Supporting Information

**Enhancement** **on the electrochemical properties of commercial coconut shell-based activated carbon by H2O dielectric barrier discharge plasma**

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Fig. S1 XPS spectra of CSAC and HCSAC



Fig. S2 (a-b) CV curves of CSAC and CSAC modified with DBD H2O plasma in a three-system with 6 M KOH aqueous electrolyte at the scan rate of 10 mV s-1. (c-d) GCD curves of CSAC and CSAC modified with DBD H2O plasma in a three-electrode system with 6 M KOH aqueous electrolyte at the current density of 1 A g-1. (e) Nyquist plots of CSAC and CSAC modified at different power electrodes. The inset is the detail with enlarged scale (f) Rate capability of CSAC and CSAC modified at different power at the current density from 0.5 to 10 A g-1.