

# Surface chemistry of sonochemically-treated bacterial cellulose

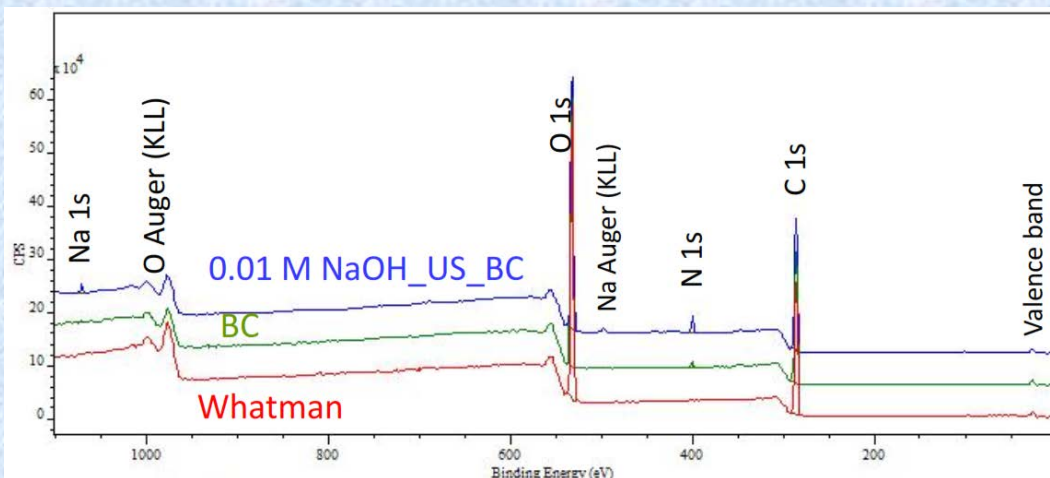
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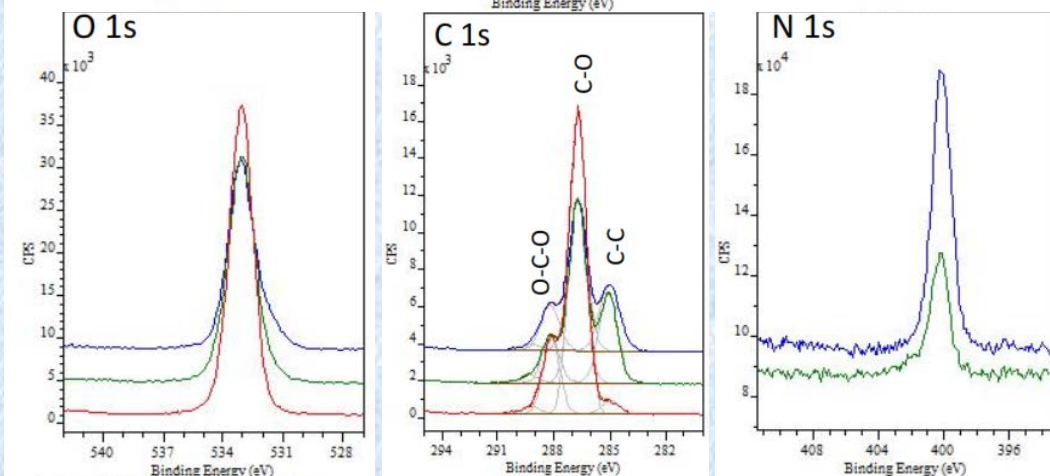




Surface elemental composition (%)				
Samples	C	O	N	Na
BC	65.8	33.1	1.1	-
Ultra BC	64.5	32	3.2	0.3
Whatman	59.6	40.4	-	-

Surface chemical groups (%)				
Samples	C-C	C-O	C=O	COO
BC	29	54.8	14	2.3
Ultra BC	26.9	54.8	16.4	1.9
Whatman	3.9	75.7	18.6	1.8



\*0.01 M NaOH\_US\_BC:  
i) BC impurities were successfully removed, ii) Displayed increased Cr.I. values, thermal stability, reduced  $\zeta$ -potential

- No pure cellulosic surface due to the drying process and agglomeration of BC fibrils
- Bacterial origin N became more evidenced after alkaline purification treatment.
- Further research: wettability, surface accessibility and reactivity of available –OH group