

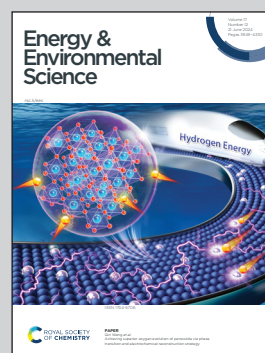


Showcasing research from Professor Long Kong's laboratory, Institute of Flexible Electronics, Northwestern Polytechnical University, Xi'an 710129, China.

Solvating lithium and tethering aluminium using di-coordination-strength anions for low-temperature lithium metal batteries

Lithium bis(fluorosulfonyl)imide (LiFSI) corrodes aluminium (Al) current collector, but this corrosion can be impeded using di-coordination-strength anions. This concept adopts the weakly coordinated anion (FSI⁻) to exert high ionic transport kinetics, and the strongly coordinated anion (nitride, NO₃⁻) to stabilize the Al foil surface. Such simultaneous Li solvation and Al tethering highlight the importance of solvation chemistry to mediate Li transport and Al corrosion.

As featured in:



See Wei Xia, Yusheng Zhao, Long Kong *et al.*, *Energy Environ. Sci.*, 2024, **17**, 4036.