

Supplementary Information

Insight into the Effects of Different Acids on the Formations and Electrochemical Properties of Carbon Spherules

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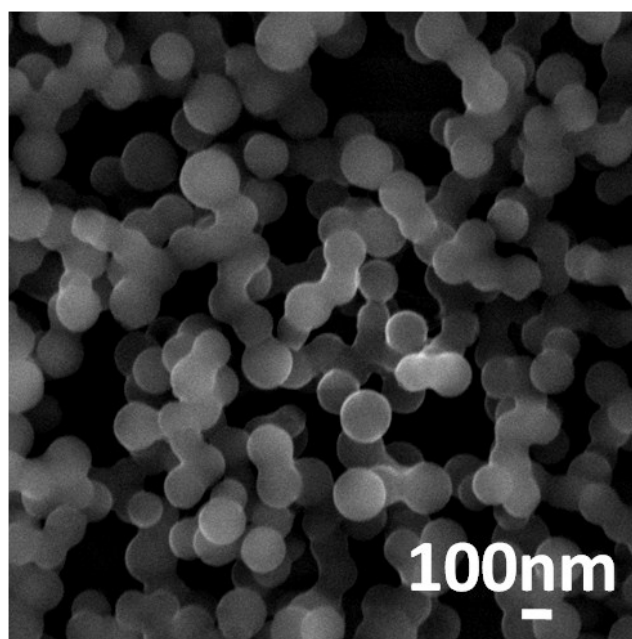


Figure S1. SEM image of CSs prepared through hydrothermal treatment (reaction condition: 28 mmol of glucose, 40 mL of deionized water, 5 h, 180 °C) of glucose without any mineralizer.

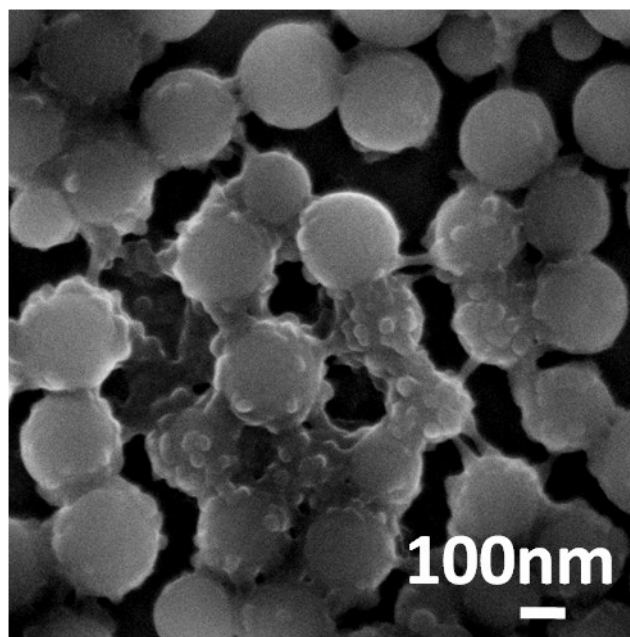


Figure S2. SEM image of CSs prepared through hydrothermal treatment (reaction condition: 28 mmol of glucose, 40 mL of deionized water , 2 h, 180 °C) of glucose with glutaric acid as mineralizer.

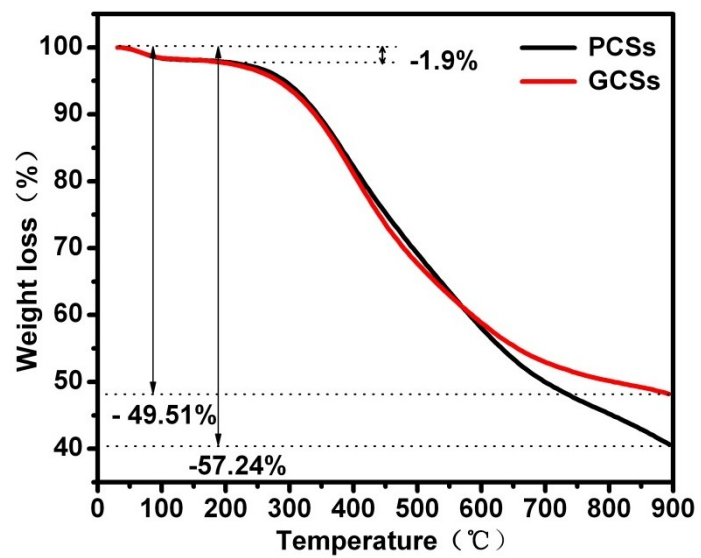


Figure S3. The TGA curves of PCSs and GCSs under N₂ atmosphere.

