Electronic Supplementary Information for

Porous hollow Co_3O_4 with rhombic dodecahedral structures for high-performance supercapacitors

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Calculation The specific capacitance of an electrode during galvanostatic charge/discharge can be calculated by the following equation:

$$C = \frac{i \cdot \Delta t}{m \cdot \Delta V}$$

Where m is the mass of Co_3O_4 (5 mg), ΔV is the range of charge/discharge (V), and i is the discharge current (A) applied for time Δt (s).

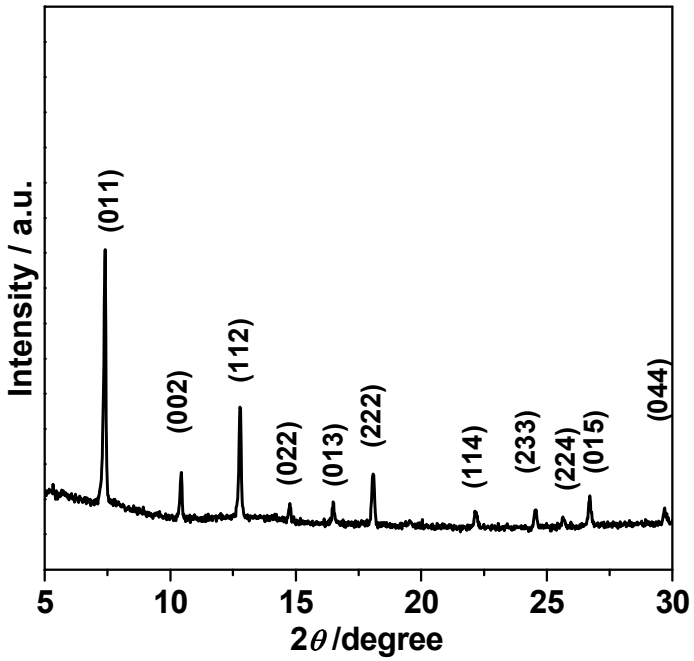

Fig. S1 XRD patterns of the as-prepared precursors.

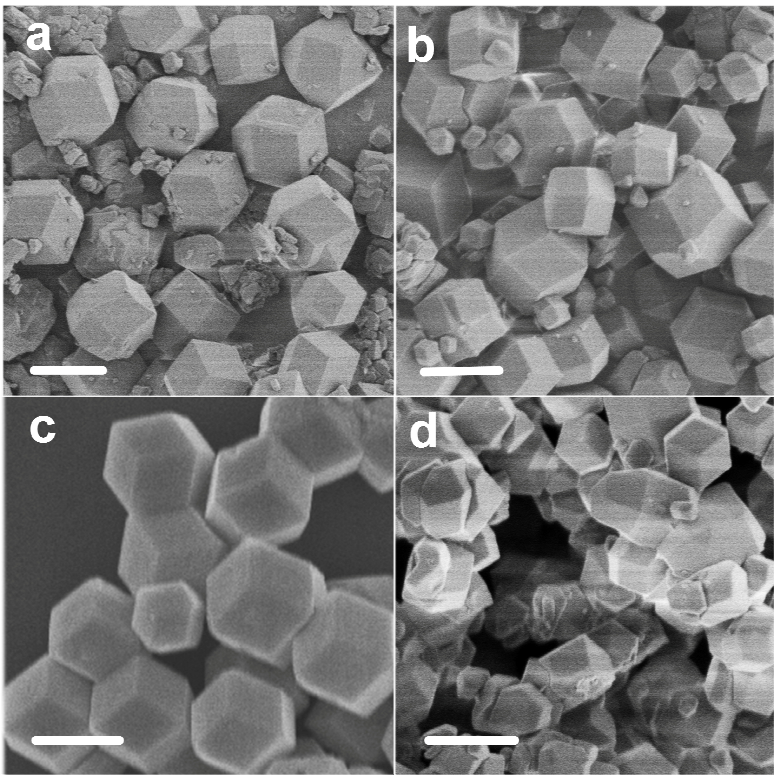

Fig. S2. SEM images of as-prepared samples with different reaction time, a) 0.5 h, b) 8 h, c) 24 h, and d) 48 h. The scale bar= 1.0 μm

