



**Highlighting a study on heat-resistant nanofiber membranes by a group of researchers led by Professor Yingde Wang and Professor Bing Wang from National University of Defense Technology, China.**

An *in situ* hyperconnective network strategy to prepare lanthanum zirconate nanofiber membranes with superior flexibility and toughness

We report a scalable approach of sol-gel electrospinning to synthesize flexible and tough  $\text{La}_{1.85}\text{Al}_{0.15}\text{Zr}_2\text{O}_7$  nanofiber membranes involving self-assembled 3D networks. The interactions between nanoscale constituents lead to high nodal connectivity and strong crosslinking, which may promote an enhancement of macroscopic mechanical properties by orders of magnitude. Mechanistic insights and manufacturability provided by these nanofiber membranes may create further opportunities for materials design and technological innovation.

**As featured in:**



See Bing Wang, Yingde Wang *et al.*,  
*J. Mater. Chem. A*, 2023, **11**, 12735.