

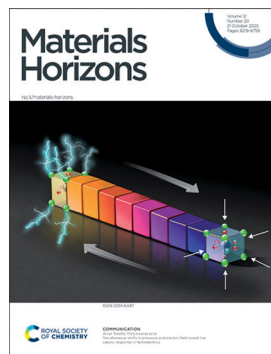
Materials Horizons

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See Àlvar Torelló, Pol Lloveras *et al.*, pp. 8460–8471.
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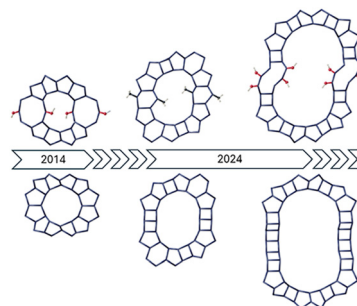
Inside cover
See Dinesh Shetty *et al.*, pp. 8472–8480.
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COMMENTARY

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A reflection on 'Flexibility versus rigidity: what determines the stability of zeolite frameworks? A case study'

Eric Breynaert,* Dries Vandenabeele, Wenfu Yan, Valentin Valtchev, Bert Sels, Veronique Van Speybroeck and Christine Kirschhock*

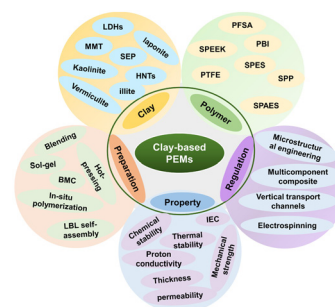


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Research progress on clay-based hybrid proton exchange membranes for fuel cells

Binbin Qian, Ruiqian Zhang, Amir Said, Ke Xu,* Kunfeng Chen, Sridhar Komarneni and Dongfeng Xue*



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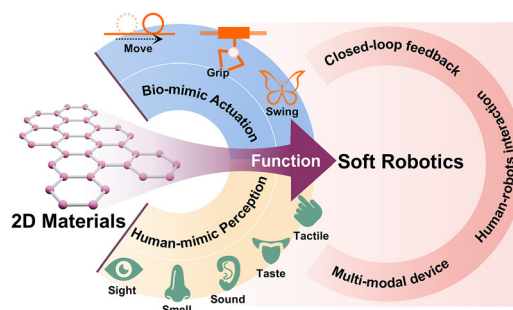


REVIEWS

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Two-dimensional materials for adaptive functionalities in soft robotics

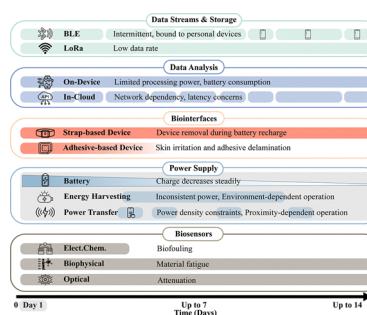
Yun Li, Jiamin Amanda Ong and Pooi See Lee*



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Continuous biosignal acquisition beyond the limit of epidermal turnover

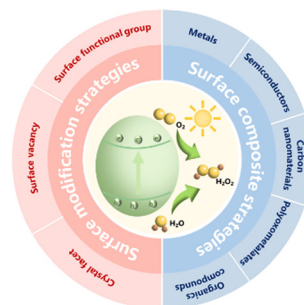
Aman Bhatia, Kevin Albert Kasper and Philipp Gutruf*



8319

Surface engineering strategies for particulate photocatalysts toward photocatalytic H₂O₂ production

Yu Zhang, Zhian Chen, Menghe Luo, Sheng Ye* and Shanshan Chen*



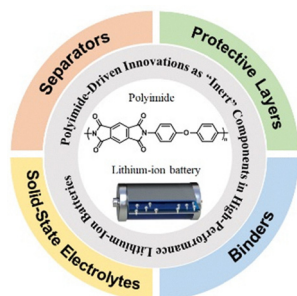
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Recent advances in metal–organic frameworks for Li–O₂ batteries: advantages, challenges, and innovative design

