Supporting Information

Rational Design of CoS_2-$CoSe_2$ Heterostructure for Catalytic Conversion of Polysulfides in Lithium-Sulfur Batteries

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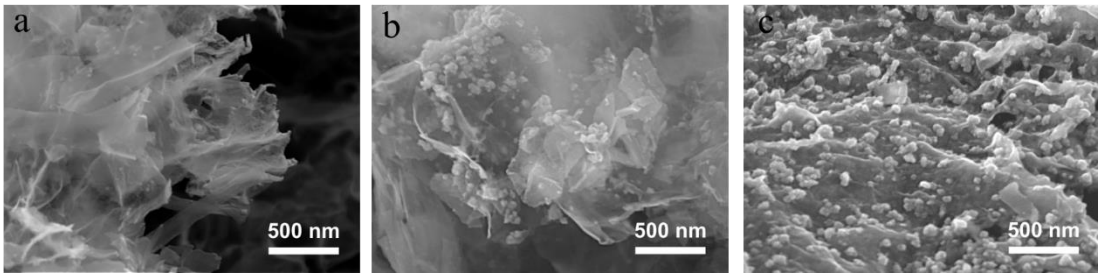

Figure S1. SEM images of CoS_2-$CoSe_2$ with different thiourea contents during the sulfurization process: (a) 50 mg, (b) 100 mg, and (c) 200 mg

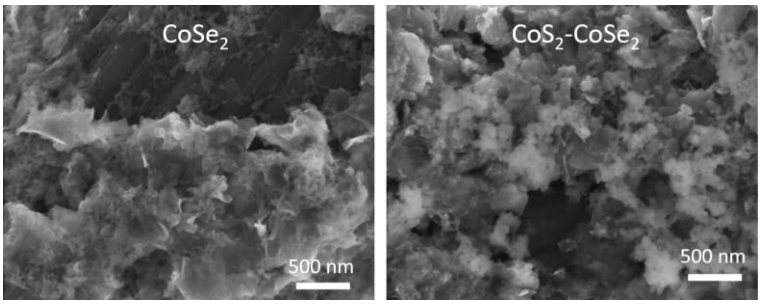

Figure S2. SEM images of $CoSe_2$ and CoS_2-$CoSe_2$ electrodes after Li_2S deposition.

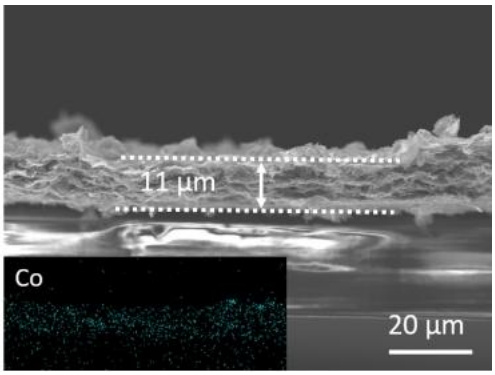

Figure S3. Cross-section image of CoS_2-$CoSe_2$/GN composite interlayer

Table S1. Performance comparison of this work with other related works

Materials	Sulfur loading	Rate	Cycle number	References
CoS_2 + G	0.4 mg cm^{-2}	0.5C	100	[1]
$CoSe_2$/G	2.69 mg cm^{-2}	0.5C	100	[2]
CS@HPP		1C	300	[3]
N-CN-750@Co_3Se_4-0.1 m		0.5C	200	[4]
N-$CoSe_2$		0.2C	250	[5]
{Co_4W_{18}}/rGO		1C	100	[6]
$Ni_{0.1}Zn_{0.1}Co_{0.8}Se_2$		1C	400	[7]
CoP-CNT	3 mg cm^{-2}	1C	200	[8]
CoS_2-$CoSe_2$	1 mg cm^{-2}	1C	450	Our Work

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