

Supplementary Information for

Morphology, Porosity and Surface Conductive Layer Optimized MnCo₂O₄ Microsphere as for Compatible Superior Li⁺ Ion/Air Rechargeable Battery Electrode Materials

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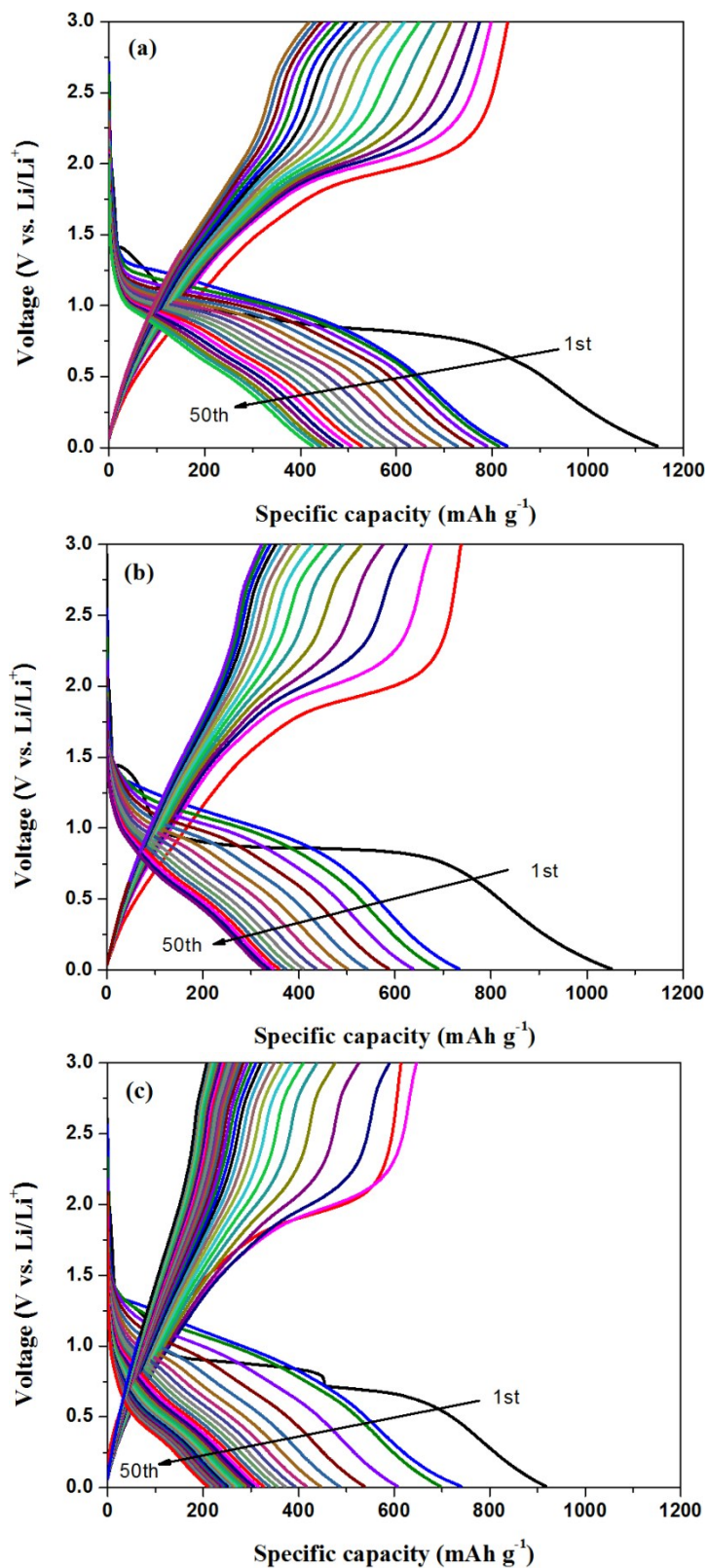
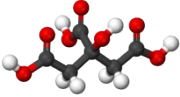
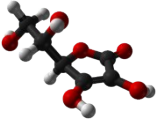
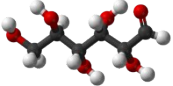
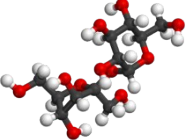


Figure S1. Galvanostatic charge/discharge curves of MnCo₂O₄ porous microspheres prepared with different organic molecules as the carbon sources; (a) ascorbic acid, (b) glucose and (c) sucrose.

Table S1. Molecule characteristic of the carbon sources.

Carbon Source	Molecular Formula/Structure [#]	Number of Oxygenous Group [*]
Citric acid	$C_6H_8O_6$ 	4
Ascorbic acid	$C_6H_8O_7$ 	5
Glucose	$C_6H_{12}O_6$ 	6
Sucrose	$C_{12}H_{22}O_{11}$ 	11

red=oxygen, grey=carbon, white=hydrogen

* -COOH, -OH, -O-, -COO-

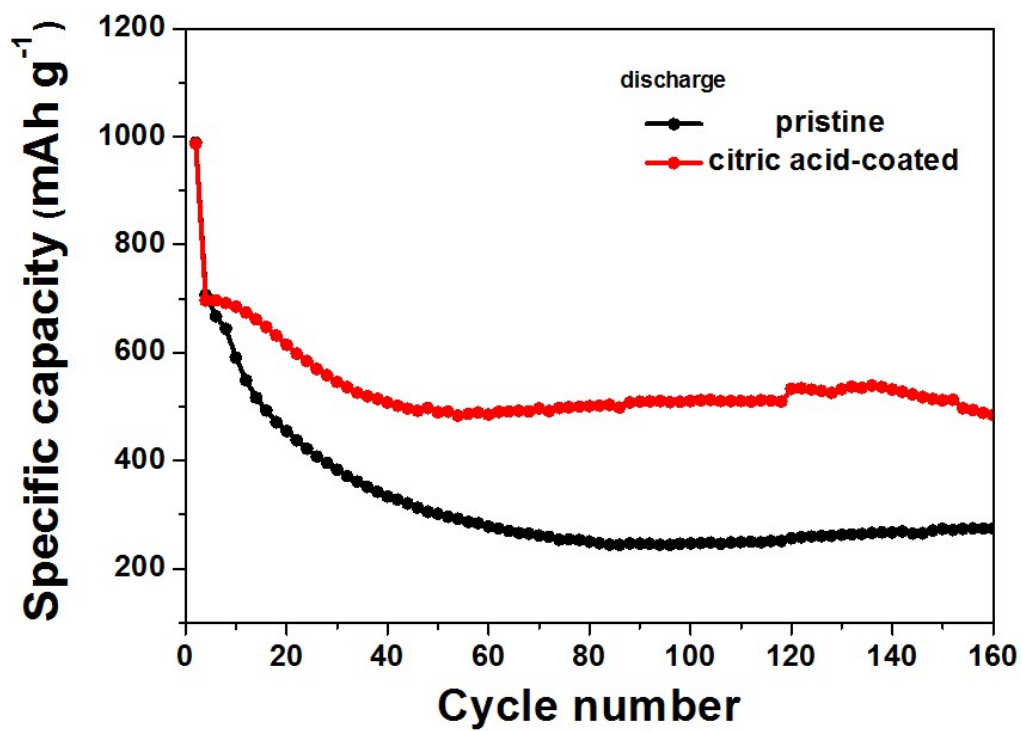


Figure S2. Long cycle discharge capacity retention of the electrodes composed of the given MnCo₂O₄ compound.