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Supporting Information

Identifying Pseudocapacitance of Fe_2O_3 in Ionic Liquid and its Application in Asymmetric Supercapacitors

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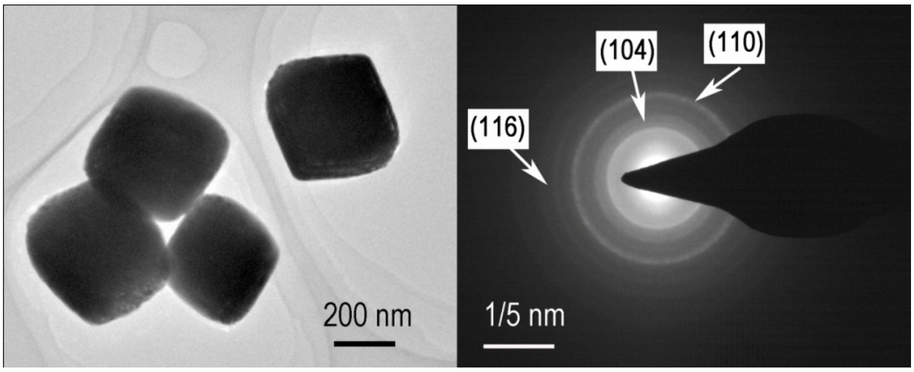

Figure S1 TEM image of as-prepared Fe_2O_3 particles and the corresponding SAED pattern.

Table S1 The fitting data from Nyquist plots of Fe_2O_3 and Fe_2O_3@GNS

Sample	R1	R2	CPE1T	CPE1P	CPE2T	CPE2P
Fe_2O_3	11.09	23.95	0.004412	0.48957	0.026855	0.72845
Fe_2O_3@GNS	3.922	14.74	0.027903	0.30084	0.11197	0.81829

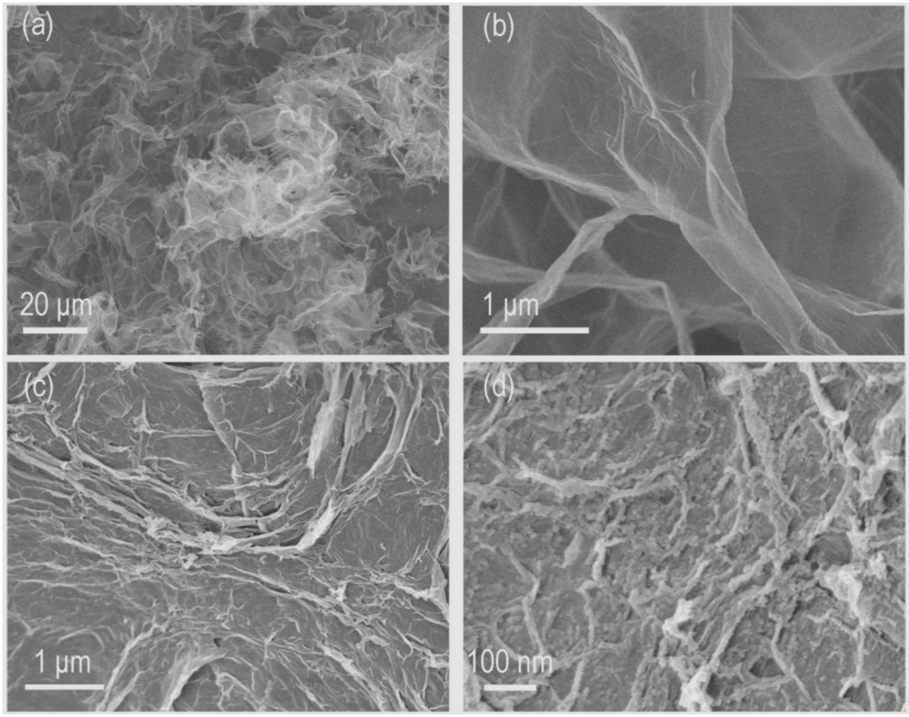

Figure S2 SEM images of as-made GNSs (a and b) and Fe_2O_3@GNS (c and d) with different magnifications.

