Materials Horizons

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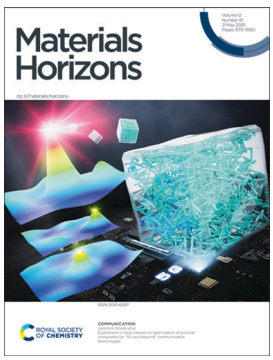
See Yimin Xuan *et al.*, pp. 3320–3331. Image reproduced by permission of Yimin Xuan from *Mater. Horiz.*, 2025, **12**, 3320.



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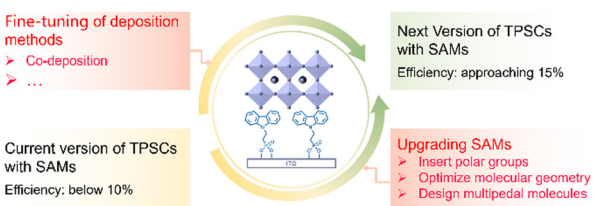
See Junichiro Shiomi *et al.*, pp. 3332–3340. Image reproduced by permission of Junichiro Shiomi from *Mater. Horiz.*, 2025, **12**, 3332.

EDITORIAL

REVIEWS



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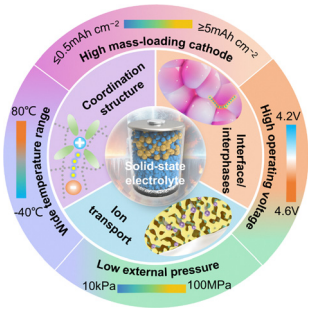

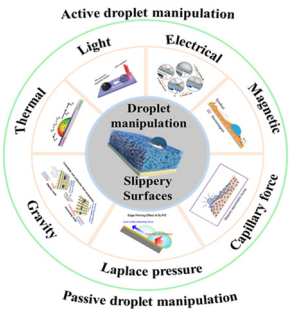

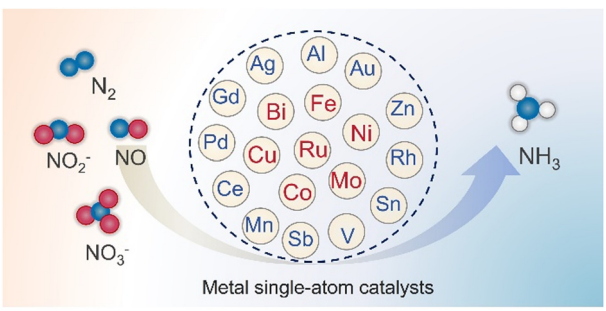

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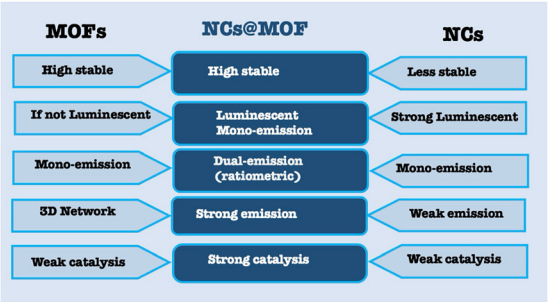

Enhanced biochemical sensing using metallic nanoclusters integrated with metal–organic frameworks (NCs@MOFs): a comprehensive review

Sameera Sh. Mohammed Ameen,* Khalid M. Omer,* Farzaneh Shalileh and Morteza Hosseini*

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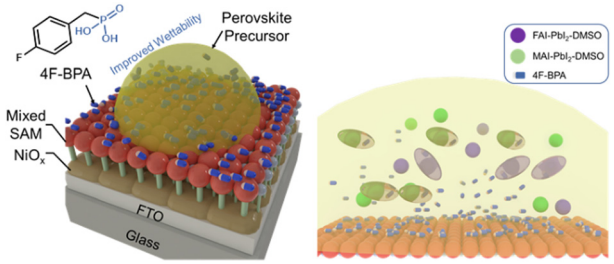
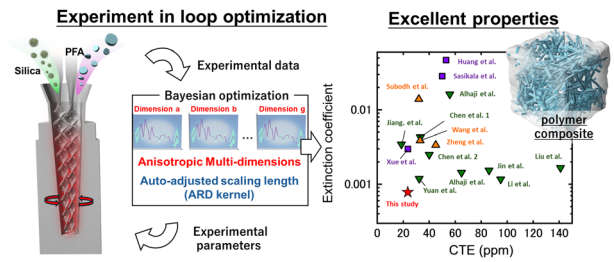


