



Showcasing research from Professor Jun Huang and Haibo Xie's laboratories, Department of Polymeric Materials & Engineering, College of Materials & Metallurgy, Guizhou University, Huaxi District, Guiyang 550025, P. R. China

Zinc chemistry regulated by chitosan-based poly(aprotic/protic ionic liquid)s with multi-anion-cation interactions for highly reversible Zn-ion batteries

The reversibility and lifespan of aqueous Zn-ion batteries (AZIBs) are constrained by the uncontrolled Zn chemistry occurring both within the bulk electrolyte and at the electrode/electrolyte interface. Herein, taking the particular structural feature of chitosan, a betaine hydrochloride-derived chitosan-based poly(aprotic/protic ionic liquid)s multifunctional additive was firstly prepared to regulate Zn chemistry through synergistic multi-anion-cation interactions for building high-performance AZIBs.

As featured in:



See Jun Huang, Haibo Xie *et al.*,  
*Energy Environ. Sci.*, 2025, **18**, 1560.