

Materials Horizons

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See Fengqi You *et al.*, pp. 15–44. Image reproduced by permission of Fengqi You from *Mater. Horiz.*, 2026, 13, 15.



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See Siyang Li, Tuck-Whye Wong, Tiefeng Li *et al.*, pp. 219–232. Image reproduced by permission of Siyang Li, Tuck-Whye Wong and Tiefeng Li from *Mater. Horiz.*, 2026, 13, 219.

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Dr Julianna Panidi, University of Edinburgh, UK

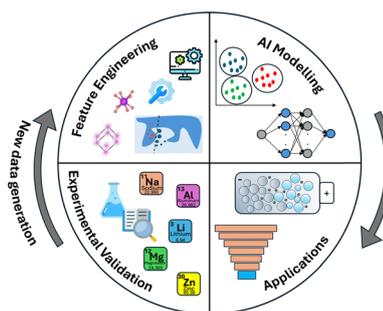


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Machine learning pipelines for the design of solid-state electrolytes

Vinamr Jain, Zhilong Wang and Fengqi You*



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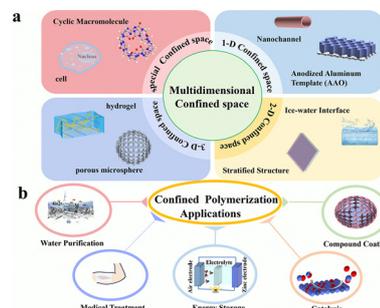
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Confined polymerization: multidimensional regulation, advanced measurements and cutting-edge applications

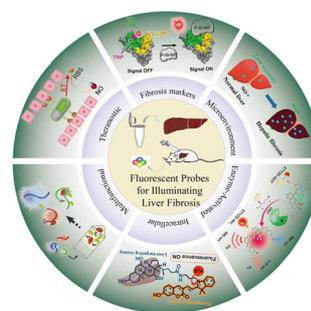
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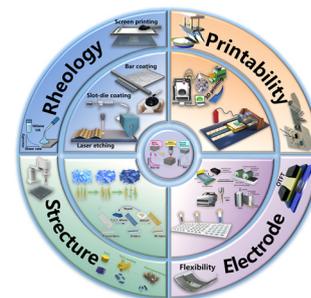
Yutong Lv, Zhe Ma, Yue Chong, Zhenlong Wang,* Li Xue* and Fu Wang*



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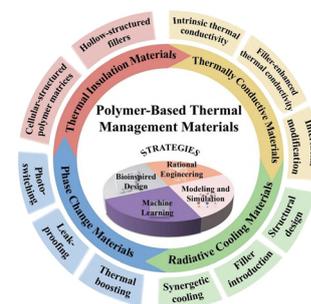
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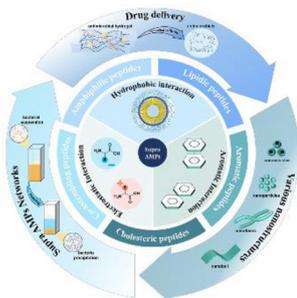
Recent advances in the thermal management performance of polymer-based composite materials

Jia Li, Mengmeng Qin* and Wei Feng*



REVIEWS

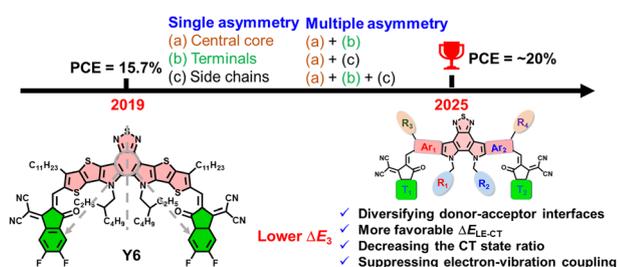
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Supramolecular crafting of peptides as novel antimicrobial materials

Longjie Li, Jiale Hu, Yi Liu, Zongyuan Wang,*
Hailong Tang,* Dongdong Zhou* and Hao Su*

