

Supporting Information

The in situ formation of ZnS nanodots embedded in honeycomb-like N-S co-doped carbon nanosheets derived from waste biomass for use in lithium-ion batteries

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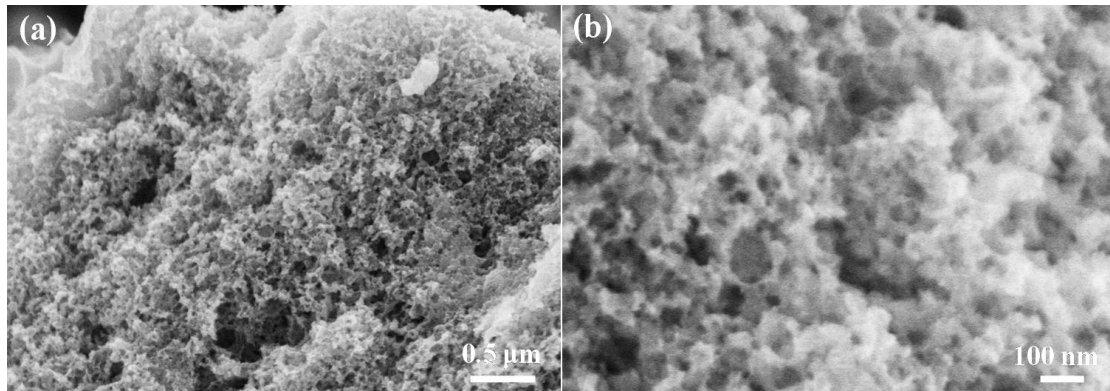


Fig. S1 (a) (b) SEM images of ZnS/NS-CN before acid etching.

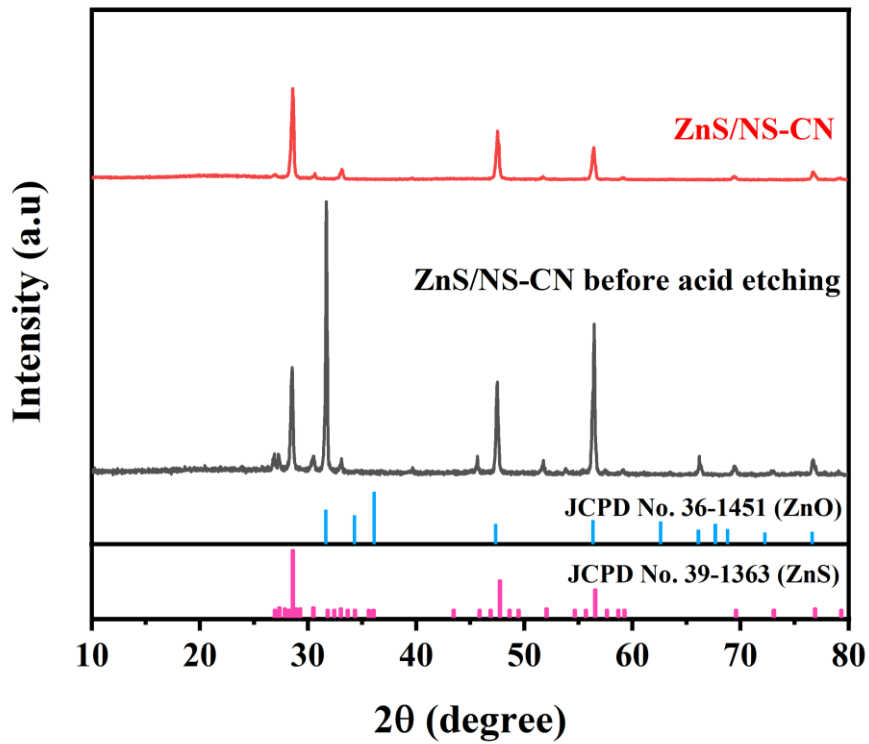


Fig. S2 XRD patterns of ZnS/NS-CN and ZnS/NS-CN before acid etching.