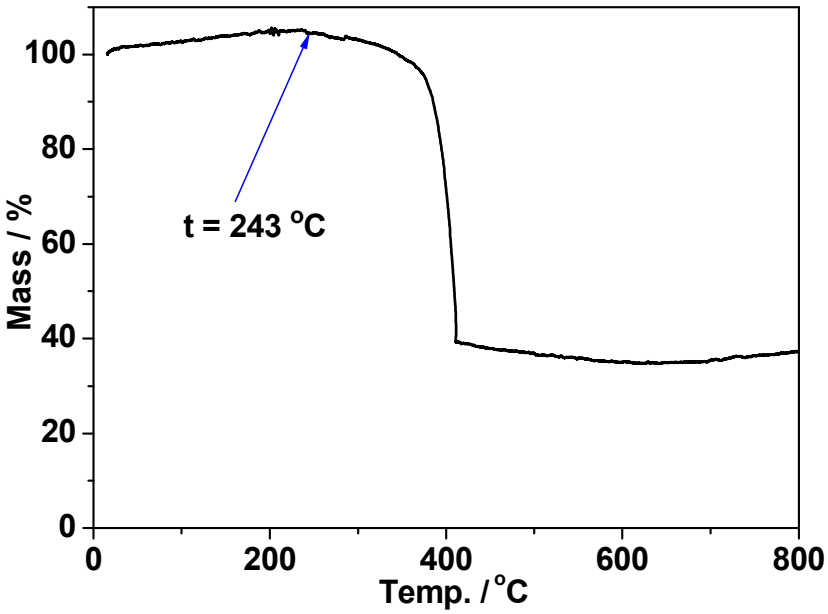

Fig. S3 TG curve of the as-prepared precursor.

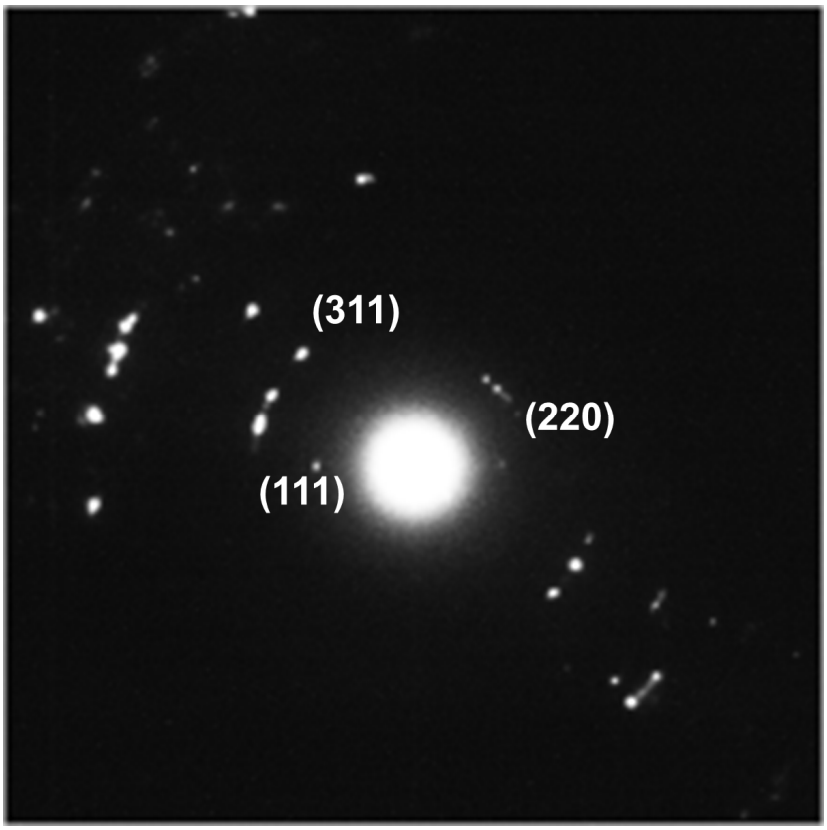

Fig. S4 SAED patterns of the as-prepared Co_3O_4.

