Electronic Supplementary Information

Facile synthesis of porous carbon materials with extra high nitrogen content for supercapacitor electrodes

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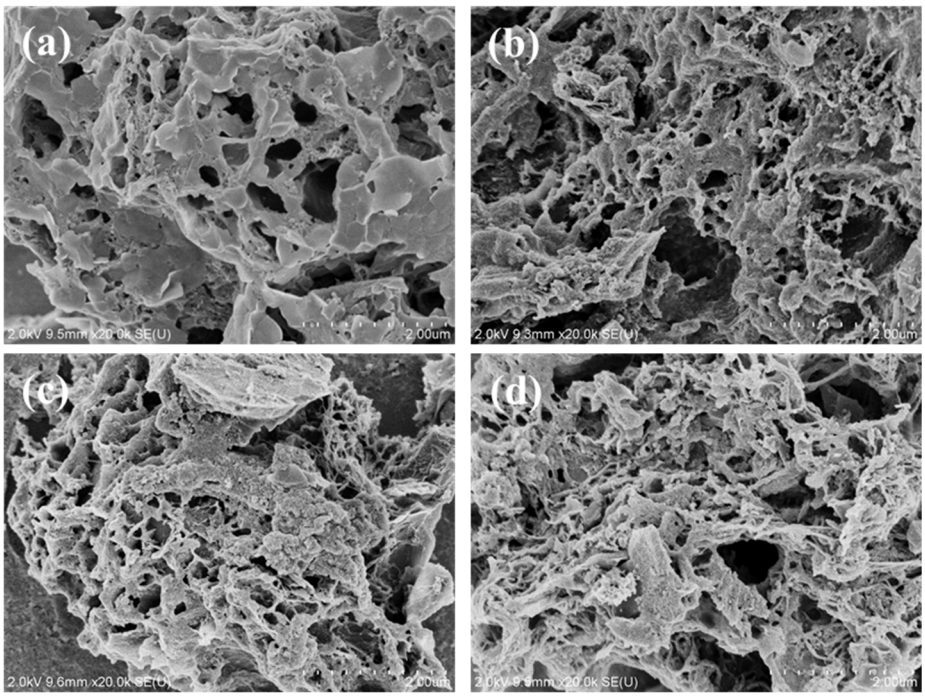

Fig. S1 SEM images of (a) PNCB-400, (b) PNCB-500, (c) PNCB-550, (d) PNCB-600.

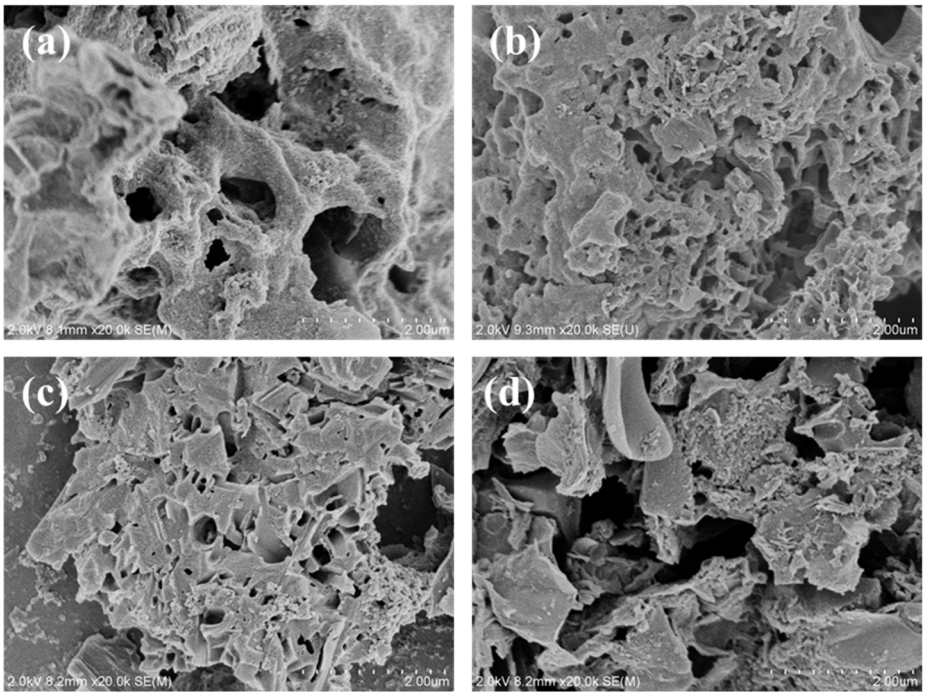

Fig. S2 SEM images of (a) PNCT-400, (b) PNCT-500, (c) PNCT-550, (d) PNCT-600.

