

Materials Horizons

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See Marcin Runowski, Sebastian Mahlik et al., pp. 4911–4924. Image reproduced by permission of Marcin Runowski from *Mater. Horiz.*, 2024, 11, 4911.



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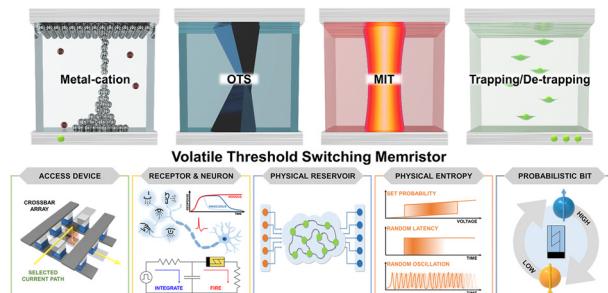
See J. Joshua Yang, Jung Ho Yoon et al., pp. 4840–4866. Image reproduced by permission of Jung Ho Yoon from *Mater. Horiz.*, 2024, 11, 4840.

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Leveraging volatile memristors in neuromorphic computing: from materials to system implementation

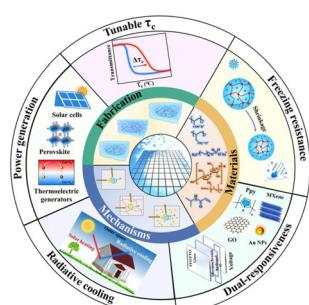
Taehwan Moon, Keunho Soh, Jong Sung Kim, Ji Eun Kim, Suk Yeop Chun, Kyungjune Cho, J. Joshua Yang* and Jung Ho Yoon*



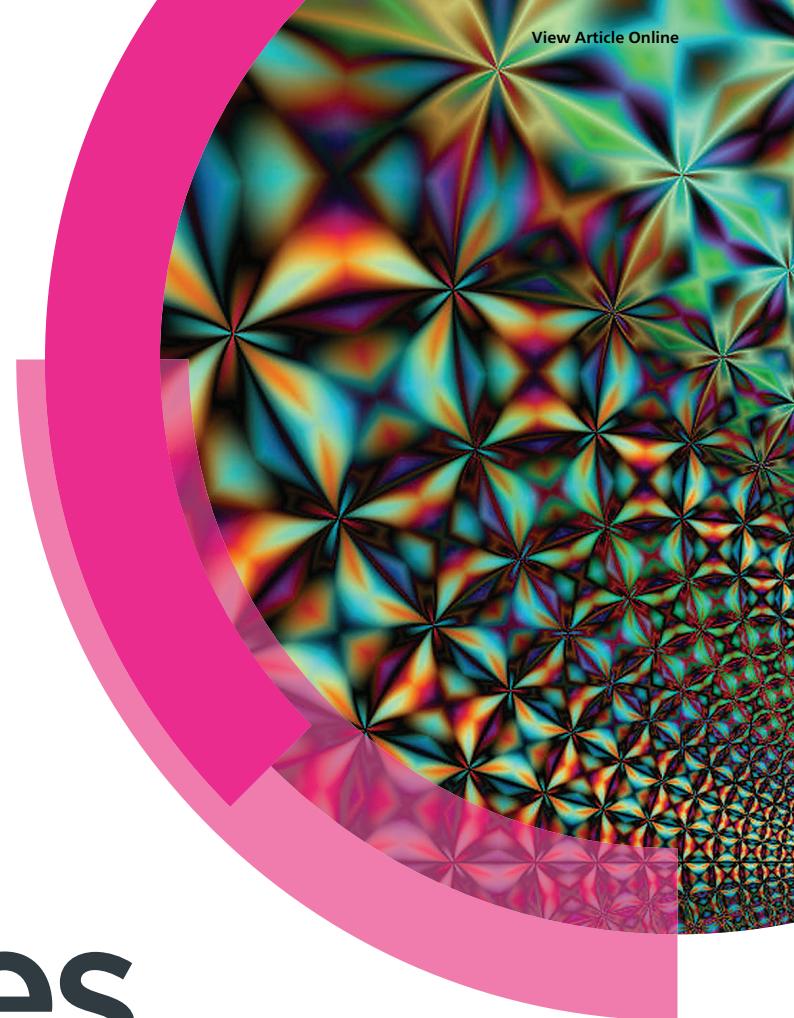
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Thermochromic hydrogel-based energy efficient smart windows: fabrication, mechanisms, and advancements

Gang Xu, Yucan Lu, Xinguantong Zhou, Nosipho Moloto, Jiacheng Liu, Song-Zhu Kure-Chu, Takehiko Hihara, Wei Zhang* and ZhengMing Sun*