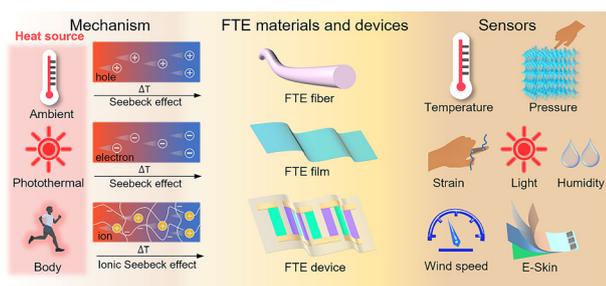
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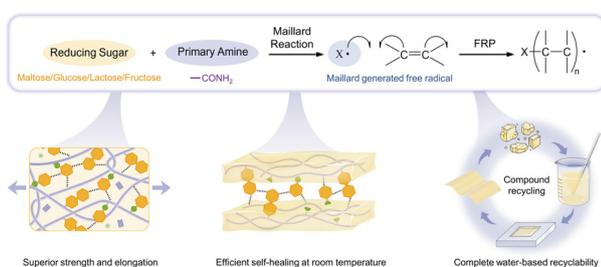


Flexible thermoelectric materials and devices for sensing applications

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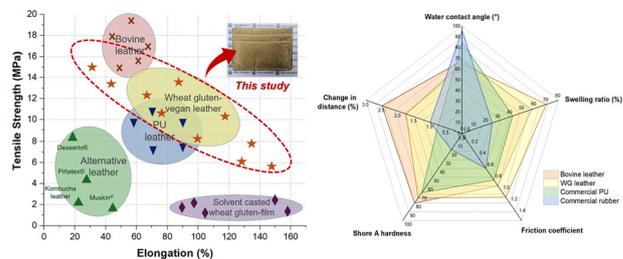
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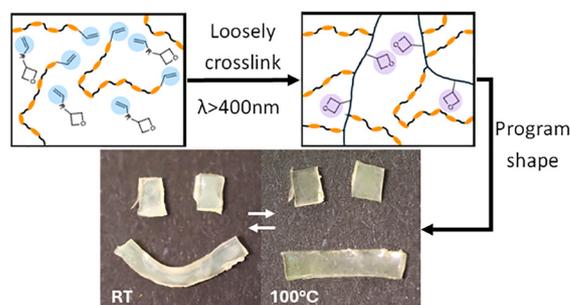
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Shape programming of liquid crystal elastomers by two-stage wavelength-selective photopolymerization

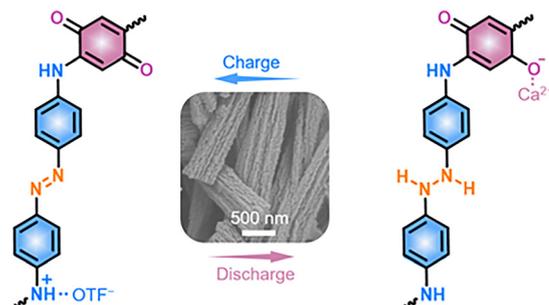
Tom Bruining, Daniela R. Tomé and Danqing Liu*



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Low-activation-energy bipolar organic nanostructures for high-capacity and ultralong-life aqueous calcium-ion batteries

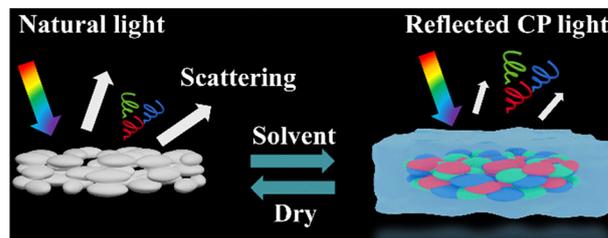
Decheng Zhao, Qi Huang, Yaokang Lv, Ziyang Song,* Lihua Gan* and Mingxian Liu*