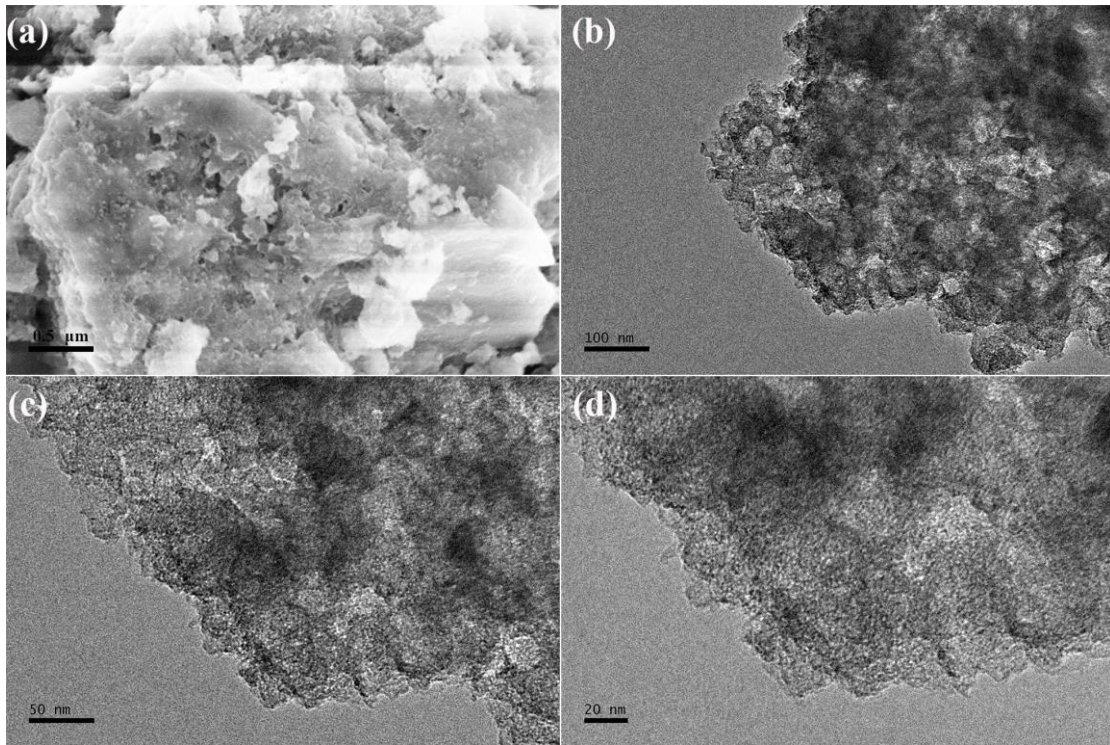


Fig. S3 The SEM image (a) and TEM images (b-d) of ZnS/NS-CN electrode after 1000 cycles at 5 A/g.

Table S1 The electrochemical performances comparison with other ZnS-based electrode materials in LIB.

ZnS-C based anode materials	Current density (A g ⁻¹)	Cycles	Specific Capacity (mAh g ⁻¹)	Ref.
ZnS/graphene	0.1	200	633	[1]
ZnS/C composites by MOF	0.3	80	624	[2]
ZnS/C	0.1	150	570	[3]
core-shell-like ZnS/C nanoparticles	0.2	500	750	[4]
Co ₃ S ₄ -ZnS/NC nanoparticles	1	1000	316.5	[5]
ZnS/CoS/CoS ₂ @N-doped carbon nanoparticles	0.1	200	622.7	[6]
ZnS@HPC composite	1	200	408	[7]
ZnS nanorods@HCP	0.6	300	840	[8]
ZnS-chicken feather carbon (ZnS-CFC)	0.1	150	788	[9]
Core-shell MWCNTs@ZnS composite	0.1	200	520	[10]
ZnS-QD@NC	1	500	620	[11]
ZnS-Sb/C nanospheres	0.1	150	747	[12]
ZnS/NS-CN	0.1	300	853.5	This Work
	5	1000	291.6	