Jiale Han, Yunfei Hao, Mengrao Luo, Zhaojun Xie* and Zhen Zhou



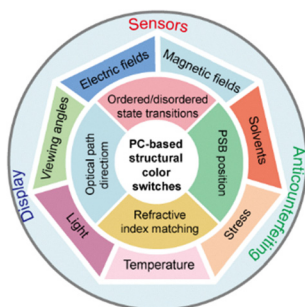
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Polyimide-driven innovations as “inert” components in high-performance lithium-ion batteries

Yayue He, Zhenxi Li, Shilun Gao,* Yinkui He, Yurong Liang, Yan Zhai, Yuxuan Li, Huabin Yang* and Peng-Fei Cao*

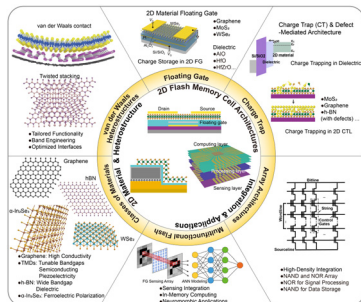
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Photonic crystal-based structural color switches

Zhipeng Meng,* Senlin Miao, Yukun Liu, Yalin Li, Yujie Ma, Wenke Luo and Haofei Huang*

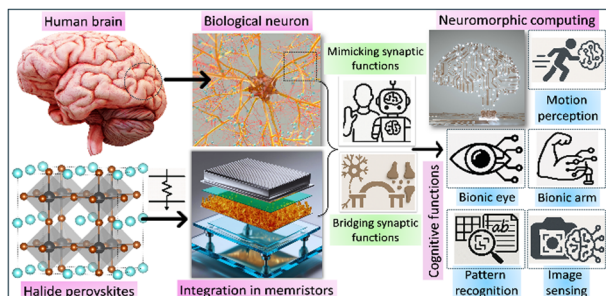
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2D materials-based flash memory device: mechanism, structure, application

Xiangxiang Yu, Langlang Xu, Wenhao Shi, Xiaohan Meng, Xinyu Huang, Zhuri Peng, Lei Tong, Huajun Sun, Xiangshui Miao and Lei Ye*

8430



Decoding halide perovskites for neuromorphic and memristive devices

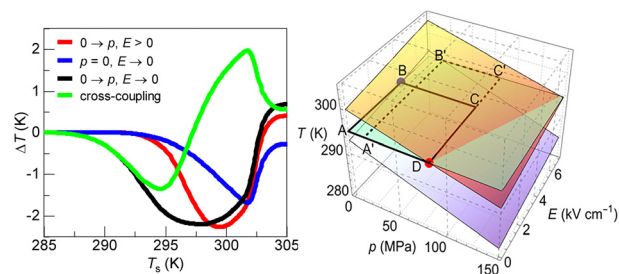
Dimitra Das, Dani S. Assi, Samrana Kazim, Vellaisamy A. L. Roy* and Shahzada Ahmad*



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Simultaneous shifts in pressure and electric field boost the caloric response in ferroelectrics

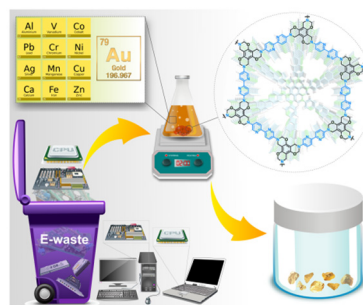
Ming Zeng, Michela Romanini, Ivana Gorican, Silvo Drnovsek, Hana Ursic, Alejandro Salvatori, María Barrio, Sophie Loehle, Nicolas Obrecht, Carlos Escorihuela-Sayalero, Claudio Cazorla, Alvar Torelló,* Pol Lloveras* and Josep-Lluís Tamarit



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Enhanced selective gold recovery from e-waste via synergistic hetero-atom controlled quasi-planar benzoxazine-based covalent organic frameworks