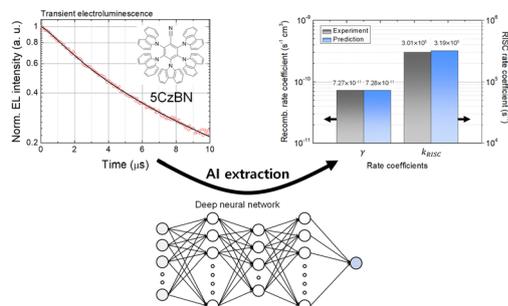
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Fang Zeng, Honghan Ji, Zhi-Wang Luo, Jiannan Xiao, Xuefeng Yang, Jiang Huang, Qianming Wang* and Pengfei Duan*



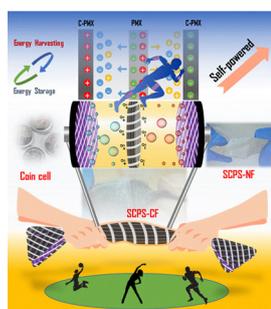
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A deep learning model for inferring the reverse intersystem crossing rate of TADF organic light-emitting diodes, overcoming the uncertainty of recombination dynamics

Junseop Lim, Seungwon Han, Jae-Min Kim* and Jun Yeob Lee*

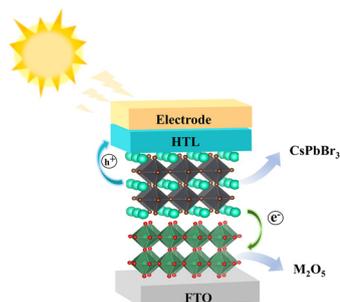
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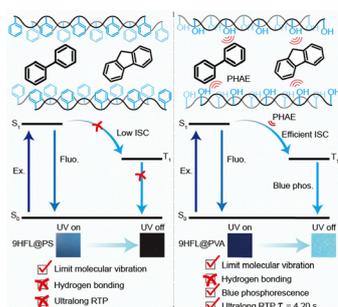
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Unraveling atomic-scale origins of interfacial properties in CsPbBr₃/M₂O₅ (M = Nb, Ta) heterojunctions: a combined first-principles and experimental approach

Menglong Gao, Yao Guo,* Shiding Zhang, Yinghui Xue, Jianxin Li, Shuaishuai Hu, Haixiang Song, Kaidi Wu, Miaomiao Li, Huihui Zhao, Zhongyuan Zhou* and Qing Shen*

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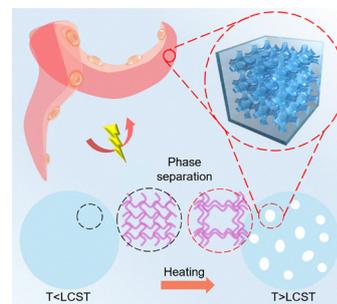
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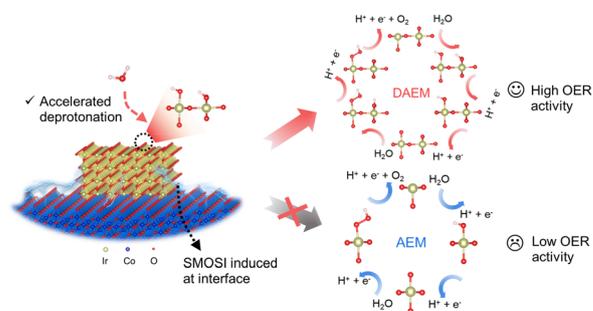
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Cobalt oxide-supported iridium oxide nanoparticles with strong metal oxide-support interaction for efficient acidic oxygen evolution reaction

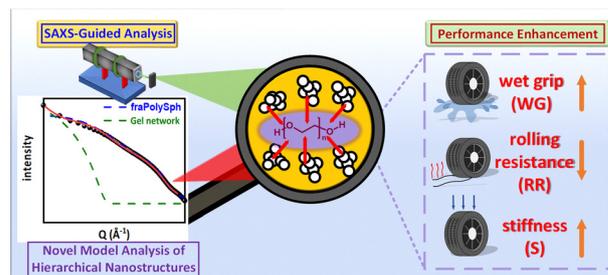
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Hierarchical morphology and interfacial dynamics in silane-free rubber nanocomposites: a SAXS-guided approach toward sustainable high-performance tire materials