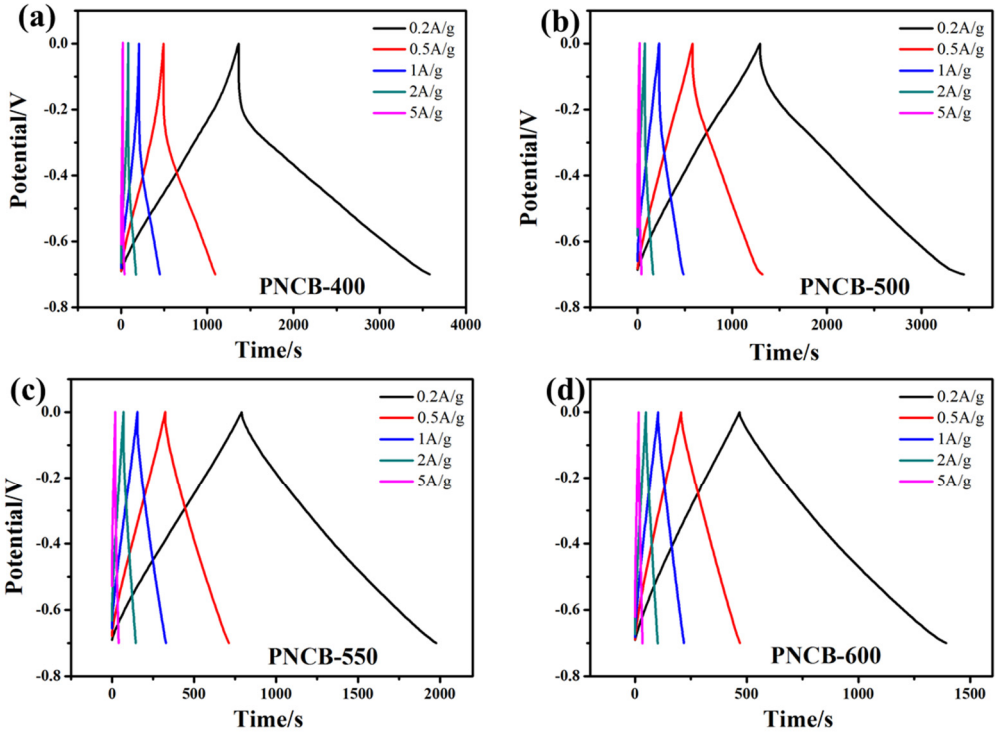

Fig. S3 GCD curves of PNCB-400 (a), PNCB-500 (b), PNCB-550 (c), PNCB-600 (d) at different current densities.