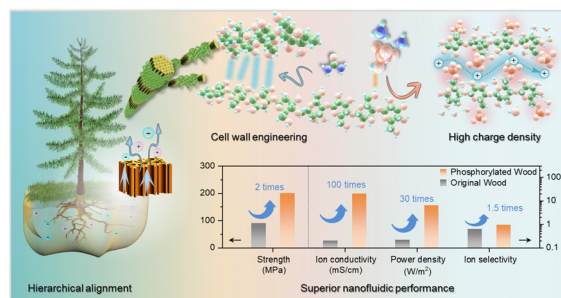
Sushil Kumar, Mahira Bashri, Safa Gaber, José I. Martínez, Matthew J. O'Connor, Sabu Varghese, Blaž Belec, Gisha Elizabeth Luckachan and Dinesh Shetty*



8481

Phosphorylation-assisted cell wall engineering enables ultra-strong, highly ion-conductive bio-membranes for high-power salinity gradient energy harvesting

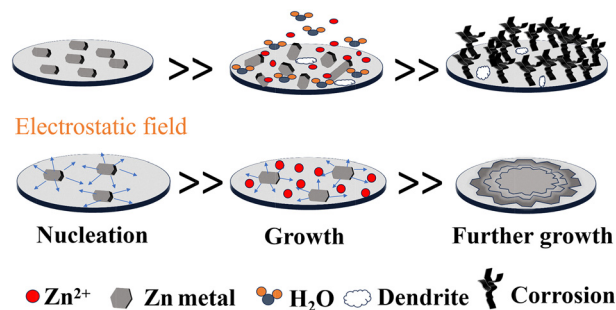
Kaihuang Chen, Jie Zhou, Chunbao Charles Xu, Zhiqiang Fang,* Le Yu, Chaoji Chen* and Xueqing Qiu*



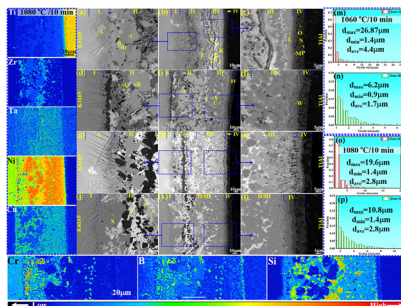
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Ferroelectric small molecule enabled high-performance zinc-ion batteries

Lixin Song, Ruizhe Zhang, Zhiyong Liao, Yongbo Fan,* Yawen Li, Longtao Ma and Huiqing Fan*



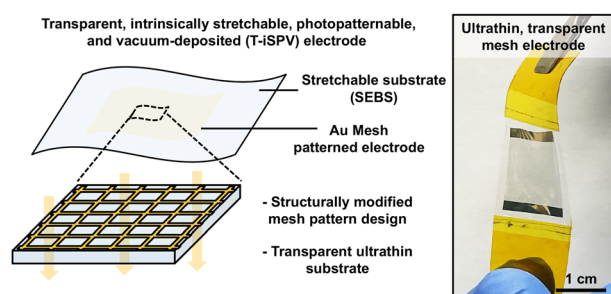
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Atomic hysteretic diffusion enables high-strength TiAl/Ni joints *via* cluster-plus-glue-atom modeled GCFMs

Liangliang Zhang, Weimin Long,* Peng Li, Zhiwei Qin, Zhijie Ding, Yinchun Wang, Xin Jiang, Bomin Zhao and Honggang Dong*

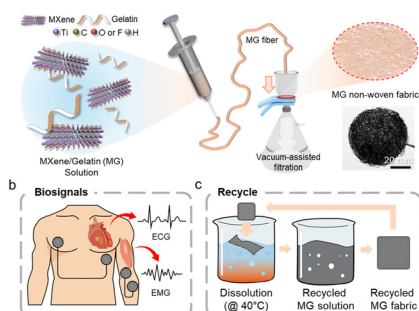
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Highly transparent, intrinsically stretchable, photo-patternable, and vacuum-deposited electrodes for wearable sensors and displays

Jaepyo Jang, Sungjun Yoon, Hyunjin Jung, Jiyong Yoon, Jaehyon Kim, Heewon Choi, Duhwan Seong, Mikyung Shin and Donghee Son*

