

Supplementary information for

**Preparation of Highly Porous Carbon through Activation of  $\text{NH}_4\text{Cl}$  Induced Hydrothermal  
Microsphere Derivation of Glucose**

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**Table S1. The elemental composition of different samples as indicated.**

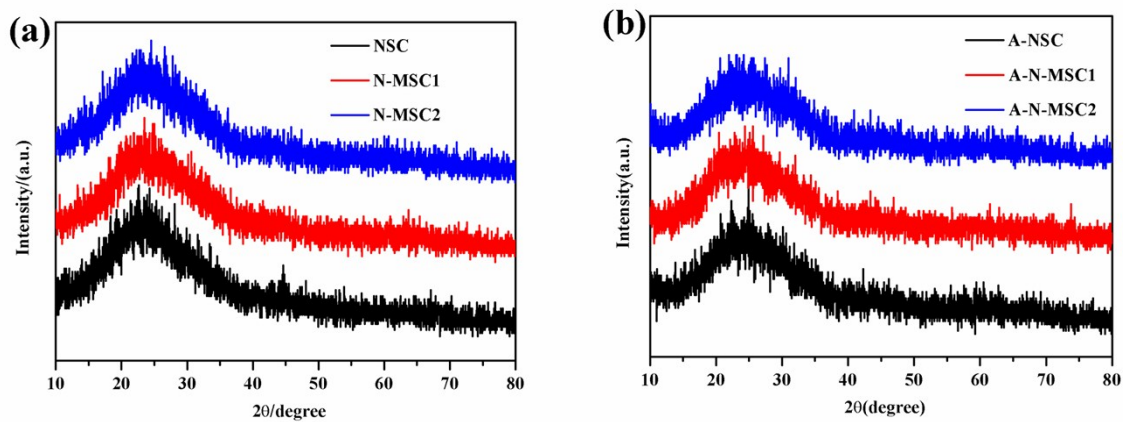
Samples	C (at%)	N (at%)	O (at%)	pyridinic- N (at%)	NH <sub>2</sub> - N (at%)	pyrrolic-N (at%)	graphitic- N (at%)	pyridine- N-oxide (at%)
A-NSC	91.7	0	8.3	-	-	-	-	-
A-N-MSC1	91.95	0.95	7.1	0.15	-	0.43	0.25	0.12
A-N-MSC2	92.51	1.7	5.79	0.26	-	0.98	0.30	0.16
NSC	77.7	0	22.3	-	-	-	-	-
N-MSC1	79.71	2.78	17.51	0.42	0.39	1.52	0.45	-
N-MSC2	79.7	4.24	16.06	0.76	0.54	2.19	0.74	-

**Table S2. The specific surface area and pore-structure parameters of different samples as indicated.**

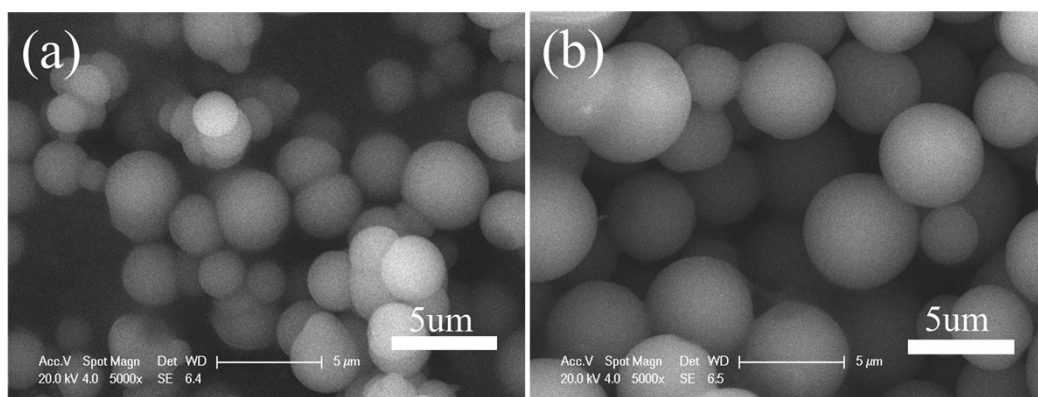
Samples	S <sub>BET</sub> <sup>a</sup> m <sup>2</sup> g <sup>-1</sup>	S <sub>micro</sub> <sup>b</sup> m <sup>2</sup> g <sup>-1</sup>	V <sub>total</sub> <sup>c</sup> cm <sup>3</sup> g <sup>-1</sup>	APD <sup>d</sup> nm
A-NSC	2385	1173	1.36	3.53
A-N-MSC1	2795	1140	1.58	3.39
A-N-MSC2	3003	1278	1.62	2.56
NSC	10.81	-	-	-
N-MSC1	0.93	-	-	-
N-MSC2	0.19	-	-	-
A-H-MSC	1789	825	0.99	3.20
A-Na-MSC	1630	1207	0.81	3.35

