

Fig. S1 XRD spectra of the pure CFC.



Fig. S2 The SEM image of the pure CFC.



Fig. S3 The SEM image of the NCO powder as electrode materials for LIBs after 100

cycles.



Fig. S4 Cycling performance of the pure CFC as electrode materials for LIBs at a current density of 100 mA g⁻¹.



Fig. S5 Electrochemical inpedance spectra of the pure NCO electrode and NCO@CFC electrode after rate cycle in the frequency range from 100 KHz to 0.01 Hz. Inset shows the equivalent circuit.



Fig. S6 Cycling performance of the pure CFC as electrode materials for SIBs at a current density of 50 mA g⁻¹.