Supporting Information for

Better Lithium-Ion Storage Materials Made through Hierarchical Assemblies of Active Nanocrystals and Nanorods

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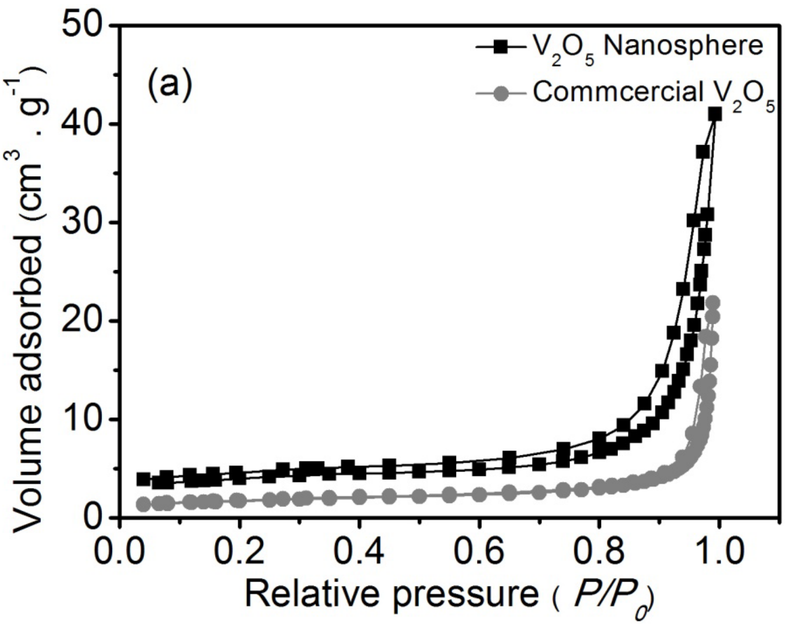

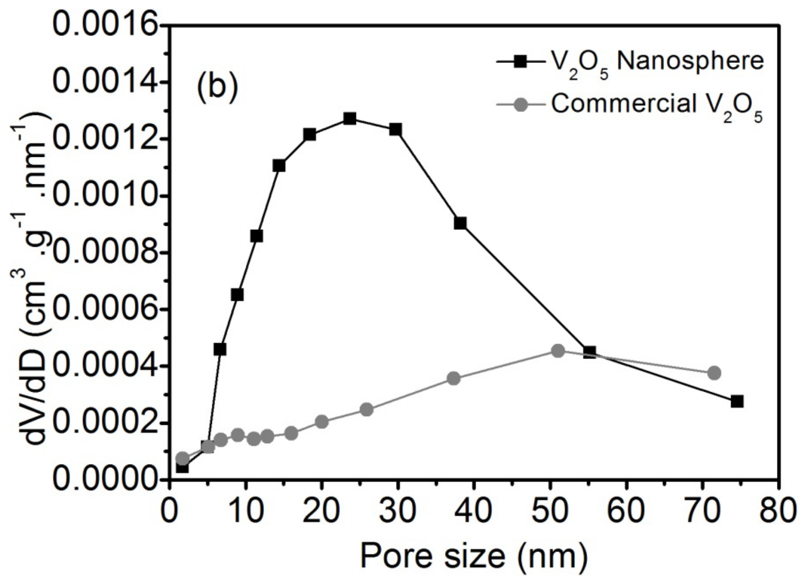

Figure S1. Nitrogen adsorption/desorption isotherms (a) and pore size distributions (b) of V_2O_5 nanorod spheres and commercial V_2O_5 particles.

Table S1. BET surface area, pore volume and average pore size of V_2O_5 nanorod spheres, commercial V_2O_5 particles, LiV_3O_8 nanorod spheres, Fe_3O_4 nanocrystal spheres and Fe_3O_4 nanocrystals.

