ARTICLE

Supplementary Information

Inhibition of Mo-doping in Phase Transition from δ-MnO_2 to α-MnO_2 and their Application in Aqueous Zinc-ion Batteries

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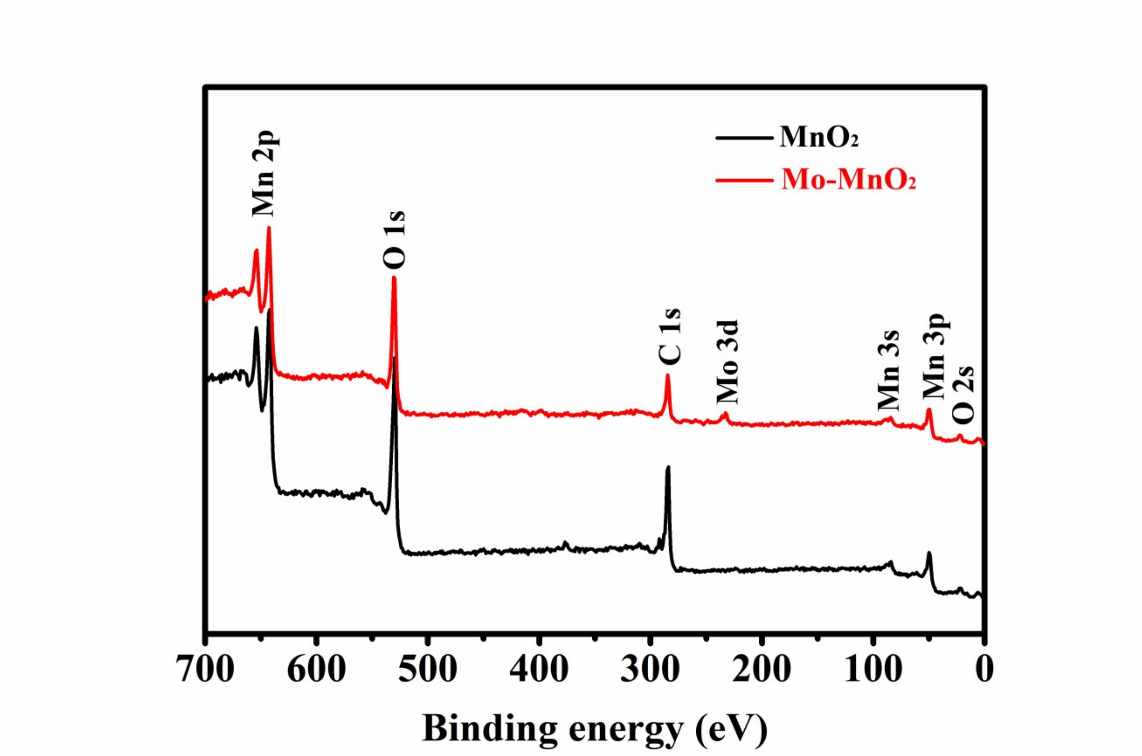

Fig. S1 XPS survey spectra of MnO_2 and Mo-MnO_2.