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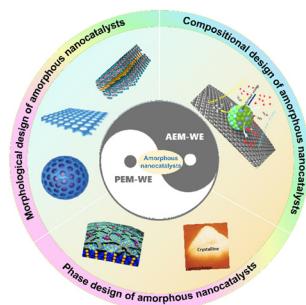
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REVIEWS

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Unveiling the potential of amorphous nanocatalysts in membrane-based hydrogen production

Yifei Liu, Qi Hu,* Xiuyi Yang* and Jianxin Kang*

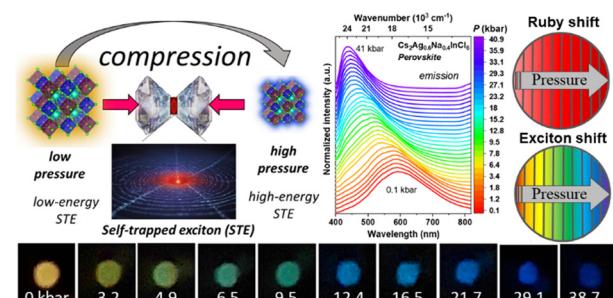


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Supersensitive visual pressure sensor based on the exciton luminescence of a perovskite material

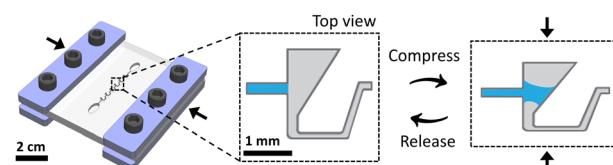
Marcin Runowski,* Przemysław Woźny, Kevin Soler-Carracedo, Agata Lazarowska, Mikołaj Kamiński, Natalia Majewska, Alfonso Muñoz, Jan Moszczyński, Szymon Sobczak, Kashyap Dave, Wen-Tse Huang, Ru-Shi Liu and Sebastian Mahlik*



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Liquid Zener diodes

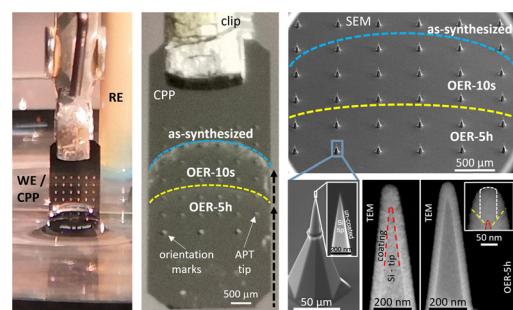
Camilla Sammartino and Bat-El Pinchasik*



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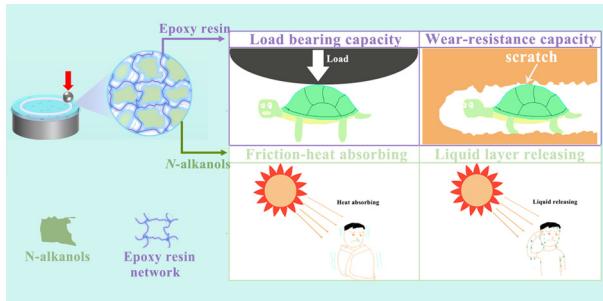
Self-formation of compositionally complex surface oxides on high entropy alloys observed by accelerated atom probe tomography: a route to sustainable catalysts

Valerie Strotkötter, Yujiao Li, Aleksander Kostka, Florian Lourens, Tobias Löffler, Wolfgang Schuhmann and Alfred Ludwig*



COMMUNICATIONS

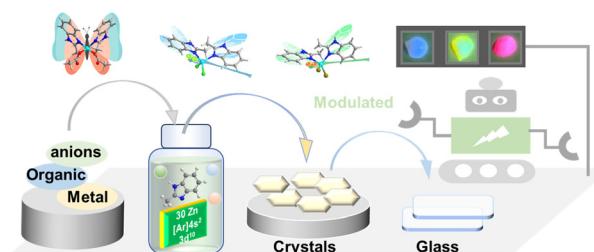
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Friction heat-driven robust self-lubricity of *n*-alkanols/epoxy resin coatings enabled by solid–liquid phase transition

Hao Li,* Cheng Cao, Yuting Li, Xiaoqiang Fan, Junhui Sun* and Minhao Zhu

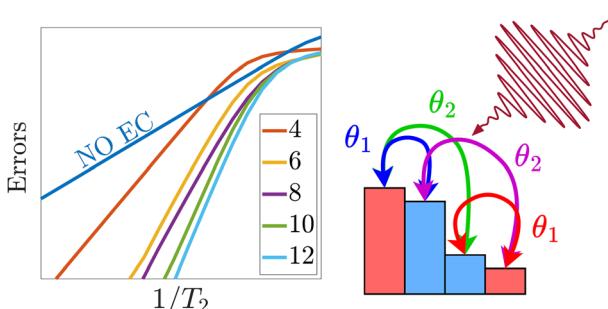
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The trade-off anionic modulation in metal–organic glasses showing color-tunable persistent luminescence