Dissolvable molecular bridges promoting buried interface modification for high-performance inverted perovskite solar cells

Ruixiong Hu, Likai Zheng, Bin Huang and Yimin Xuan*

3332



Experiment-in-loop interactive optimization of polymer composites for "5G-and-beyond" communication technologies

Bin Xu, Touchy Abeda Sultana, Koki Kitai, Jiang Guo, Toyomitsu Seki, Ryo Tamura, Koji Tsuda and Junichiro Shiomi*

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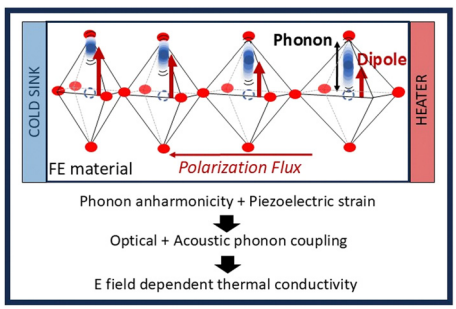

Electric field-dependent thermal conductivity of relaxor ferroelectric PMN-33PT through changes in the phonon spectrum

Delaram Rashadfar, Brandi L. Wooten* and Joseph P. Heremans*

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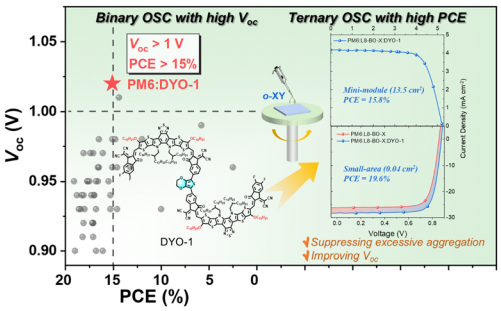

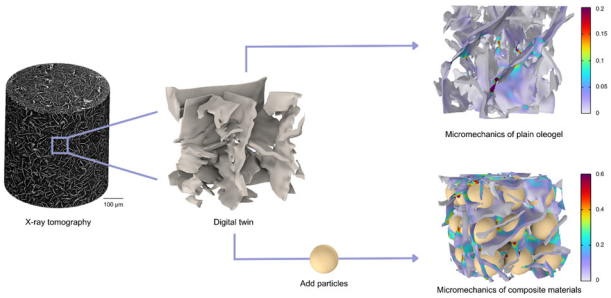

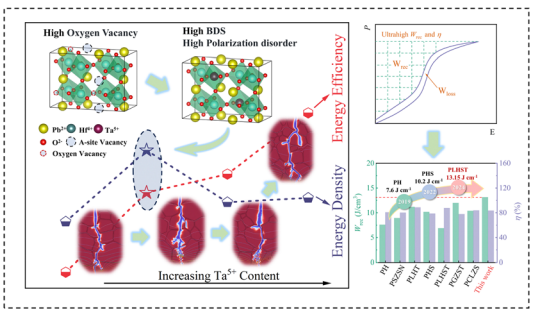

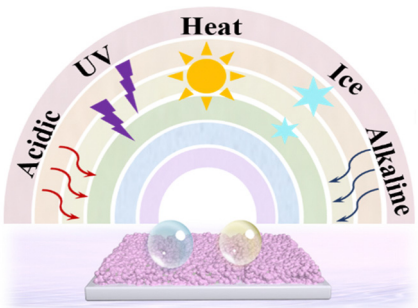

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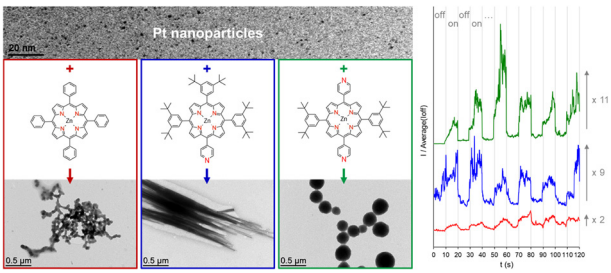