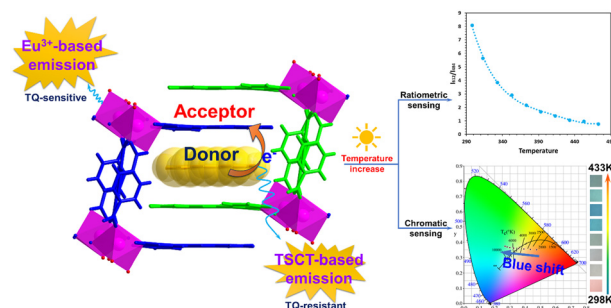
8528



Soft, breathable, and recyclable MXene fabrics for wearable electrophysiological recordings

Kihyun Lee, Osvaldo Linares Gutierrez and Wubin Bai*

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Rare-earth-based donor-acceptor metal-organic frameworks with low thermal quenching and dual emission mechanisms for high-temperature sensing

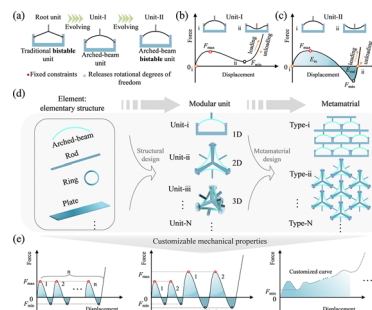
Da-Shuai Zhang,* Zhen-Wei Zhang, Wei Wang, Xiao-Ting Liu, Qiang Gao, Jingjing Pang, Yong-Zheng Zhang, Longlong Geng, Chuanqi Feng, Yanyan Gao, Sha Sha, Ai-Yun Ni, Bin Li, Xiuling Zhang, Hui Hu* and Ze Chang*



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Multistable metamaterials enabled by arched beams for high-efficiency energy absorption

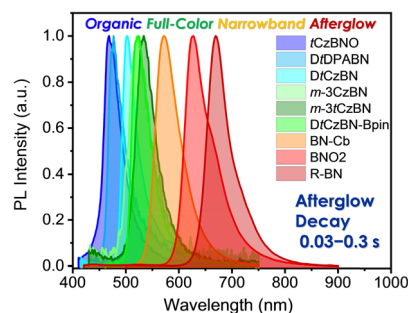
Wenlong Liu, Xiaojun Tan, Sen Yan, Jin Wang, Hong Luo, Xinran Dong, Tao Wen, Jingbo Sun and Ji Zhou*



8555

Organic full-color narrowband afterglow

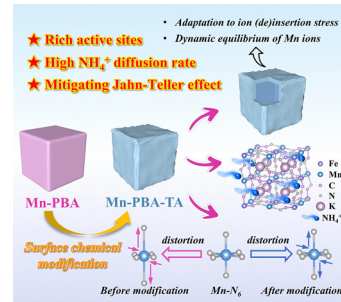
Yincai Xu, Yufeng Xue, Le Mei, Zongliang Xie, Zhu Wu, Zheng Yin, Xian-kai Chen,* Yue Wang and Bin Liu*



8565

Tailoring surface structures in Mn-based Prussian blue analogues for enhanced NH_4^+ transport and high-performance aqueous batteries

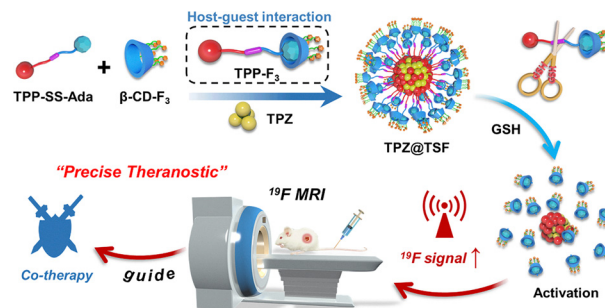
Jun Yang, Hao Fu, Lingqian Ye, Minjie Shi and Edison Huixiang Ang*



