

## Making anode-free lithium metal battery work

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Anode-free lithium metal batteries are regarded an ultimate version of next generation lithium metal battery. This talk deals with current collector for anode-free lithium metal battery. The formation of thick and inhomogeneous solid electrolyte interface (SEI) on current collector and the afterward irregular Li deposition hinder the advert of anode-free lithium metal battery. To address the issue, electron-deficient electrode surface with a lowered Fermi level is suggested and demonstrated. By combining molecular simulation, spectroscopic analysis, and electrochemical engineering, novel academic strategies to control the interfacial process are developed and their efficacies are demonstrated.