Supporting Information

Preparation of Hierarchically Porous Graphitic Carbon Spheres and Their Applications in Supercapacitors and Dye Adsorption

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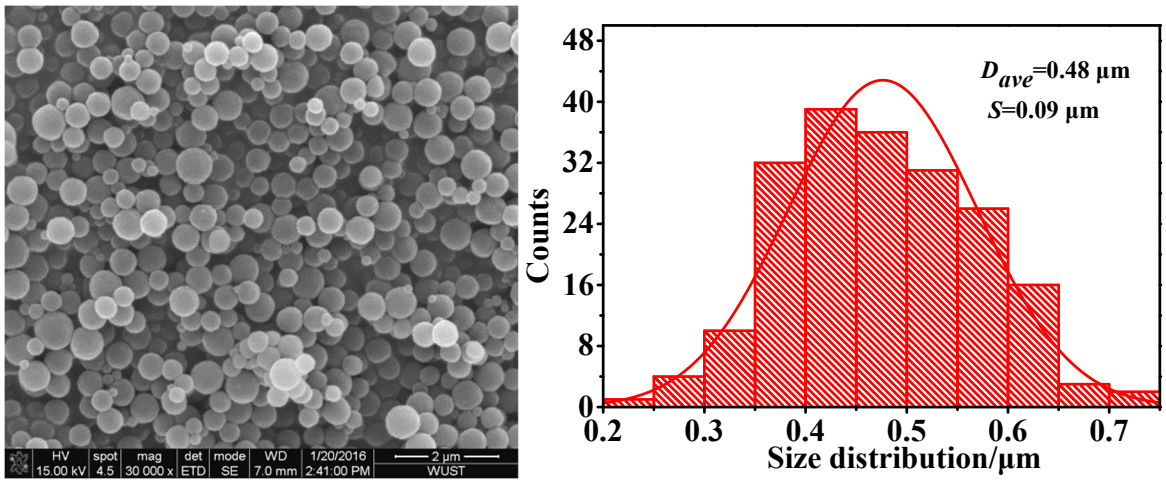

Fig. S1 SEM image and particle size distribution of carbon spheres prepared by hydrothermal carbonization at 180 °C for 12 h.

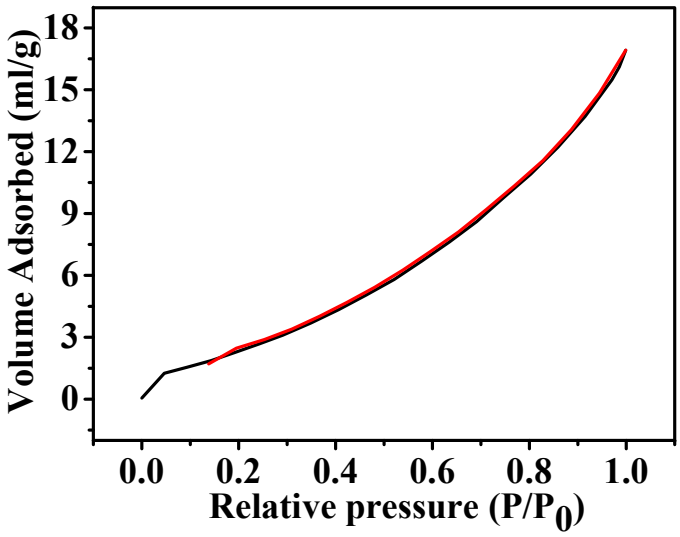

Fig. S2 Nitrogen adsorption/desorption isotherms of the pre-synthesized carbon spheres.

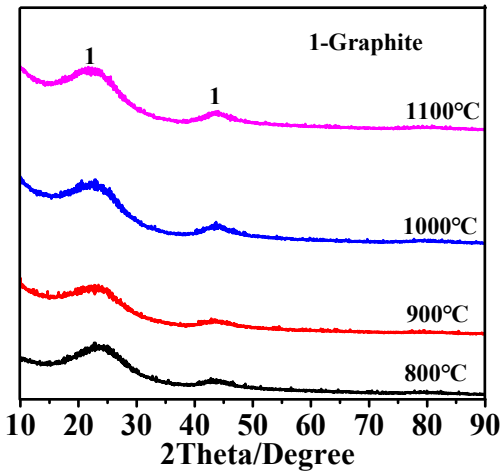

Fig. S3 XRD patterns of HGCS resultant from 3 h firing of pre-synthesized carbon spheres at different temperatures without using Fe catalyst (ICDD: 01-075-1621 (Graphite)).