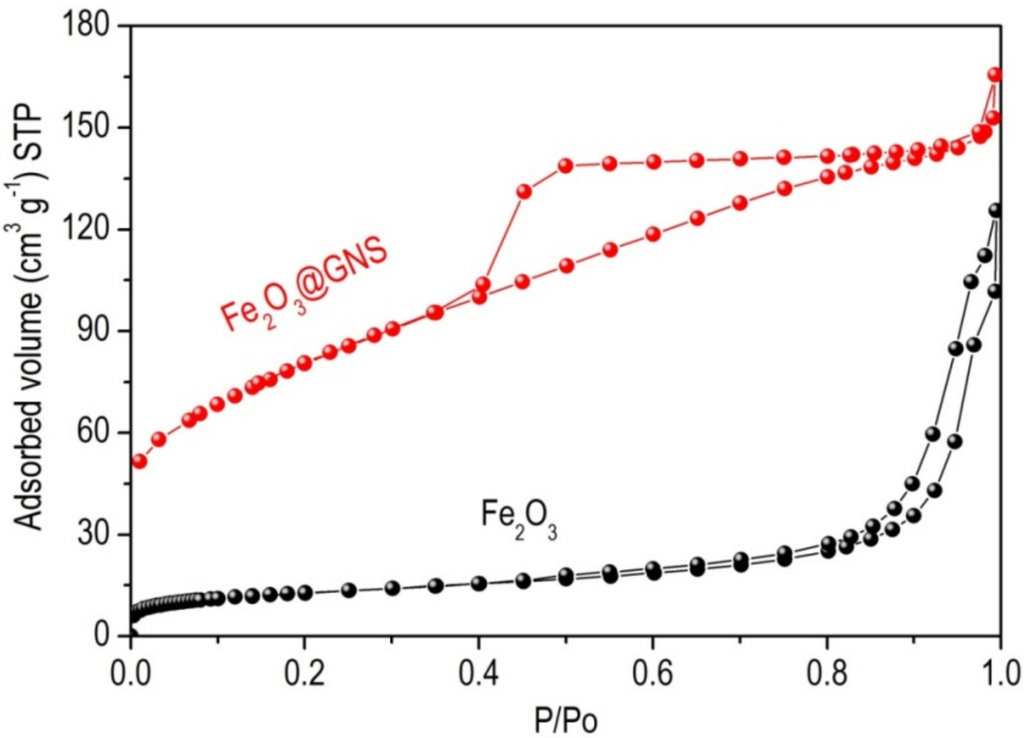

Figure S3 Nitrogen adsorption-desorption isotherms of as-made Fe_2O_3 and Fe_2O_3@GNS.

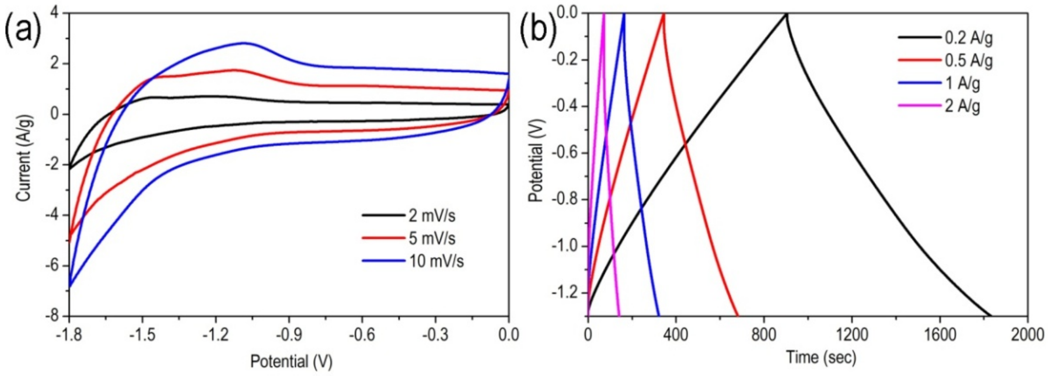

Figure S4 Electrochemical characteristics of Fe_2O_3@GNS in $EMIMBF_4$ electrolyte under the three-electrode system: (a) CV curves at different scan rates, (b) GCD curves at different current densities.

