Supporting Information

Nitrogen Configuration Enriched N-doped Activated Carbon from Spent Tea Leaves Through Ammonia Impregnation Approach for CO$_2$ Adsorption

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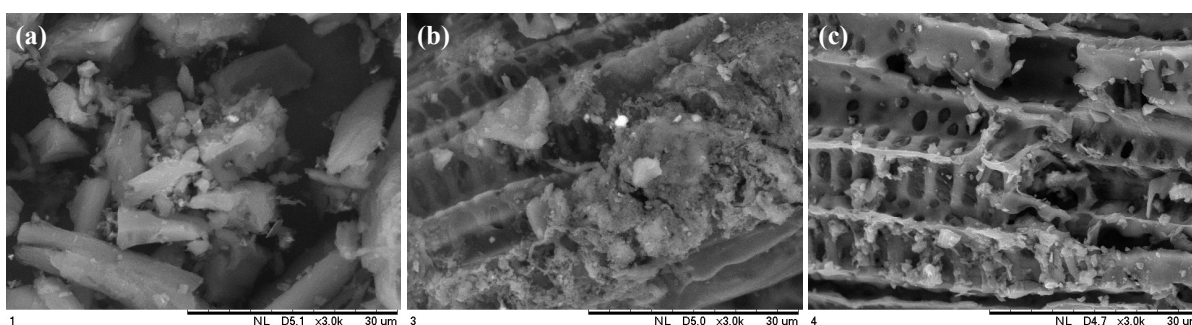
Fig. S1 The SEM image of a) CAC and the stem-part of b) NC and c) NA773C

Table S1 The CHNS Elemental Composition of The Prepared Adsorbent Using Elemental Analyser (VarioMICRO CHNS, ELEMENTAR).

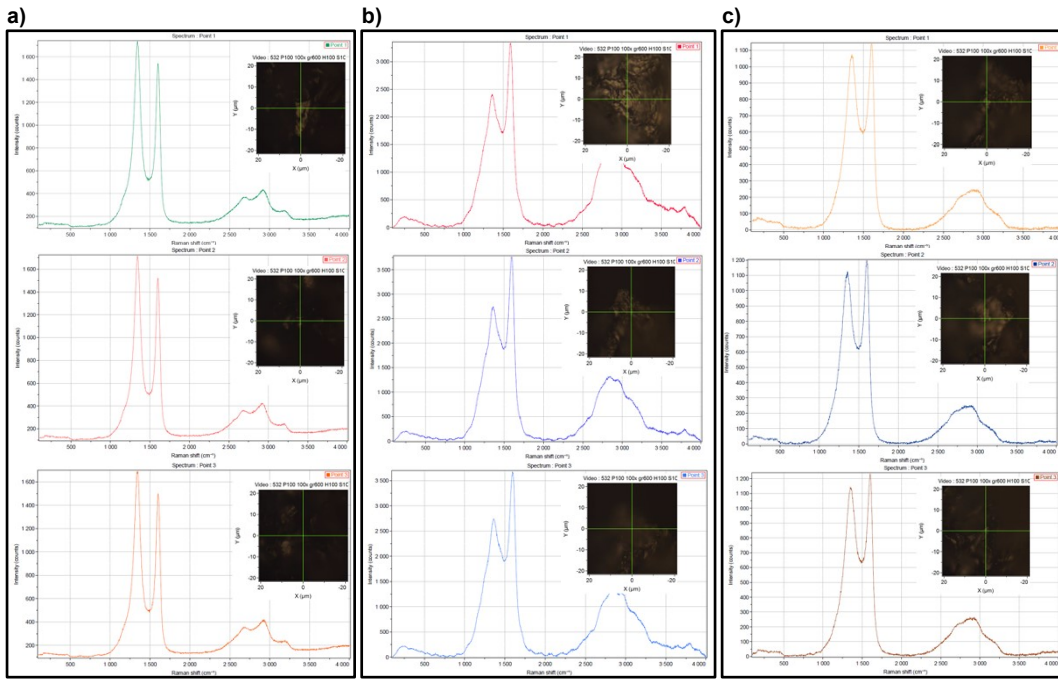| Adsorbent	Elemental Composition (wt%)							
	N		C		H		S	
	Composition	Average	Composition	Average	Composition	Average	Composition	Average
CAC	0.4167		58.5985		2.7283		2.3303	
	0.3854	0.4	58.9048	58.6	2.8900	2.8	2.2658	2.3
	0.3846		58.2323		2.8500		2.1685	
AC	2.2824		57.4274		2.9105		2.1092	
	2.2193	2.2	57.4846	57.3	2.9655	2.9	2.1182	2.1
	2.1851		56.9077		2.9539		2.0288	
NC	5.7384		68.1188		3.3569		2.0193	
	5.6981	5.7	68.1813	68.3	3.3203	3.3	2.0097	2.0
	5.5548		68.4532		3.3217		2.0224	
NA773C	3.7231		57.7098		2.3095		2.0061	
	3.7484	3.7	60.0293	58.8	2.3295	2.4	1.9891	2.0
	3.6771		58.5131		2.4262		2.0349	