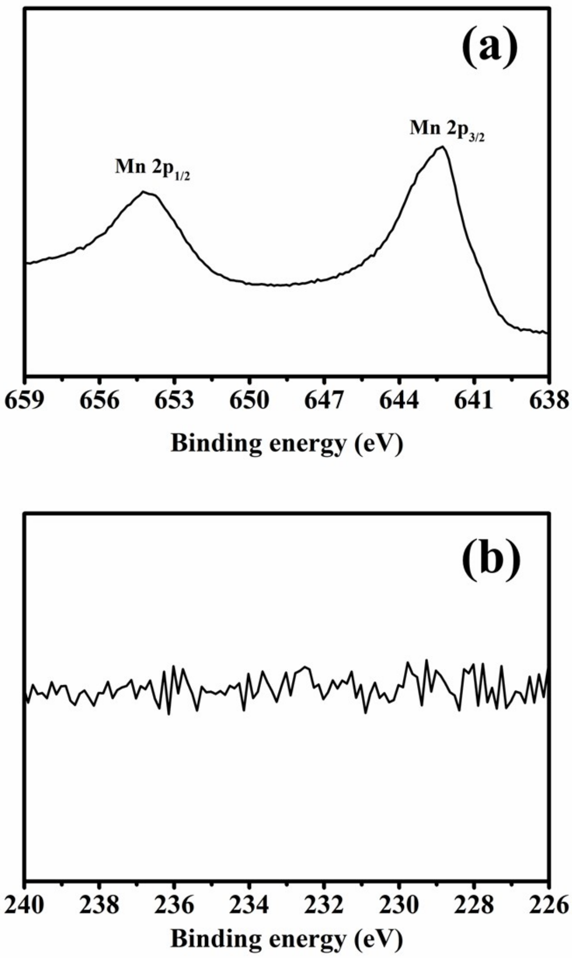

Fig. S2 High-resolution XPS spectra of (a) Mn 2p and (b) Mo 3d for MnO_2.

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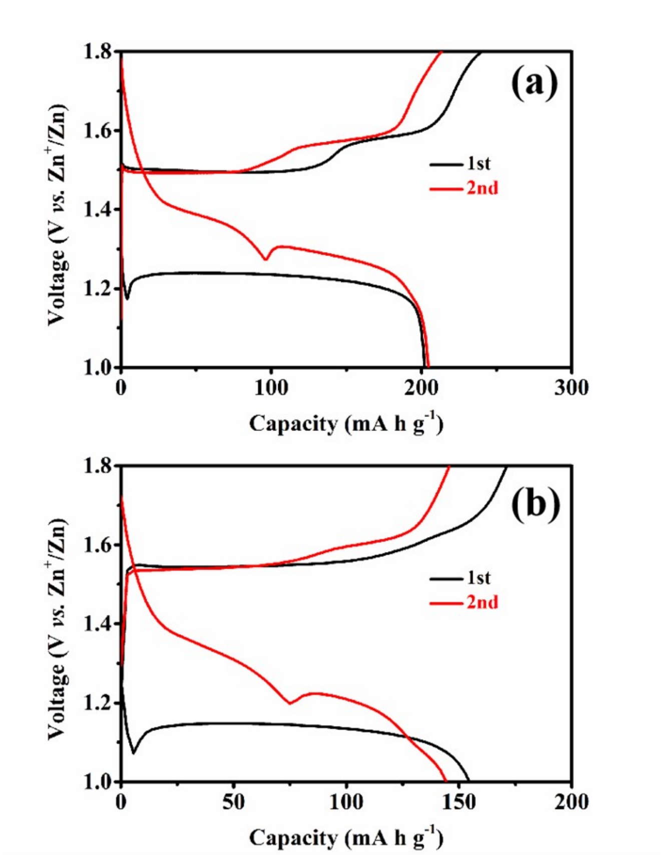

Fig. S3 Charge-discharge profiles of MnO_2 at different current densities of (a) 200 and (b) 2000 mA g^{-1}.