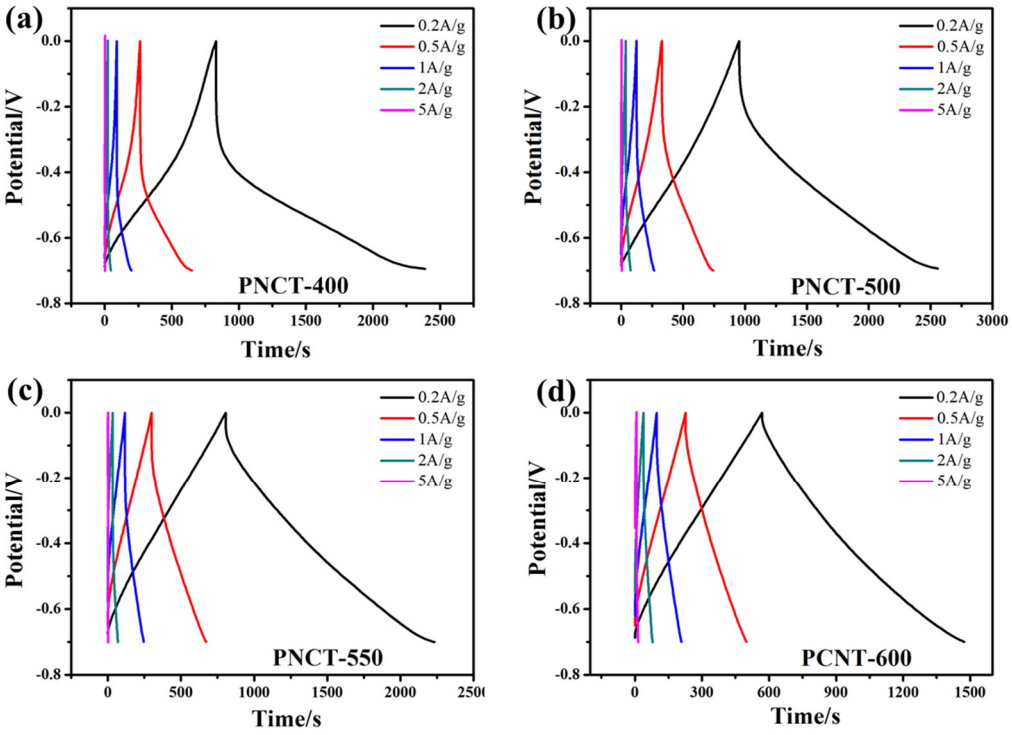

Fig. S4 GCD curves of PNCT-400 (a), PNCT-500 (b), PNCT-550 (c), PNCT-600 (d) at different current densities.

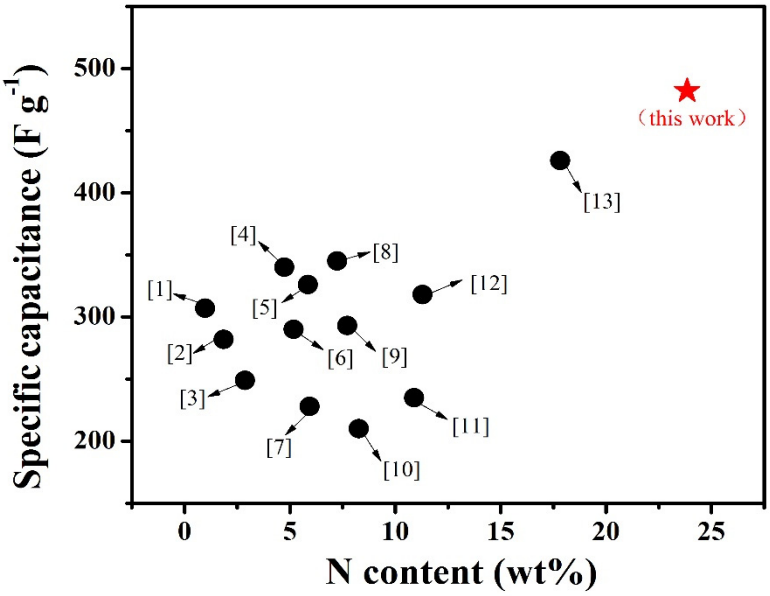

Fig. S5 Ragone plot of specific capacitance of other carbon materials with different nitrogen content at a current density of 1 A g^{-1}.

Table S1 Specific capacitance of other carbon materials with different nitrogen content at a current density of 1 A g^{-1} reported in the literature.

Materials	N content (wt%)	Electrolyte	Capacitance(F g^{-1})
[1]	0.98	H_2SO_4	307
[2]	1.86	KOH	282
[3]	2.87	KOH	249
[4]	4.74	KOH	340
[5]	5.86	KOH	326
[6]	5.17	H_2SO_4	290
[7]	5.94	KOH	228
[8]	7.24	H_2SO_4	345
[9]	7.72	KOH	293
[10]	8.27	KOH	210
[11]	10.89	H_2SO_4	235
[12]	11.3	KOH	318
[13]	17.82	H_2SO_4	426

