

Fig. S1 The SEM images of (a) sublimed sulfur and (b) modified sulfur.

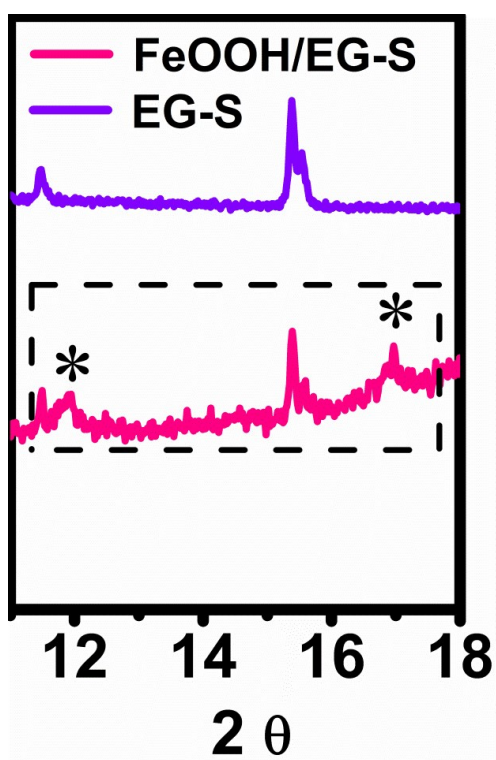


Fig. S2 XRD patterns of EG-S and FeOOH/EG-S composite.

Fig. S3 Raman I_D/I_G ratio for different samples

Sample	I_D/I_G
EG	0.92
FeOOH/EG	0.96
EG-S	0.91
FeOOH/EG-S	0.99

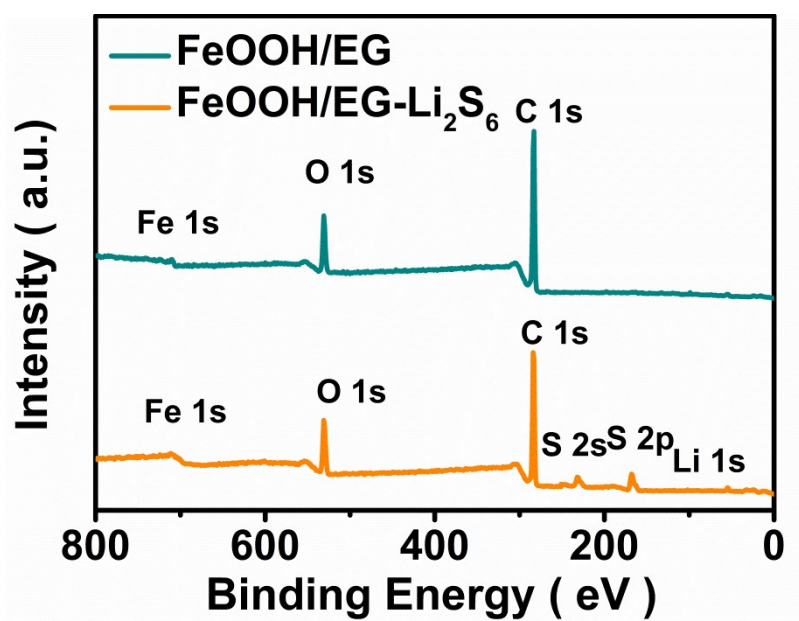


Fig. S4 XPS survey spectra for FeOOH/EG-S before and after adsorption.

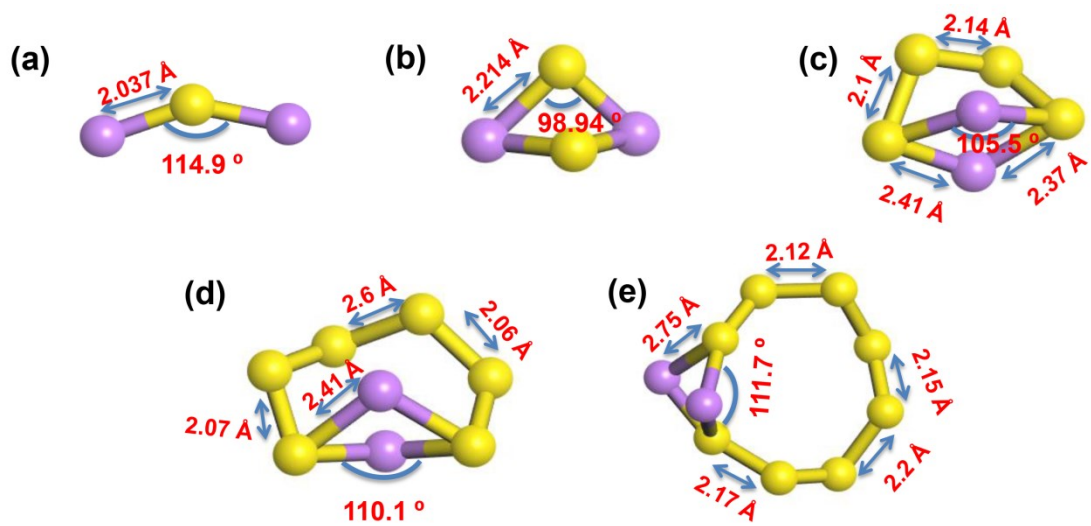


Fig. S5 Fully optimized molecular structures of isolated (a) Li_2S , (b) Li_2S_2 , (c) Li_2S_4 , (d) Li_2S_6 and (e) Li_2S_8 in the ground states. The yellow and purple balls represent S and Li atoms, respectively.

The bond lengths and angles of each cluster are also listed.

