

# Journal of Materials Chemistry C

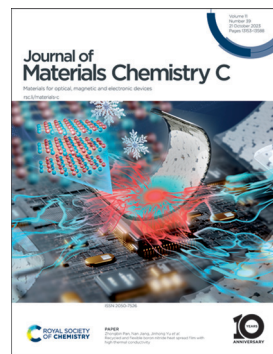
Materials for optical, magnetic and electronic devices

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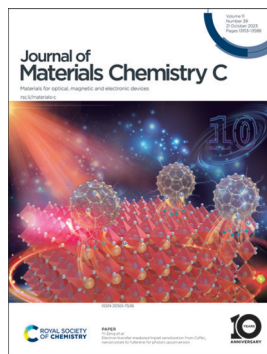
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ISSN 2050-7526 CODEN JMCCCX 11(39) 13153–13588 (2023)



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See Zhongbin Pan, Nan Jiang, Jinhong Yu *et al.*, pp. 13204–13212. Image reproduced by permission of Jinhong Yu from *J. Mater. Chem. C*, 2023, 11, 13204.



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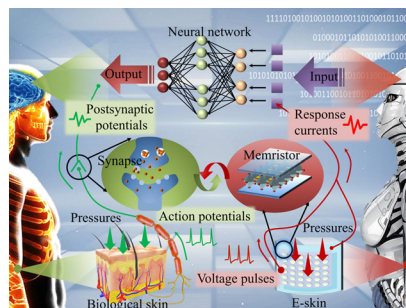
See Yi Zeng *et al.*, pp. 13213–13219. Image reproduced by permission of Yi Zeng from *J. Mater. Chem. C*, 2023, 11, 13213.

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### Perovskite material-based memristors for applications in information processing and artificial intelligence

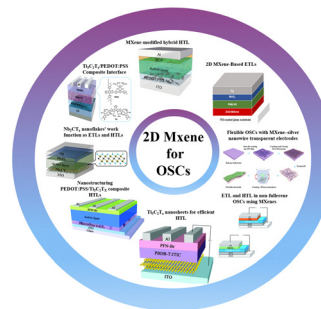
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### 2D MXene interface engineering for organic solar cells

Sikandar Aftab,\* Muhammad Zahir Iqbal, Sajjad Hussain, Fahmid Kabir, Sunil Kumar, H. H. Hegazy and Burragoni Sravanthi Goud\*



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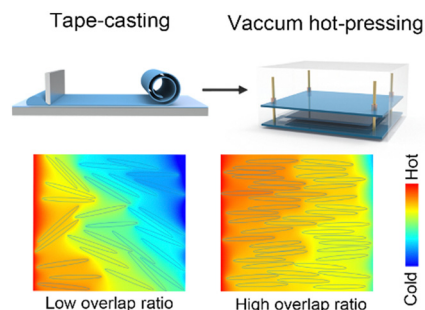


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### Recycled and flexible boron nitride heat spread film with high thermal conductivity

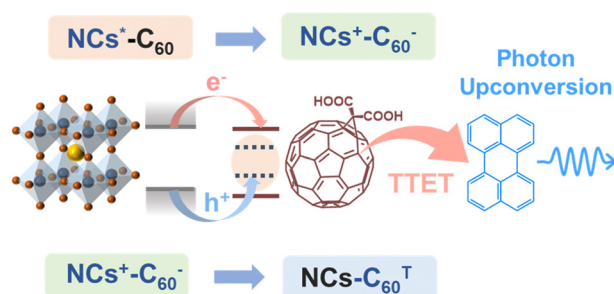
Jianxiang Zhang, Xiangdong Kong, Yandong Wang, Zhenbang Zhang, Linhong Li, Kang Xu, Maohua Li, Rongjie Yang, Yiwei Zhou, Tao Cai, Wen Dai, Cheng-Te Lin, Kazuhito Nishimura, Zhongbin Pan,\* Nan Jiang\* and Jinhong Yu\*



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### Electron transfer-mediated triplet sensitization from CsPbI<sub>3</sub> nanocrystals to fullerene for photon upconversion