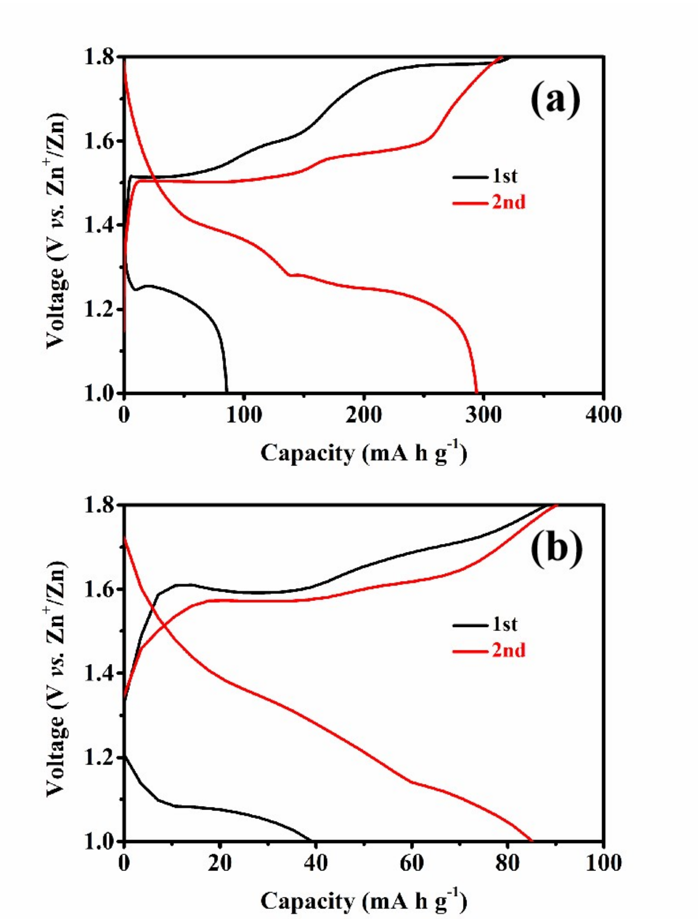

Fig. S4 Charge-discharge profiles of Mo-MnO_2 at different current densities of (a) 200 and (b) 2000 mA g^{-1}.

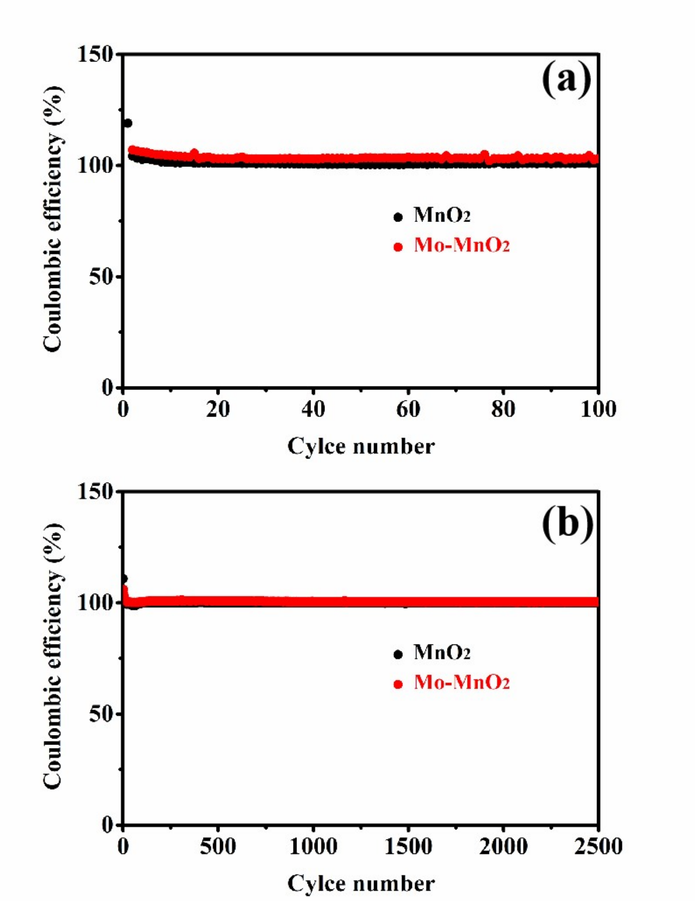

Fig. S5 Coulombic efficiency of MnO_2 and Mo-MnO_2 at different current densities of (a) 200 and (b) 2000 mA g^{-1}.

Table 1 Summary of discharge capacity for various δ-MnO_2 as cathodes for AZIBs.

δ-MnO_2	Discharge capacity (mA h g^{-1})	Current density (mA g^{-1})	Reference
Mo-MnO_2	**353.5 (after 100 cycles)**	**200**	**This work**
	72.6 (after 2500 cycles)	**2000**	
Ultrathin δ-MnO_2 nanosheets	133 (after 100 cycles)	100	S1
Zn doped δ-MnO_2	140 (after100 cycles)	200	S2
	about 75 (after 500 cycles)	500	
Bi doped δ-MnO_2	108 (after 5000 cycles)	3000	S3
δ-MnO_2 nanodots	335 (after 100 cycles)	50	S4
Mo-pre-intercalated MnO_2	159 (after 1000 cycles)	1000	S5
δ-MnO_2 nanoflower/graphite	113.4 (after100cycles)	400	S6
K-pre-intercalated δ-MnO_2	about 250 (after 100 cycles)	100	S7
	84 (after 1000 cycles)	1000	

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