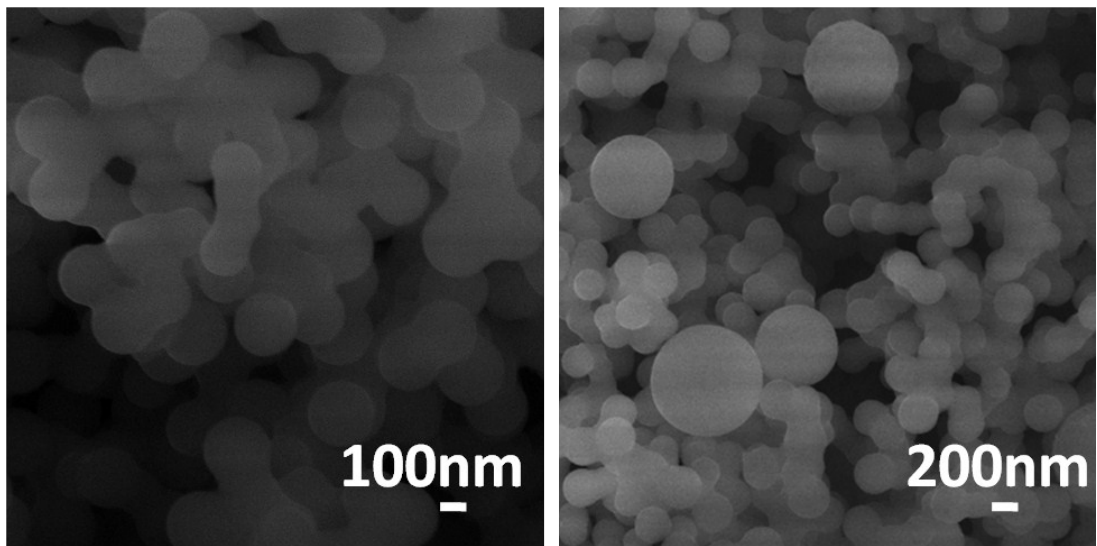


Figure S4. SEM images of CSs prepared through hydrothermal treatment (reaction condition: 28 mmol of glucose, 3 mmol of n-valeric acid, 40 mL of deionized water , 5 h, 180 °C) of glucose with n-valeric acid as mineralizer.

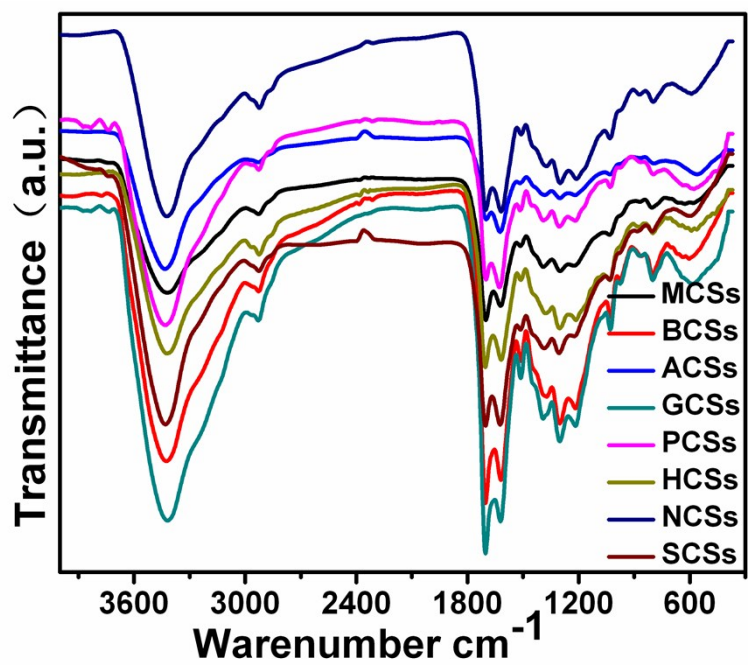


Figure S5. FT-IR spectra of MCSs, BCSs, ACSs, GCSs, HCSs, NCSs, SCSs and PCSs before annealing treatment.