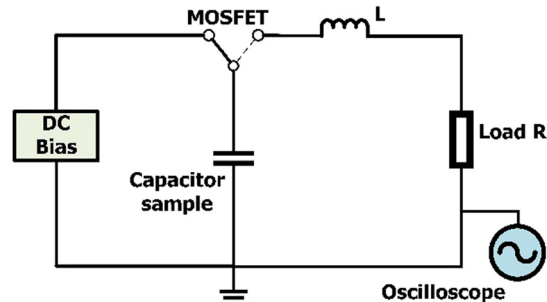
Pengfei Niu, Guiwen Luo, Tianjun Yu, Jinping Chen, Rui Hu, Guoqiang Yang, Yi Zeng\* and Yi Li



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### The effect of non-intrinsic factors on pulse discharge and energy releasing performance of dielectric ceramics

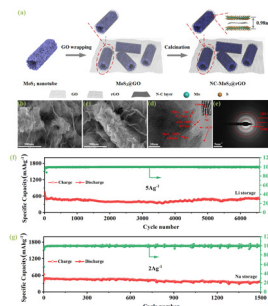
Haochen Xie, Yongping Pu,\* Yangchao Shang, Lei Zhang, Bo Wang and Yuxing Hao



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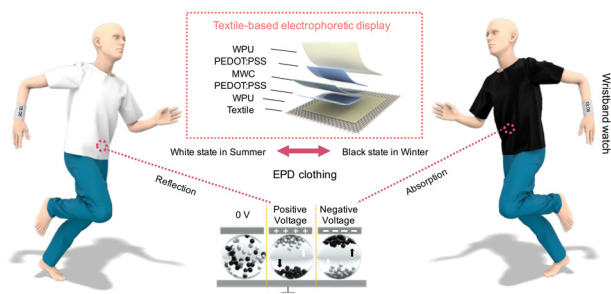
### 3D hierarchical networks constructed from interlayer-expanded MoS<sub>2</sub> nanotubes and rGO as high-rate and ultra-stable anodes for lithium/sodium-ion batteries

Bingqing Ye, Zhou Cui, Zunxian Yang,\* Wenbo Wu, Yuliang Ye, Zihong Shen, Yuanqing Zhou, Qiaocan Huang, Songwei Ye, Zhiming Cheng, Hongyi Hong, Zongyi Meng, Zhiwei Zeng, Qianting Lan, Jiaxiang Wang, Ye Chen, Hui Zhang, Tailiang Guo, Yun Ye, Baisheng Sa,\* Zhenzhen Weng and Yongyi Chen



## PAPERS

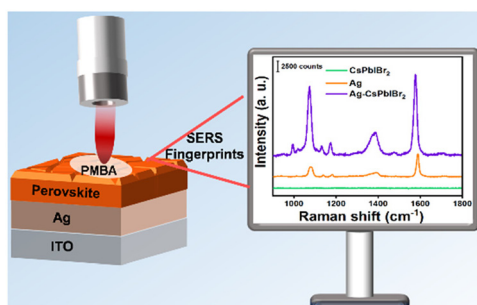
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### Textile-based electrophoretic electronic paper displays with machine-washable, tailorable, and thermostatic functions for truly wearable displays

Zhiguang Qiu, Yifan Gu, Simu Zhu, Ziyi Wu, Lisha Peng, Ting Wang and Bo-Ru Yang\*

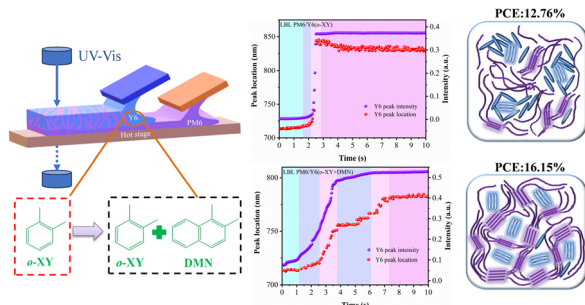
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### Investigation of sensitive SERS detection via a perovskite-coated Ag nanofilm

Niu Pan, Jun Tian, Ziqian Shi, Wen Zhang, Yukun Gao, Tingting You\* and Penggang Yin\*

