Electronic Supplementary Information

Morphology Controlled Synthesis and Modification of High-Performance $LiMnPO_4$ Cathode Materials for Li-ion Batteries

Zhihong Qin, Xufeng Zhou*, Yonggao Xia, Changlin Tang, and Zhaoping Liu*

Ningbo Institute of Material Technology and Engineering, Chinese Academy of Sciences (CAS), Ningbo 315201, P. R. China.

Email: liuzp@nimte.ac.cn; zhouxf@nitme.ac.cn

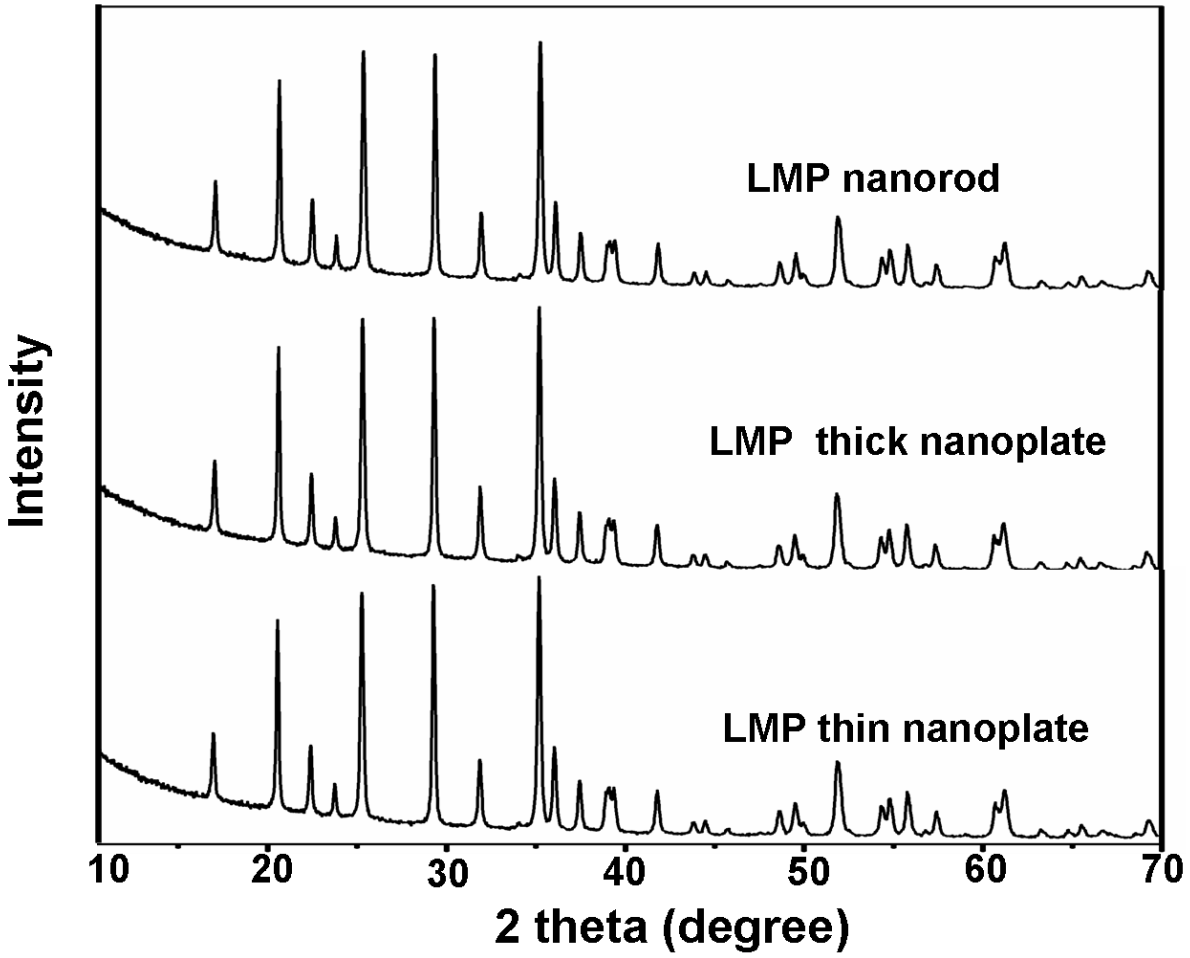

Figure S1. XRD patterns of LMP products: a) LMP nanorod, b) LMP thick nanoplate and c) LMP thin nanoplate obtained by the solvothermal method.

Table S1
Refined lattice parameters of LMP nanocrystals with different morphologies

sample	*a* (Å)	*b* (Å)	*c* (Å)	*V*(Å^3)
$LiMnPO_4$ nanorod	6.1005	10.4508	4.7464	302.607
$LiMnPO_4$ thick nanoplate	6.0997	10.4493	4.7456	302.473
$LiMnPO_4$ thin nanoplate	6.0993	10.4488	4.7449	302.394

