Supplementary material

Synthesis of N-doping carbon nanosheets with controllable porosity derived from bio-oil for high-performance supercapacitors

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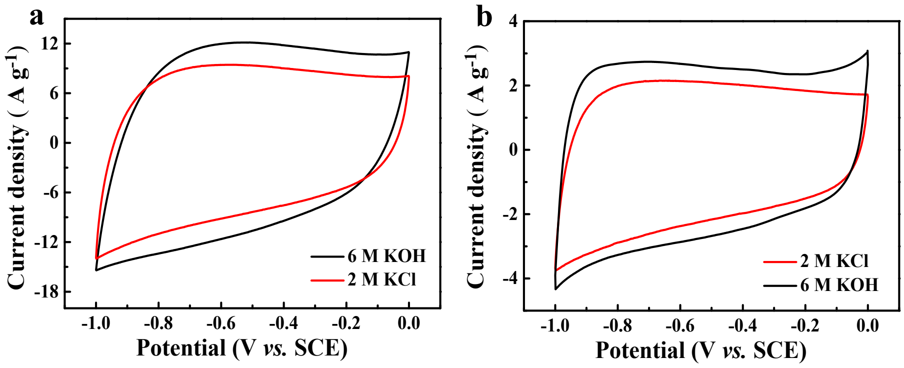

Fig. S1 Cyclic voltammetry curves for ABF-9%M with the scan rate of 50 mV s^{-1} (a) and 10 mV s^{-1} using 2M KCl and 6M KOH as the electrolyte.

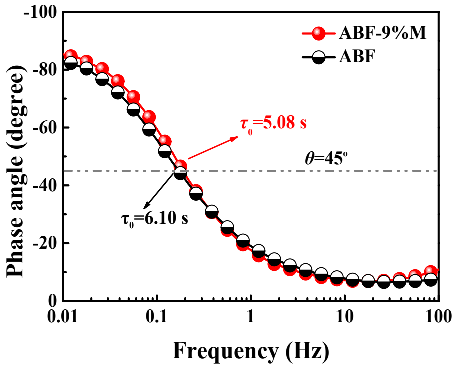

Fig. S2 Plot of Bode phase angle with frequency.

Table S1 Comparison of the specific capacitance of ABF-9%M with reported biomass-derived carbon materials previously.

Precursors	S_{BET} (m^2 g^{-1})	C/S	C (F g^{-1})	Electrolyte	Ref.
Bamboo	1732	0.5 A g^{-1b}	222	6 M KOH	1
Bark	1721	0.5 A g^{-1b}	206	1 M H_2SO_4	2
Rapeseed	1417	5 mV s^{-1b}	171	1 M H_2SO_4	3
Carrot	1899	0.2 A g^{-1b}	276	6 M KOH	4
Chitosan	1582	0.5 A g^{-1b}	252	6 M KOH	5
tofu	1208	0.5 A g^{-1b}	262		
		50 A g^{-1b}	145	6 M KOH	6
Raspberry	1234	0.1 A g^{-1b}	213	6 M KOH	7
Bagasse	1360	5 mV s^{-1a}	173	6 M KOH	8
Agar	1672	1 A g^{-1b}	226	6 M KOH	9
Soybean	1749	0.5 A g^{-1b}	243	6 M KOH	10
catkin	1462	0.5 A g^{-1b}	251	6 M KOH	11
Bio-oil	2566	0.5 A g^{-1b}	289	6 M KOH	This
		20 A g^{-1b}	227		work
		0.5 A g^{-1a}	256		

C/S represents current density or sweep rate; [a] two electrode; [b] three electrode

Table S2 Equivalent circuit parameters of the ABFs.

Sample	R_s (Ω)	R_{ct} (Ω)	f_o (Hz)	τ_0 (s)
ABF	0.94	0.71	0.16	6.10
ABF-9%M	0.64	0.87	0.20	5.08

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