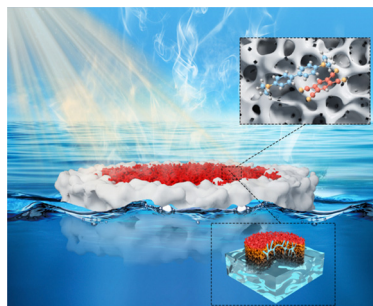
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### Layer-by-layer blade-coated organic solar cells with non-halogenated solvents and non-halogenated additive via adjusting morphology and crystallization

Youzhan Li, Jiang Wu, Xueting Yi, Zekun Liu, He Liu, Yingying Fu, Jian Liu and Zhiyuan Xie\*

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### Organic photothermal cocrystal with high stability for efficient solar-driven water evaporation

Mengjia Jiang, Yi Su, Shuyu Li, Siyao Fu, Lingsong Wang, Darya Khan, Yajing Sun,\* Lingjie Sun,\* Xiaotao Zhang\* and Wenping Hu



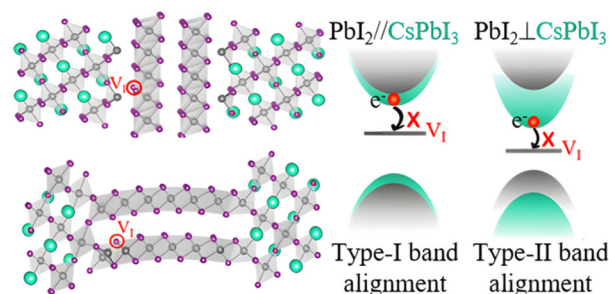


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# Impacts of $\text{PbI}_2$ on high-efficiency perovskite solar cells: exploring intercalation orientations and defects

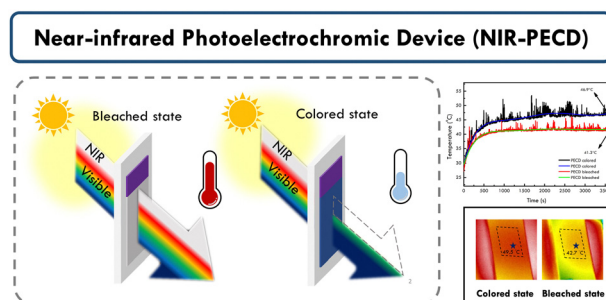
Feifei Ren, Huiwen Xiang, Ke Zhao and Chengyan Liu\*



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# A near-infrared photoelectrochromic device with indoor thermal management for self-powered smart windows

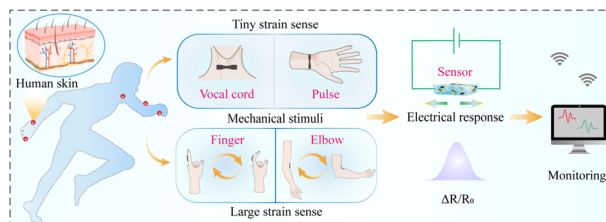
Ching-Cheng Chang, Ling-Yu Chang, Yao-Sheng Cheng, Yu-Hsin Chang, Tsung-Hsin Lai, Ni Luh Wulan Septiani, Brian Yulianto and Min-Hsin Yeh\*



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# Composite biomaterial for mimetic electric skin generated by conductive polymer/anion synergistic effect

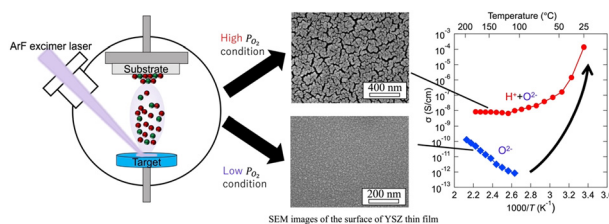
Xiao Li, Yaping Zhu, Siqi Zhang, Xuehui Zhang, Yang Liu, Xiaogang Wu, Yanru Xue, Yi-Xian Qin, Yanqin Wang\* and Weiyei Chen\*