Samples	BET Surface Area (m^2/g)	Pore Volume (cm^3/g)	Average Pore Size (nm)
V_2O_5 nanorod spheres	13.4	0.061	31.2
Commercial V_2O_5 particles	5.9	0.033	30.6
LiV_3O_8 nanorod spheres	13.6	0.094	30.9
Fe_3O_4 nanocrystal spheres	23.8	0.135	24.0
Fe_3O_4 nanocrystals	120.8	0.301	8.3

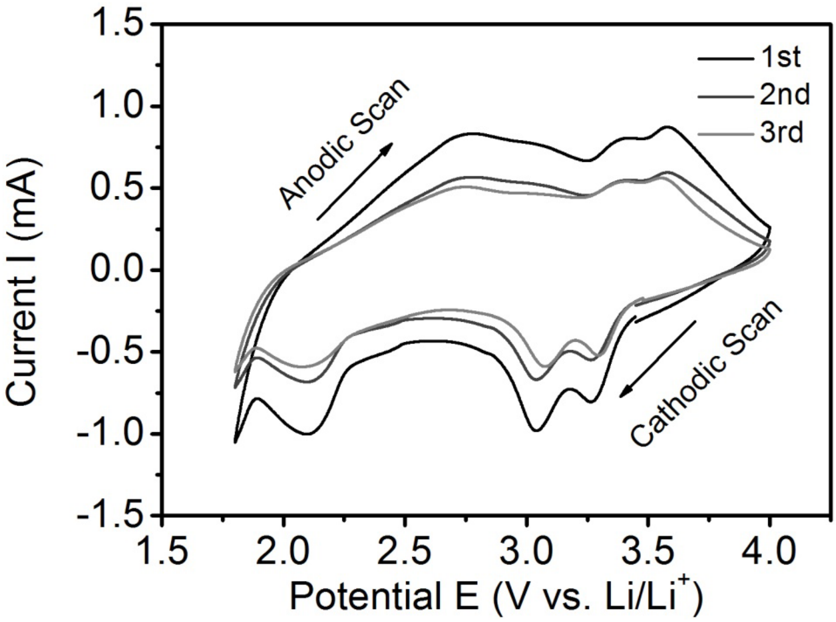

Figure S2. The CV curves of V_2O_5 nanorod spheres for the first three cycles in a voltage range of 1.8 to 4.0 V *vs.* Li/Li^+ at a scan rate of 1 mV s^{-1}. The peak currents were normalized to active mass.

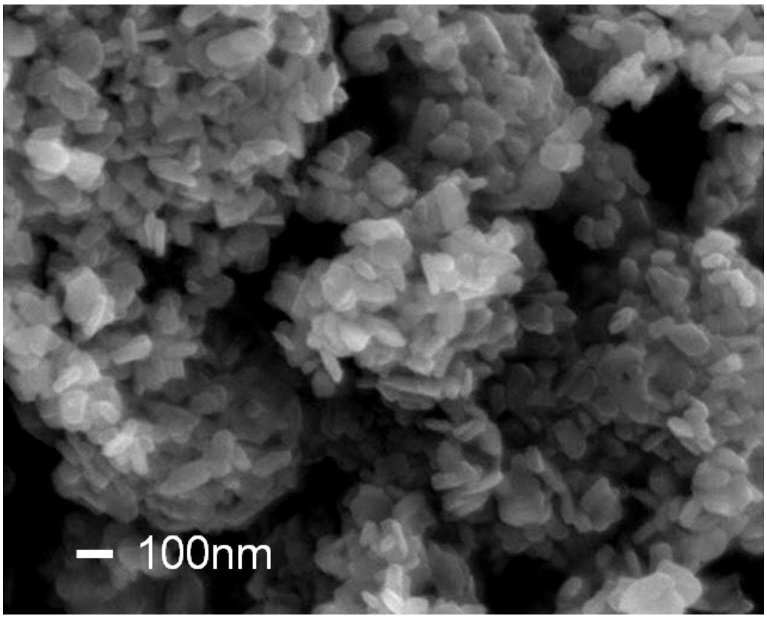

Figure S3. SEM image of V_2O_5 particles after crashing the nanorod-sphere structure.

