Electronic Supplementary Information

Aerosol construction of multi-shelled $LiMn_2O_4$ hollow microspheres as a cathode in lithium ion batteries

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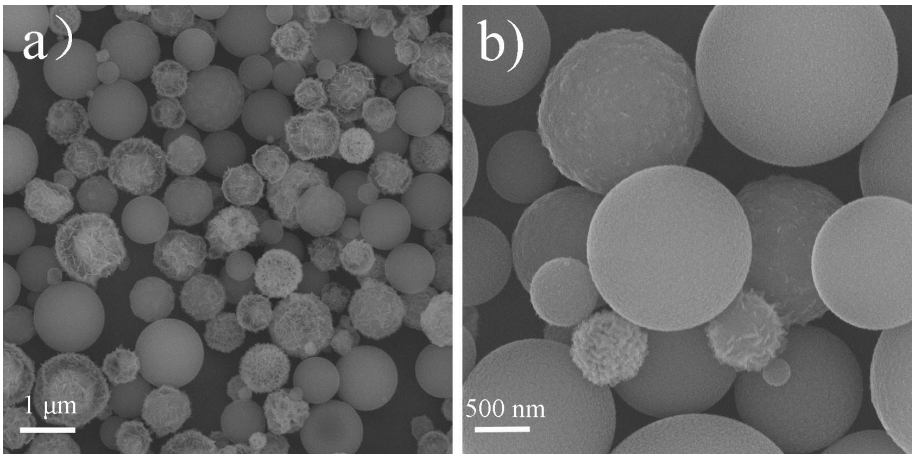

Figure S1 SEM images of $LiMn_2O_4$-C precursor microspheres prepared by an one-step ultrasonic spray pyrolysis process.

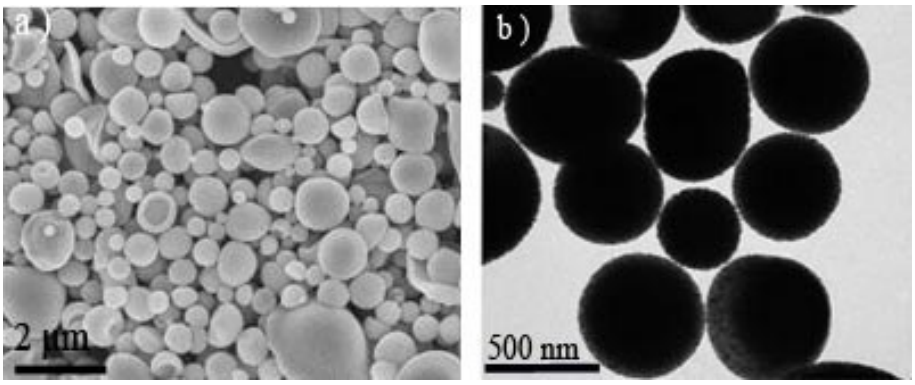

Figure S2 (a) SEM image and (b) TEM image of $LiMn_2O_4$ dense microspheres without sucrose prepared by an one-step ultrasonic spray pyrolysis process.

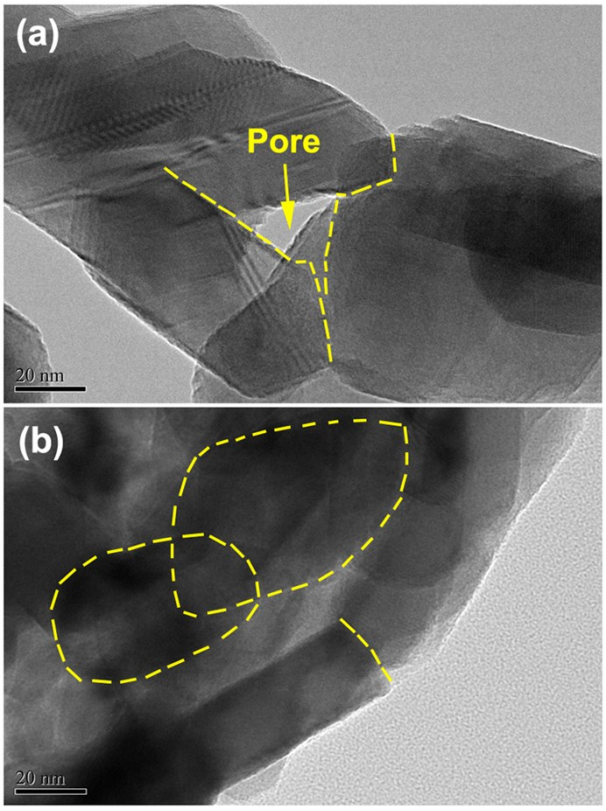

Figure S3 (a, b) HRTEM images of the as-prepared ms-LMO HMs (it demonstrates that there exists a bridge-link interaction among the $LiMn_2O_4$ particles).