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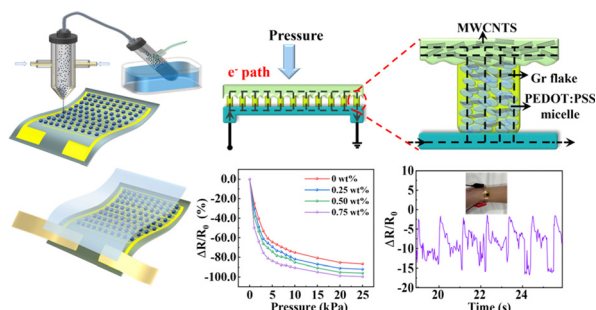
# Room temperature fabrication of highly proton conductive amorphous zirconia-based thin films achieved through precise nanostructure control

Makoto Takayanagi, Takashi Tsuchiya,\* Daiki Nishioka, Tohru Higuchi\* and Kazuya Terabe



## PAPERS

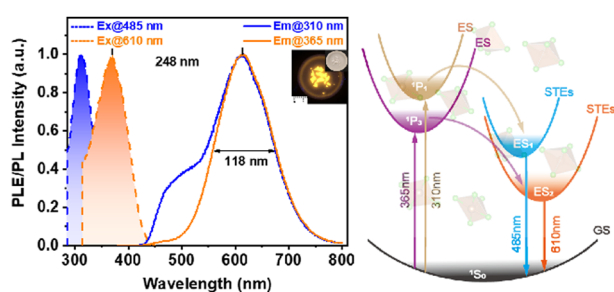
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### A flexible piezoresistive pressure sensor comprising a microstructure printed with poly(3,4-ethylenedioxythiophene):poly(styrenesulfonate) copolymers@graphene hybrid ink

Haoyang Yao, Zhiheng Yu, Fengli Huang,\* Taiyao Pan, Chengli Tang and Hui Zhang

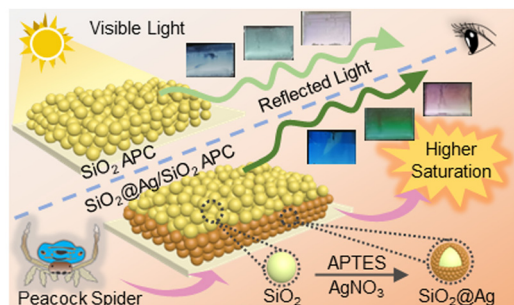
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### Yellow phosphor based on zero-dimensional antimony halide for white light-emitting diodes

Longyun Lv, Hao Yang, Xiaohua Cheng, Yufan Lin, Xuerui Chang, Teng Cheng, Yipeng Xie, Ying Han, Juan Li,\* Jun Yin\* and Bin-Bin Cui\*

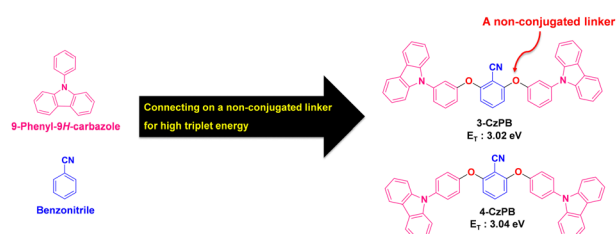
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### Synthesis of SiO<sub>2</sub>@Ag for light absorption and the fabrication of highly color-saturated amorphous photonic crystals

Congcong Chi,\* Panpan Qu, Xin Xu, Jiarong Xian, Danjie Zhang, Jiahao Li, Jiangxue Ren, Xinggen Xu and Honglei Chen

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### Carbazole-benzonitrile derivatives as universal hosts for triplet-harvesting blue organic light-emitting diodes

Sook Hee Jeong, Seung Chan Kim and Jun Yeob Lee\*

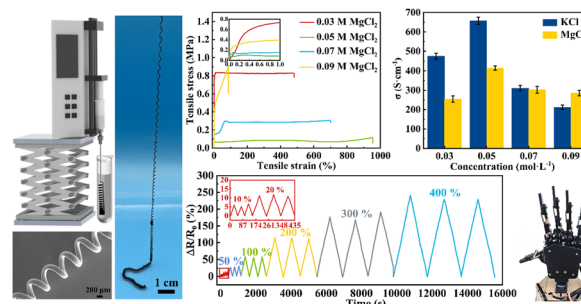


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# Highly stretchable and elastic PEDOT:PSS helix fibers enabled wearable sensors