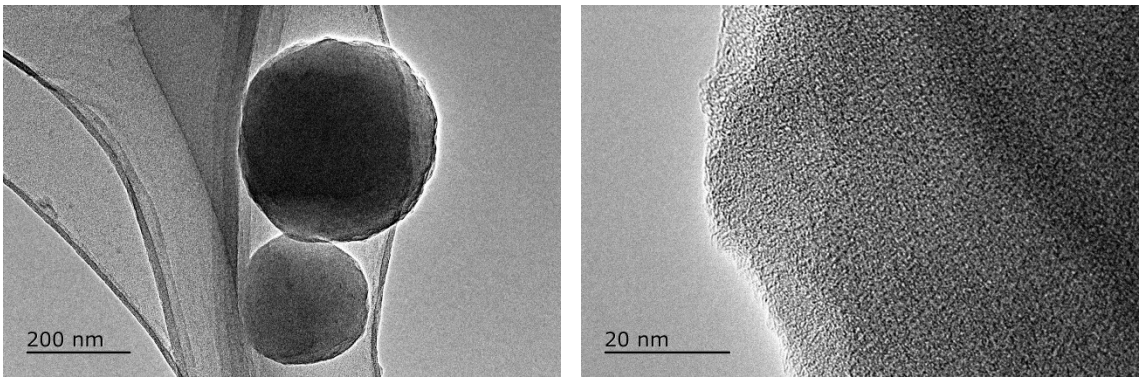

Fig. S4 TEM images of carbon spheres prepared by hydrothermal carbonization at 180 °C for 12 h.

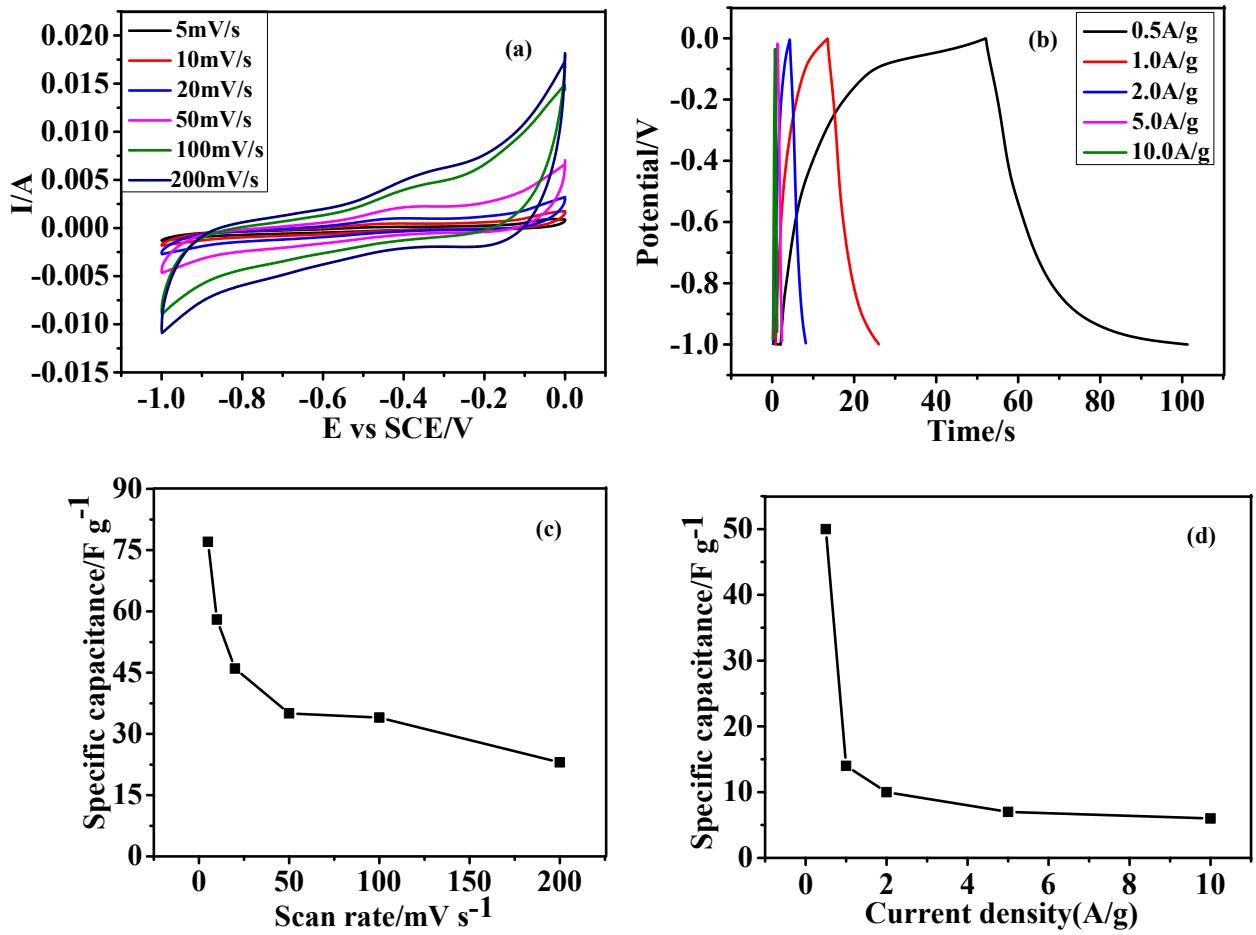

Fig. S5 CV curves (a), galvanostatic charge/discharge curves (b), specific capacitance versus scan rate (c) and specific capacitance versus current density (d), in the case of pre-synthesized carbon spheres.

