Supplementary Information

Synthesis of size-controlled carbon microspheres from resorcinol/formaldehyde for high electrochemical performance

Xu Du, Hui-min Yang, Yan-lan Zhang, Qing-cheng Hu, Song-bo Li, Wen-xiu He
1. School of Chemistry and Chemical Engineering, Inner Mongolia University of Science & Technology, Baotou 014010, China;
2. Inner Mongolia Key Laboratory of Coal Chemical Engineering & Comprehensive Utilization, Baotou 014010, China;
3. Mining Research Institute, Inner Mongolia University of Science & Technology, Baotou 014010, China
Corresponding author: YANG Hui-min, Lecturer. Email: emma920@imust.edu.cn

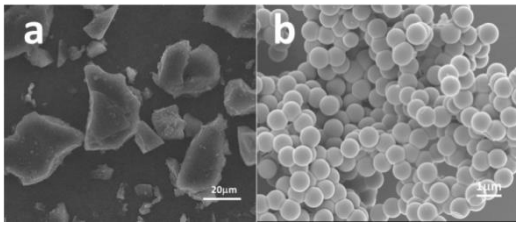

Fig. S1 (a) Bulk and (b)spherical carbon materials by using Na_2CO_3 and NH_3 , respectively.

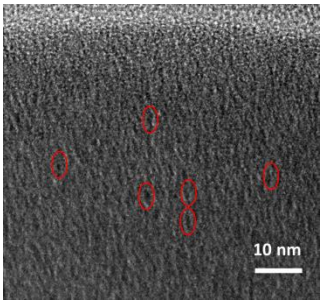

Fig. S2 TEM image of CN-80.

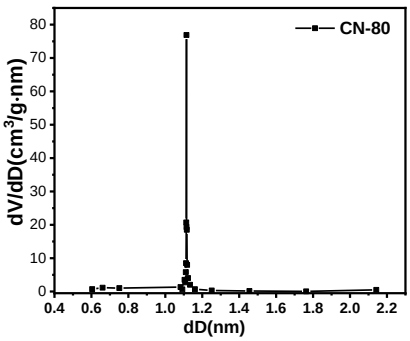

Fig. S3 The micropore pore size distribution of CN-80.

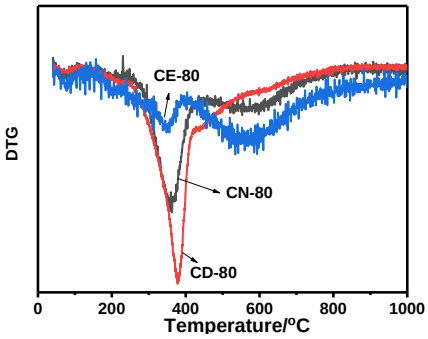

Fig. S4 The DTG curves of the samples.

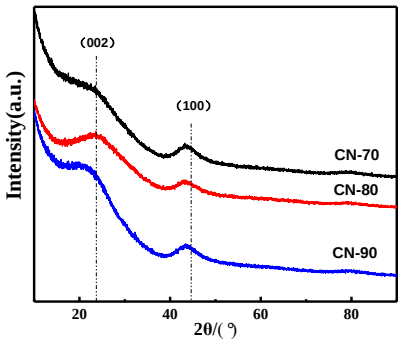

Fig. S5 The XRD patterns of the samples in different preparation temperature.

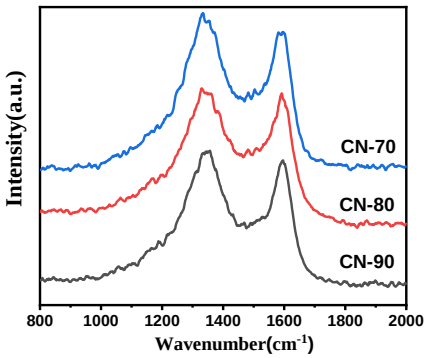

Fig. S6 The Raman patterns of the samples in different preparation temperature.

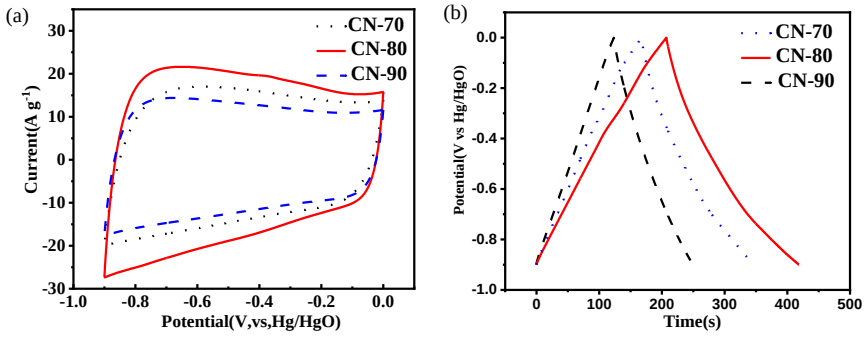

Fig. S7 (a) Comparison of CV curves of CN-70, CN-80 and CN-90 at 100mV $s^{-1}$and (b)Comparison of GCD curves of CN-80, CE-80 and CD-80 at 1A g^{-1}.

Table S1 Pore structure parameters of the five simples.

Sample	S_{BET}(cm^2/g)	S_{mic}(cm^2/g)	V_{total}(cm^3/g)	V_{meso}(cm^3/g)	D_{pore}(nm)
CN-80	1835.22	441.89	0.77	0.48	2.6
CE-80	1157.52	935.43	0.56	0.06	2.9
CD-80	1117.41	873.07	0.54	0.10	3.7
CN-70	1851.09	900.11	0.82	0.28	3.0
CN-90	1101.82	999.88	0.54	0.04	4.0

Table S2 Integral areas values of D and G peaks of five smples.

Sample	S_D	S_G	I_D / I_G
CN-70	346123.5	322474.1	1.07
CN-80	283782.7	251877.1	1.13
CN-90	285569.4	264212.6	1.08
CE-80	217452.2	203019.1	1.07
CD-80	248556.3	222248.6	1.12