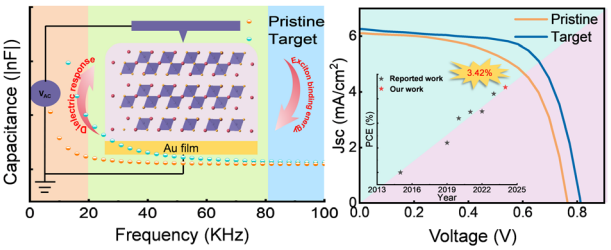

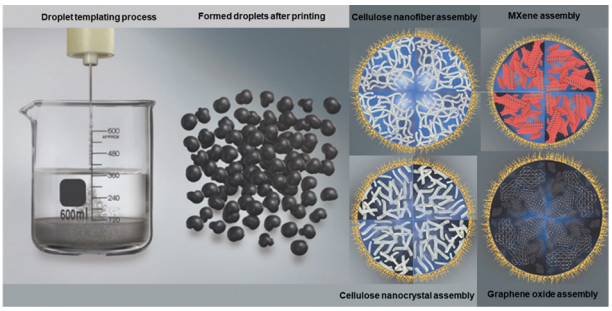

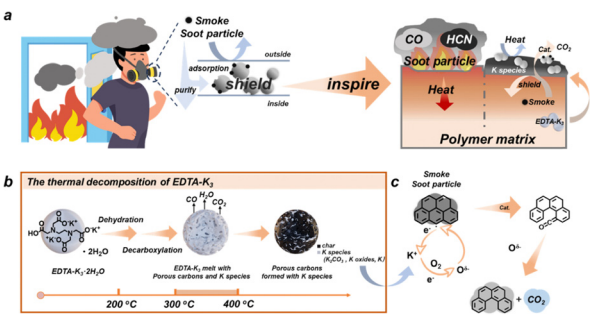

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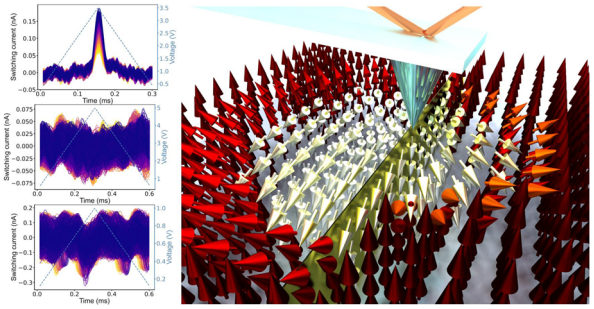

Differentiating the origins of local charge transfer in oxides and hybrid halides by accumulating charge

Chenxi Wang, Panithan Sriboriboon, Owoong Kwon, Seo-Ryeong Lee, Myeong Seop Song, Jin-Wook Lee, Seung Chul Chae and Yunseok Kim*

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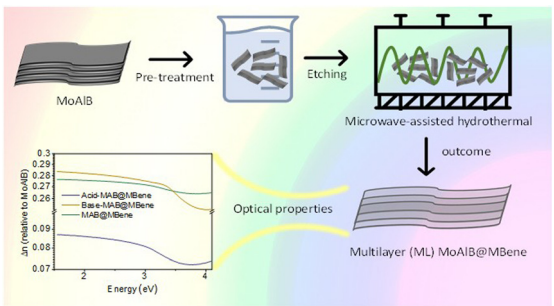

Multilayered MoAlB@MBene structures using mild microwave-assisted etching and their optical properties

Madhurya Chandel,* Muhammad Abiyyu Kenichi Purbayanto, Dominik Kowal, Dorota Moszczyńska, Anna Wójcik, Muhammad Danang Birowosuto, Michael Naguib and Agnieszka Maria Jastrzębska*

