Supplementary Materials

Three-Dimensionally Ordered Macroporous ZnO Framework as Dual-Functional Sulfur Host for High-Efficiency Lithium–Sulfur Batteries

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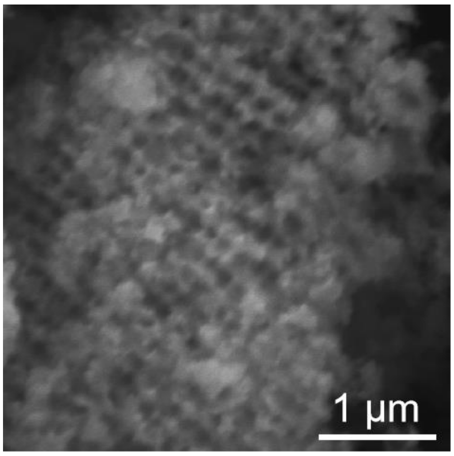

Figure S1. SEM image of S/3DOM ZnO after 50 cycles.

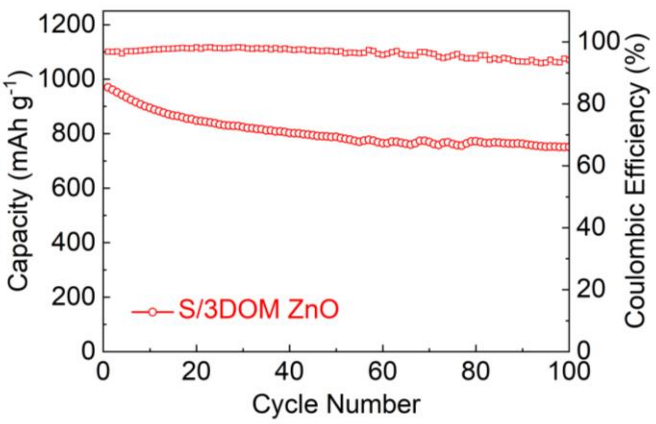

Figure S2. Cycling performance of the Li-S battery with S/3DOM ZnO electrode free of $LiNO_3$.

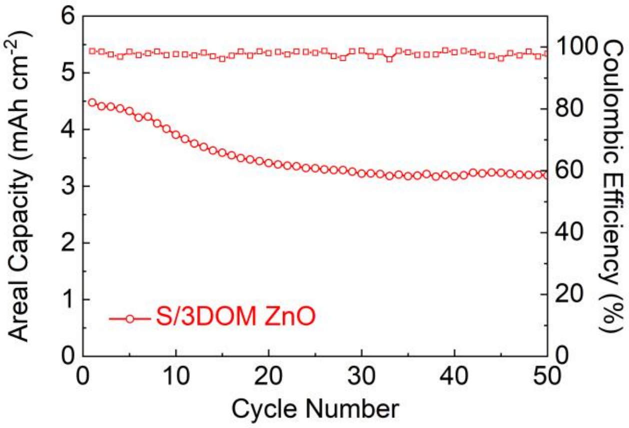

Figure S3. Cycling performance of S/3DOM ZnO electrode at 0.2 C under high sulfur loading (5 mg cm^{-2}).

Table S1. The comparison of the electrochemical performance of S/3DOM ZnO electrode with the previously reported S/C electrodes.

Electrode material	Sulfur Loading	Initial capacity (mAh g^{-1}, at n C)	Capacity retention (%, at n C, after n Cycle)	High Rate Performance (mAh g^{-1}, at n C)	Ref.
HPC-S	1 mg cm^{-2}	998 mAh g^{-1} (0.3 C)	77% (2.4 C, 500 th)	700 mAh g^{-1} (2.4 C)	[1]
3D S@PGC	2.36 mg cm^{-2}	1382 mAh g^{-1} (0.5 C)	61% (2 C, 1000 th)	500 mAh g^{-1} (5 C)	[2]
3D/S/VCNs	1.0–1.5 mg cm^{-2}	1240 mAh g^{-1} (167 mA g^{-1})	80.3% (837 mA g^{-1}, 300 th)	738 mAh g^{-1} (3340 mA g^{-1})	[3]
S/3DOM-m C	2 mg cm^{-2}	1042 mAh g^{-1} (0.2 C)	67.4% (0.2 C, 100 th)	357 mAh g^{-1} (2.5 C)	[4]
S/C-1.5	1.0–1.5 mg cm^{-2}	870 mAh g^{-1} (0.5 C)	85% (1 C, 300 th)	703 mAh g^{-1} (2 C)	[5]
PCKH/S	1.2 mg cm^{-2}	1188.6 mAh g^{-1} (0.1 C)	60% (1 C, 300 th)	668.1 mAh g^{-1} (2 C)	[6]
S/3DOM ZnO	2 mg cm^{-2}	1110 mAh g^{-1} (0.2 C)	78.6% (3 C, 500 th)	651 mAh g^{-1} (3 C)	This work

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