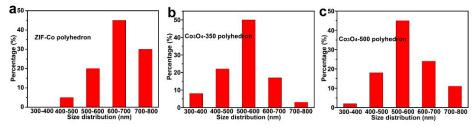
Supporting information for

## MOF-Derived Co<sub>3</sub>O<sub>4</sub> Polyhedrons as Efficient Polysulfides Barrier on Polyimide Separators for High Temperature Lithium–sulfur Batteries

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**Figure S1.** The size distribution of the ZIF-Co polyhedron (a), the Co<sub>3</sub>O<sub>4</sub>-350 polyhedron (b), and the Co<sub>3</sub>O<sub>4</sub>-500 polyhedron (c).

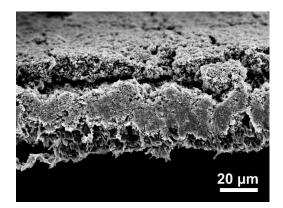


Figure S2. Typical cross-section SEM image of the Co<sub>3</sub>O<sub>4</sub>-350/PI/LLZO separator.

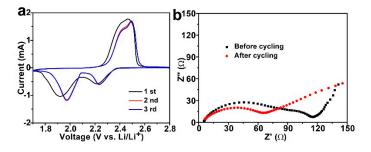


Figure S3. Typical CV curves and Nyquist plots of Li-S cell using the pristine PI separator.

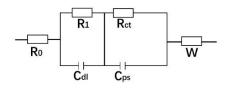


Figure S4. The equivalent electric circuit from the EIS fitting results.