



Showcasing research from Professor Zheng-Long Xu's laboratory, Department of Industrial and Systems Engineering, The Hong Kong Polytechnic University, Hong Kong SAR, China.

Deciphering the dynamic interfacial chemistry of calcium metal anodes

Calcium metal batteries have been considered potentially high-energy and low-cost alternatives to lithium-ion batteries because of the high abundance of calcium elements in the Earth's crust. Calcium metal anode has been concerned unstable in most organic electrolytes. In this work, we studied the dynamic corrosion of calcium metal in borate-based electrolyte, which revealed the reasons for the successful cycling and failure of calcium metal anodes reported in literature. Our findings provide constructive reference for the design of new electrolytes for calcium metal batteries.

As featured in:



See Zheng-Long Xu *et al.*,
Energy Environ. Sci., 2024, 17, 6548.