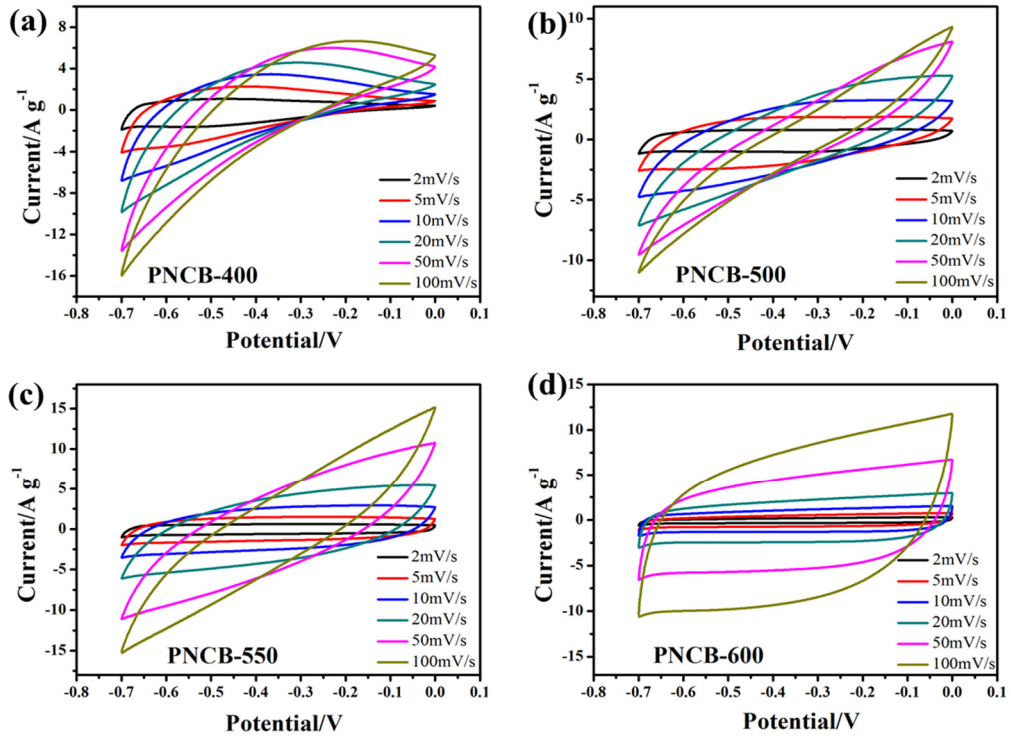

Fig. S6 CV curves of PNCB-400 (a), PNCB-500 (b), PNCB-550 (c), PNCB-600 (d) at different scan rates.

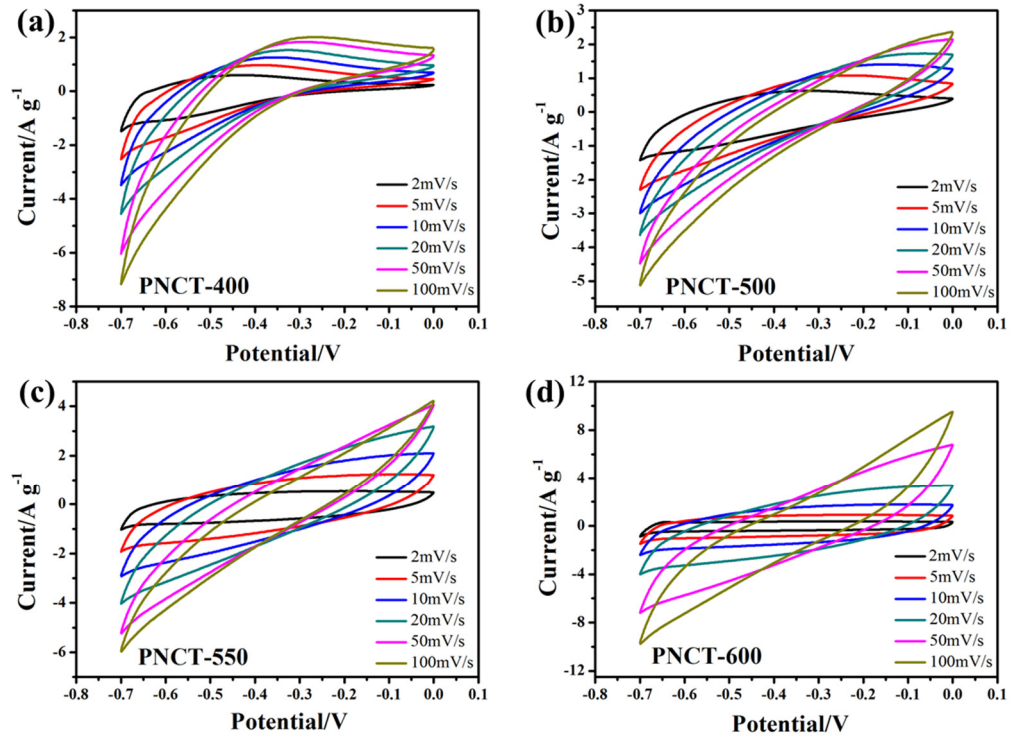

Fig. S7 CV curves of PNCT-400 (a), PNCT-500 (b), PNCT-550 (c), PNCT-600 (d) at different scan rates.