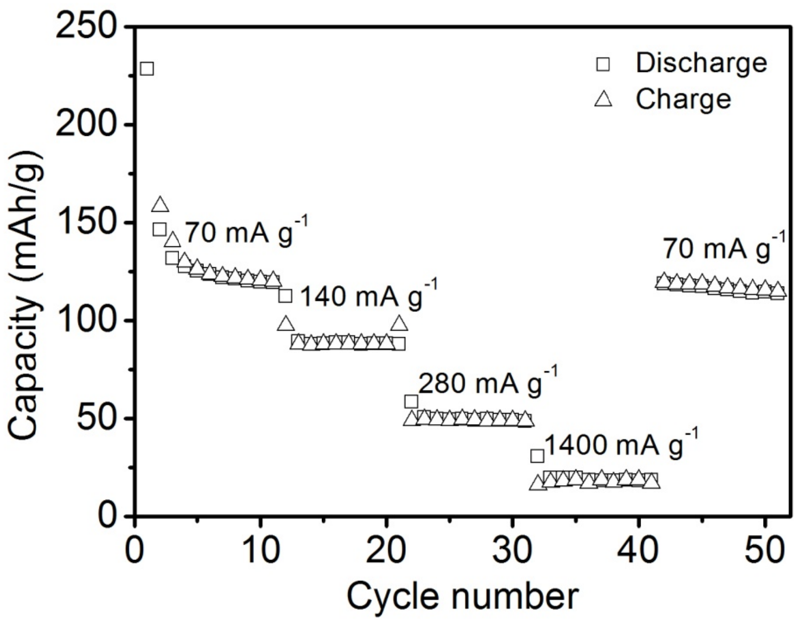

Figure S4. Rate-capability of electrode made from commercial V_2O_5 particles cycled between 1.8 and 4.0 V at different current densities of 70, 140, 280, 1400 mA g^{-1}, respectively.

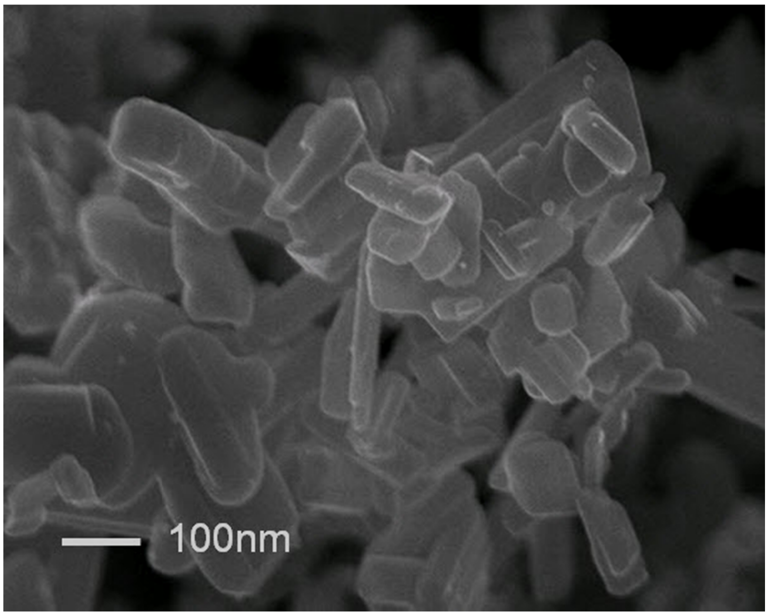

Figure S5. SEM image of LiV_3O_8 particles after crashing the nanorod-sphere structure.

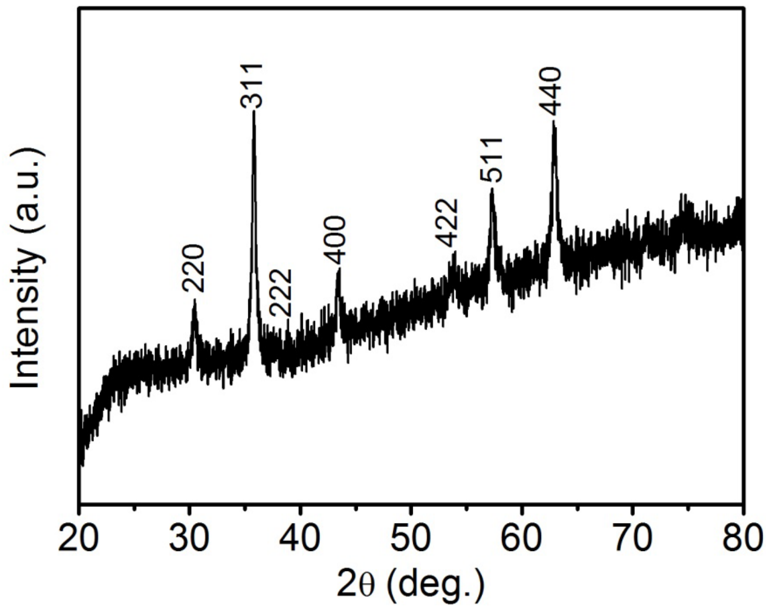

Figure S6. XRD patterns of the Fe_3O_4 nanocrystal spheres.