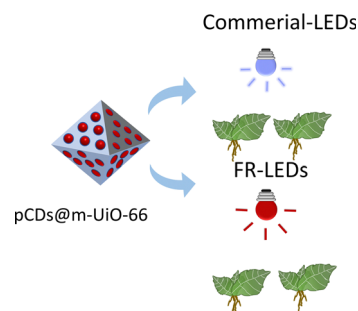
Jing Chen, Jiadeng Zhu, Zhongrui Wei, Ziwei Chen, Chunhong Zhu, Qiang Gao and Chunxia Gao\*



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# Far-red emission carbon dot–metal organic frameworks composite for plant growth regulation application

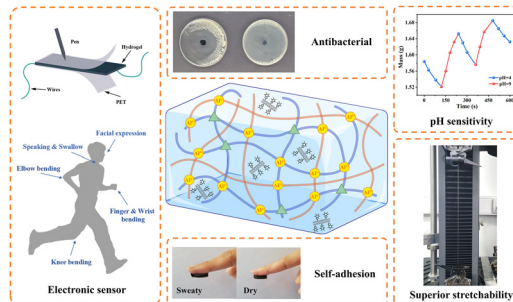
Shixin Wu, Chaowei Yang, Jiechun Zhuang, Jiahao Chen, Wei Li, Yingliang Liu, Mingtao Zheng, Xuejie Zhang, Bingfu Lei,\* Yuxia Guo and Haoran Zhang\*



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# A mussel-inspired semi-interpenetrating structure hydrogel with superior stretchability, self-adhesive properties, and pH sensitivity for smart wearable electronics

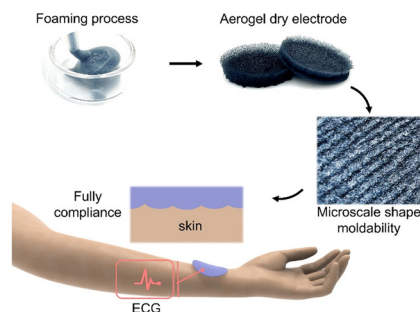
Lu Xing, Yaoting Song, Xinquan Zou, Haojie Tan, Jiani Yan and Jikui Wang\*



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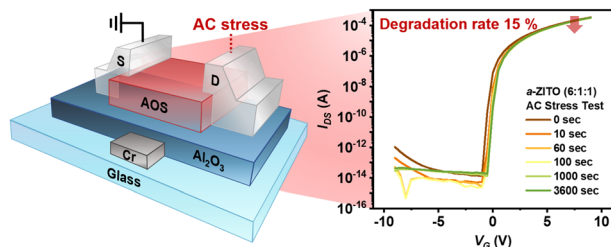
# A moldable PEDOT:PSS dry electrode with excellent epidermal compliance for wearable electrocardiogram monitoring

Xianglin Gao, Tong Su, Yilin Bao, Jipei Lu, Lei Zhang,\* Chaobin He and Jianyong Ouyang



## PAPERS

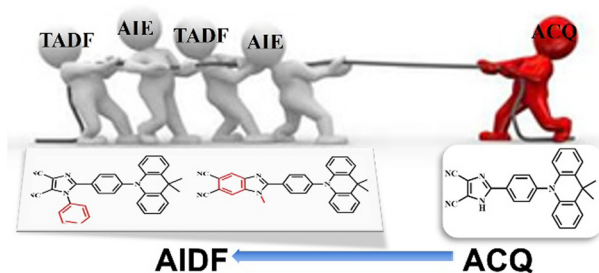
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### Solution-processed amorphous zinc indium tin oxide thin-film transistors with high stability under AC stress

Dongil Ho, Hyewon Jeong, Hun-Bum Park, Sung Kyu Park, Myung-Gil Kim and Choongik Kim\*

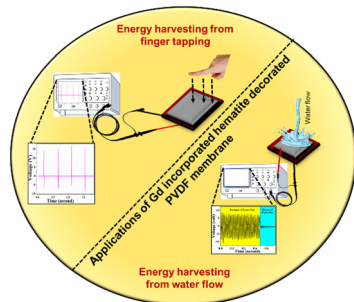
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### From aggregation-caused quenching to aggregation-induced delayed fluorescence: the impact of the effect of substituents