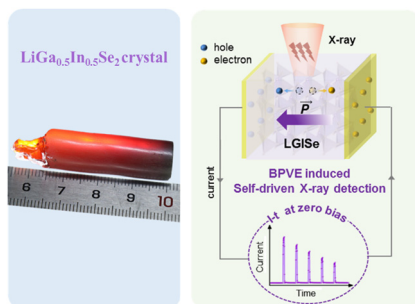
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Host-guest supramolecular approach for the preparation of a ^{19}F MRI-guided theranostic agent with long T_2 relaxation times and its synergetic performances

Jialei Han, Bo Wang, Xinyu Zhao, Chunan Wang, Danfeng Peng, Yadong Liu, Haotu Zhu, Weijie Chen, Zhong Cao and Dalin Wu*



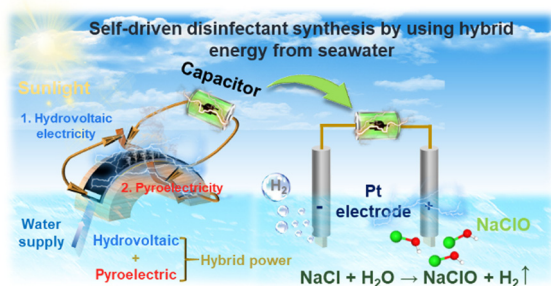
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Polar selenide single crystal $\text{LiGa}_{0.5}\text{In}_{0.5}\text{Se}_2$ with a bulk photovoltaic effect for highly sensitive self-driven X-ray detection

Kaihui Xu, Chao Ma, Shuai Liu, Xingguang Li, Yanru Yin, Lili Zhao, Zeliang Gao* and Shanpeng Wang*

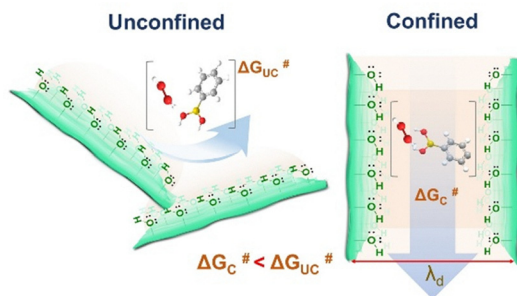
8603



A photothermal-driven hydrovoltaic-pyroelectric hybrid system for efficient energy harvesting and self-powered disinfection

Hui Cheng, Hiang Kwee Lee* and Haitao Li*

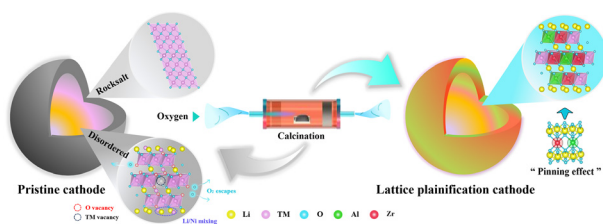
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Effect of physicochemical congestion on the catalytic conversion of arylboronic acids to phenols

Mrityunjoy Dey, Mithu Roy, Partha Pratim Borah, Sonali Roy, Amlan Jyoti Gogoi, Kalishankar Bhattacharyya* and Kalyan Raidongia*

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Lattice plainification flattens the crystal structure of nickel-rich layered cathodes

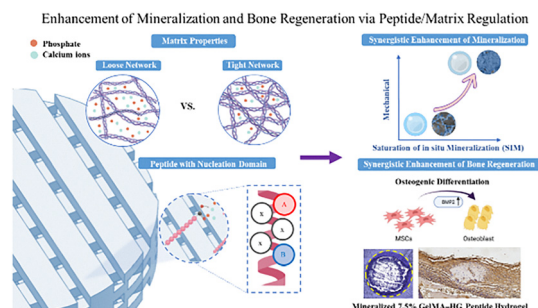
Pengcheng Li, Zhuo Peng, Zhihao Sun, Chengyu Li, Jianjun Ma,* Jun Wang, Run Yu, Cairong Jiang, Xiang Gao, Wenge Yang, Dongliang Chao* and Yongjin Chen*