Fig. S2 The RAMAN spectra of; a) CAC, b) NC and c) NA773C at three (3) different scanning point.
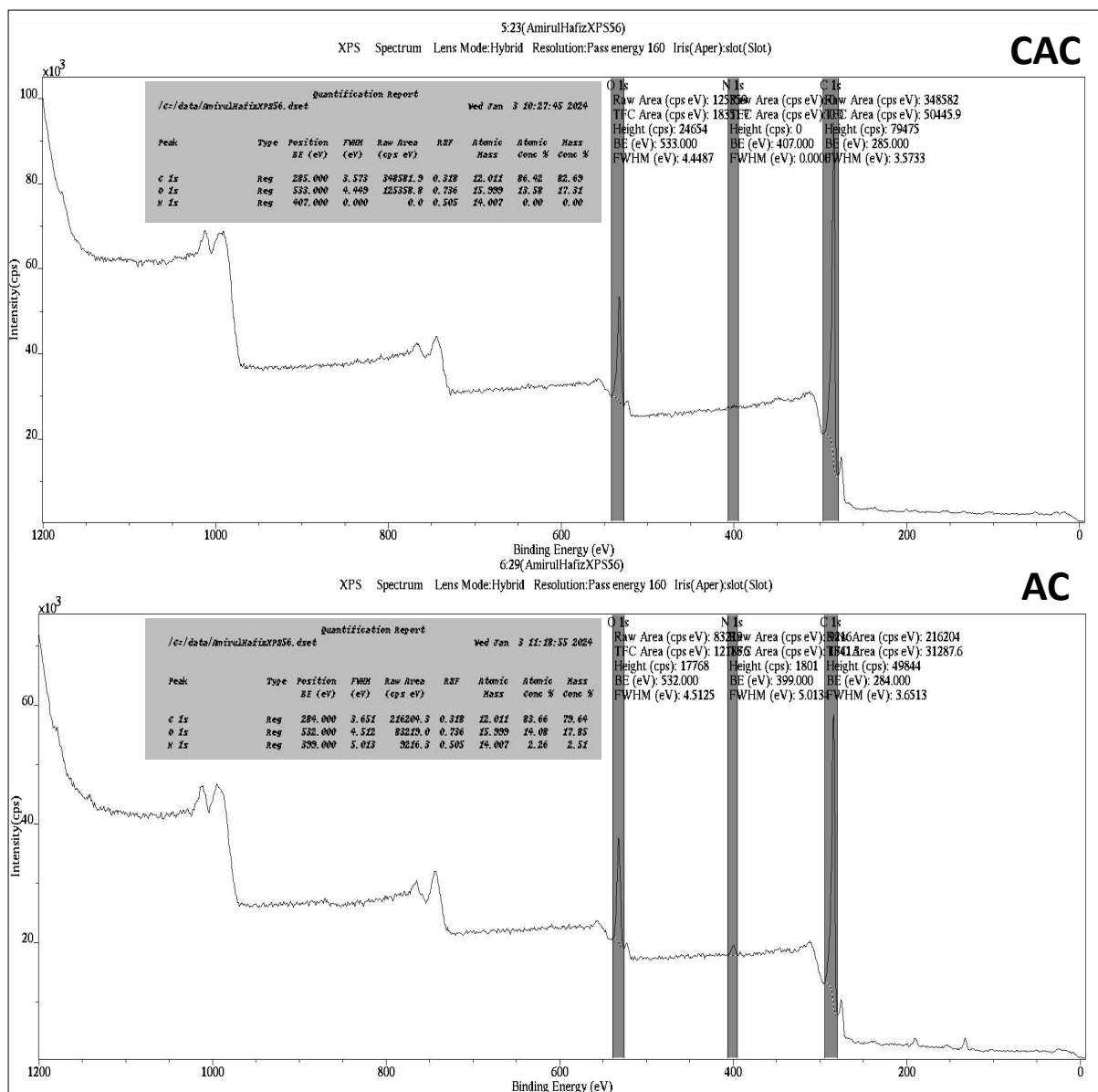
Fig. S3 The full-scale XPS Spectrum of CAC and