Tianhong Chen, Yu-Juan Ma, Guowei Xiao, Xiaoyu Fang, Yumin Liu, Kangjing Li and Dongpeng Yan*

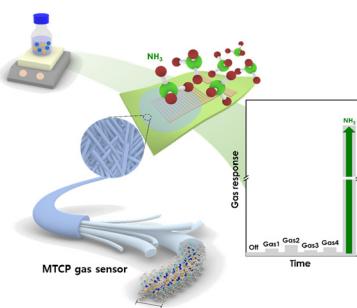
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Fault-tolerant computing with single-qudit encoding in a molecular spin

Matteo Mezzadri, Alessandro Chiesa, Luca Lepori and Stefano Carretta*

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Single stranded 1D-helical Cu coordination polymer for ultra-sensitive ammonia sensing at room temperature

Taehun Im, Juyun Lee, Sung-Chul Kim, Joharimanitra Randrianandraina, Joo-Won Lee, Myoung Won Chung, Taesung Park, Kam-Hung Low, Seungkyu Lee, Soong Ju Oh, Yun Chan Kang, Seunghyun Weon, Jung-Hoon Lee, Seon Joon Kim* and Sohee Jeong*

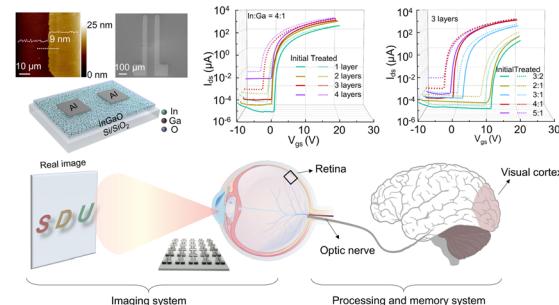


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Tunable synaptic behaviors of solution-processed InGaO films for artificial visual systems

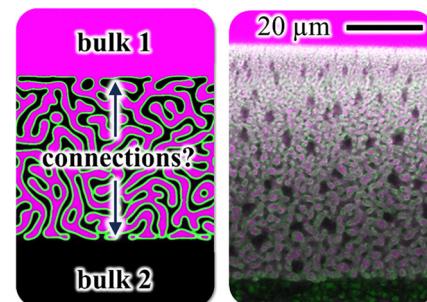
Pengsheng Li, Honglin Song, Zixu Sa, Fengjing Liu,* Mingxu Wang, Guangcan Wang, Junchen Wan, Zeqi Zang, Jie Jiang* and Zai-xing Yang*



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Dual access to the fluid networks of colloid-stabilized bicontinuous emulsions through uninterrupted connections

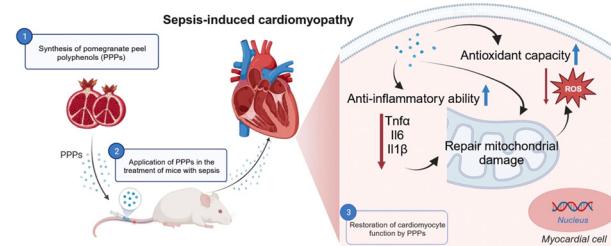
Mariska de Ruiter, Meyer T. Alting, Henrik Siegel and Martin F. Haase*



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Biogenic derived nanoparticles modulate mitochondrial function in cardiomyocytes

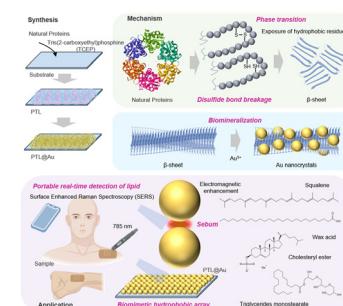
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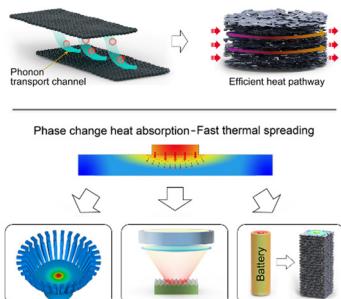
Mineralized aggregates based on native protein phase transition for non-destructive diagnosis of seborrheic skin by surface-enhanced Raman spectroscopy

Hao Liu, Zhiming Liu, Hao Zhang, Ke Huang, Xiaohui Liu, Hui Jiang* and Xuemei Wang*



