

Exceptional Lithium Diffusion through Porous Aromatic Frameworks (PAFs) Interlayers Delivers High Capacity and Long-life Lithium-Sulfur Batteries

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Figure S1. Synthesized off-white porous aromatic framework (PAF-1) and purple sulfonated porous aromatic framework (SPAF).

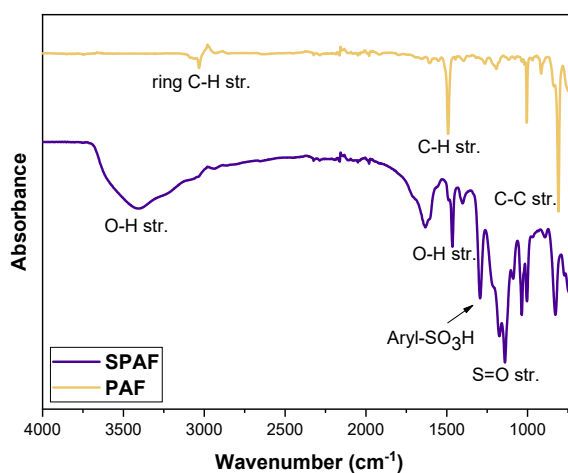


Figure S2. FTIR spectra of porous aromatic framework (PAF-1) and sulfonated porous aromatic framework (SPAF).

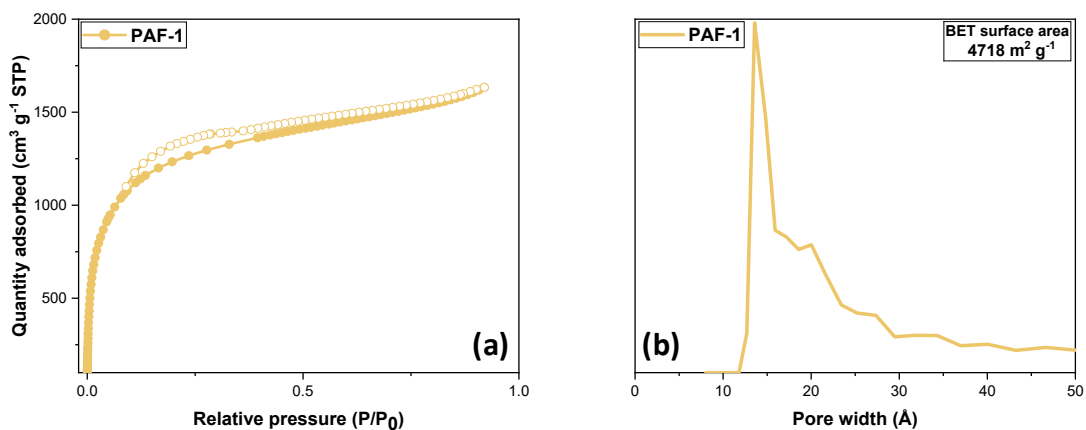


Figure S3. a) N_2 adsorption isotherm and b) pore size distribution of porous aromatic framework (PAF-1).

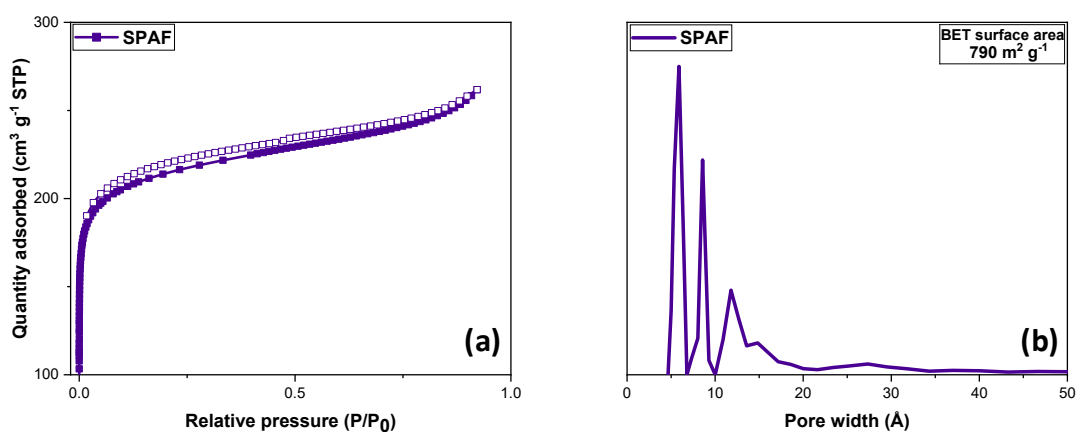


Figure S4. a) N_2 adsorption isotherm and b) pore size distribution of sulfonated porous aromatic framework (SPAF).

