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## **Supplementary Information for**

## A selenium@polypyrrole hollow sphere cathode for rechargeable

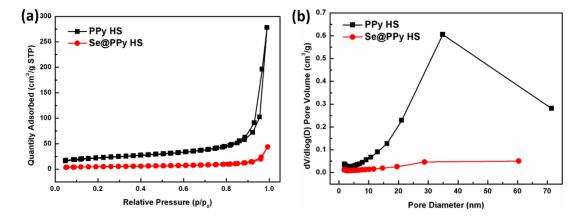
## lithium batteries

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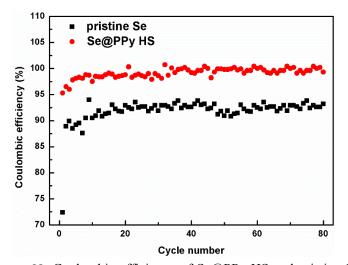
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**Supplementary Figure S1.** (a)  $N_2$  adsorption/desorption isotherms, (b) pore size distribution of the PPy hollow spheres and Se@PPy HS composite. After Se loading, the specific surface area (78 m<sup>2</sup>/g) and pore volume (0.43 cm<sup>3</sup>/g) of PPy hollow spheres reduce to 17 m<sup>2</sup>/g and 0.07 cm<sup>3</sup>/g, respectively.



**Supplementary Figure S2.** Coulombic efficiency of Se@PPy HS and pristine Se at 0.2C (with a scale range of 70% - 110%).