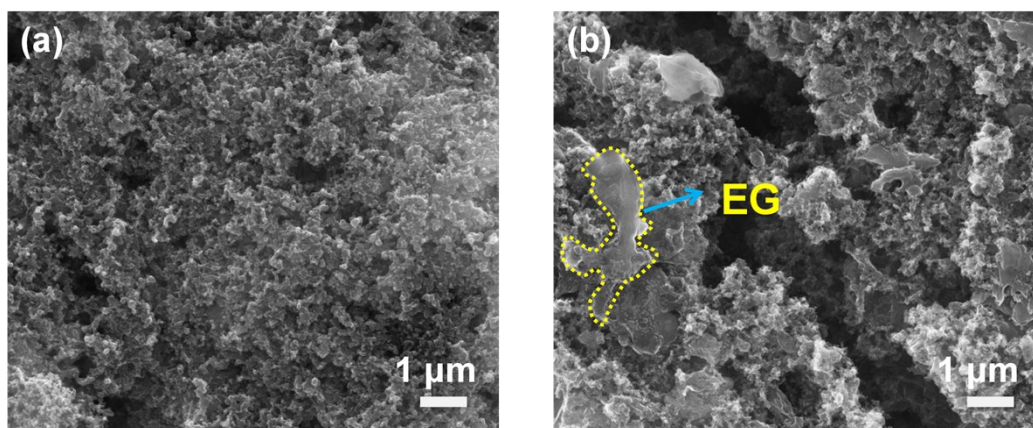


Fig. S6 (a) The SEM images of FeOOH/EG-S and (b) EG-S electrodes after 300 cycles.

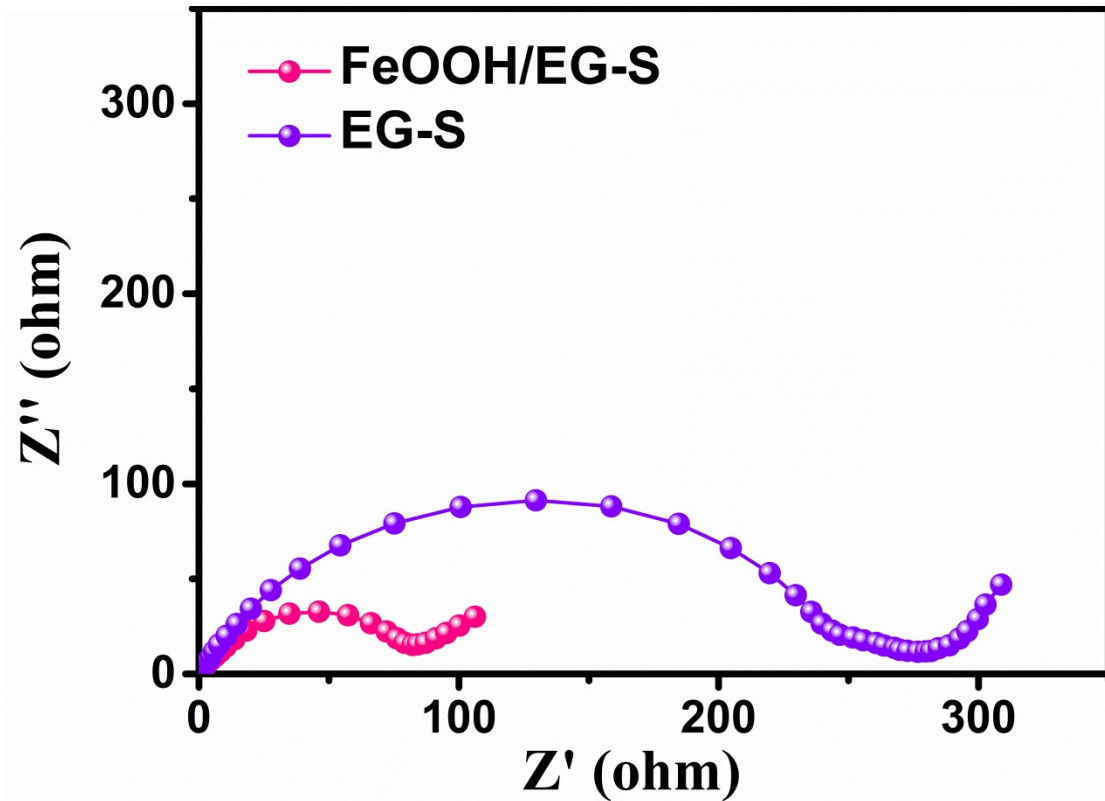


Fig. S7 (a) The EIS of FeOOH/EG-S and (b) EG-S electrodes after 300 cycles.

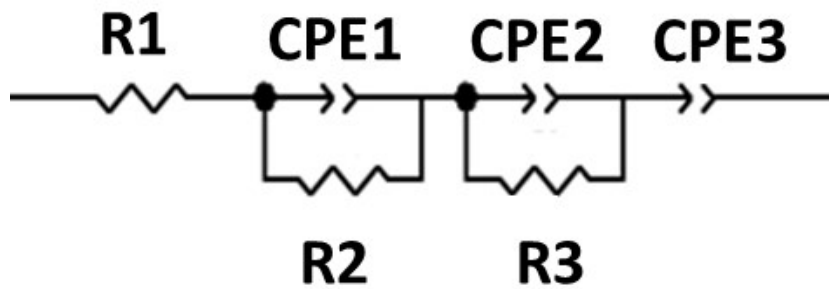


Fig. S8 Equivalent circuit diagram of the FeOOH/EG-S electrode