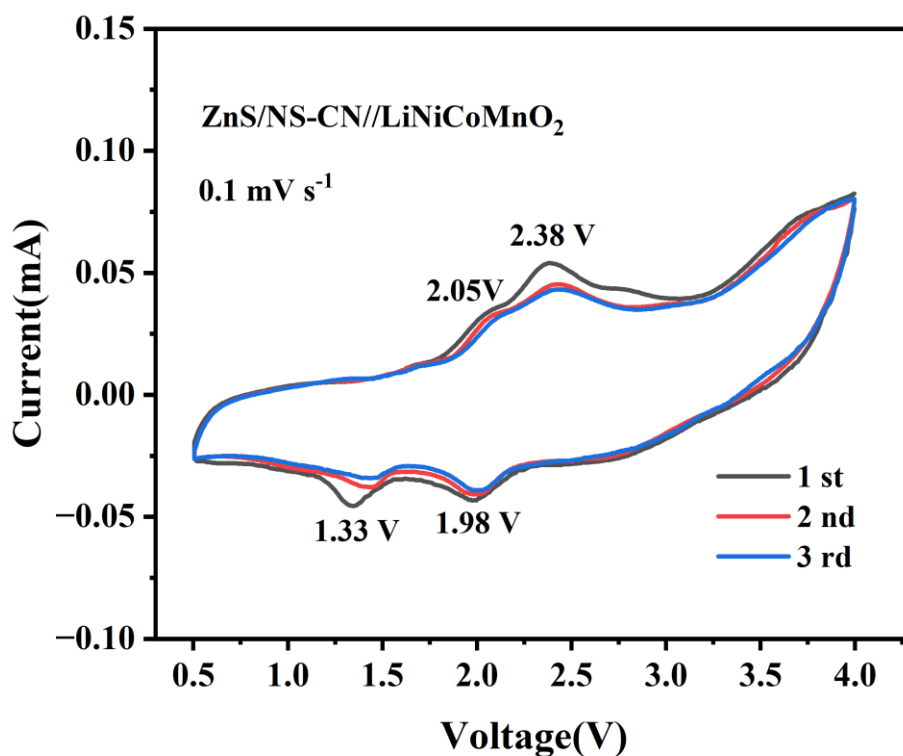


Fig. S4 CV curves of the ZnS/NS-CN//LiNiCoMnO₂ full cells.

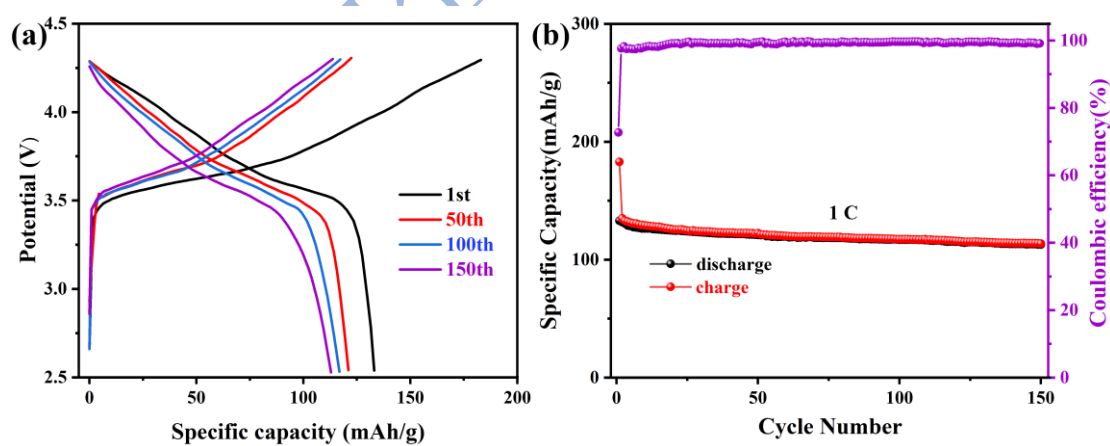


Fig. S5 Charge-discharge curves (a) and cyclic stability (b) of LiNiCoMnO₂ at 1 C.

References

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