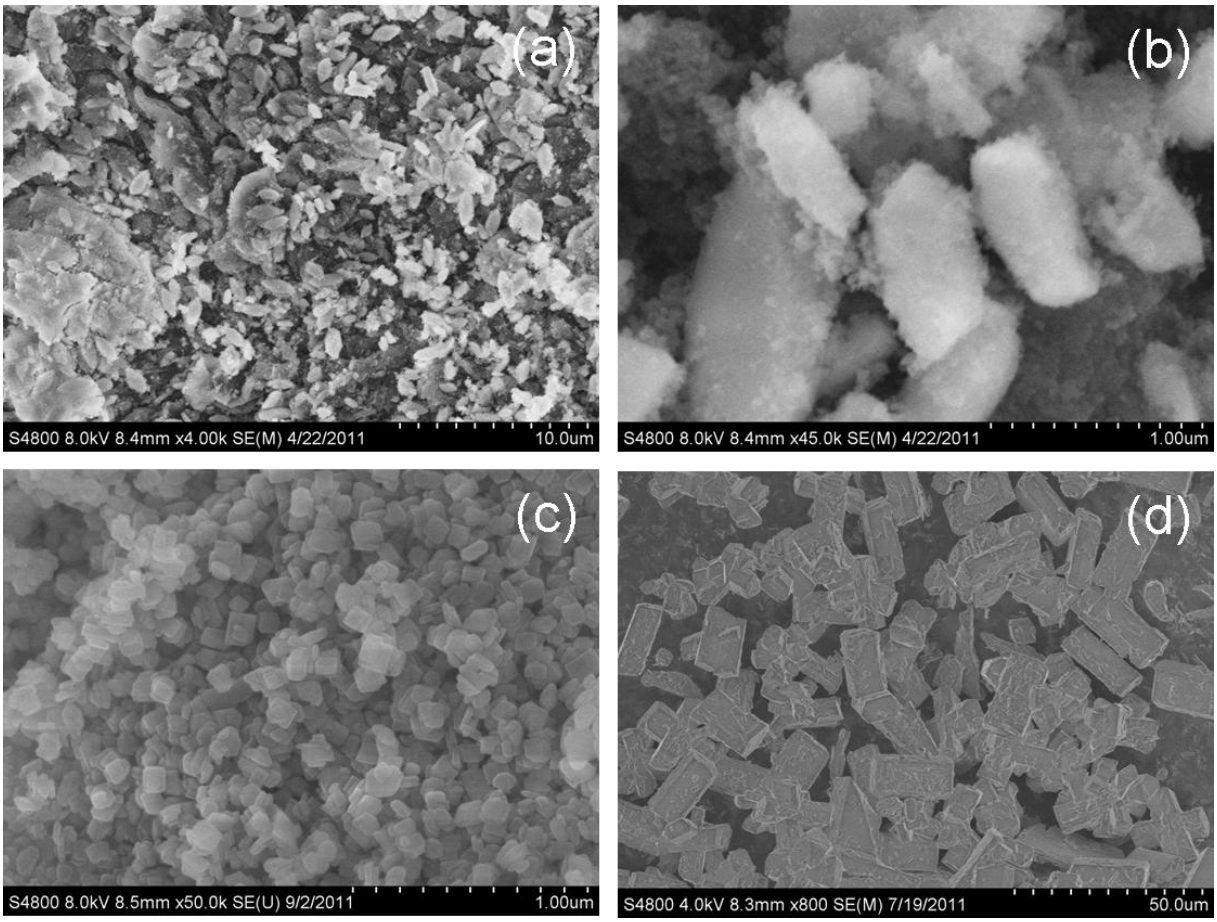

Figure S2. SEM images of the LMP products obtained at a) and b) pH =13.5, under air atmosphere, c) pH =13.5, under Ar atmosphere, and d) pH =7.0, under air atmosphere.

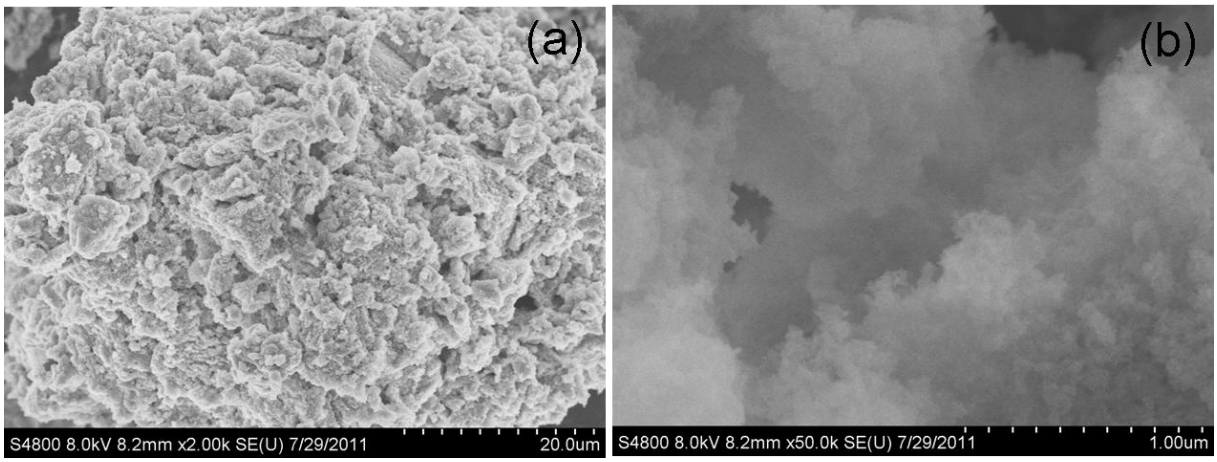

Figure S3. SEM images of the intermediate solid precipitates in the reaction suspension obtained at room temperature before solvothermal treatment.