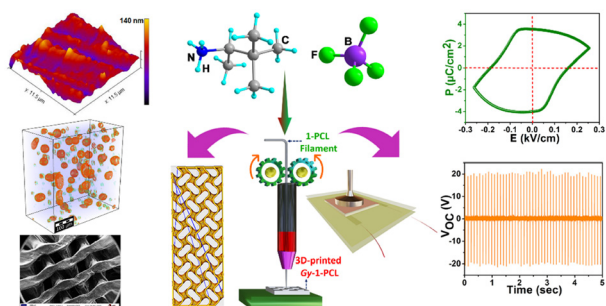
3140

Electrowetting-assisted printing of 3D-architected microelectrodes inside flexible piezoelectric films for sensitive, robust responses to bending deformation

Chao Yan, Xiangming Li,* Zhengjie Yang, Xiaopei Wang, Hao Ran, Ruolin Zhang, Hongmiao Tian, Chunhui Wang, Xiaoliang Chen and Jinyou Shao*



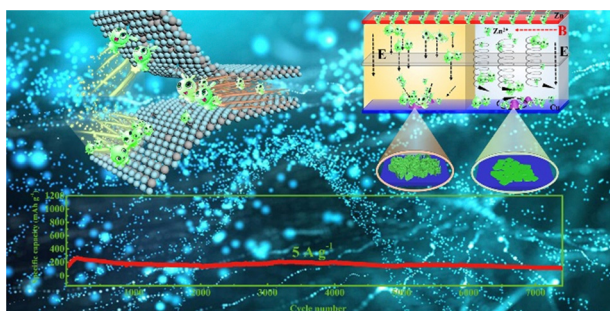
3153



3D-printed polymer composite devices based on a ferroelectric chiral ammonium salt for high-performance piezoelectric energy harvesting

Supriya Sahoo, Premkumar Anil Kothavade, Dipti R. Naphade, Arun Torris, Balu Praveenkumar, Jan K. Zareba,* Thomas D. Anthopoulos,* Kadiravan Shanmuganathan* and Ramamoorthy Boomishankar*

3162



Magneto-electrochemistry driven ultralong-life Zn- VS_2 aqueous zinc-ion batteries

Yunjie Mao, Jin Bai,* Jianguo Si,* Hongyang Ma, Wanyun Li, Peiyao Wang, Hongli Zhang, Zhigao Sheng, Xiaoguang Zhu, Peng Tong, Xuebin Zhu, Bangchuan Zhao* and Yuping Sun

