Supporting Information

Ultrafast spray pyrolysis fabrication of nanophase $ZnMn_2O_4$ anode towards high-performance Li-ion batteries

Longhai Zhang,[a] Siqi Zhu,[a] Hui Cao,[a] Gang Pang,[a] Jingdong Lin, [b] Linrui Hou* [a] and Changzhou Yuan,* [a, c]*

[a] *School of Materials Science and Engineering, Anhui University of Technology, Ma'anshan, 243002, P. R. China* *Email:*ayuancz@163.com (C.Z. Yuan); houlr629@163.com (L.R. Hou)

[b] *Department of Chemistry, College of Chemistry and Chemical Engineering, Xiamen University, Xiamen, 361005, P. R. China* *Email:*jdlin@xmu.edu.cn (J.D. Lin)

[c] *Chinese Academy of Science (CAS) Key Laboratory of Materials for Energy Conversion, Hefei, 230026, P.R. China*

Table S1 Atomic coordinates, isotropic thermal parameters and occupation numbers for the ZMO phase refined from X-ray powder diffraction data. Spinel-type structure in space group $I4_1/amd$ (No. 141); cell parameters: a = 5.7399 (6) Å, c = 9.2903 (1) Å, V = 306.08 (8) Å^3 and Z = 4; R_{wp} = 9.16 %, R_p = 7.31 %, S = 1.91.

Atom	Site	g	x	y
Mn	4a	0.839(9)	0.0	0.0
Zn	16h	0.849(1)	0.0	0.244(2)
O	16h	1.253(1)	0.0	0.225(3)

