

Supporting Information

A Novel Soft Template Strategy to Fabricate Mesoporous Carbon /Graphene Composites as High-Performance Supercapacitor Electrodes

Lei Wang,^{a,b} Li Sun,^a Chungui Tian,^a Taixing Tan,^a Guang Mu,^a Hongxing Zhang^b
and Honggang Fu^{*a,b}

^aKey Laboratory of Functional Inorganic Material Chemistry, Ministry of Education
of the People's Republic of China, Heilongjiang University, 150080 Harbin P. R.
China. Fax:(+86)-451-86673647; E-mail: fuhg@vip.sina.com

^bState Key Laboratory of Theoretical and Computation Chemistry, Jilin University,
Changchun 130023, P. R. China

Table S1 The detailed experimental parameters for all the compared samples.

Samples	Mass ratio of mesoporous carbon and graphene	Carbonized temperature (°C)
MCG1	1:1	700
MCG2	2:1	700
MCG3	2:3	700
MCG4	1:2	700
MCG5	1:1	600
MCG6	1:1	800

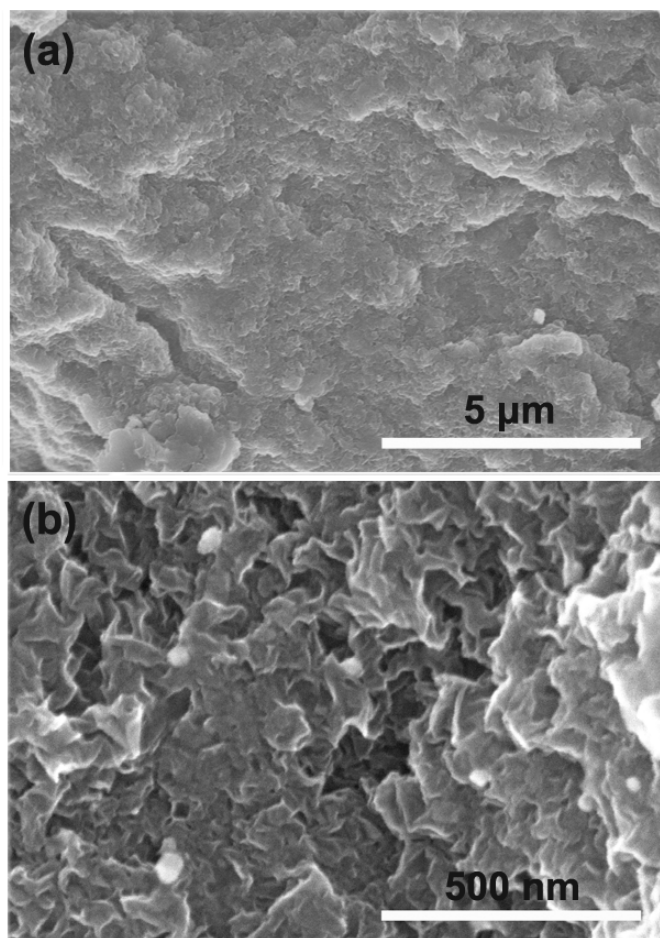


Fig. S1 SEM images of RGO synthesized under the same experimental condition of MCG1.

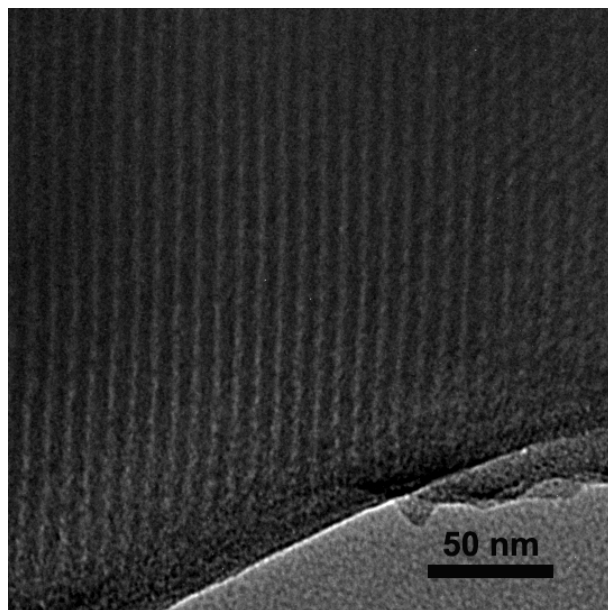


Fig. S2 TEM image of mesoporous carbon prepared at 700 °C.

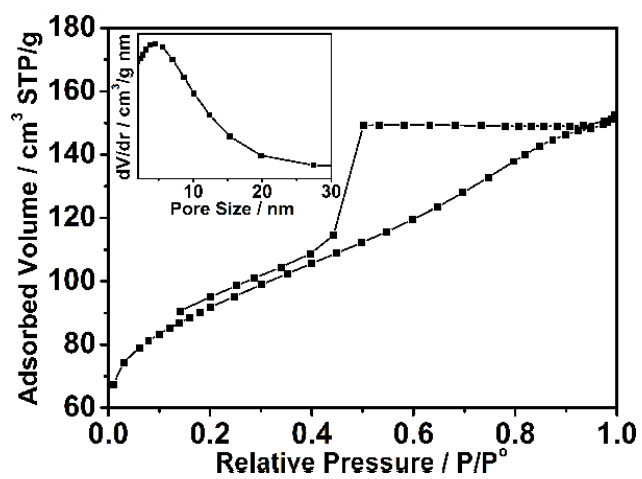


Fig. S3 Nitrogen adsorption/desorption isotherms of RGO.

Table S2 Physicochemical properties of the synthesized MCG composites and comparable samples.

samples	BET ($\text{m}^2 \text{g}^{-1}$)	pore volume ($\text{cm}^3 \text{g}^{-1}$)	Pore size (nm)
MCG1	545.8	0.56	4.0
MCG2	582.3	0.59	3.9
MCG3	485.8	0.50	3.9
MCG4	411.7	0.45	3.9
MCG5	698.6	0.61	3.9
MCG6	507.5	0.53	3.9
RGO	321.2	0.23	
MC	744.5	0.65	3.5

Table S3 Special capacitances of MCG composites and all the comparable samples calculated from charge/discharge curves measured at different current densities.

Samples	Special capacitances ($F g^{-1}$)			
	$0.5 A g^{-1}$	$1 A g^{-1}$	$2 A g^{-1}$	$4 A g^{-1}$
MCG1	242	203	168	154
MCG2	190	166	145	132
MCG3	170	153	140	124
MCG4	159	135	118	102
MCG5	153	131	92	68
MCG6	173	157	144	132
MC	136	107	83	62
RGO	95	75	54	36
MC+RGO	142	116	90	68