

N-Doped Porous Carbon Microspheres Derived from Yeast as Lithium Sulfide Hosts for Advanced Lithium-Ion Batteries

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1. Figures

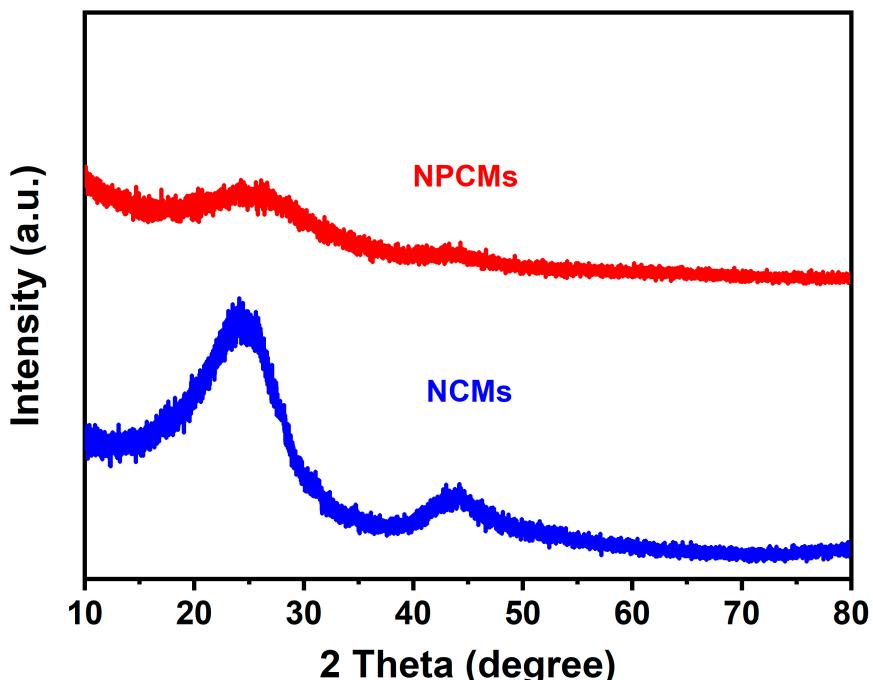


Figure S1. XRD patterns of NPCMs and NCMs.

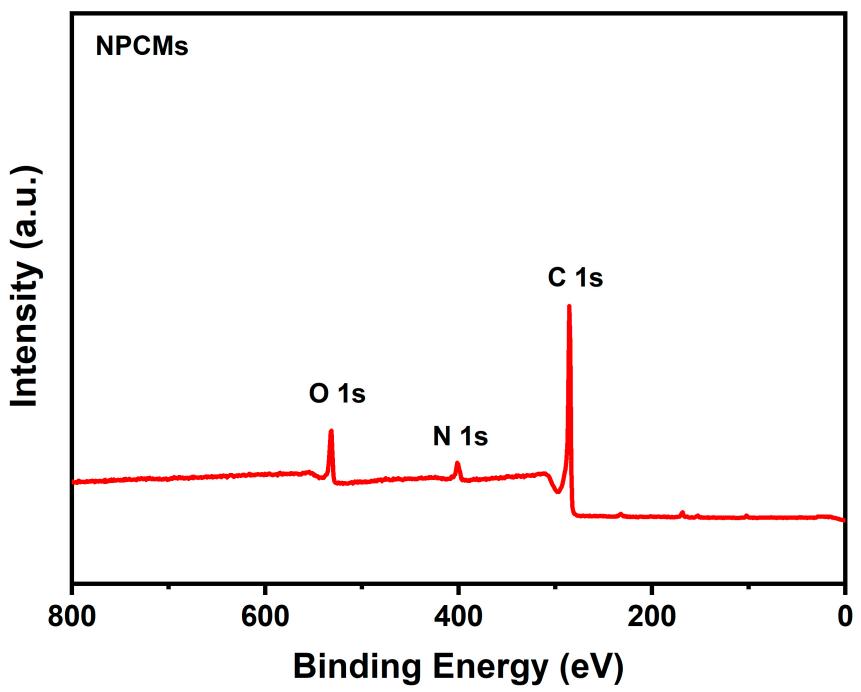


Figure S2. XPS spectra of NPCMs.

