

# Minimizing Polysulfide Shuttle Effect in Lithium-Ion Sulfur Batteries by Anode Surface Passivation

- Supplementary Information

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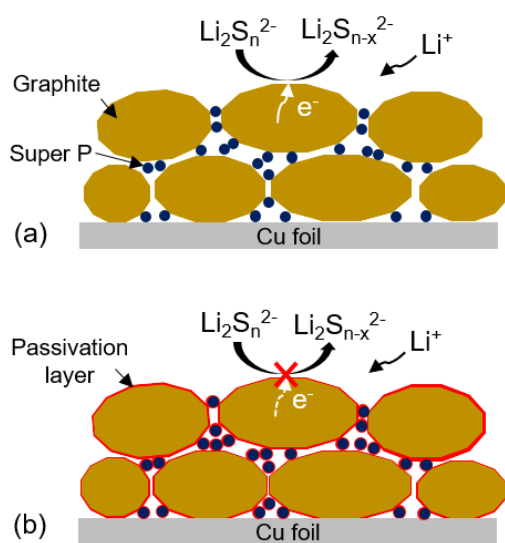
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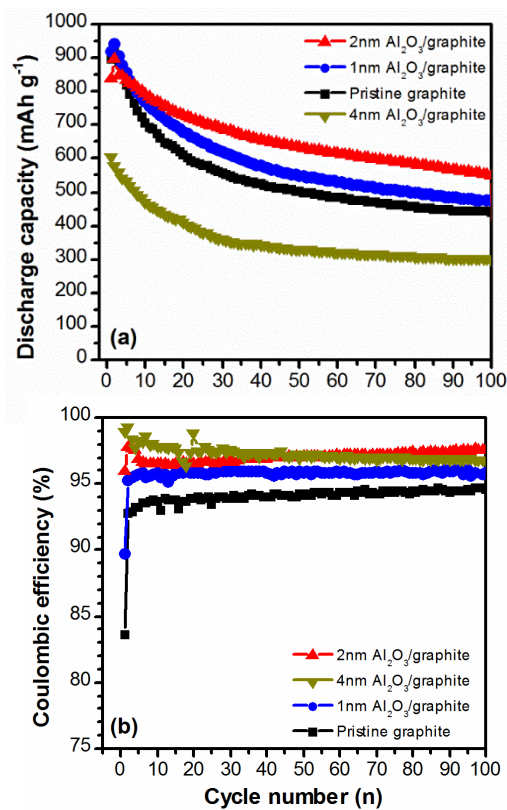
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**Figure 1.** Schematic diagram of (a) polysulfide reduction reactions on the graphite anode surface; (b) surface passivation layer on the graphite anode blocks the transport pathway for electrons, therefore suppressing polysulfide reduction reactions.



**Figure 2.** (a) Cycling stability and (b) Coulombic efficiency of graphite-sulfur batteries using pristine graphite and 1 nm, 2 nm, and 4 nm Al<sub>2</sub>O<sub>3</sub>/graphite as the anode.