Yuqi Liu, Lijuan Wang,\* Lin Xu and Yan Song

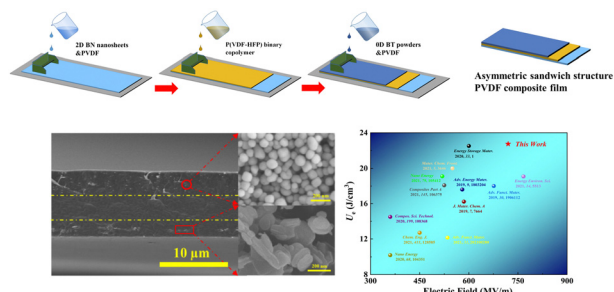
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### Water flow and finger-tapping mediated piezoelectric energy generation using a natural hematite-based flexible PVDF-HFP membrane

Saheli Ghosh, Dhananjay Mondal, Shubham Roy, Jhilik Roy, Souravi Bardhan, Ayan Mazumder, Neelanjana Bag, Ruma Basu and Sukhen Das\*

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### Ultrahigh breakdown strength and discharge energy density of newly designed asymmetric sandwich-structured PVDF-based nanocomposite film

Yongjing Zhang, Yanlong Ma, Ying Lin,\* Qibin Yuan\* and Haibo Yang\*



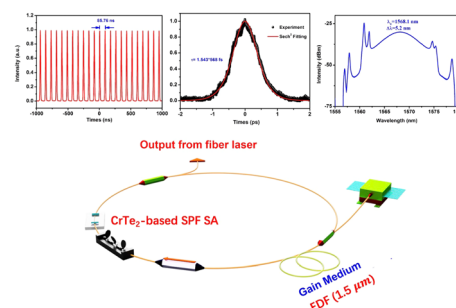


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CrTe<sub>2</sub> as a new saturable absorber for a passive mode-locking Er-doped laser

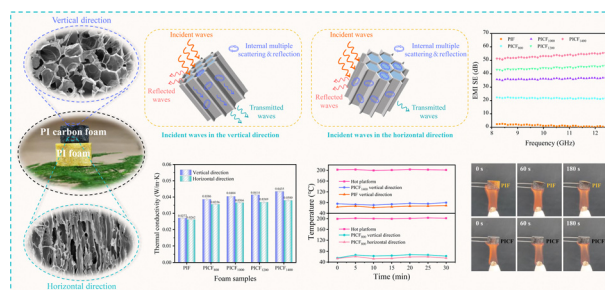
Junpeng Qiao, Safayet Ahmed, Jialiang Yu, Ranran Fan,\* Guangqiang Liu, Yuen Hong Tsang and Sujuan Feng\*



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## Lightweight polyimide-derived carbon foams with anisotropic porous structures prepared by microwave-assisted foaming and carbonization for thermal insulation and EMI shielding applications

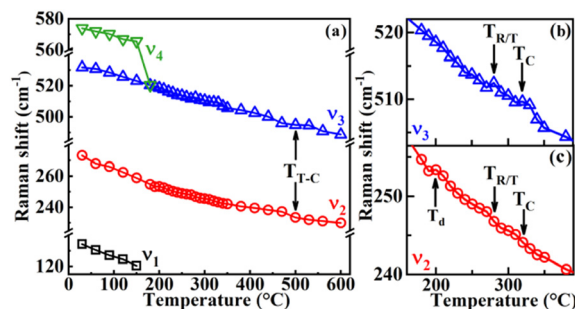
Long Ni, Zhenling Kang, Yinfu Luo, Liwei Yan, Junyu Lu, Guanchun Wang, Shaoyu Qiu, Mei Liang, Shengtai Zhou\* and Huawei Zou\*



13459

Dynamics of the phase transition in Bi<sub>0.5</sub>Na<sub>0.5</sub>TiO<sub>3</sub> based on *in situ* Raman spectroscopy

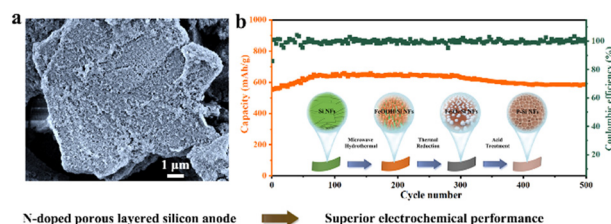
L. G. Wang, C. M. Zhu,\* J. B. Jiang, G. B. Yu, H. X. Qin, P. Y. Zeng, C. H. Jiang and Y. S. Wang