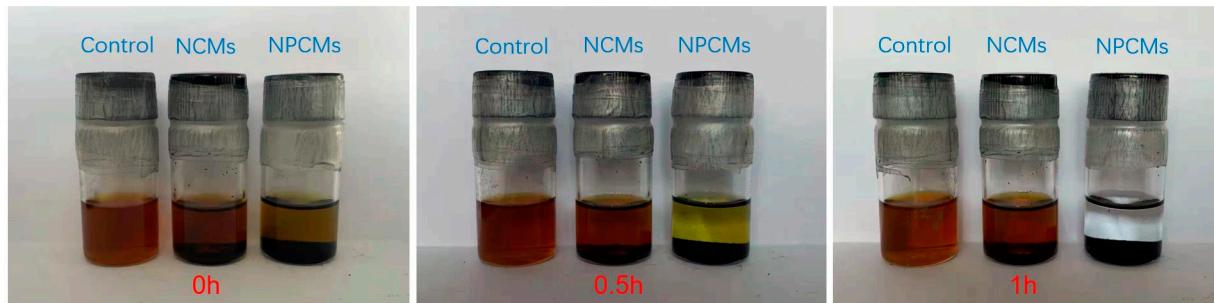


Figure S3. Digital images of Li₂S₆ adsorption at different time.

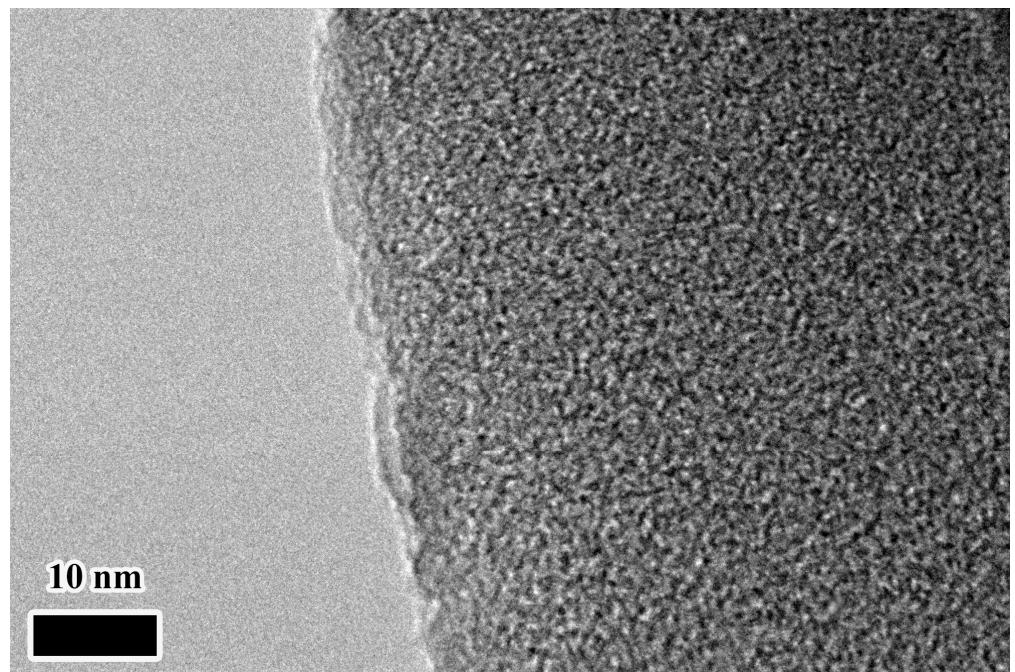


Figure S4. HRTEM image of NPCMs .