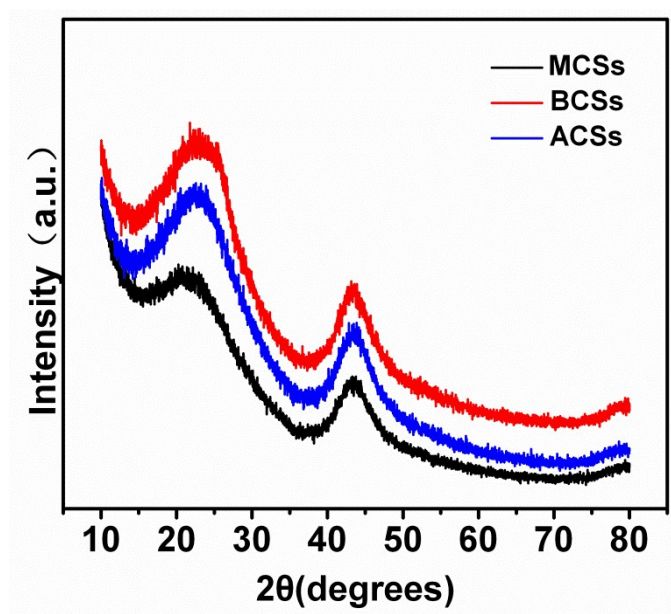


Figure S6. XRD patterns of MCSs, BCSs and ACSs after being annealed at 900 °C in Ar gas flow containing 5% of H₂ for 3 h.

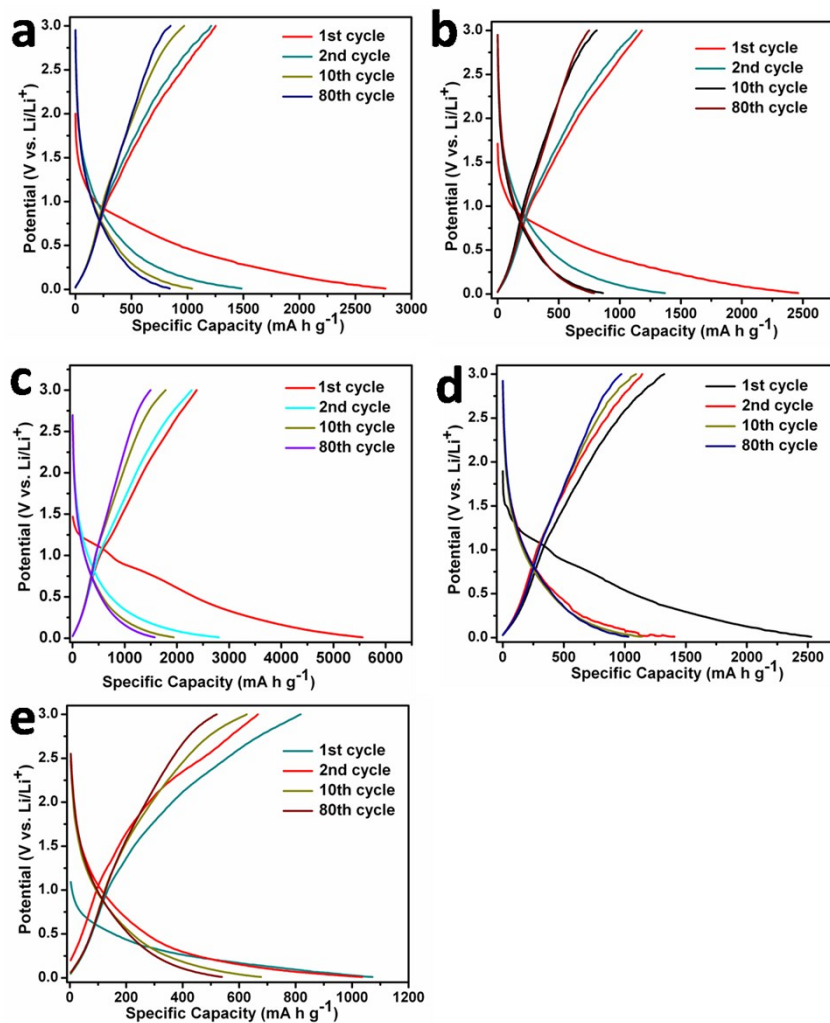


Figure S7. Galvanostatic charge-discharge curves of CRGO/MCSs (a), CRGO/BCSs (b), CRGO/GCSs (c), CRGO/ACSs (d) and CRGO/PCSs (e) which prepared with original GO to CSs ratio of 10:1 in weight, as anodes assessed at the current densities of 0.2 A g^{-1} .

Table S1. Atomic percent contents of carbon, oxygen in MCSs, BCSs, GCSs, ACSs, and PCSs before annealing treatment.

CS	MCSs	BCSs	GCSs	ACSs	PCSs
C-atomic%	82.6	78.0	78.4	79.7	75.0
O-atomic%	17.4	22.0	21.6	20.3	25.0

Table S2. The electrokinetic property of GCSs, PCSs, CRGO/GCSs (original GO:GCSs = 10:1, in weight) , CRGO/PCSs (original GO:PCSs = 10:1, in weight) and CRGO anodes.

Sample	R_f(Ω)	R_{ct} (Ω)
CRGO/GCSs	80.7	53.5
CRGO/PCSs	85.9	80
CRGO	101	115
GCSs	97.3	162
PCSs	108.7	146