Electronic Supporting Information (ESI)

Template-free formation of one-dimensional mesoporous $ZnMn_2O_4$ tube-in-tube nanofibers towards Lithium-ion batteries as anode materials

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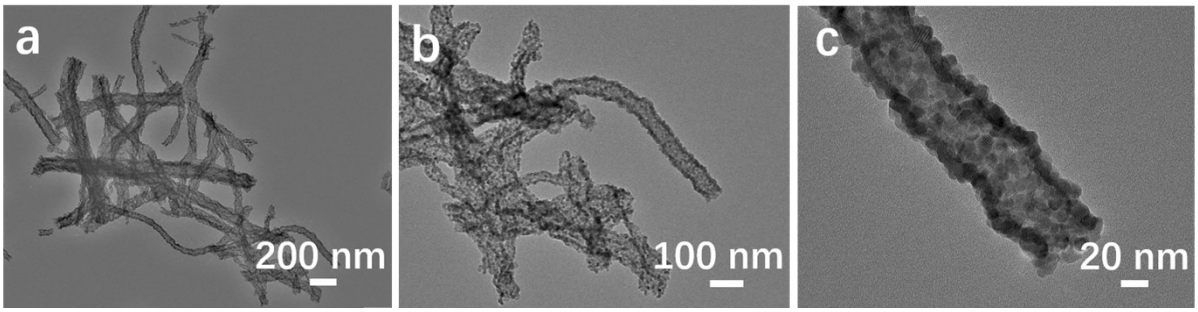

Fig. S1 (a-c) TEM images of the ZMO NTs.

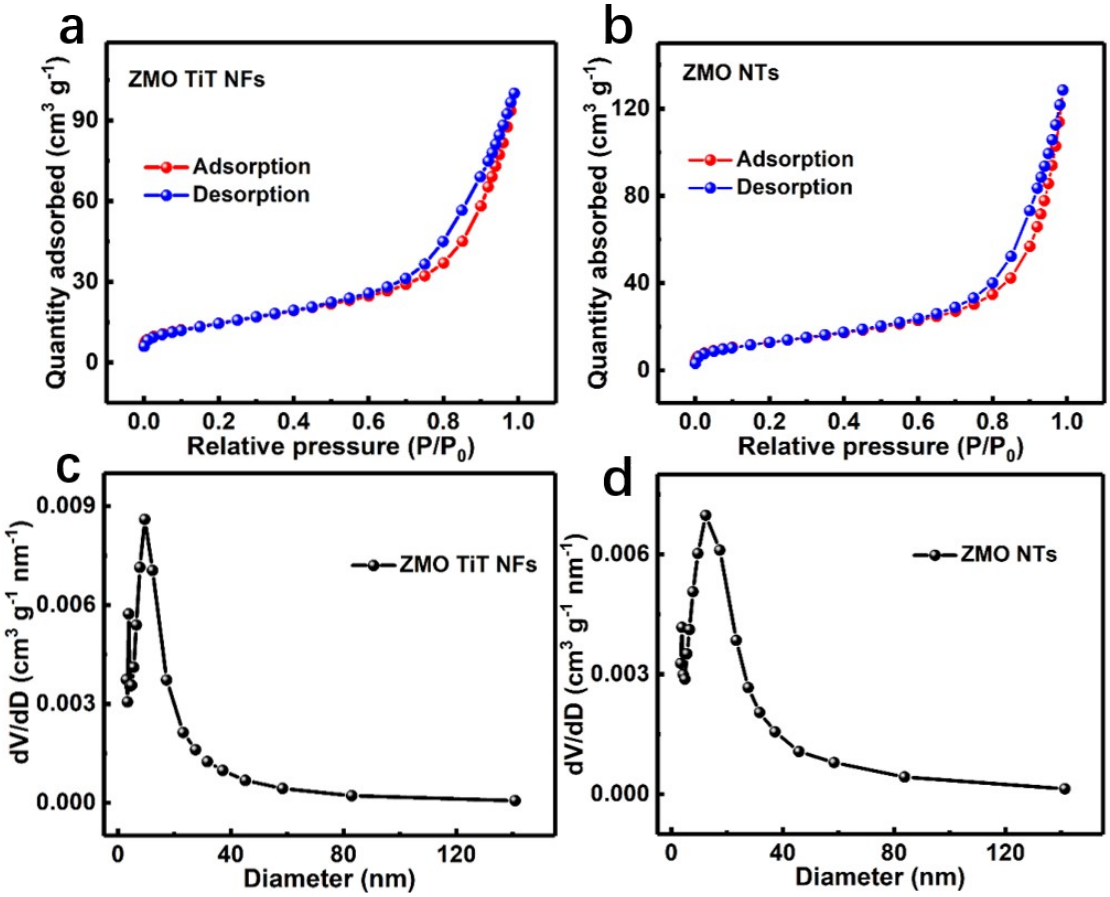

Fig. S2 (a, b) Nitrogen adsorption/desorption isotherms and (c, d) pore-size distribution plots of (a, c) ZMO TiT NFs and (b, d) ZMO NTs.