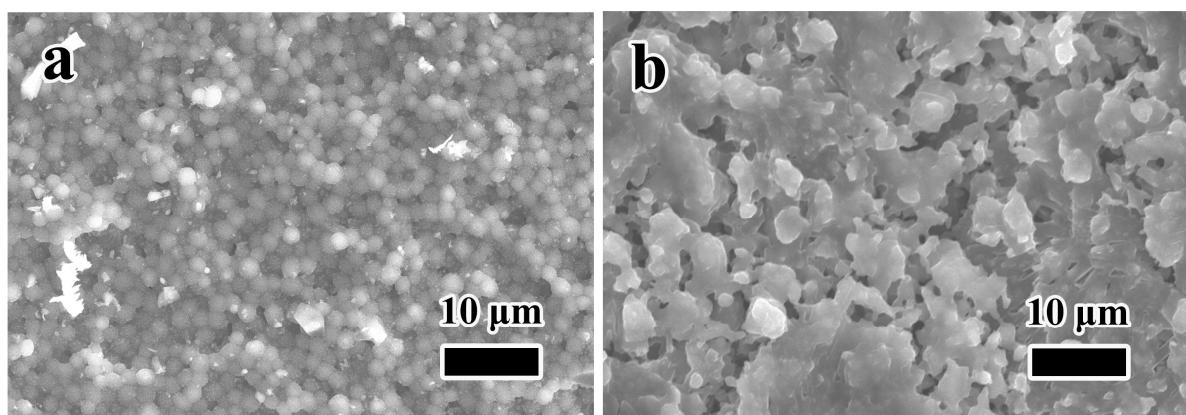


Figure S5. SEM images of (a) NCMs and (b) NCMs–Li₂S.

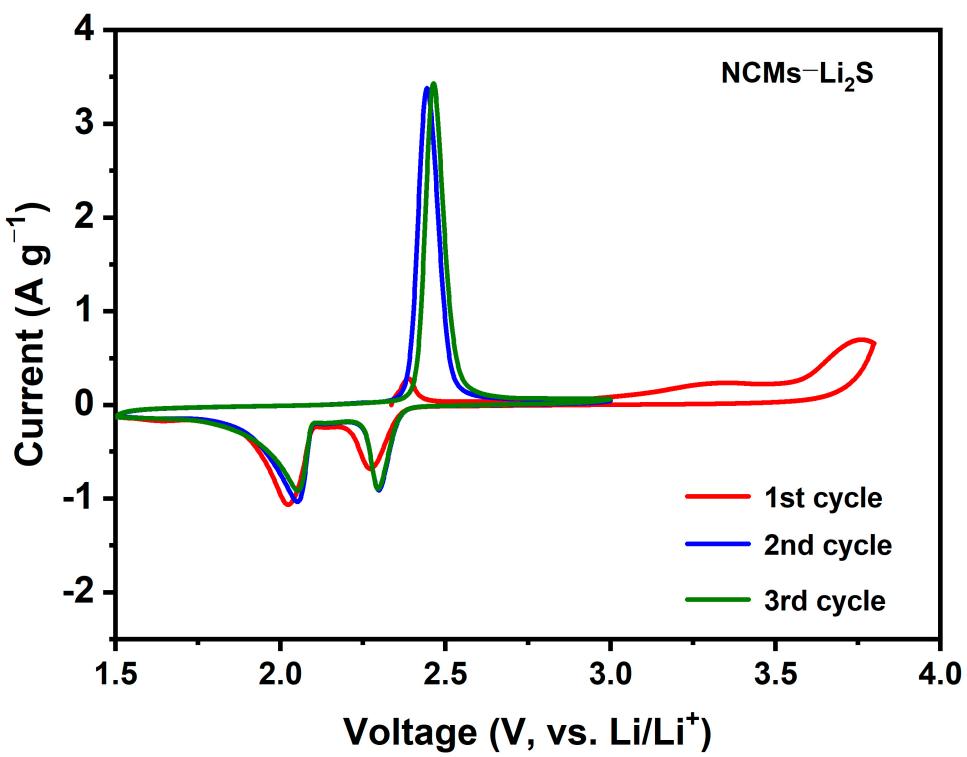


Figure S6. CV curves of NCMs–Li₂S cathode.