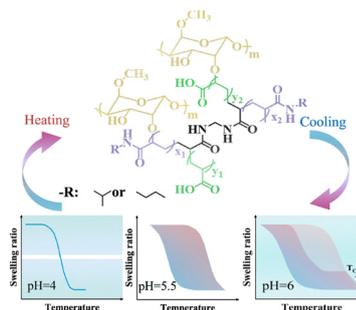
Cheng-Ti Hu, Heng-Yi Lin, Po-Hsun Chiu, Heng-Yan Dai, Lucy Liberman, Jih-Min Lin, U-Ser Jeng, Cheng-Si Tsao,* Chih-Chen Hsieh* and Chi-An Dai*



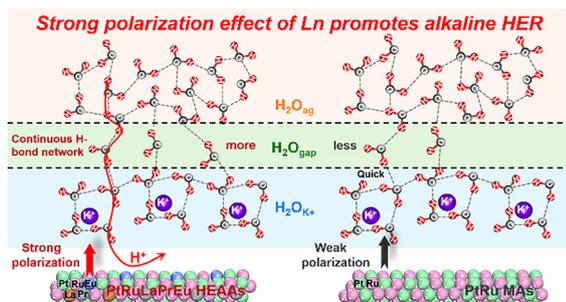
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Adaptive memory of hydrogels with tunable hysteresis

Zichao Wang, Xuan Zhang,* Xuehua Zhou, Mingze Liu, Xuefeng Zhu, Mingchao Zhang, Xuzi Yang, Yinglai Hou,* Yuzhang Du and Jie Kong*



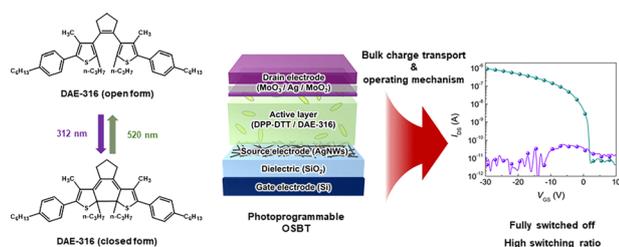
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The strong polarization effect of lanthanide metals for efficient alkaline hydrogen evolution

Yajun Wang, Siyi Wang, Mingrui Guo, Tianjun Zhang,*
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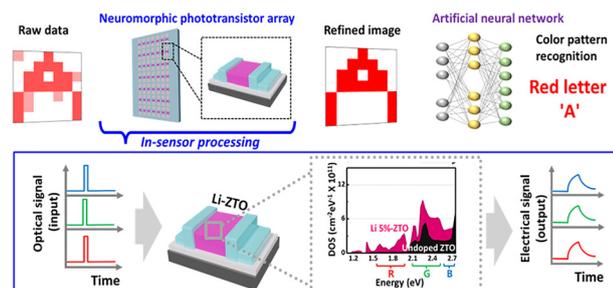
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Molecular-switch-embedded organic Schottky barrier transistors for a high switching ratio

Hye Ryun Sim, Syed Zahid Hassan, Sangjun Lee,
Jieun Kwon, Geon-Hee Nam, Seyeon Baek, Chan So,
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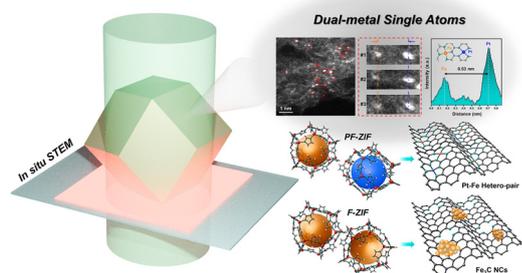
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Defect-induced subgap state engineering in neuromorphic metal-oxide phototransistors for in-sensor color processing

