

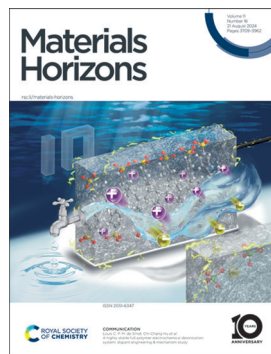
Materials Horizons

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IN THIS ISSUE

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Cover

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EDITORIAL

3718

Horizons Community Board collection: setting new trends in energy storage and harvesting through innovative approaches

Satyajit Ratha* and Edison Huixiang Ang*

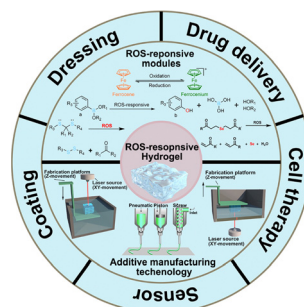


REVIEWS

3721

ROS-responsive hydrogels: from design and additive manufacturing to biomedical applications

Minju Pu, Huan Cao, Hengjie Zhang, Tianyou Wang, Yiwen Li, Shimeng Xiao* and Zhipeng Gu*



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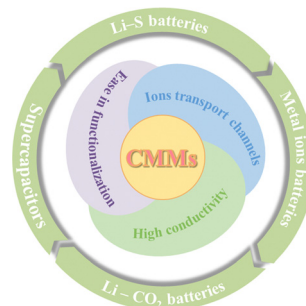


REVIEWS

3747

Porous crystalline conjugated macrocyclic materials and their energy storage applications

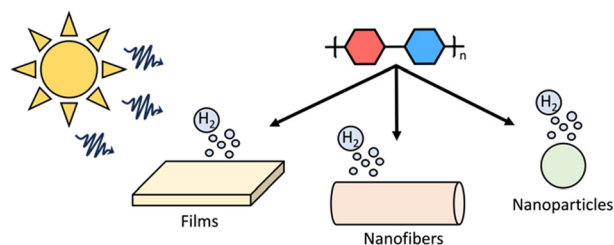
Yiwen Yang, Xiaoman Yao, Zhe Xuan, Xuanxu Chen, Yuluan Zhang, Taoping Huang, Mingjin Shi, Yifa Chen* and Ya-Qian Lan*



3764

Processing polymer photocatalysts for photocatalytic hydrogen evolution

Richard Jack Lyons and Reiner Sebastian Sprick*

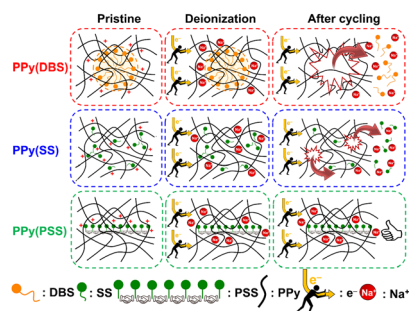


COMMUNICATIONS

3792

A highly stable full-polymer electrochemical deionization system: dopant engineering & mechanism study

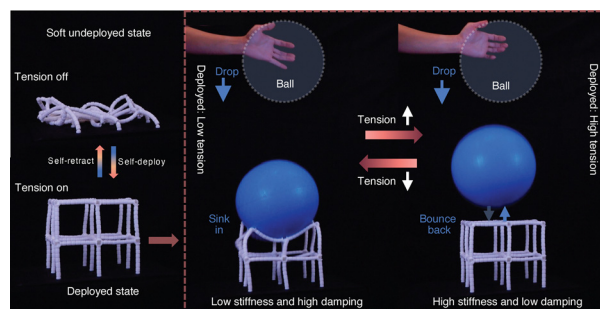
Yi-Heng Tu, Hung-Yi Huang, Yu-Hsiang Yang, Louis C. P. M. de Smet* and Chi-Chang Hu*