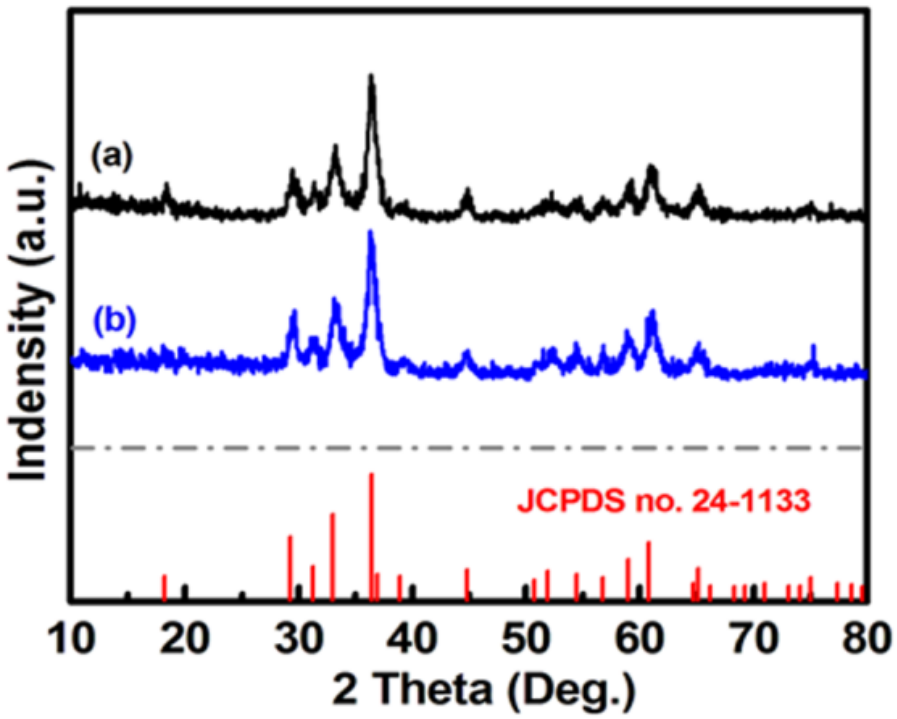

Fig. S1 XRD patterns of the (a) ZMO-AE and (b) ZMO-EG samples

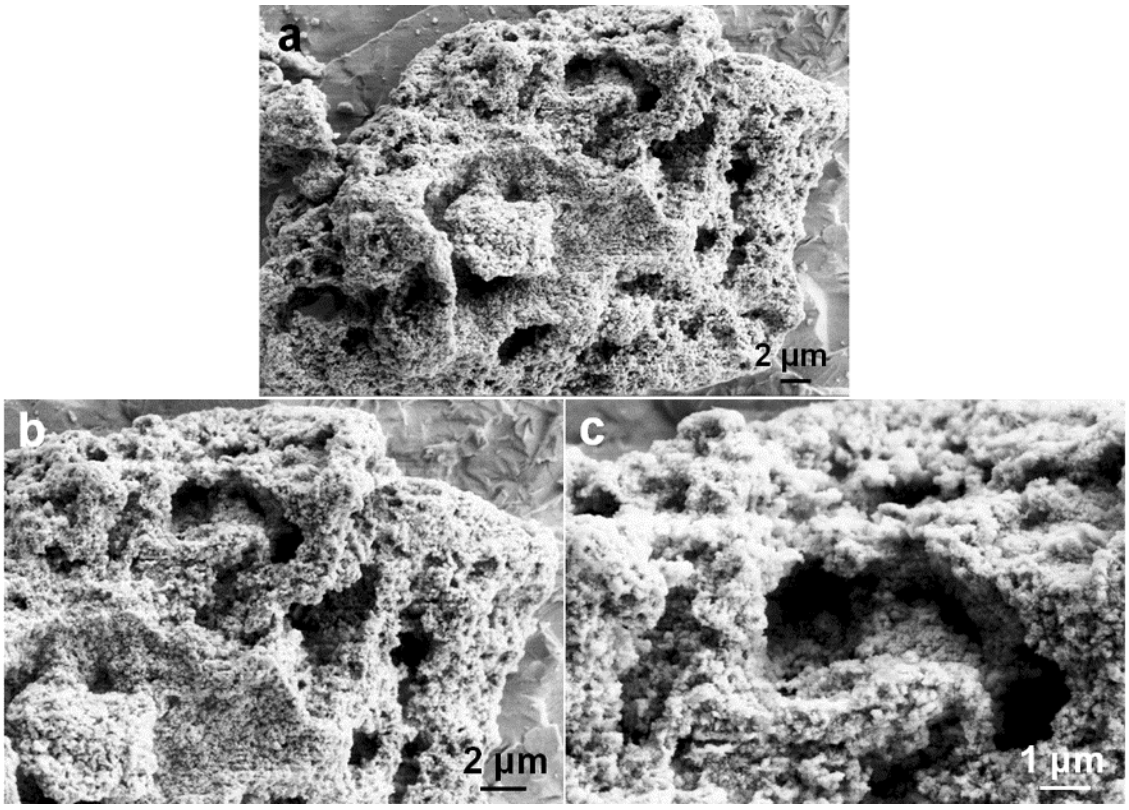

Fig. S2 Low-magnification FESEM images of the as-obtained ZMO-W sample with different magnifications