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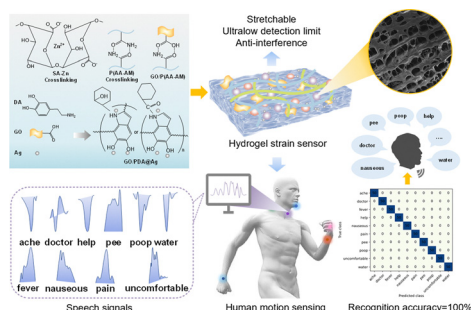
## A thermally etched N-doped porous layered silicon anode for improved cycling stability of lithium-ion batteries

Bing Bai, Linlin Qiu, Yang Liu, Zhiqin Su, Lixin Song and Pingfan Du\*



## PAPERS

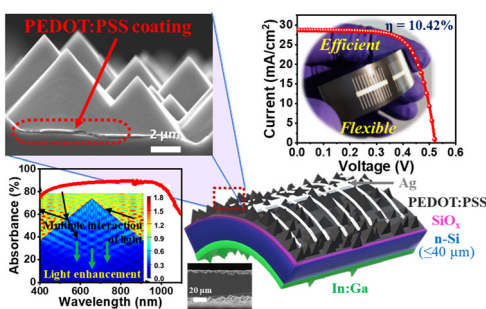
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### Stretchable, ultralow detection limit and anti-interference hydrogel strain sensor for intelligent throat speech recognition using Resnet50 neural network

Jiaye Zhou, Tianchi Chen,\* Zhenzhi He, Lianchao Sheng and Xiangning Lu\*

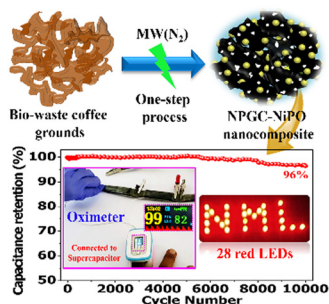
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### High efficiency flexible PEDOT:PSS/silicon hybrid heterojunction solar cells by employing simple chemical approaches

Deepak Sharma, Avritti Srivastava, Jai S. Tawale, Pathi Prathap and Sanjay K. Srivastava\*

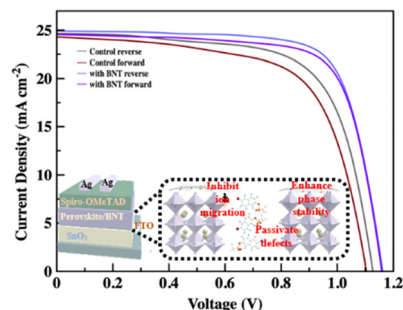
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### Microwave-plasma induced one-step synthesis of Ni(PO<sub>3</sub>)<sub>2</sub> nanosphere-loaded bio-waste derived N, P co-doped carbon for an asymmetric supercapacitor with prolonged life

Nisha Gupta and Pallab Bhattacharya\*

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### Ion migration inhibition and defect passivation via sulfonate salt coordination for high-performance perovskite solar cells with enhanced phase stability

Hanyu Wang,\* Wenjing Zou, Hu Luo, Yihao Quan, Lang Yang, Xingchong Liu and Haimin Li

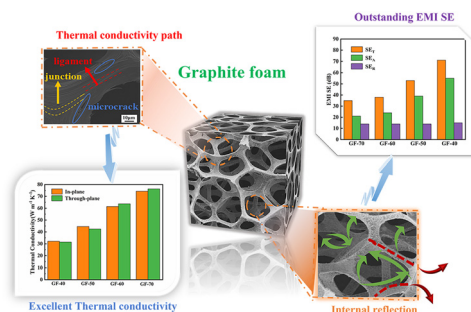


## PAPERS

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# Melamine foam-induced isotropic graphite foam for effective thermal management and electromagnetic interference shielding

