Electronic Supplementary Information (ESI) for

Facile Synthesis of 3D Hierarchical Foldaway-lantern-like $LiMnPO_4$ by Nanoplate Self-Assembly and Electrochemical Performance for Li-Ion Batteries

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Supporting information:

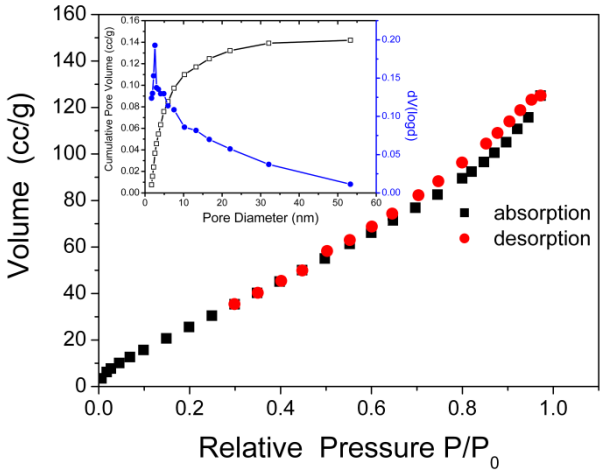

Fig. S1. N_2 adsorption/desorption isotherms and pore size distribution (inset) of 3D hierarchical foldaway-lantern-like $LiMnPO_4$ microstructure.

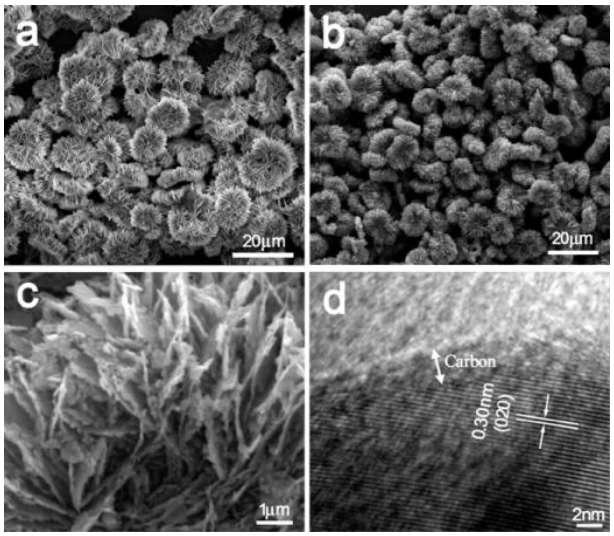

Fig. S2. (a) SEM images of $LiMnPO_4/C_{220}$ using D-gluconic acid lactone as the carbon source; (b) SEM and magnified images of $LiMnPO_4/C_{700}$; (d) HRTEM image of $LiMnPO_4/C_{700}$

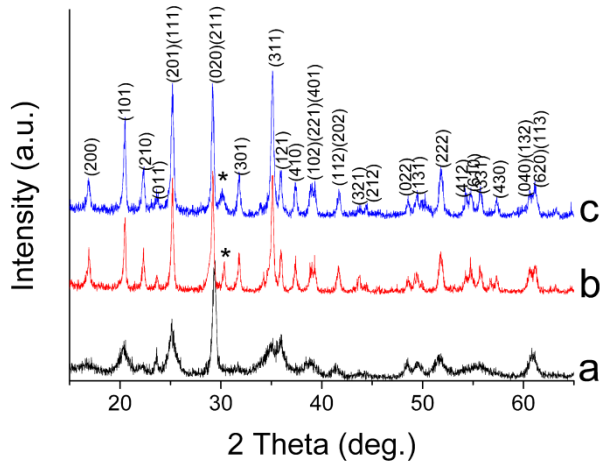

Fig. S3. XRD patterns of $LiMnPO_4/C_{220}$ (a) and $LiMnPO_4/C_{700}$ before (b) and (c) after ball milling with 20 wt % conductive carbon (* $Mn_2P_2O_7$)

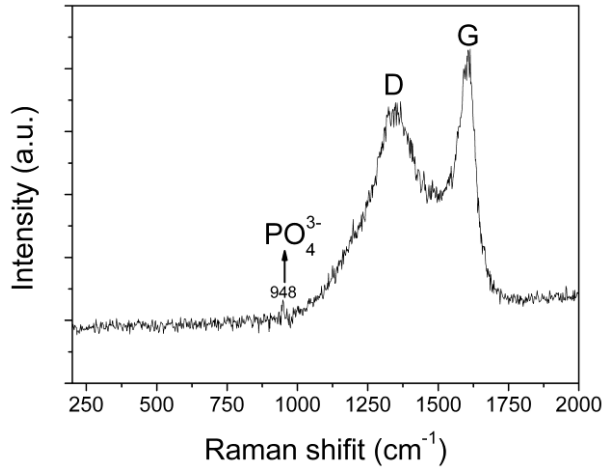

Fig. S4. Raman spectra of $LiMnPO_4/C_{700}$

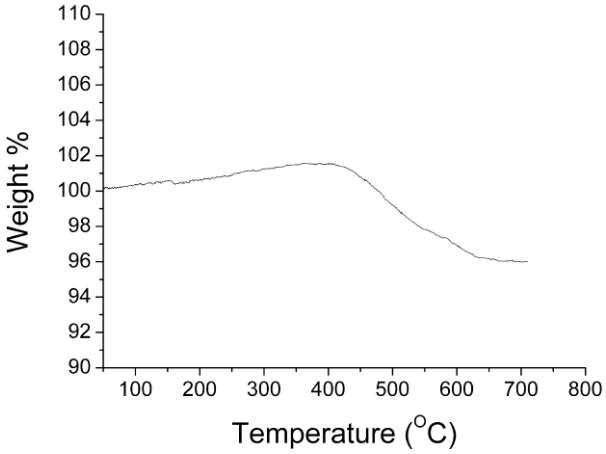

Fig. S5. TG curve of $LiMnPO_4/C_{700}$

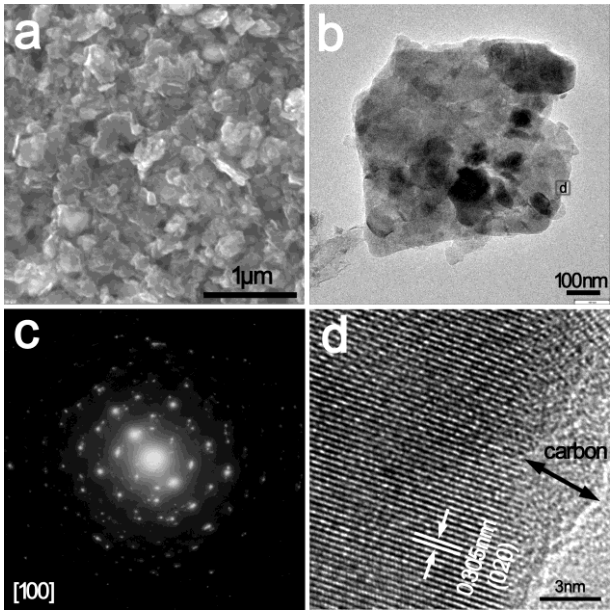

Fig. S6 (a) SEM and (b) TEM images of $LiMnPO_4/C_{700}$ nanoplates after balling milling; (c) SAED pattern of $LiMnPO_4/C_{700}$ nanoplates after balling milling and HRTEM images of selected area in (b).