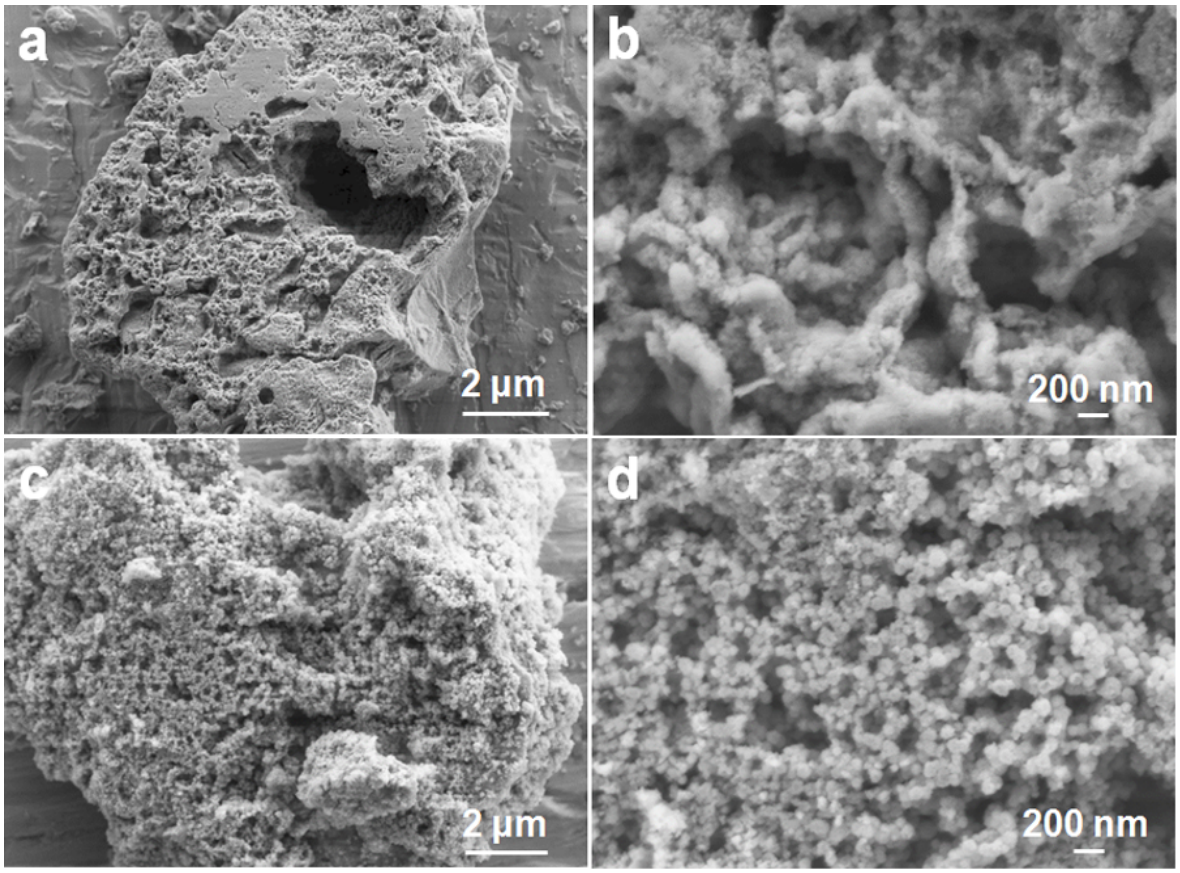

Fig. S3 FESEM images of the (a, b) ZMO-AE and (c, d) ZMO-EG products

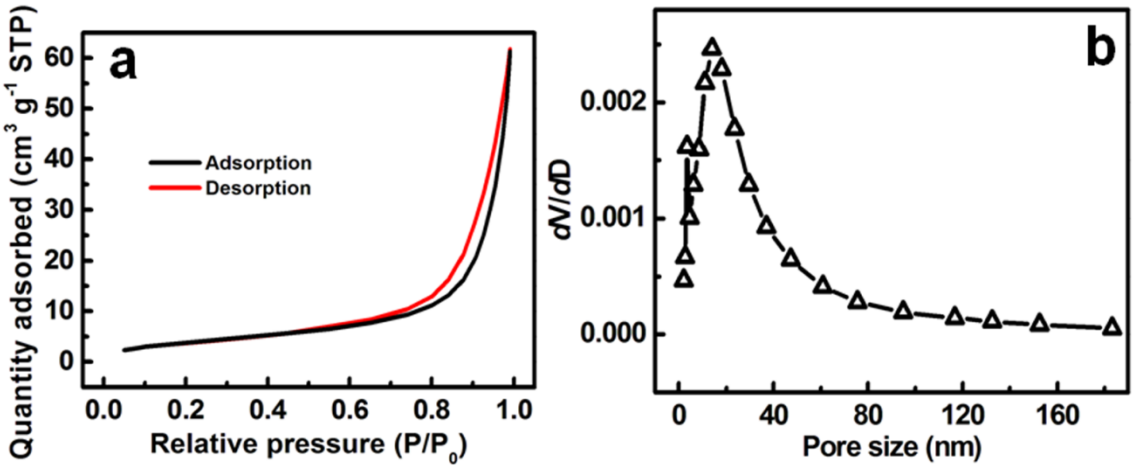

Fig. S4 (a) N_2 adsorption-desorption isotherms and (b) corresponding PSD data of the ZMO-AE sample

