Electronic Supplementary Material (ESI) for RSC Advances.

Supplementary Information

Facile synthesis of g-C_3N_4 quantum dots/graphene hydrogel nanocomposites for a high-performance supercapacitor

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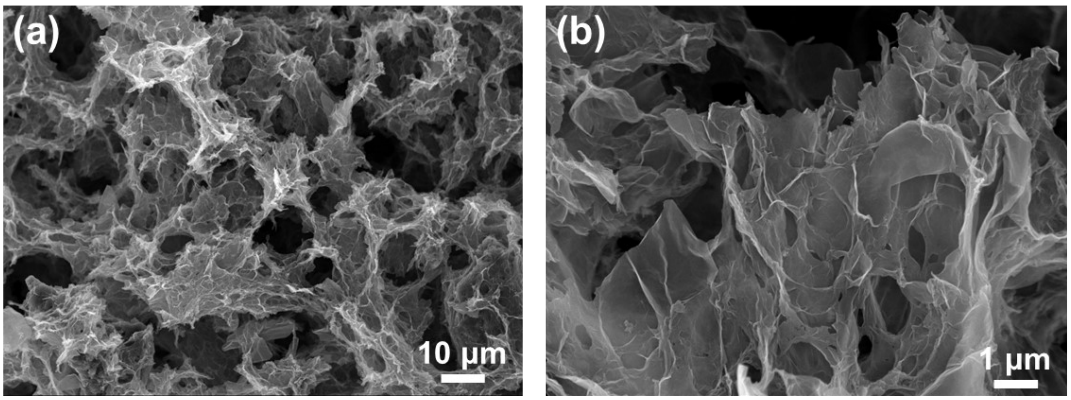

Fig. s1. (a-b) SEM images of GH

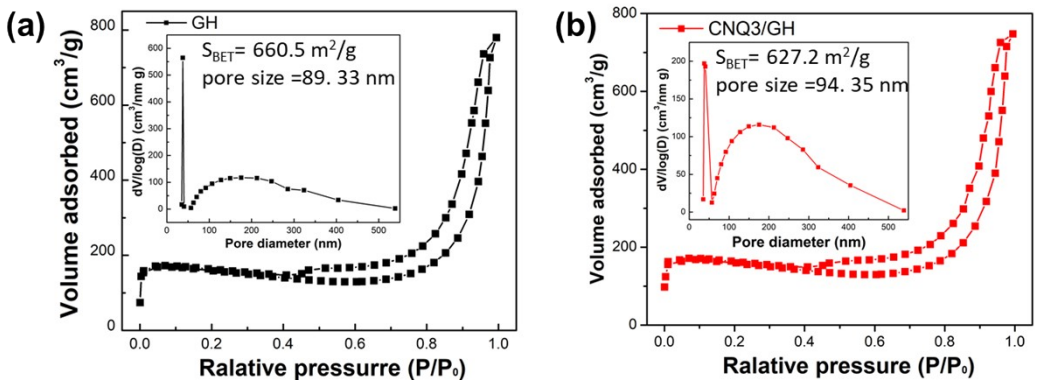

Fig. s2. N_2 adsorption-desorption isotherms and the corresponding pore size distribution curve of (a) GH and (b) CNQ3-GH nanocomposites.

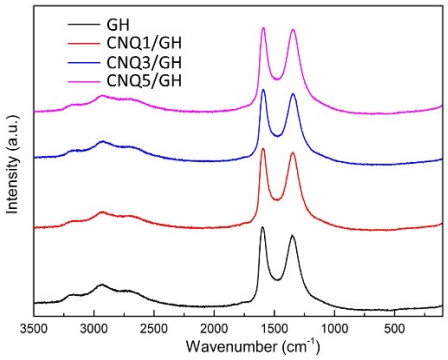

Fig. s3. Raman spectrum of GH and CNQ-GH nanocomposites

Table s1. Performance comparison of graphene hydrogel-based supercapacitors.

Materials	Synthesis	Electrolyte	Capacitance ($F \cdot g^{-1}$)	Condition	Potential (V)	Ref.
N-doped GH	Solvothermal method	25% KOH	205	5 mV s^{-1}	-0.5 to 0.5	[s1]
N-doped graphene aerogels	Hydrothermal process	6 M KOH	175	0.5 A g^{-1}	-1 to -0.2	[s2]
Functionalized GH	Chemical reduction	6 M KOH	203.9	0.5 A g^{-1}	-0.9 to 0	[s3]
Highly reduced GH	Chemical method	6 M KOH	190	0.5 A g^{-1}	0 to 1	[s4]
N/P co-doped porous carbon	Solvent evaporation	1 M H_2SO_4	206	0.5 A g^{-1}	-0.1 to 0.9	[s5]
Aramid nanofiber/GH	Sol-gel method	6 M KOH	190	5 mV s^{-1}	0 to 1.0	[s6]
Polyporphyrin coated GH	Hydrothermal process	1 M H_2SO_4	182.7	0.5 A g^{-1}	0 to 1.0	[s7]
GH microspheres	Shaking process	6 M KOH	179	0.2 A g^{-1}	0 to 1.0	[s8]
CNQ/GH composites	Hydrothermal process	6 M KOH	243.2	0.2 A g^{-1}	-0.2 to 0.8	This work

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