

# Supporting Information

## Nanoporous Cathodes for High-Energy Li-S Batteries from Gyroid Block Copolymer Templates

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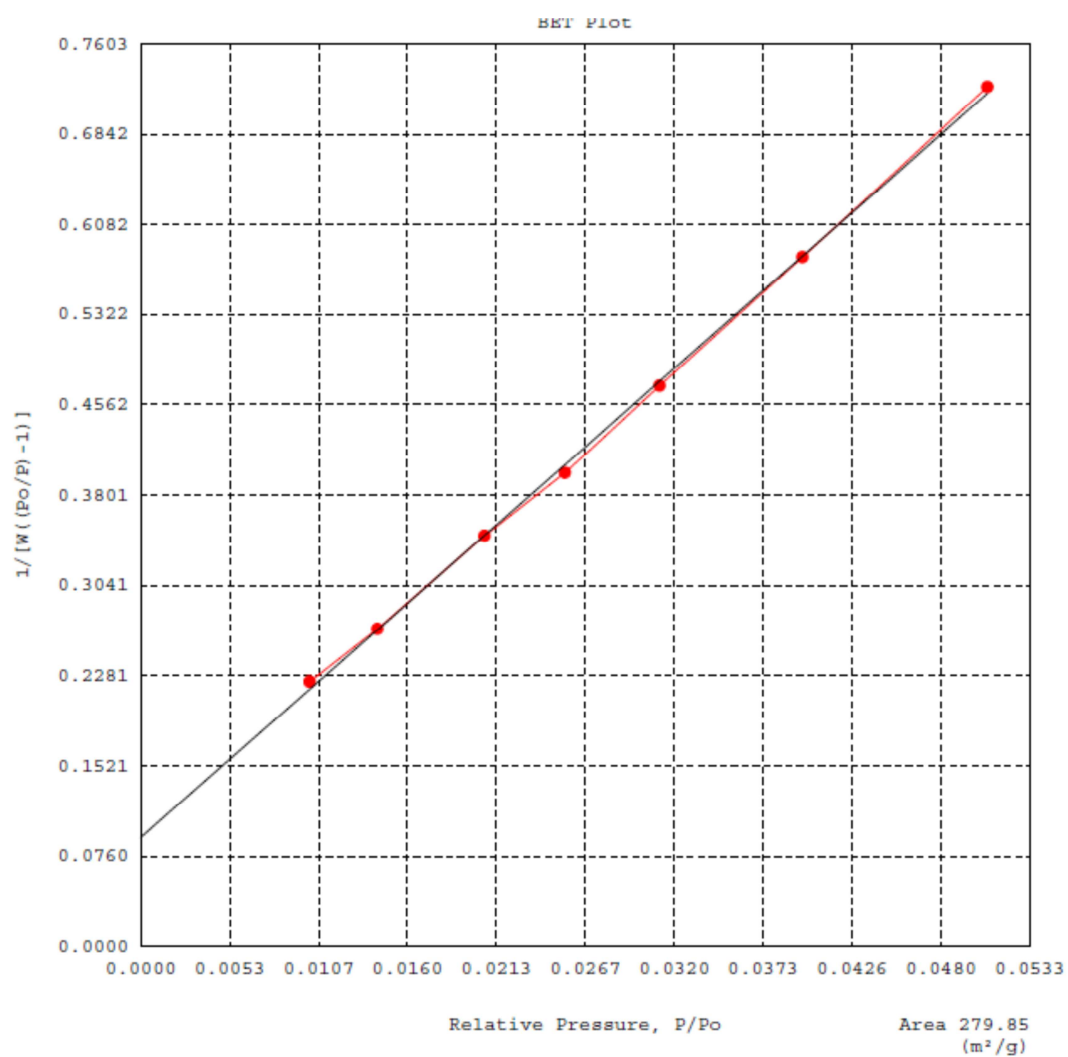
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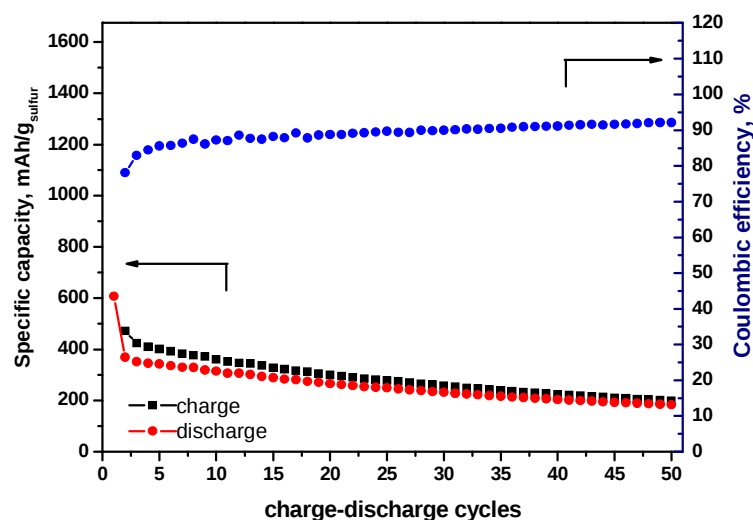
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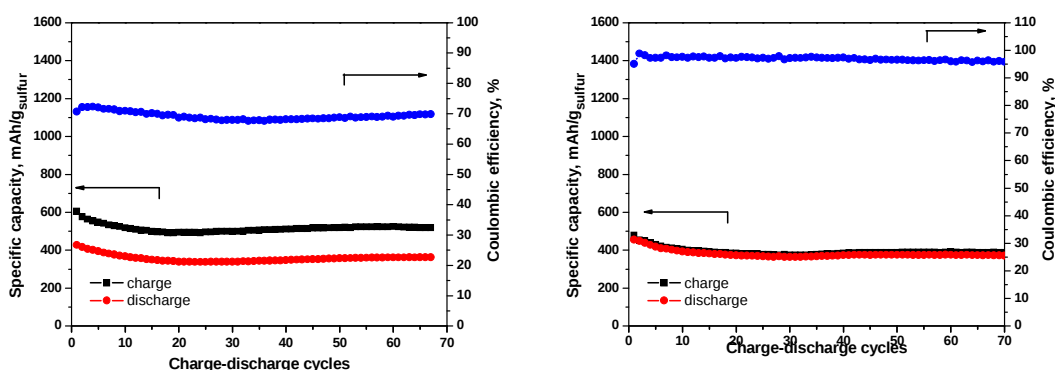
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**Figure S1.** Nitrogen adsorption isotherms at 77 K for carbonized resorcinol- formaldehyde resin without polymer template carbon.



**Figure S2.** Charge-discharge performance of gyroid templated carbon in the potential window between 1 V- 3 V with  $\text{LiNO}_3$ .



**Figure S3.** Charge-discharge performance of carbon-sulfur composite from carbonized neat resorcinol-formaldehyde resin without gyroid template in the potential window between 1.5 V- 2.8 V (left) without  $\text{LiNO}_3$ , (right) with  $\text{LiNO}_3$ .

### Additional supporting information

Small-angle X-ray scattering (SAXS) was done by means of a self-constructed three-fold pinhole system (main slit  $\varnothing = 200 \mu\text{m}$ ) with  $\text{CuK}\alpha$  radiation (RIGAKU rotating anode, OSMIC confocal optic) in the range of  $0.14^\circ$  to  $2.1^\circ$  ( $0.1$  to  $1.5 \text{ nm}^{-1}$ ). The scattering intensity was accumulated by

a marCCD X-ray detector system. The experiments were realized in transmission of powdery samples filled into thin glass tubes.