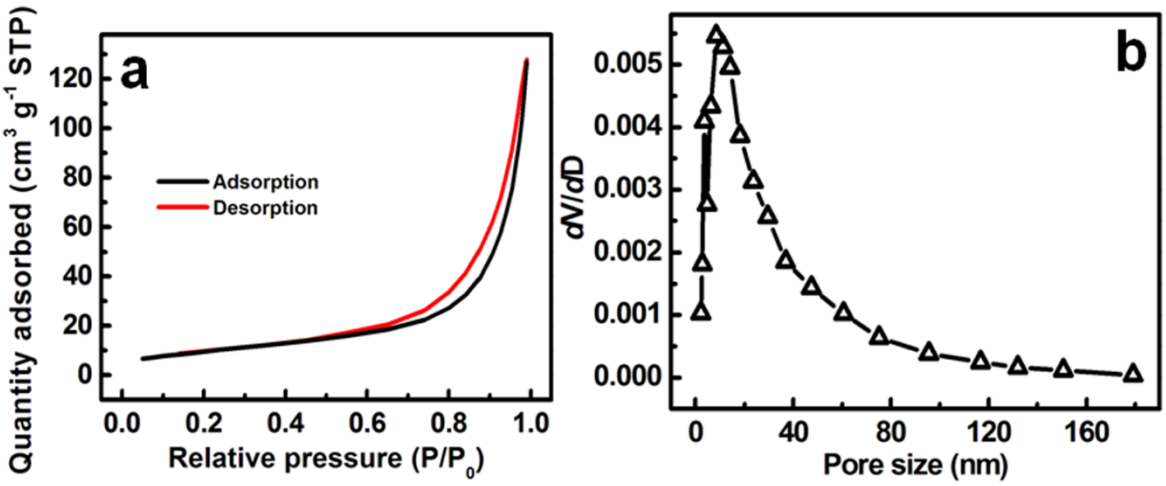

Fig. S5 (a) N_2 adsorption-desorption isotherms and (b) corresponding PSD data of the ZMO-EG sample

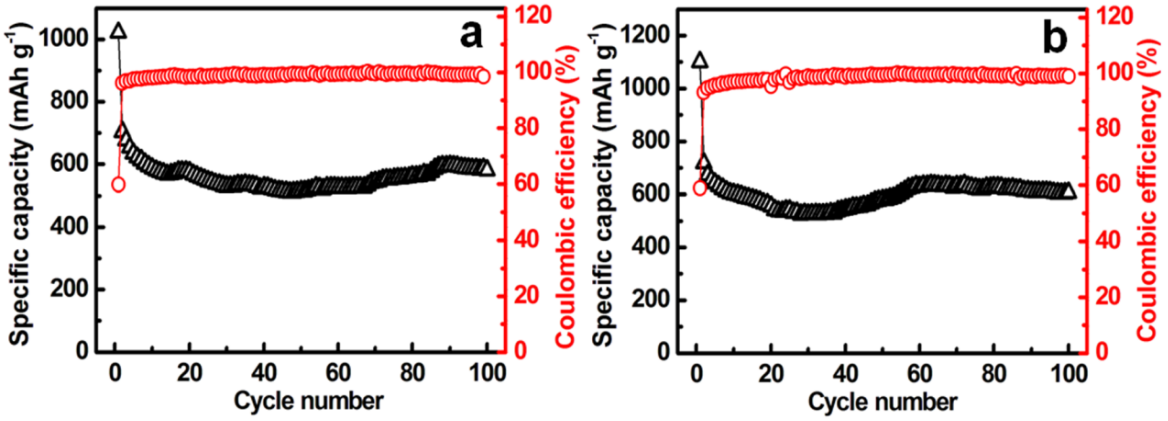

Fig. S6 Cycling performance (1.0 C) of the (a) ZMO-AE and (b) ZMO-EG products