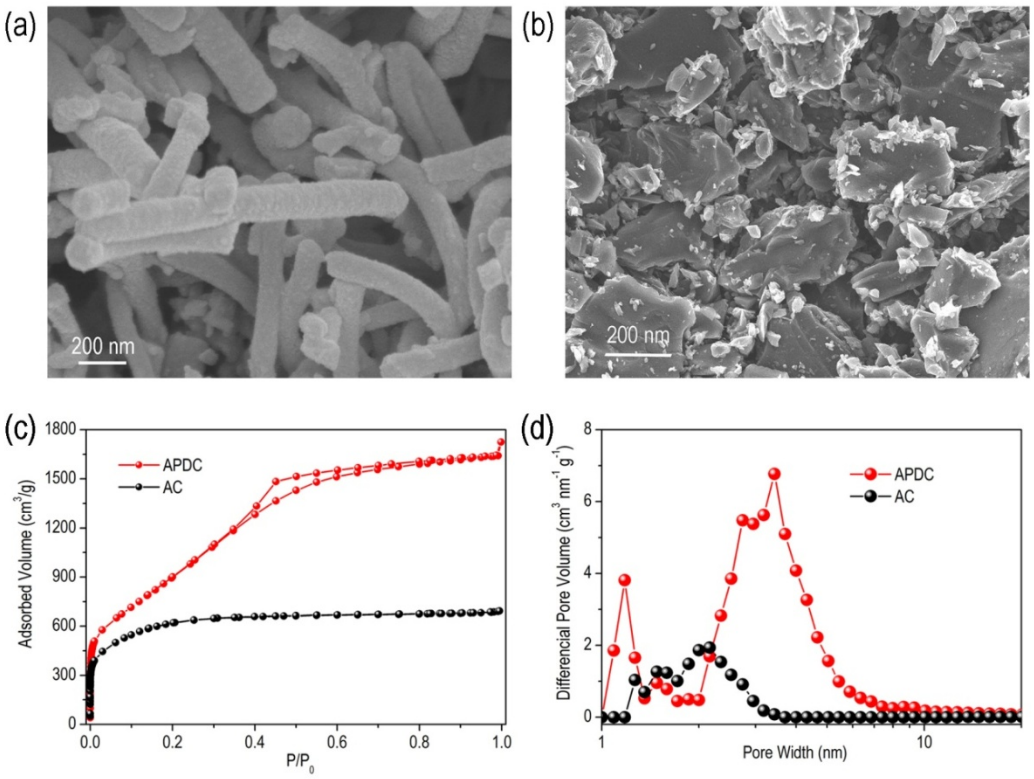

Figure S5 Structure characteristics of commercial AC (*Xinjiang Tianfu Technology Co., Ltd, China*) and as-made APDC: SEM images of (a) APDC and (b) commercial AC, (c) Nitrogen adsorption-desorption isotherms, and (d) the corresponding pore-size distributions.