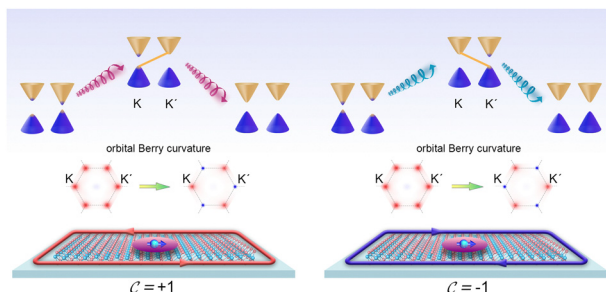
3805

Self-deployable contracting-cord metamaterials with tunable mechanical properties

Wenzhong Yan,* Talmage Jones, Christopher L. Jawetz, Ryan H. Lee, Jonathan B. Hopkins and Ankur Mehta



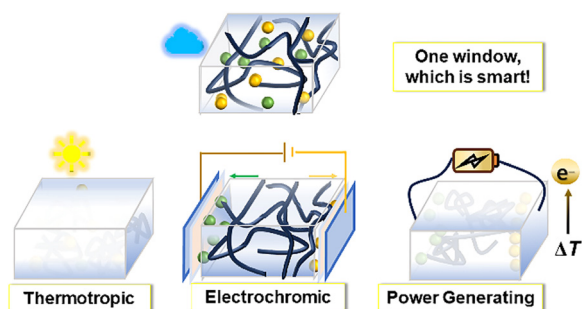
3819



Floquet engineering of the orbital Hall effect and valleytronics in two-dimensional topological magnets

Runhan Li, Xiaorong Zou, Zhiqi Chen, Xiaoran Feng, Baibiao Huang, Ying Dai* and Chengwang Niu*

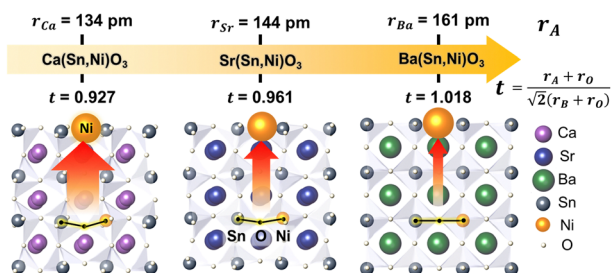
3825



LCST ion gels fabricating "all-in-one" smart windows: thermotropic, electrochromic and power-generating

Yue Ma, Yunbo Wang, Junyu Zhou, Yueyang Lan, Sheng Jiang, Yifan Ge, Shuai Tan, Shiguo Zhang, Caihong Wang* and Yong Wu

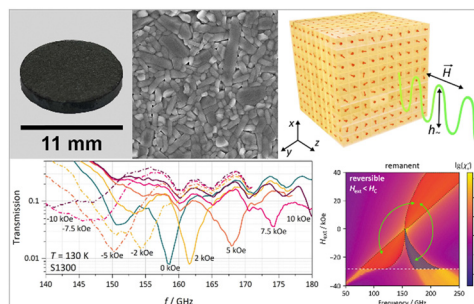
3835



Accelerating metal nanoparticle exsolution by exploiting tolerance factor of perovskite stannate

Yujeong Lee, Daseob Yoon, Yeon-Seo Nam, Sangbae Yu, Chaesung Lim, Hyeji Sim, Yunkyu Park, Jeong Woo Han,* Si-Young Choi* and Junwoo Son*

3844



Tunable sub-terahertz resonance absorption in high-coercivity magnetodielectric ceramics

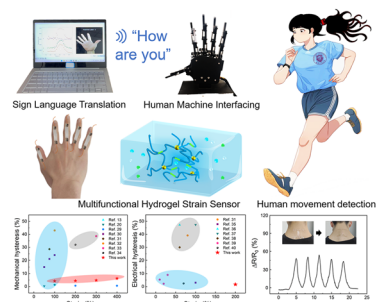
Evgeny A. Gorbachev,* Liudmila N. Alyabyeva, Artem V. Pronin, Alexandra S. Sultanovskaya, Ekaterina S. Kozlyakova, Oxana V. Magdysyuk, Ilya V. Roslyakov, Martin Dressel, Boris P. Gorshunov and Lev A. Trusov*