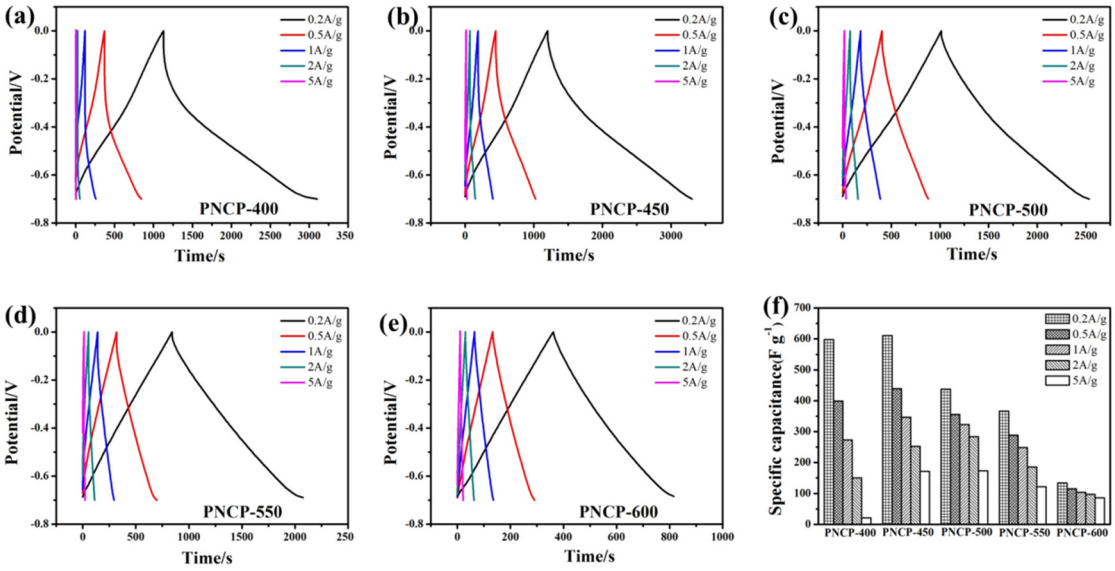

Fig. S8 GCD curves of PNCP-400 (a), PNCP-450 (b), PNCP-500 (c), PNCP-550 (d), PNCP-600 (d) at different current densities. Specific capacitance of PPD-T (f) prepared at different carbonized temperatures.

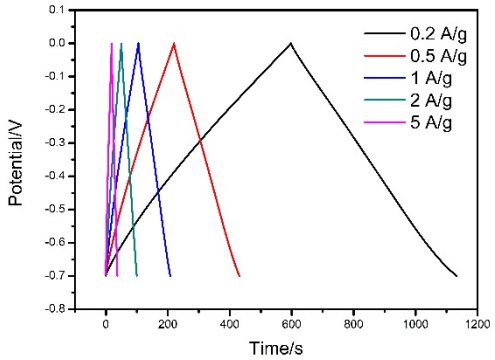

Fig. S9 (a) GCD curves of the pure carbon material YP-50F at different current densities. From the GCD curves, it could be extracted that the specific capacitances are 152.8 F/g, 149 F/g, 146.7 F/g, 141.6 F/g and 131.6 F/g for charge-discharge current density of 0.2 A/g, 0.5 A/g, 1 A/g, 2 A/g and 5 A/g, respectively.

Table S2. The energy density and power density extracted from the two-electrode symmetrical supercapacitor with PNCB-450

Current Density ($A\ g^{-1}$)	IR Drop (V)	Discharge Time (s)	Specific Capacitance ($F\ g^{-1}$)	Energy Density ($Wh\ kg^{-1}$)	Power Density ($W\ kg^{-1}$)
0.2	0.034	700.82	841	12.94	66.53
0.5	0.079	218.41	703	9.43	155.43
1	0.201	53.71	430	3.72	249.62
2	0.143	46.44	333	3.59	277.92
5	0.367	1.50	90	0.35	829.22

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