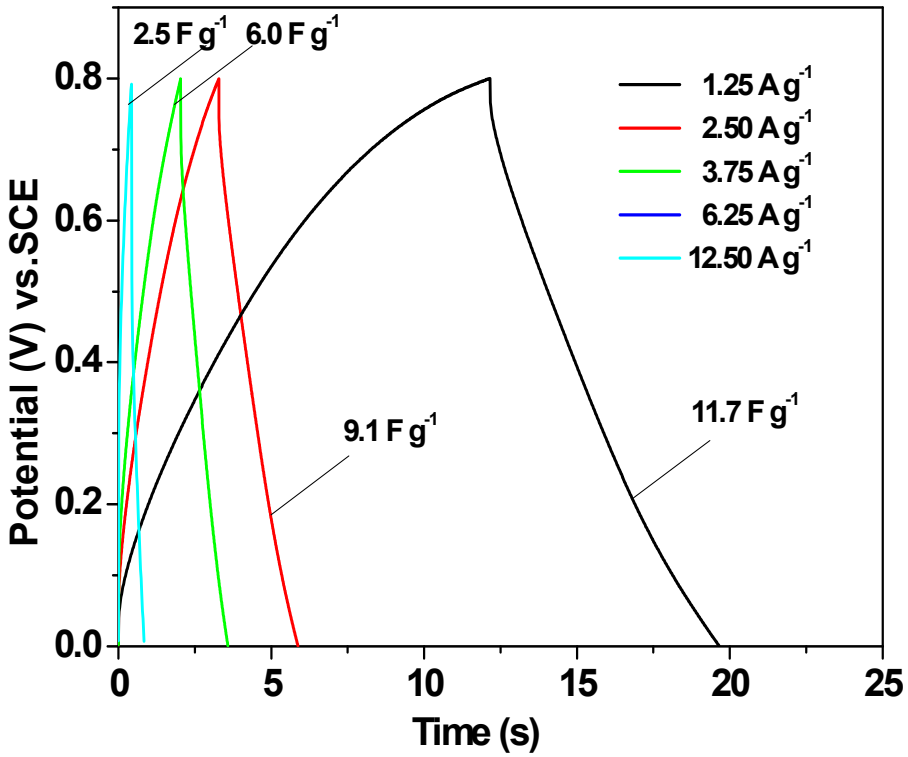

Fig. S5. The capacitive performance of the conductive carbon measured at the same condition as Co_3O_4.