3856

Low hysteresis, water retention, anti-freeze multifunctional hydrogel strain sensor for human–machine interfacing and real-time sign language translation

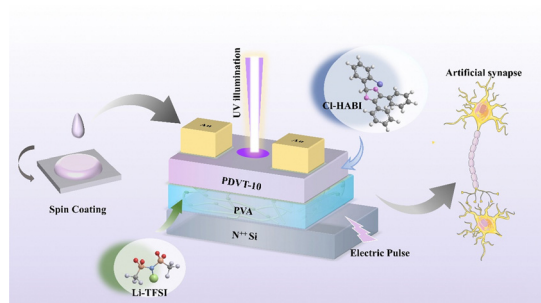
Lijuan Zhou, Bin Zhao, Jingye Liang, Fangying Lu, Weiping Yang, Jishuai Xu, Jingxuan Zheng, Yong Liu,* Run Wang* and Zunfeng Liu



3867

A high-performance organic lithium salt-doped OFET with the optical radical effect for photoelectric pulse synaptic simulation and neuromorphic memory learning

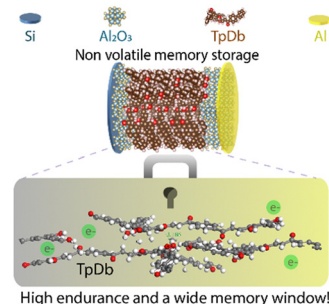
Yujiao Li, Gang He,* Wenhao Wang, Can Fu, Shanshan Jiang, Elvira Fortunato and Rodrigo Martins



3878

A carbonyl-decorated two-dimensional polymer as a charge-trapping layer for non-volatile memory storage devices with a high endurance and wide memory window

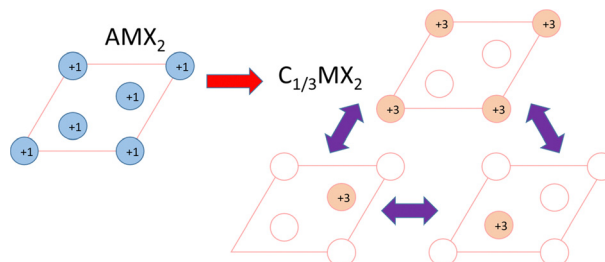
Ruba Al-Ajeil, Abdul Khayum Mohammed, Pratibha Pal, Matthew A. Addicoat, Surabhi Suresh Nair, Dayanand Kumar, Abdul Momin Syed, Ayman Rezk, Nirpendra Singh, Ammar Nayfeh, Nazek El-Atab* and Dinesh Shetty*



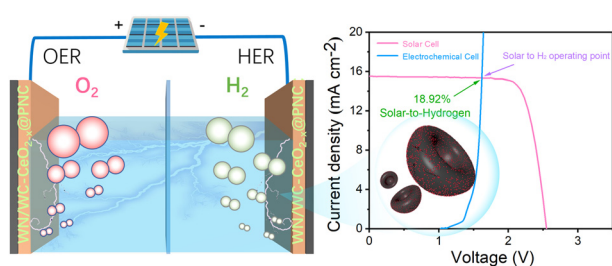
3885

Quantized ferroelectricity in multivalent ion conductors with non-polar point groups

Xuechen Wang and Menghao Wu*



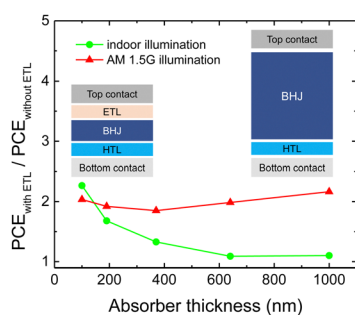
3892



Treasure-bowl style bifunctional site in cerium–tungsten hetero-clusters for superior solar-driven hydrogen production

