

新材料突破高温储能极限！

作者：writer 来源：科学网

本文原地址：<https://www.iikx.com/news/progress/38426.html>


本文仅供学习交流之用，版权归原作者所有，请勿用于商业用途！

新材料突破高温储能极限！。 *Advanced Materials*

**ADVANCED
MATERIALS**
www.advmat.de

RESEARCH ARTICLE

Multilevel Heterointerface Engineering Breaks the Trap-Barrier Trade-Off in High-Energy-Density Polymer Dielectrics

Yang Liu¹ | Zhenjun Shao¹ | Jin Qian² | Tiezhu Guo¹ | Jian Bao¹ | Diming Xu¹ | Weichen Zhao¹ | Zhentao Wang¹ | Zilin Huang¹ | Jiajia Ren¹ | Jinnan Liu¹ | Ziyang Liu¹ | Jiwei Zhai² | Yao Zhou³ | Zenghui Liu¹ | Tao Zhou⁴ | Guiwei Yan¹ | Jinzhan Su⁵ | Wenyuan Liu⁶ | Wenfeng Liu³ | Jordí Jacas⁷ | Joan Ramon Morante Lleonart^{7,8} | Andreu Cabot^{7,9} | Di Zhou¹ 

¹Electronic Materials Research Laboratory & Multifunctional Materials and Structures, Key Laboratory of the Ministry of Education & International Center for Dielectric Research, School of Electronic Science and Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi, China | ²Functional Materials Research Laboratory, School of Materials Science and Engineering, Tongji University, Shanghai, China | ³State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an, Shaanxi, China | ⁴School of Electronic and Information Engineering, Hangzhou Dianzi University, Hangzhou, Zhejiang, China | ⁵International Research Centre for Renewable Energy, State Key Laboratory of Multiphase Flow in Power Engineering Xi'an Jiaotong University, Xi'an, P. R. China | ⁶State Key Laboratory for Strength and Vibration of Mechanical Structures, School of Aerospace Engineering, Xi'an Jiaotong University, Xi'an, China | ⁷Catalonia Institute for Energy Research-IREC, Sant Adrià de Besòs, Barcelona, Spain | ⁸Faculty of Physics, University of Barcelona, Barcelona, Spain | ⁹ICREA, Pg. Lluís Companys, Barcelona, Spain

Correspondence: Jiwei Zhai (apzhai@tongji.edu.cn) | Yao Zhou (zhouyao@xjtu.edu.cn) | Zenghui Liu (liu.z.h@xjtu.edu.cn) | Tao Zhou (zhou.tao@hdu.edu.cn) | Wenfeng Liu (liuwenfeng@gmail.com) | Di Zhou (zhoudi1220@xjtu.edu.cn)

网站截图。

该研究通过深度融合微观界面电子结构与宏观储能表现，有效突破了高功率应用中的性能瓶颈，为该材料在电动汽车逆变器及集成电容器系统等领域的规模化应用提供了可能。同时，这一创新成果也为研发下一代高能量密度、耐高温、长寿命的聚合物薄膜电容器确立了普适性的设计范式。（来源：中国科学报 李媛）

相关论文信息：<https://doi.org/10.1002/adma.202517624>

作者：周迪等 来源：《先进材料》

更多 科学进展 请访问 <https://www.iikx.com/news/progress/>

本文版权归原作者所有，请勿用于商业用途，[爱科学iikx.com](http://iikx.com)转发