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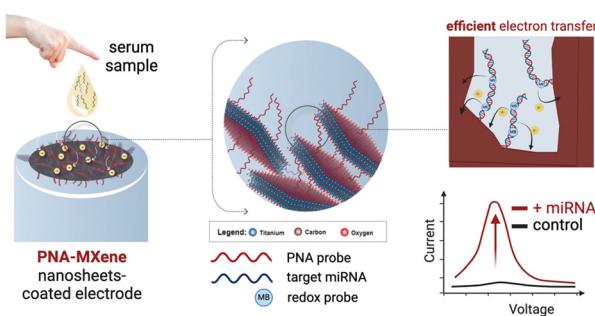
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van der Waals-bonded graphene clusters enhance thermal conductivity of phase-change materials for advanced thermal energy management

Liwen Sun, Yandong Wang, Lu Chen, Junfeng Ying, Qiuyu Li, Li Fu, Qingwei Yan, Kai Wu, Chen Xue,* Jinhong Yu, Nan Jiang, Kazuhito Nishimura, Cheng-Te Lin* and Wen Dai*

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Peptide nucleic acid-clicked $Ti_3C_2T_x$ MXene for ultrasensitive enzyme-free electrochemical detection of microRNA biomarkers

Muhsin Ali, Erol Hasan, Sharat Chandra Barman, Mohamed Nejib Hedhili, Husam N. Alshareef and Dana Alsulaiman*

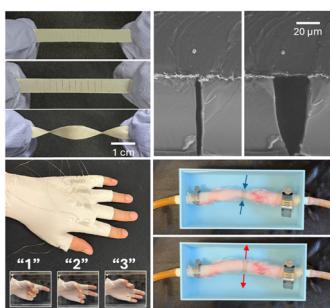
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High toughness, healable, self-cleaning polydimethylsiloxane elastomers with "rigid-while-flexible" mutual network structure

Xing Yang, Jiawen Ren, Baoquan Wan, Sichen Qin,* Qian Wang, Wenjie Huang, Jinghui Gao, Bing Xia and Jun-Wei Zha*

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Encapsulated stretchable amphibious strain sensors

Shuang Wu, Doyun Kim, Xiaoqi Tang, Martin W. King and Yong Zhu*

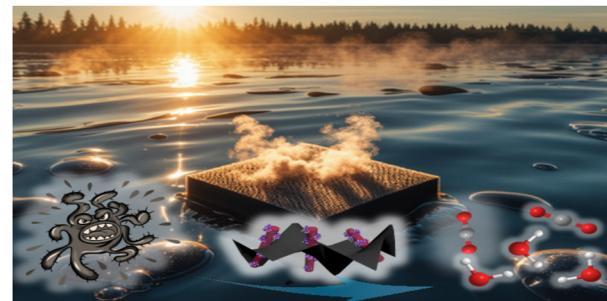


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Monolith floatable dual-function solar photothermal evaporator: efficient clean water regeneration synergizing with pollutant degradation

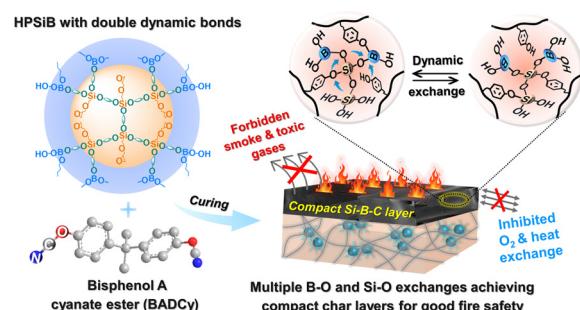
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Si, B-containing dynamic covalent bonds enable excellent flame retardancy and reduced fire hazards for cyanate ester resin

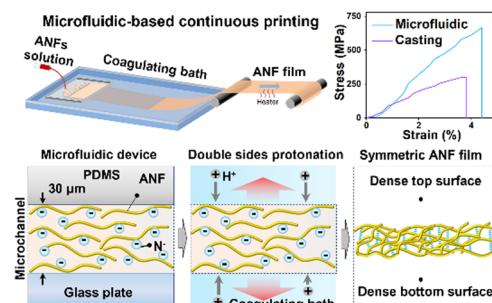
Rui Liu, Yifeng Zhang, Zheng Li, Rui Wang and Hongxia Yan*



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Mechanically robust ultrathin nanofibrous films by using microfluidic-based continuous printing

Xiao Chen, Jiaqing Su, Sha Cheng, Cheng Huang, Chunxia Zhao, Chao Teng* and Pengchao Zhang*



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A lignin-derived carbon dot-upgraded bacterial cellulose membrane as an all-in-one interfacial evaporator for solar-driven water purification

Nirmiti Mate, Kallayi Nabeela, Gopika Preethikumar, Saju Pillai* and Shaikh M. Mobin*