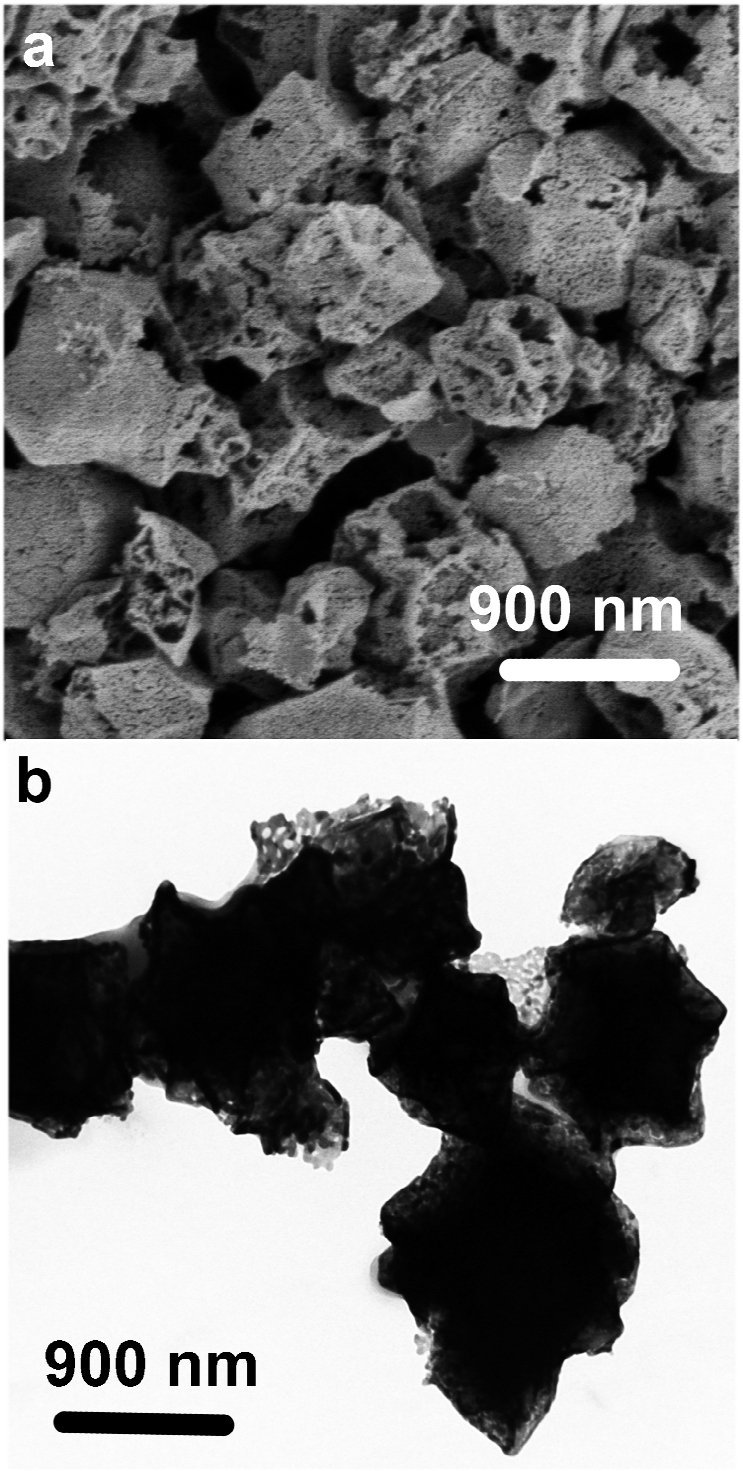

Fig. S6 a) SEM image, and b) TEM image of Co_3O_4 samples after 6000 cycles.

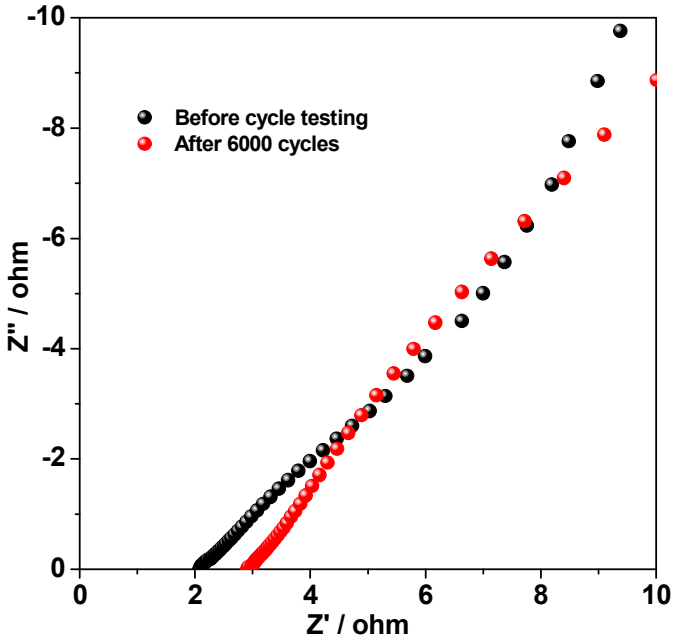

Fig. S7. Electrochemical impedance spectroscopy (EIS) analysis of as-prepared electrodes before and after 6000 cycling test.

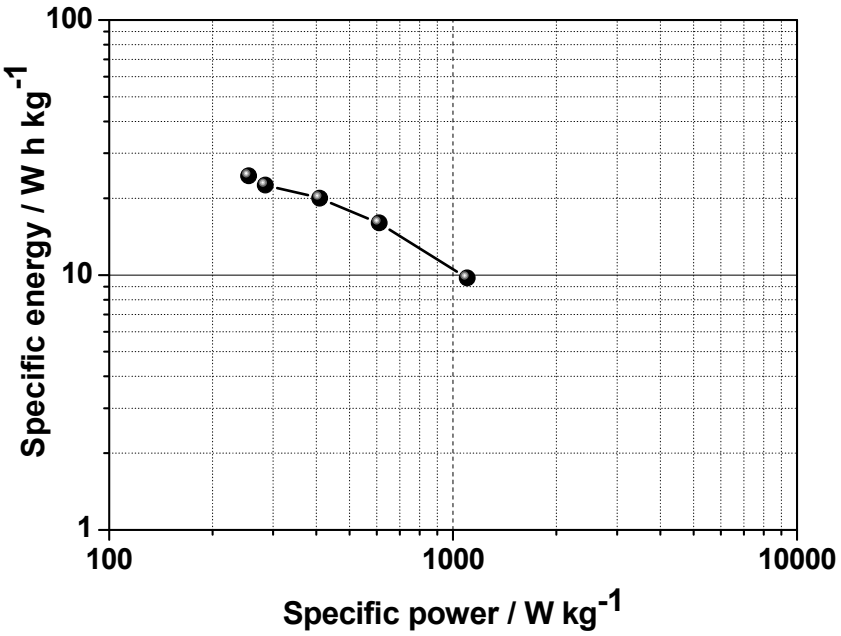

Fig. S8. Ragone plot regarding specific energy and power density parameters of the as-prepared electrode.