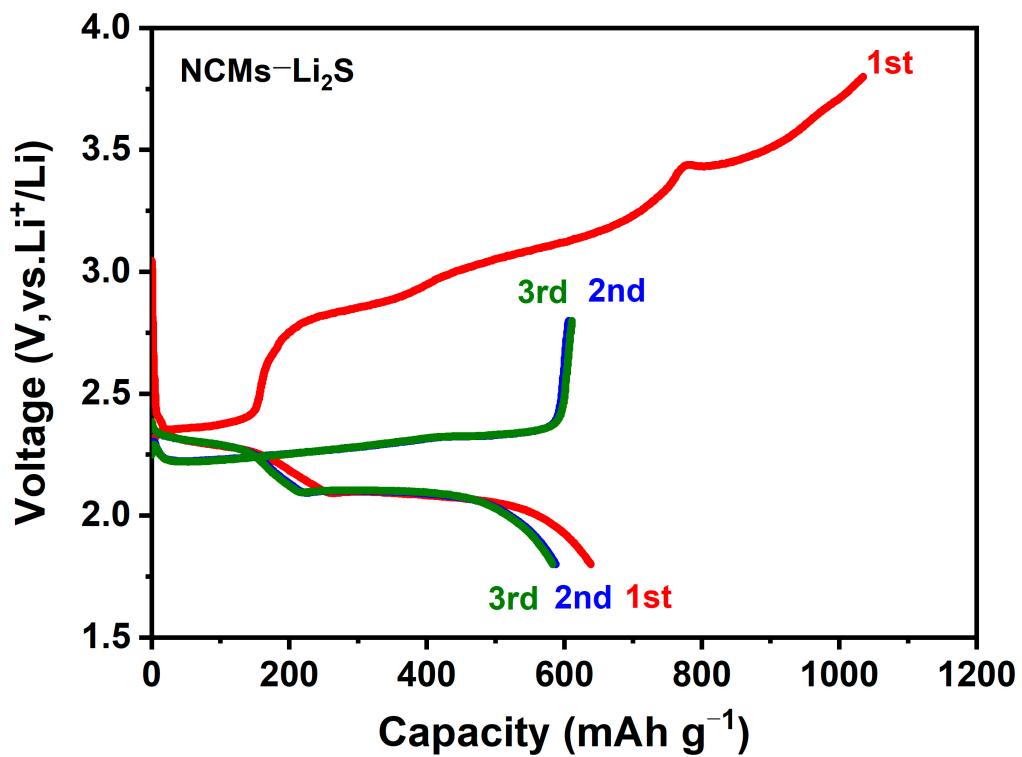


Figure S7. Charge–discharge curves of NCMs–Li₂S cathode in the first three cycles.

