Electronic Supplementary Information

Porous Carbon-Coated $CuCo_2O_4$ Concave Polyhedrons Derived from Metal-Organic Frameworks as Anodes for Lithium-Ion Batteries

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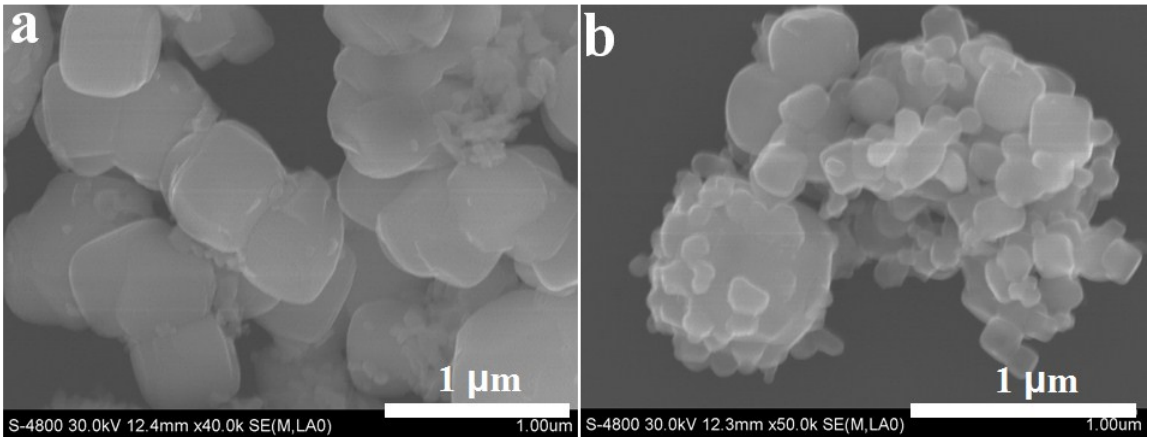

Fig. S1 SEM imagines of NMC (a) precursor and (b) after calcinations.

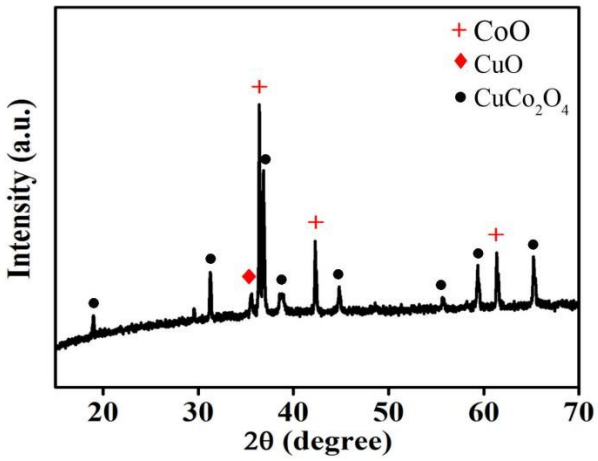

Fig. S2 XRD pattern of NMC.

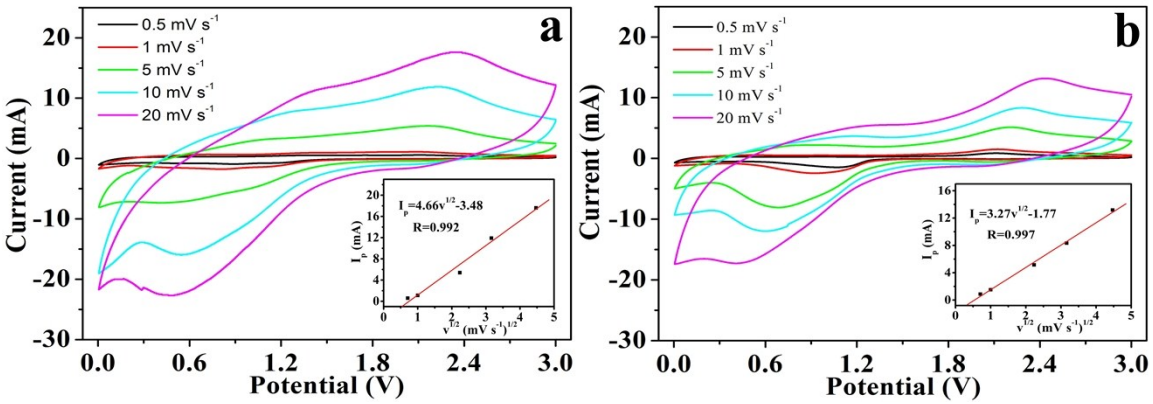

Fig. S3 CV curves of CCP (a) and NMC (b) at various scan rates (insets are relationship between the anodic peak currents and square root of scan rate, respectively.).

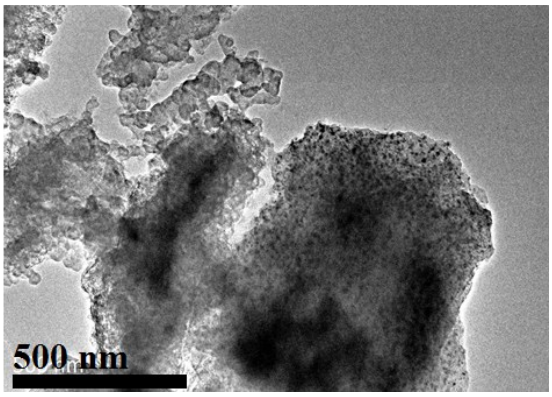

Fig. S4 TEM image of CCP after long-term cycling at the current density of 5 C.

Table. S1 Summary for the performance of porous $CuCo_2O_4$ concave polyhedrons, and other Co-based metallic oxide anode materials reported previously.

Material	**Morphology**	**Final Capacity (mAh g^{-1})**	**Current (mA g^{-1})**	**Reference**
$CuCo_2O_4$/C	Concave polyhedron	740 (50^{th} cycle)	100	This work
$MgCo_2O_4$	Needle-shape	114 (50^{th} cycle)	60	1
$CuCo_2O_4$	Nanoparticle	742 (40th cycle)	60	4
$CuCo_2O_4$	Nanoparticle	750 (50th cycle)	60	2
$FeCo_2O_4$	Grain-like	752 (50^{th} cycle)	60	1
$ZnCo_2O_4$	Nanoparticle	578 (15^{th} cycle)	60	5
$ZnCo_2O_4$	Tube-in-tube	560 (50^{th} cycle)	200	11
$NiCo_2O_4$/C	Nanoparticle	915 (50^{th} cycle)	40	36
$NiCo_2O_4$	Nanorod	695 (30^{th} cycle)	2000	3
Co_3O_4	Nanoparticle	850 (rate capacity)	100	8
Co_3O_4	Nanocage	487 (rate capacity)	1000	16