**Shape-controlled MnO$_2$ as sulfur host for high performance Lithium-Sulfur Batteries**

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**Fig.S1** The thermal gravimetric analysis (TGA) curves of the MnO$_2$ flakes/S and MnO$_2$ tubes/S.

**Fig.S2** BET surface area analysis of (a) MnO$_2$ flakes and (b) MnO$_2$ tubes.
Fig. S3 The discharge/charge voltage profiles of (a) MnO$_2$ flakes/S and (b) MnO$_2$ tubes/S electrodes with increasing cycles at 1.0C.
Fig. S4 (a) Digital photographs of Li$_2$S$_6$ and Li$_2$S$_6$ solution with MnO$_2$ flakes; (b) UV-Vis spectra of Li$_2$S$_6$ solution and the Li$_2$S$_6$-MnO$_2$ flakes.