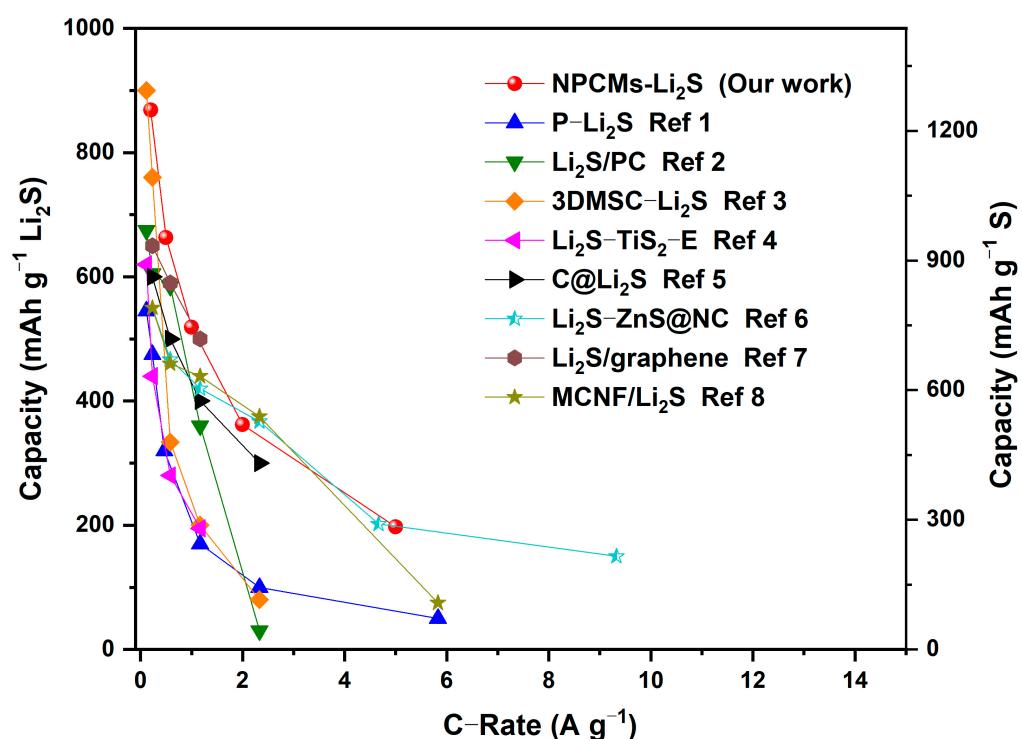


Figure S8. Comparison of the rate capabilities of NPCMs–Li₂S and various Li₂S cathodes.

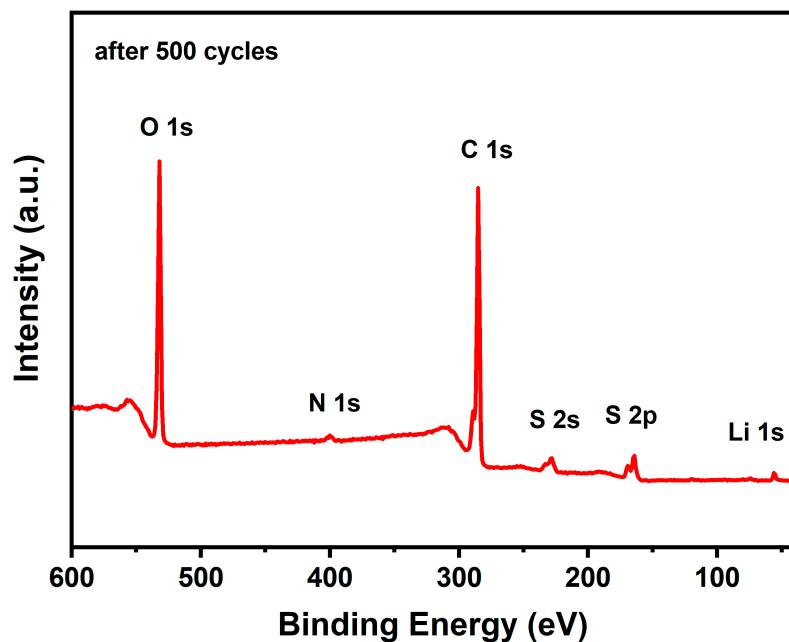


Figure S9. XPS survey spectra of NPCMs–Li₂S after 500 cycles at 1.0 A g⁻¹.

2. Table

Table S1. Electrochemical performance of various lithium sulfide-based cathodes.

Cathode material	Initial capacity (mAh g ⁻¹)	Capacity (mAh g ⁻¹)@cycles number	Current density (mA g ⁻¹)	Ref
P–Li ₂ S	450	125@200	583	1
Li ₂ S/PC	505	320@200	1166	2
3DMSC–Li ₂ S	916	500@200	167	3
Li ₂ S–TiS ₂ –E	500	390@200	233	4
C@Li ₂ S	467	282@100	1166	5
Li ₂ S@NC	495	110@100	233	6
Li ₂ S/graphene	432	230@100	233	7
MCNF/Li ₂ S	510	445@150	233	8
Li ₂ S@DC/WCF	874	722@100	233	9
Li ₂ S–SPEEK	666	362@200	1000	10
Li ₂ S@C–CNT	692	595@150	233	11
Li ₂ S@PC–CNT	1020	502@300	500	12
NPCM– Li ₂ S	1077	762@60	200	Our Work
	704	354@500	1000	

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