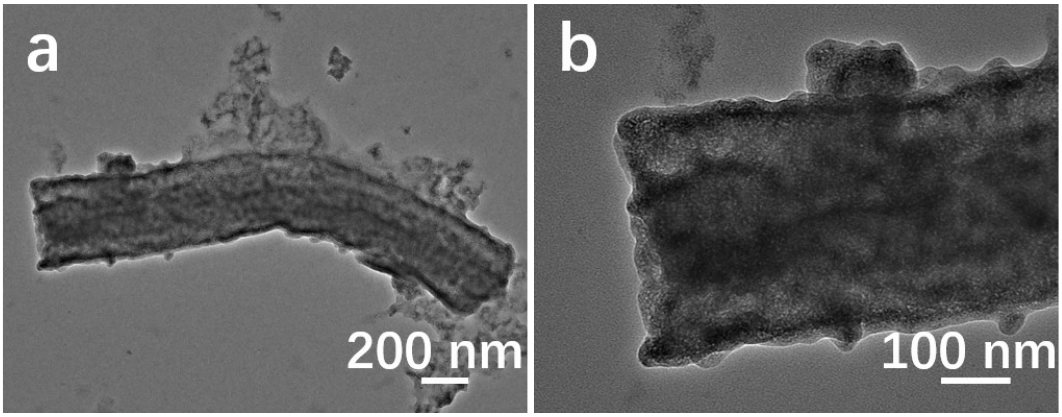

Fig. S3 (a, b) TEM images of the ZMO TiT NFs electrode after 300 cycles at 0.5 A g^{-1}.

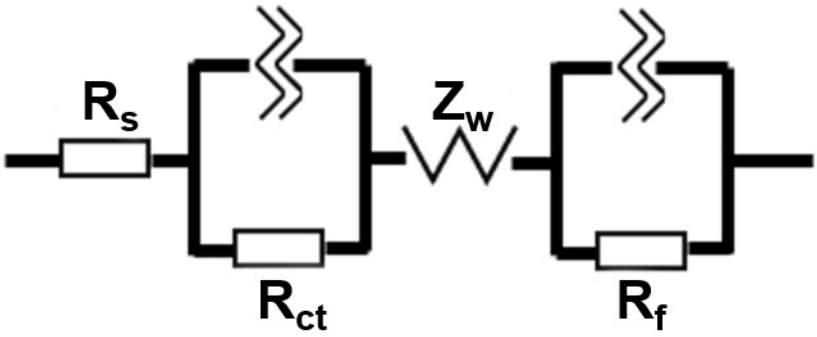

Fig. S4 Equivalent circuit model for Nyquist plots in Fig. 4f.

Table S1 Corresponding EIS fitted date for the ZMO TiT NFs and ZMO NTs

Electrode	R_s (ohm)	R_{ct} (ohm)	R_f (ohm)
ZMO TiT NFs	1.3	151.7	4.1
ZMO NTs	1.6	204.6	6.2

Table S2 Comparison in cycling performance of the ZMO TiT NFs with other ZMO-based anodes

Sample	Current density (mA g^{-1})	Cycle number	Reversible capacity (mAh g^{-1})	Ref.
ZMO TiT NFs	**500** **2000**	**200** **1000**	**938.9** **564.6**	**This work**
$ZnMn_2O_4$ microtubules	200 500	300 300	750.4 535.3	S1
Nano-$ZnMn_2O_4$	100 1000	90 1200	716 500	S2
Yolk-shell MnO@$ZnMn_2O_4$/N-C nanorods	1000	200	595	S3
$ZnMn_2O_4$ micro-belts	500 1000	150 350	731 372	S4
$ZnMn_2O_4$ nano-peanuts	2000	200	516	S5
MWCNT/$ZnMn_2O_4$	1600	1000	527	S6
Porous $ZnMn_2O_4$/biocarbon microsphere	500 1000	150 650	820 550	S7
Core-shell $ZnMn_2O_4$ nanosheets@carbon nanotubes	50 1000	100 200	803 595	S8
Loaf-like $ZnMn_2O_4$	500	100	517	S9
$ZnMn_2O_4$ hollow microspheres	400	100	607	S10
$ZnMn_2O_4$ microspheres	100	100	602	S11
$ZnMn_2O_4$/AC	100	50	714	S12
$ZnMn_2O_4$ nanoparticles	200	160	745	S13
$ZnMn_2O_4$/N-doped graphene	500	200	747	S14

References

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