<sup>a</sup>Specific surface area calculated using the Brunauer–Emmett–Teller (BET) method for the adsorption data in the relative pressure interval from 0.16 to 0.20. <sup>b</sup>t-plot micropore area. <sup>c</sup>Total pore volume calculated at P/P<sub>0</sub> = 0.995. <sup>d</sup>average pore size from Barrett–Joyner–Halenda (BJH) adsorption curves.

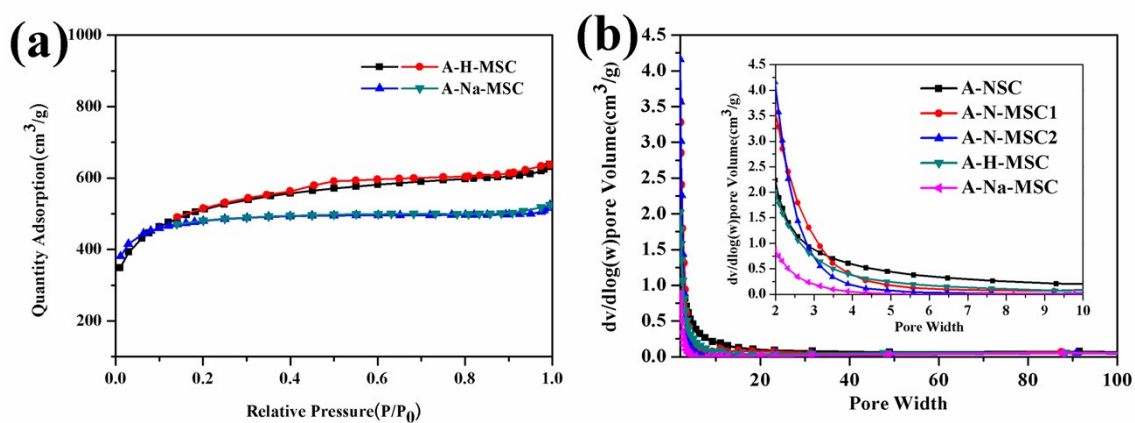
## Supplementary figures



**Fig. S1.** XRD patterns of several HTC carbons (as indicated) before (a) and after (b) the KOH activation.



**Fig. S2.** SEM images of H-MSC, and Na-MSC.



**Fig. S3.** (a) BET  $N_2$  sorption isotherms of A-H-MSC and A-Na-MSC, respectively. (b) BJH pore size distribution

of A-NSC, A-N-MSC1, A-N-MSC2, A-H-MSC and A-Na-MSC.