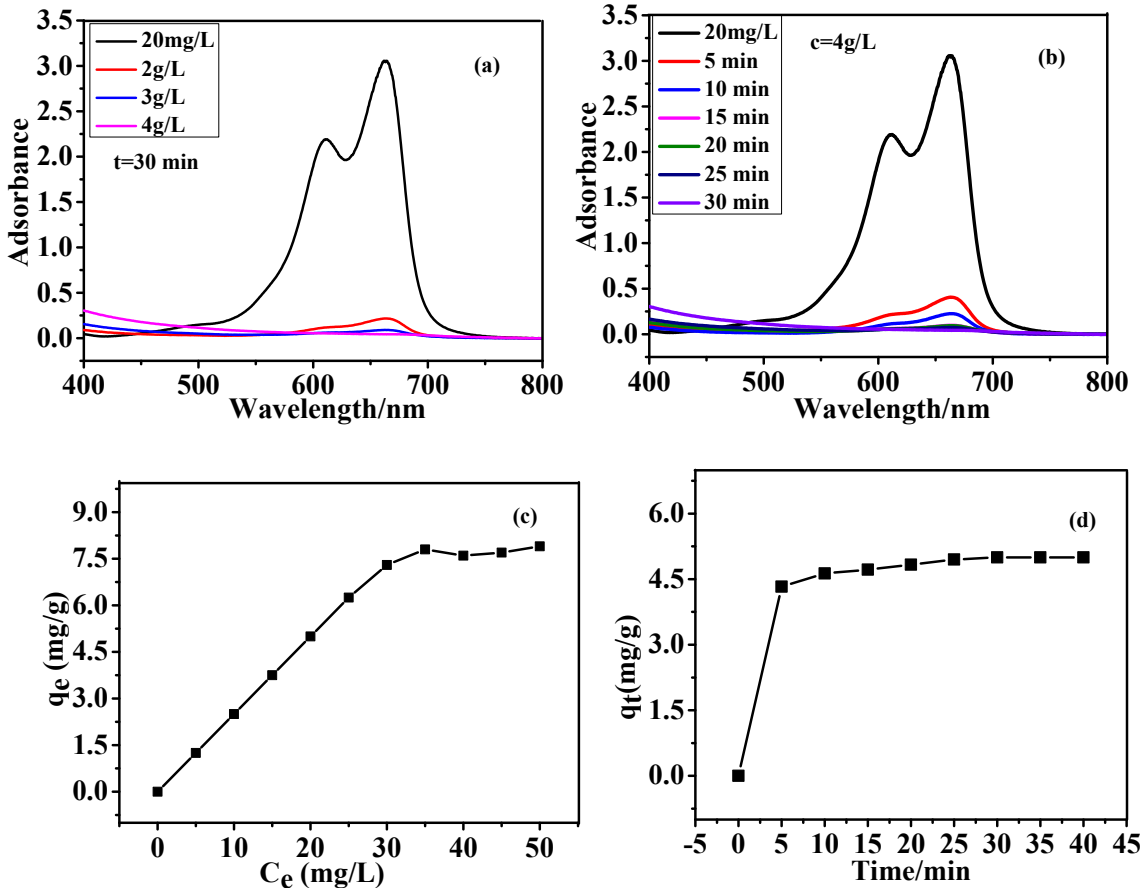

Fig. S6 UV curves corresponding to concentration (a) and time (b), adsorption isotherms (c), and adsorption kinetics (d), in the case of pre-synthesized carbon spheres.

Table S1 Comparison of graphitic carbon materials investigated to date

Samples	Carbon precursor	Preparation method	Specific surface area/m^2/g	Specific capacitance F/g	Refs
Mesoporous FeNi/graphitic carbon	Natural soybean oil	Template method	360~430	-	[1]
Nanoporous graphitic carbon	Iron phthalocyanine	Template method	960~1200	-	[2]
Porous graphitic carbon monoliths	Phenolic resol	Double template	725	-	[3]
Nanoporous graphitic carbon	Sucrose	Soft-template method	329	120 (0.2 A/g)	[4]
Mesoporous carbon spheres	Ethylene	Template method	666.8	59 (0.2 A/g)	[5]
HGCS	Glucose	Catalytic carbonization	564	140 (0.2 A/g)	This work

Table S2 Comparison of porous amorphous carbon materials reported to date

Samples	S_{BET} (m^2/g)	C (1A/g) (F/g)	$Cs=C/S_{BET}$ (F/m^2)	Refs
Hierarchical porous carbon nanospheres	1227	353	0.28	[6]
Activated hollow porous carbon spheres	1290	303.9	0.235	[7]
Nitrogen enriched carbon	1003	300	0.3	[8]
Hierarchically porous carbon spheres	1974	300	0.15	[9]
Hierarchical porous carbon	1513	300	0.198	[10]
Micro-meso-porous carbon spheres	2502	230	0.09	[11]

Hierarchical porous carbon spheres	1939	165	0.085	[12]
Activated carbon	1672	275	0.16	[13]
Nitro-doped ordered mesoporous carbons	1741	220	0.126	[14]
Hierarchically graphitic carbon spheres	564	113	0.2	This work

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