Supporting Information for

Modified Separator Using Thin Carbon Layer Obtained from its Cathode for Advanced Lithium Sulfur Batteries

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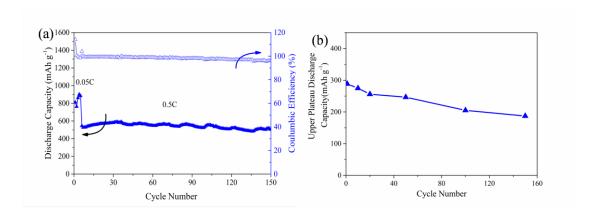
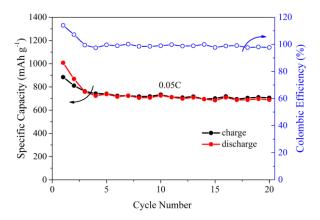


Fig. s1. (a) Long cycle performance of Li-S cells with IM modified separator using PVDF binder at the rate of 0.5C. (b) Upper plateau discharge capacities of batteries with IM modified separator using PVDF binder at various cycles.



 $Fig.\ s2.\ Cycling\ performance\ of\ Li-S\ cells\ with\ IM\ modified\ separator\ at\ high\ sulfur\ loadings\ of\ 5\ mg\ cm^{-2}.$