8631

Synergistic peptide–organic matrix enhances mineralization of biomimetic scaffolds for bone regeneration

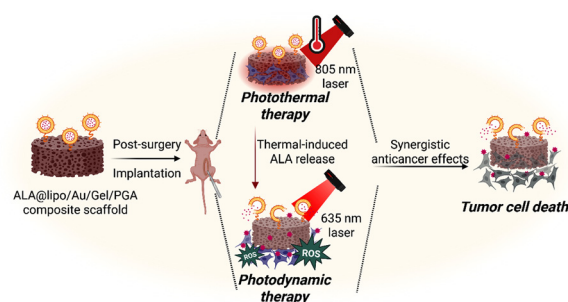
Yawen Huang, Ziqi Zhao, Yu Yang, Ruiqi Mao, Dongxuan Li, Fengxiong Luo, Kefeng Wang,* Yujiang Fan and Xingdong Zhang



8654

Thermosensitive liposomal nanomedicine-functionalized photothermal composite scaffolds for light-guided cancer therapy

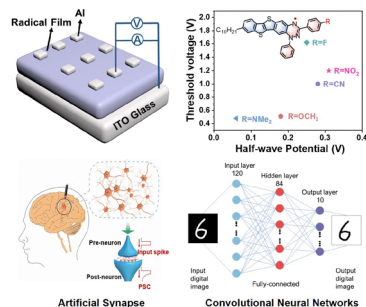
Xiaohan Liu, Huajian Chen, Man Wang, Tianjiao Zeng, Toru Yoshitomi, Naoki Kawazoe, Yingnan Yang and Guoping Chen*



8667

Redox tunable conjugated radicals enable low threshold voltage memristors for artificial synapses

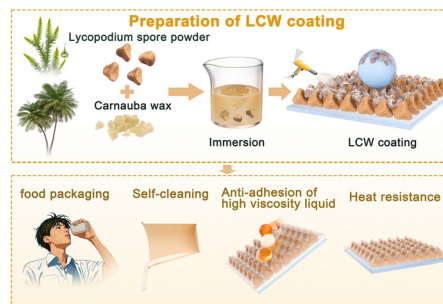
Kai Peng, Hanjiao Chen, Chengjia Shi, Siying Liu, Yan Hou, Yu Yan, Zhicong Li, Shuiren Liu, Li Zhang,* Xiaoguang Hu* and Xuying Liu*



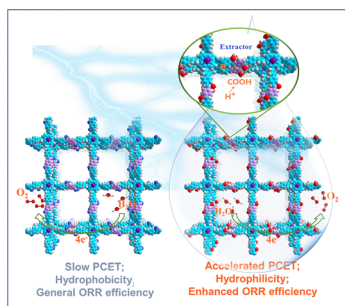
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Heat-resistant bio-based superhydrophobic coating from lycopodium powder skeletons for liquid food residue reduction

Yuanmeng Zhou, Jing Wang, Shulun Ai* and Zhiguang Guo*



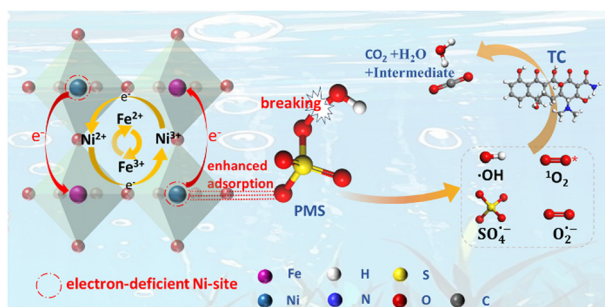
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Hydrophilic sp^2 -carbon conjugated co-porphyrin covalent organic frameworks for efficient electrocatalytic oxygen reduction reaction

Yan-Fang Yao, Yun-Rui Lv, Feng Li, Xin-Yi Huang, Si-Jing Huang,* Xin-Yan Xiao* and Hai-Yang Liu*