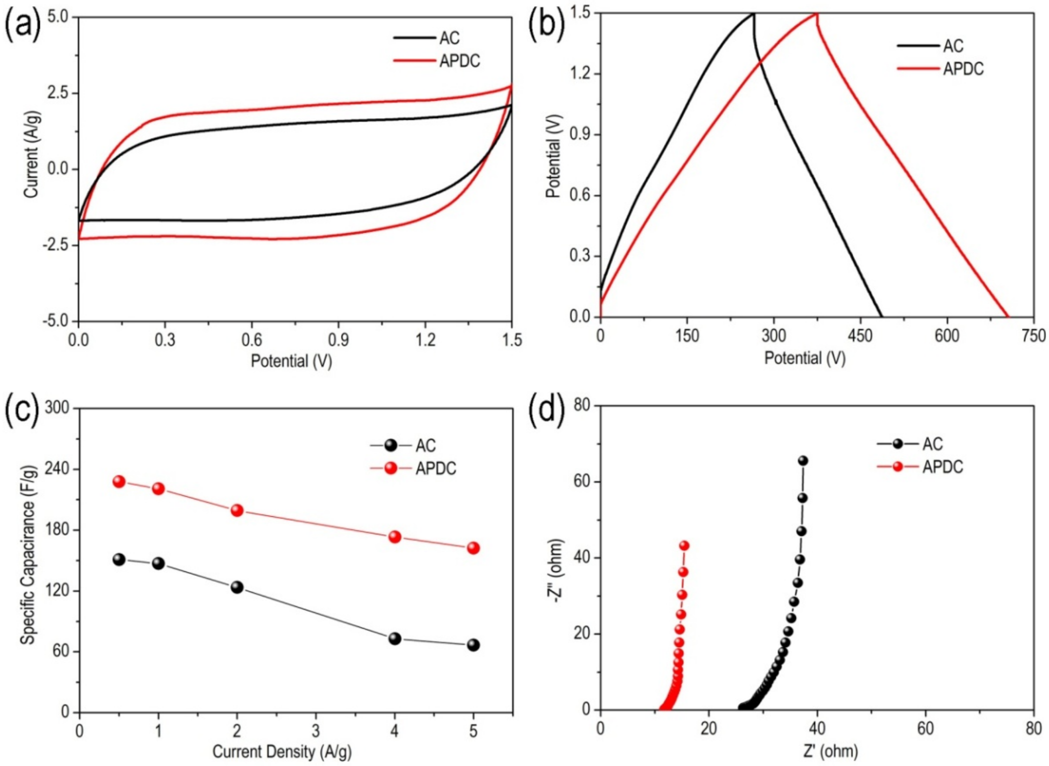

Figure S6 Electrochemical characteristics of commercial AC and as-made APDC in $EMIMBF_4$ electrolyte under the three-electrode system: (a) CV curves at a scan rate of 10 $mV \cdot s^{-1}$, (b) GCD curves at a current density of 0.5 $A \cdot g^{-1}$, (c) the specific capacitance as a function of discharge current density, and (d) Nyquist plots.

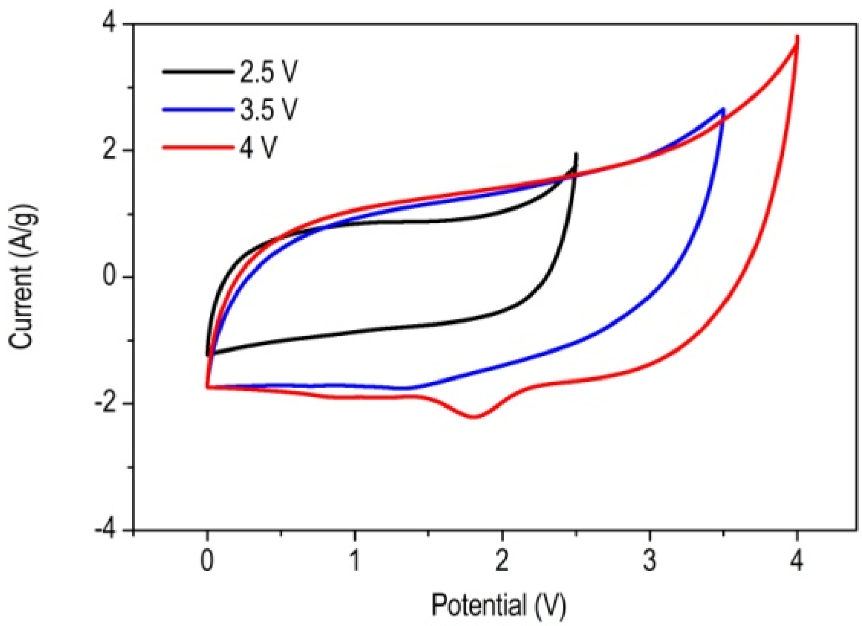

Figure S7 CV curve of Fe_2O_3@GNS//AC in different cell windows at the scan rate of 50 $mV \cdot s^{-1}$.