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Jeong-Wan Jo, Yong-Hoon Kim,* Sung Kyu Park* and
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Stabilizing Pt–Fe dual-metal single atoms in ZIFs: a pathway to form heterogeneous catalysts

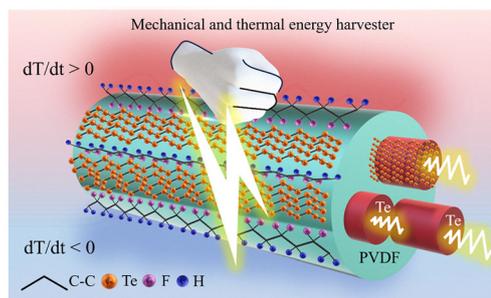
Kai-Yuan Hsiao, Yi-Dong Lin, Yu-Ru Lin, Ching-Wei Chin,
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Ferroelectric nanofibers with nanoconfined tellurium nanobeams for mechanical and thermal energy harvesting and wearable healthcare

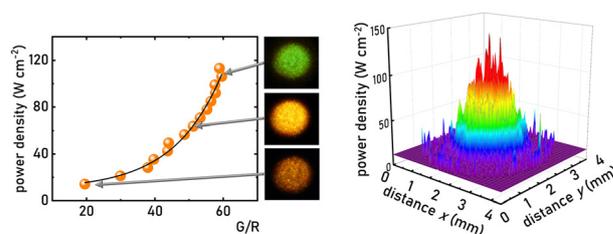
Utsa Sarkar, Hari Krishna Mishra, Ajay Kumar, Shanker Ram* and Dipankar Mandal*



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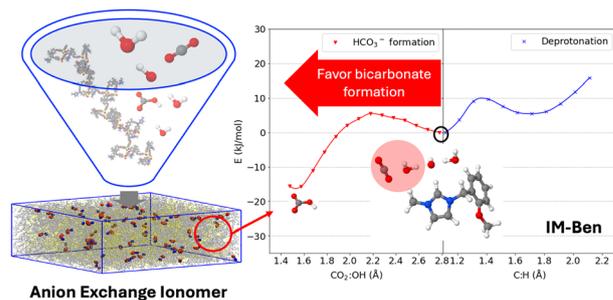
Anam Javaid, Maja Szymczak* and Lukasz Marciniak*



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Molecular insights into CO₂-to-bicarbonate transformation in functionalized anion exchange ionomers for electrochemical separations

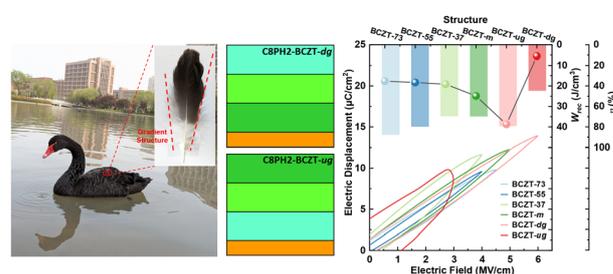
Shi Li, Tianyue Gao, Yupu Lin, Christopher G. Arges* and Rajeev Surendran Assary*



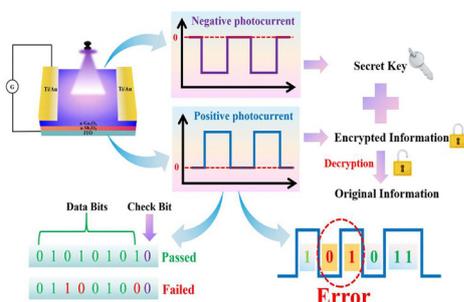
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Bioinspired, compositionally graded cellulose-based dielectrics with Schottky-engineered interfaces for high-performance and sustainable energy storage

Zixiong Sun, Yao Li, Haoyang Xin, Liming Diwu, Zhanhua Wang, Pan Gao, Ye Tian, Hongmei Jing and Zhuo Wang*