Pengliang Sun, Eduardo Gracia-Espino, Fang Tan, Hua Zhang, Qingquan Kong, Guangzhi Hu* and Thomas Wågberg*

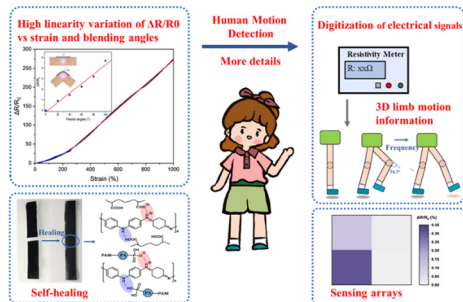
3903



Organic indoor PV: vanishing surface recombination allows for robust device architecture

Xueshi Jiang,* Bernhard Siegmund* and Koen Vandewal*

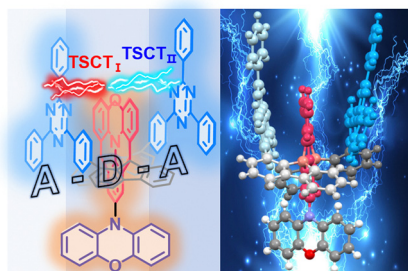
3911



A stretchable conductive elastomer sensor with self-healing and highly linear strain for human movement detection and pressure response

Yao Zhang, Yizhong Yuan,* Huimei Yu,* Chunhua Cai, Jinyu Sun and Xiaohui Tian

3921



Intramolecular exciplex featuring a bis- sp^3 C-locked acceptor–donor–acceptor sandwich

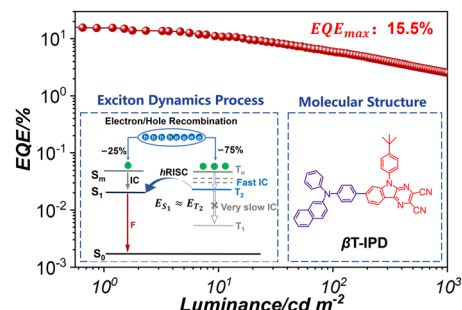
Feng-Ming Xie, Han-Yang Wang, Hao-Ze Li, Kai Zhang, Yang Shen, Jianhua Zou, Yan-Qing Li* and Jian-Xin Tang*



3928

Optimizing the energy level alignment for achieving record-breaking efficiency in hot exciton deep red OLEDs

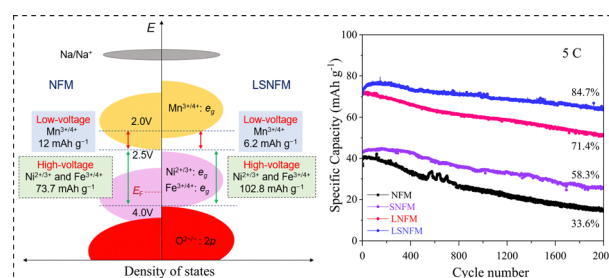
Yujie Wu, Jiasen Zhang, Deli Li, Songyu Du, Xilin Mu, Chunyu Liu, Kaibo Fang, Tingting Feng, Tao Wang, Wei Li* and Ziyi Ge*



3935

Realizing long-term cycling stability of O3-type layered oxide cathodes for sodium-ion batteries

Guohua Zhang, Yuheng Gao, Ping Zhang, Yuheng Gao, Jingrong Hou, Xuemin Shi, Jiwei Ma, Renyuan Zhang* and Yunhui Huang*



3946

New insights into pure zwitterionic hydrogels with high strength and high toughness

Haiyan Yin, Min You, Xinlei Shi, Hui Yu and Qiang Chen*