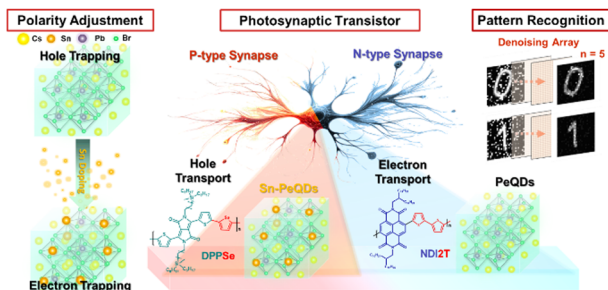
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Electron-deficient B-site engineering in $CeNiO_3$ for efficient PMS activation and tetracycline degradation

Xin Tang, Huiwei Ding, Qiaofeng Han,* Guolang Zhou, Rongyao Ma, Zhipeng Xue, Shuolei Yan, Lili Zhang,* Jingzhou Yin* and Edison Huixiang Ang*

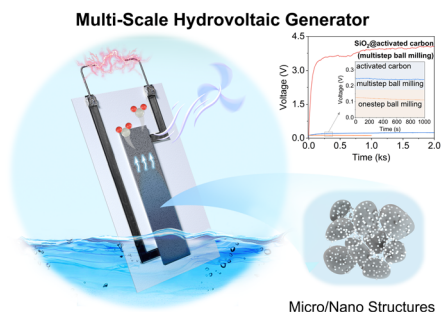
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Ultralow energy consumption conjugated polymers with perovskite quantum dots via polarity adjustment for photosynaptic transistors

Wei-Cheng Chen, Ya-Shuan Wu, Yan-Cheng Lin, Yu-Hang Huang, Jing-Yang Wu, Kai-Wei Lin, Cheng-Liang Liu, Chi-Ching Kuo* and Wen-Chang Chen*

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High-voltage hydrovoltaic generator based on micro/nano multi-scale superhydrophilic SiO_2 @activated carbon with enhanced capillary infiltration performance

Luomin Wang, Weifeng Zhang* and Yuan Deng*

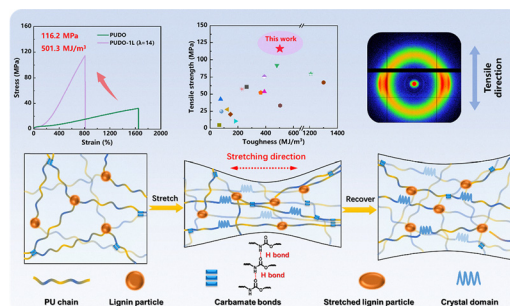


COMMUNICATIONS

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Ultra-robust polyurethane/lignin elastomers based on multiscale structural orientation induced by pre-stretching

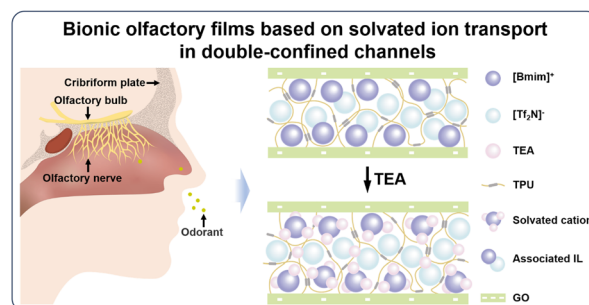
Weijun Yang,* Yu Zhang, Bing Li, Xiang Zhang, Debora Puglia, Deyu Niu, Pengwu Xu and Piming Ma*



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A bioinspired double-confining strategy enables highly practical target gas detection via promoted solvated ion transport

Lijuan Wu, Guocheng Lv,* Lili Wang, Yi Zhou, Yupeng Chen* and Cen Tang*



CORRECTION

8755

Correction: Switchable nanoparticle for programmed gene-chem delivery with enhanced neuronal recovery and CT imaging for neurodegenerative disease treatment

Linying Liu, Yan Li, Ruiyuan Liu, Qi Shen, Yanhui Li, Zhuyan Shi, Jie Shen, Weihong Ji and Xin Zhang*