Table S1. Sulfur content of cathodes with and without interlayer

Sulfur loading of Cathodes (mg cm^{-2})	Sulfure content without interlayer (%)	Sulfure content with interlayer (%)
3.5	70	54
6	70	60

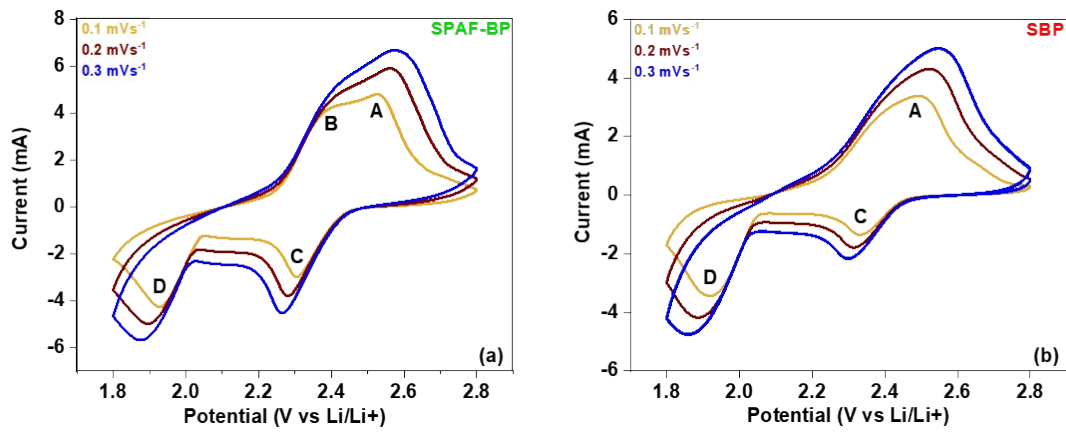


Figure S5. CV curves of a) SPAF-BP and b) SBP cells at different scan rates.

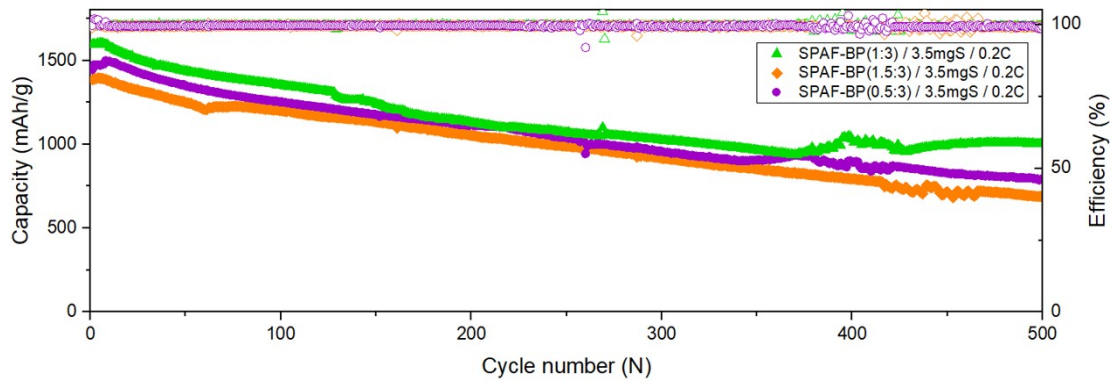


Figure S6. Long term cycling performance of Li-S batteries with different SPAF-BP interlayer compositions at 0.2 C rate for 500 cycles.

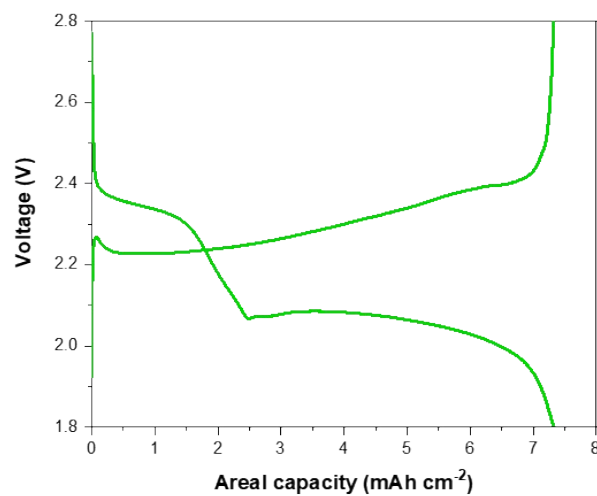


Figure S7. Areal capacity of SPAF-BP battery with high sulfur loading of 6 mg at 0.1 C rate.