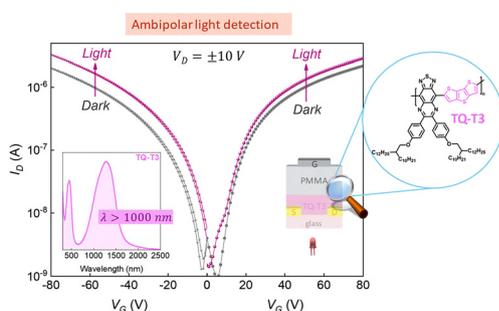
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A bipolar response deep ultraviolet photodetector for encryption and anti-interference communication based on an a-Sb₂O₅/a-Ga₂O₃ heterojunction

Cheng Wu, Peiwen Lv,* Zhaojie Zhu, Yizhi Huang, Chaoyang Tu, Chenlong Chen, G. Lakshminarayana and Yan Wang*

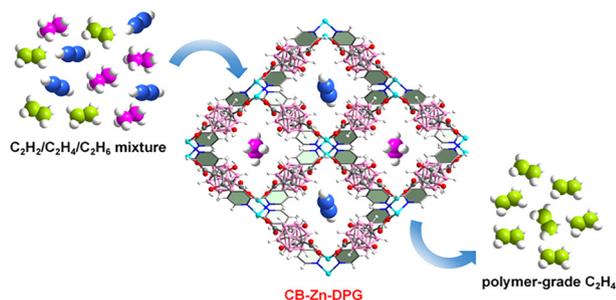
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Novel ambipolar polymers for detection beyond 1000 nm with organic phototransistors

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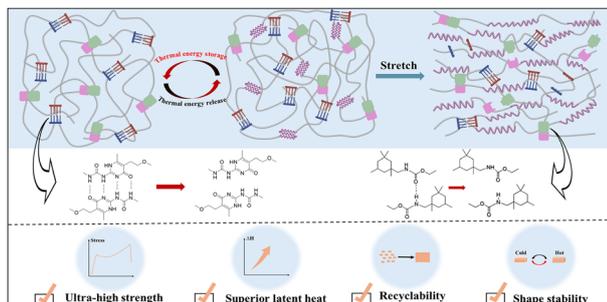
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Moderately polarized carborane-MOF with inverse C₂ selectivity for one-step polymer-grade ethylene purification

Changhong Liu, Guangzu Xiong, Yuzhe Wang, Wenlei Yang, Yiwen Yuan, Hui Wang, Lingyao Wang* and Yuanbin Zhang*

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Mechanically robust and high latent heat solid–solid phase change materials via a H-bonding collaborative strategy for energy storage and conversion

Zhiqiang Li, Chunhua Ge,* Daming Feng, Xinyue Zhang, Lixue Zhou and Xiangdong Zhang*



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Predicting how fast crystals grow at the free surface of molecular glasses

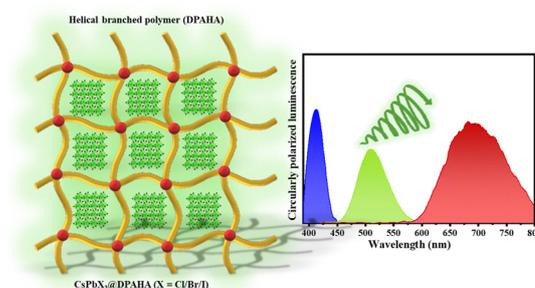
Federico Caporaletti,* Martin Eduardo Villanueva, Sascha Molitor, Biao Zuo and Simone Napolitano*



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Photopolymerized helical acrylate networks enable stable and full-color circularly polarized luminescence in perovskite nanocrystals

Atanu Jana,* Deblina Das, Sourav Mal, Tarak Nath Mandal, Youngsin Park* and Sangeun Cho*



CORRECTION

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Correction: Shape programming of liquid crystal elastomers by two-stage wavelength-selective photopolymerization

Tom Bruining, Daniela R. Tomé and Danqing Liu*