AC recorded on a Kratos Axis Ultra spectrometer.
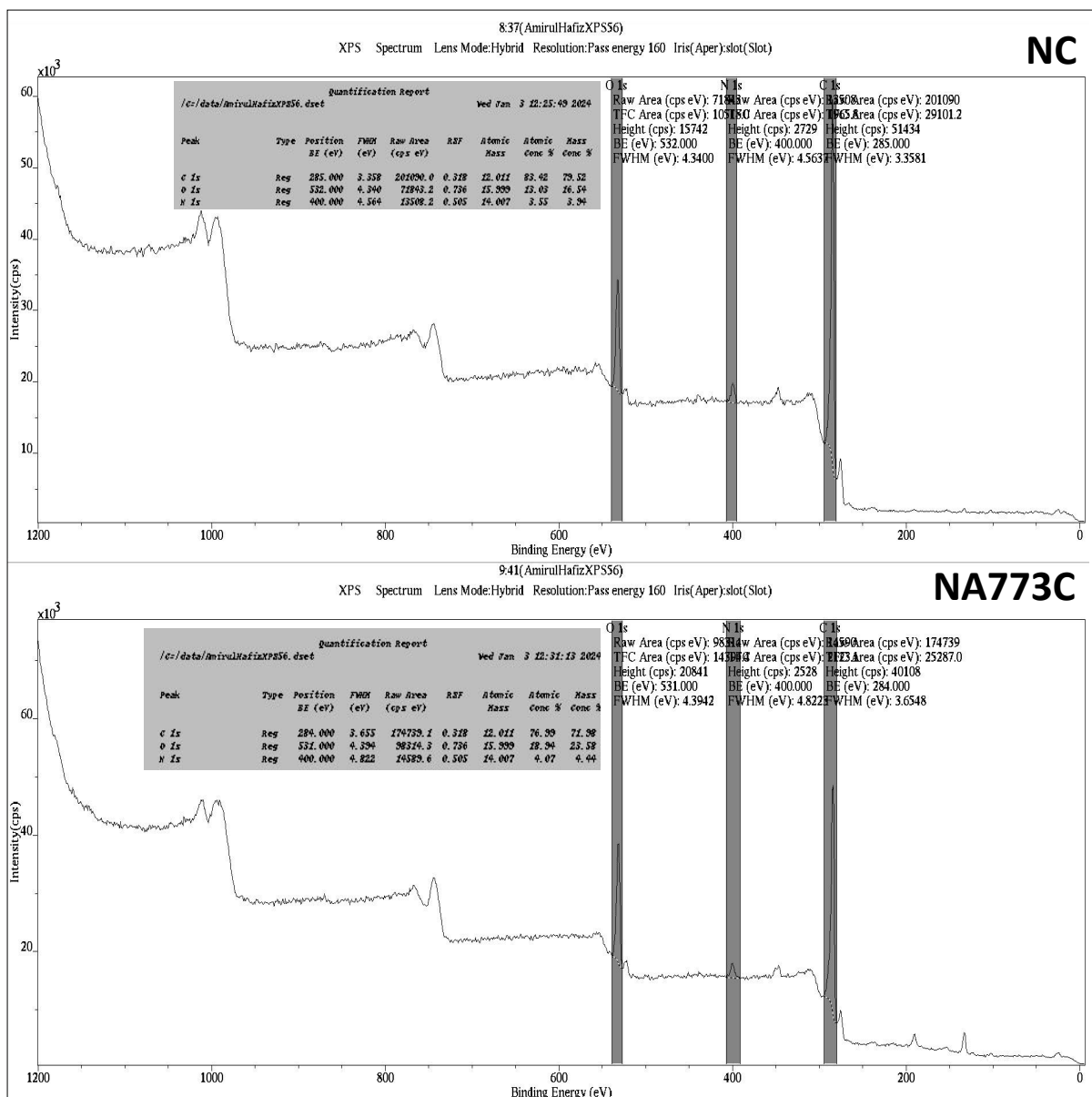
Fig. S4 The full-scale XPS Spectrum of NC and NA773C recorded on a Kratos Axis Ultra spectrometer.