## **Electronic Supplementary Information**

## LiAlO<sub>2</sub>/Nitrogen-doped Hollow Carbon Spheres (NdHCSs) Modified

## Separator for Advanced Lithium-Sulfur Batteries †

Fanqun Li<sup>a</sup>, Furong Qin<sup>a</sup>, Guanchao Wang<sup>a</sup>, Kai Zhang<sup>a</sup>, Peng Wang<sup>a</sup>, Zhian Zhang<sup>a</sup> and Yanqing Lai<sup>a</sup>, \*

<sup>a</sup> School of Metallurgy and Environment, Central South University, Changsha

410083, China

\* Corresponding author: laiyanqingcsu@163.com

## **Supporting Figures**

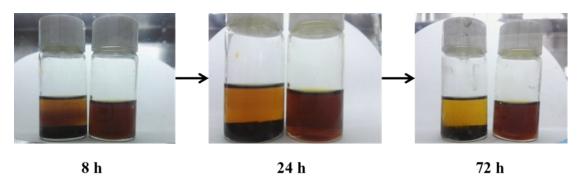


Figure S1. Colour change of the electrolyte with NdHCSs (left) .

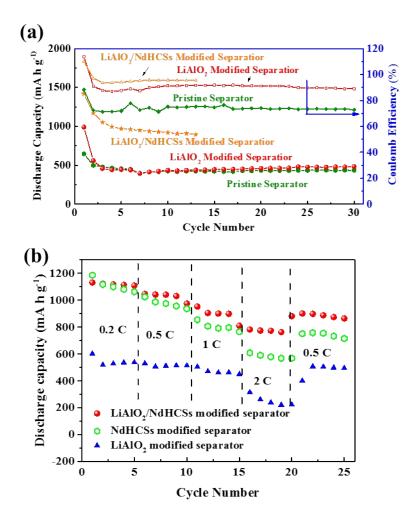


Figure S2. Cycle performance (a) and rate performance (b) of cell with different separator.