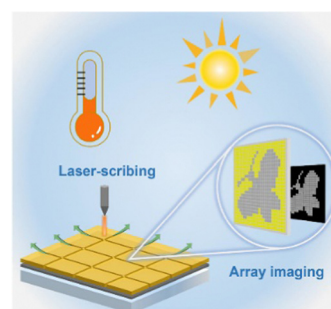
Xing Guo, Yaxiong Liu, Sufang Yang, Hui Jia, Long Gao, Xiaodong Tian, Zechao Tao, Jinxing Liu, Xi Yan\* and Zhanjun Liu\*



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# Zero-bias Bi-based perovskite image sensor arrays with direct laser-scribing process

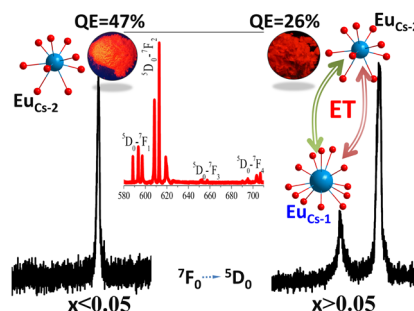
Yaqian Yang, Ying Li,\* Di Chen and Guozhen Shen\*



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# Clarifying concentration quenching mechanisms by lattice site-occupation and luminescence kinetics of Eu<sup>3+</sup>-activated Cs<sub>2</sub>Mg<sub>2</sub>Mo<sub>3</sub>O<sub>12</sub>

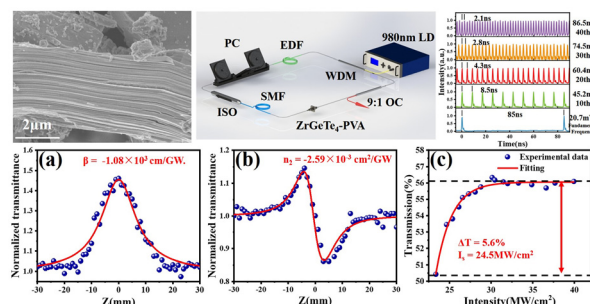
Donglei Wei, Xifeng Yang, Yushen Liu, Joo Hyun Kim, Sung Heum Park, Hyo Jin Seo and Bo Ram Lee\*



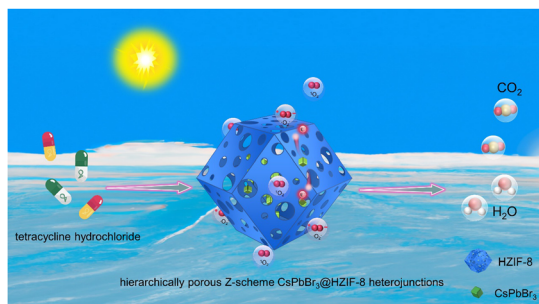
13561

# Investigations of the nonlinear optical properties of ZrGeTe<sub>4</sub> nanosheets and their application in ultrafast photonics

Baohao Xu, Lie Shi, Xiangen Ma, Huanian Zhang, Kai Jiang, Jing Wang, Hongwei Chu, Wenjing Tang\* and Wei Xia\*



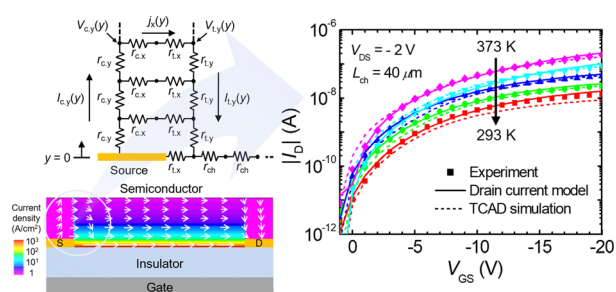
13570



### Hierarchically porous CsPbBr<sub>3</sub>@HZIF-8 heterojunctions for high-performance photocatalytic degradation of antibiotics in high-salinity wastewater

Yangwen Hou, Fanfei Meng, Jingting He, Man Dong, Jialin Tong, Jing Sun, Chunyi Sun,\* Xinlong Wang and Zhongmin Su\*

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### A temperature dependent power-law drain current model for coplanar OFETs

Junbum Park, Yongjeong Lee, Gilles Horowitz, Sungyeop Jung\* and Yvan Bonnasieux\*