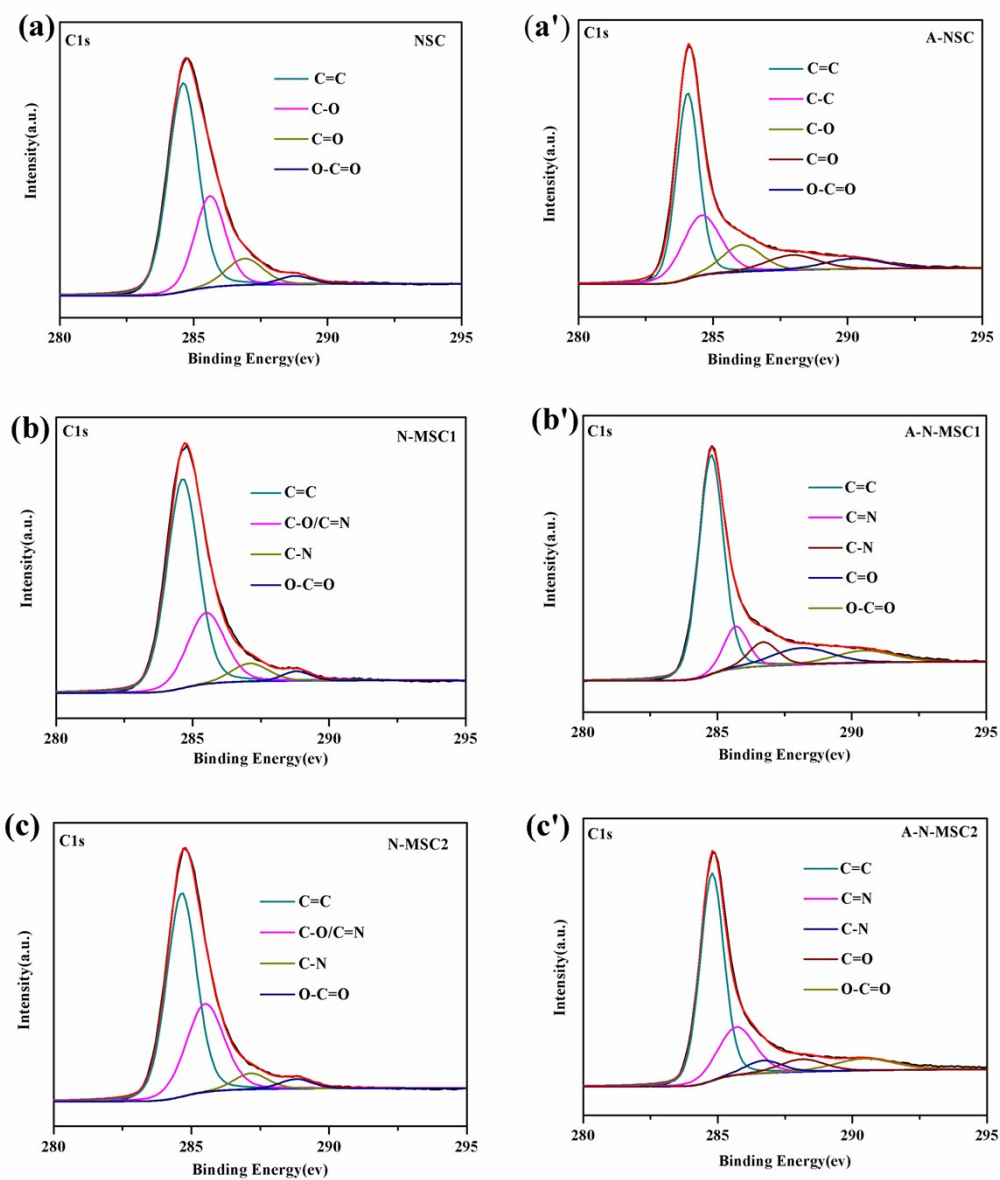


Fig. S4. XPS spectra of C1s peaks and their resolution results of different samples as indicated.

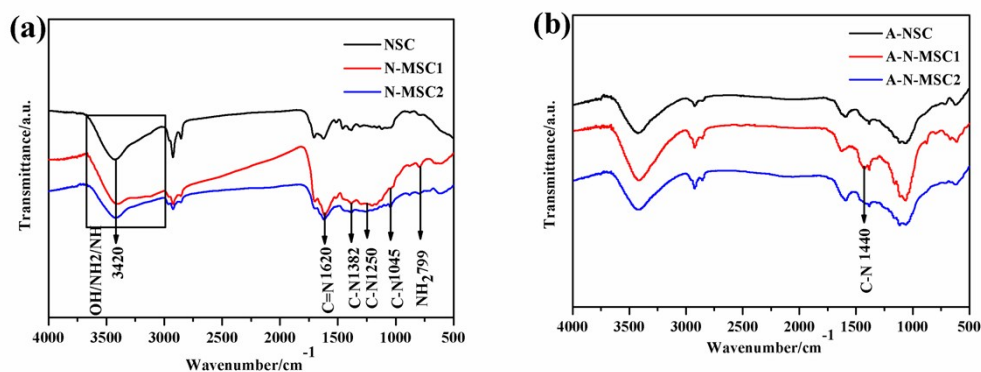


Fig. S5. FT-IR spectra of several HTC carbons (as indicated) before (a) and after (b) the KOH activation.