Supporting information

Boosting the Electrochemical Properties of Carbon Materials as Bipolar Electrodes by Reasonable Oxygen Functional Groups

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Figure S1 TEM image and average diameter of CNTs.



Figure S2 The SEM images of CCC



Figure S3 XPS wide scan spectra of CC, CCC, and PCCC



Figure S4 CV curves of PCCC-20 at different scan rates



Figure S5 PCCC-20 as anode, the GCD curves at different current densities.



Figure S6 PCCC-20 as cathode (a) the CV curves at different scan rates and (b) the GCD curves at different current densities.



Figure S7 CV curves of the supercapacitor at different voltage windows at a scan rate of 20 mV/s.



Figure S8 GCD curves of the supercapacitor at different current densities.