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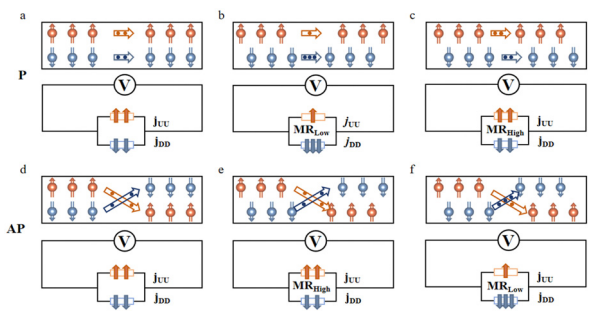

Origin and enhancement of magnetoresistance in antiferromagnetic tunnel junctions: spin channel selection rules

Xiao Liu, Guorong Yu, Keqian He, Yuxiang Xiao, Sicong Zhu* and Lei Shen*

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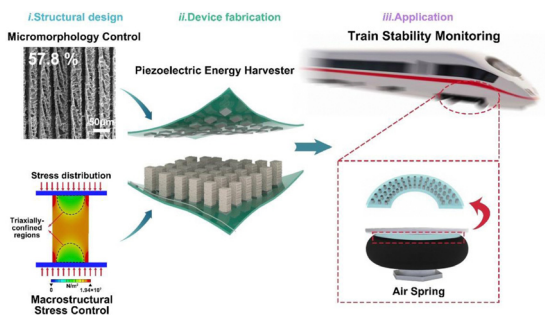

Significantly enhanced energy harvesting performance in lead-free piezoceramics *via* a synergistic design strategy

Jianxun Zhang, Qianqian Xu, Yan Zhang,* Wei Guo,* Hanmin Zeng, Yimeng He, Jiatao Wu, Longlong Guo, Kechao Zhou and Dou Zhang

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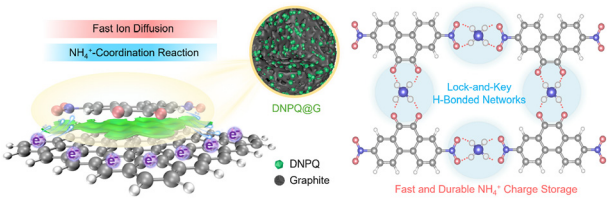

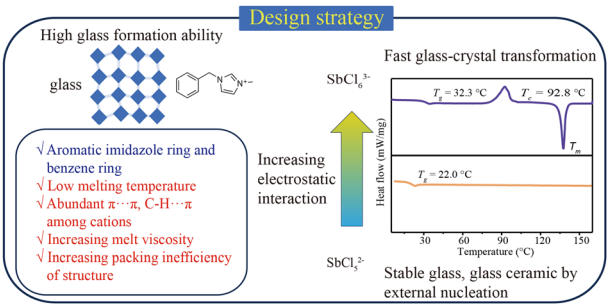

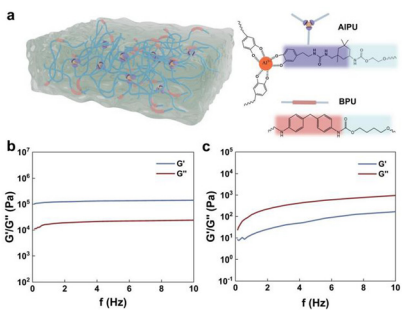

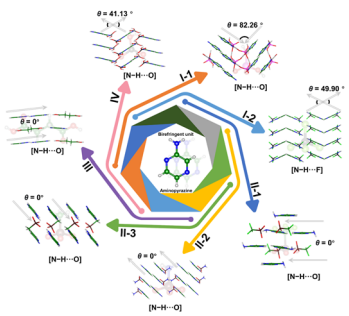

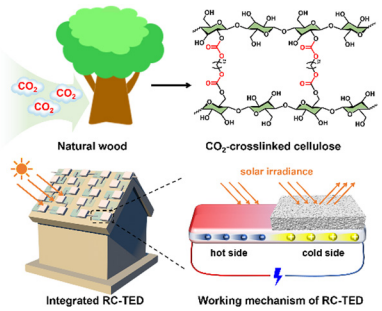

CO_2-crosslinked cellulose for radiative-cooling-driven passive thermoelectric devices: one stone, two birds

Legeng Li, Doudou Xing, Hao Yu, Zhihan Wang, Yingjie Zhou* and Feng Yan*