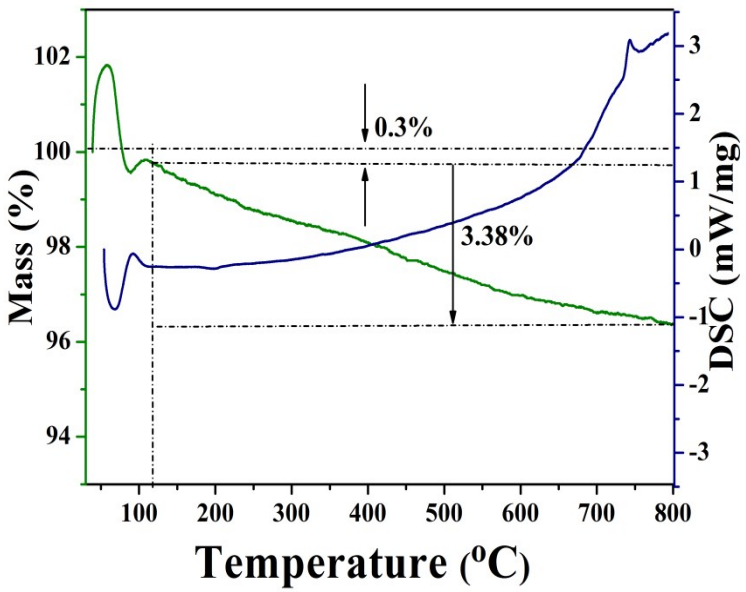

Figure S4 TG and DSC profiles of as-prepared ms-LMO HMs.

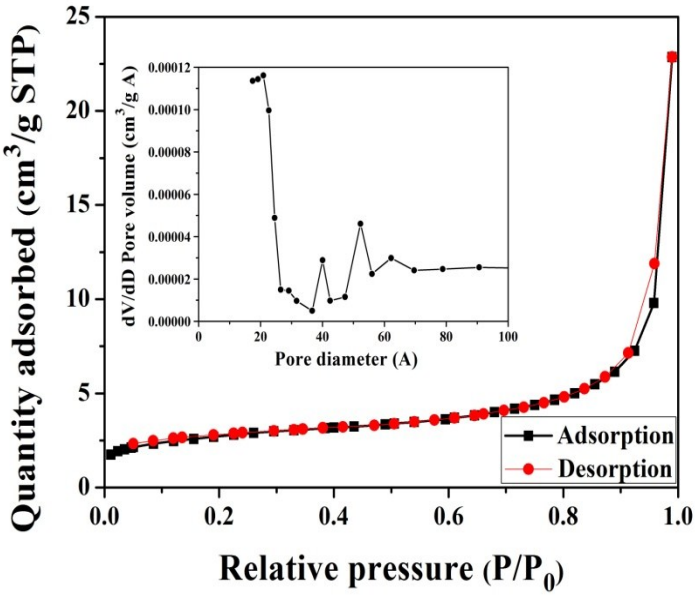

Figure S5 Nitrogen adsorption/desorption isotherm of the ms-LMO HMs (inset: the corresponding pore distribution profiles).

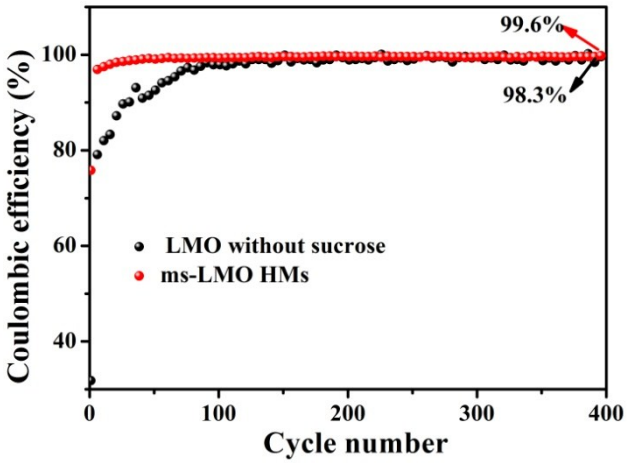

Figure S6 Coulombic efficiency of ms-LMO HMs and LMO without sucrose

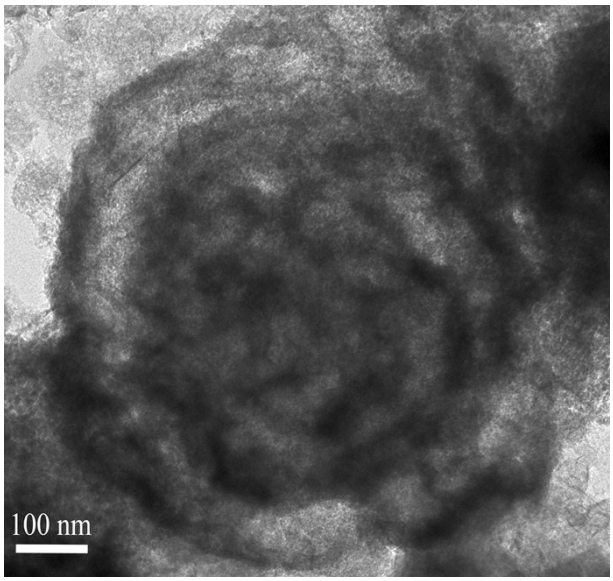

Figure S7 TEM image of the ms-LMO HMs after 400 cycles