

Supplementary

Lignin-Based Carbon Nanofibers as Electrodes for Vanadium Redox Couple Electrochemistry

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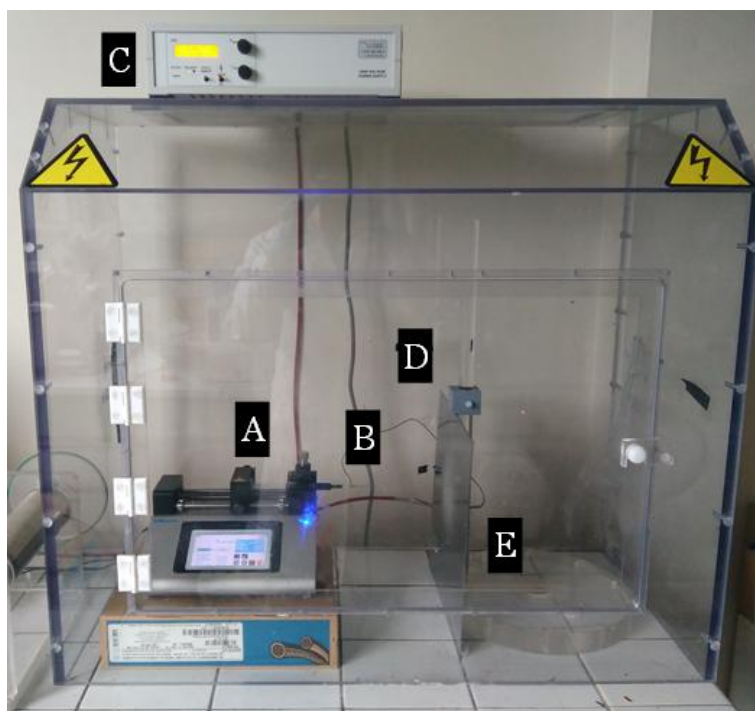
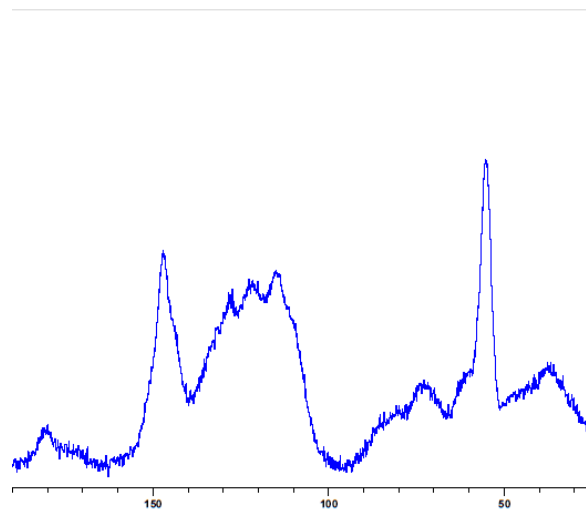
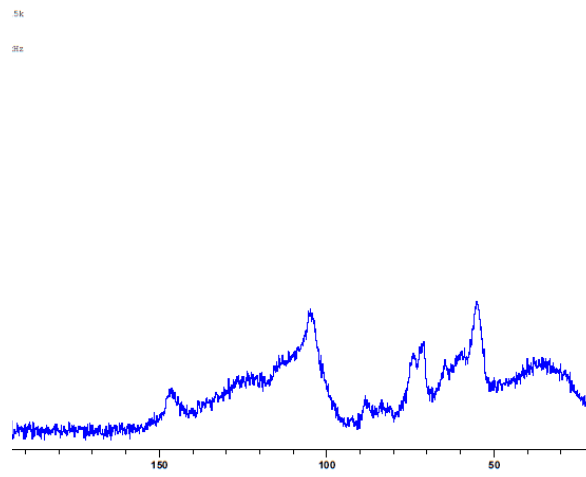


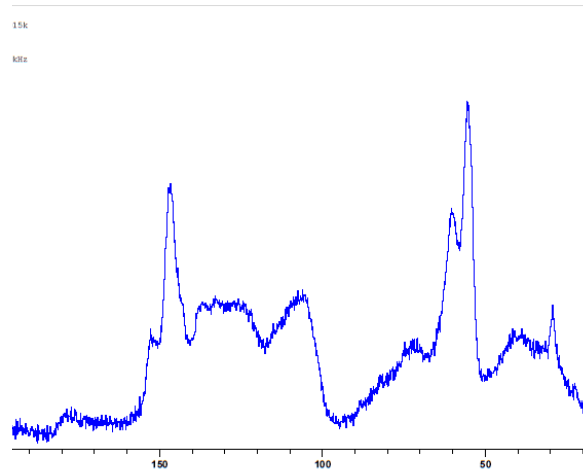
Figure S1. Electrospinning set-up: (A) syringe loaded with solution; (B) needle; (C) high voltage supply; (D) collector; (E) fibers.



(A)



(B)



(C)

Figure S2. ^{13}C Solid State NMR spectra of lignins: (A) EOL; (B) KL; and (C) PL.

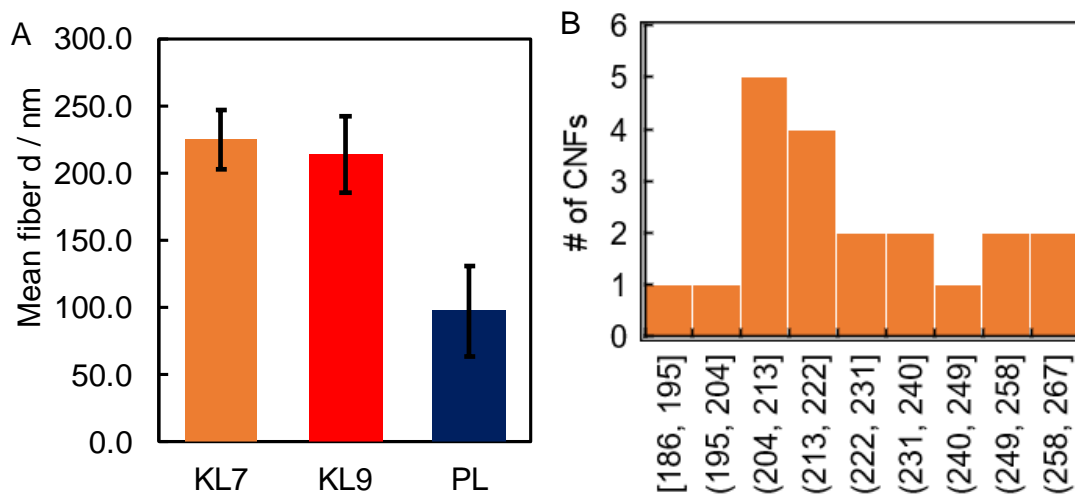


Figure S3. (A) Average fiber diameter and standard deviation obtained from the analysis of SEM images; (B) histogram of fiber diameter distribution for sample KL7.

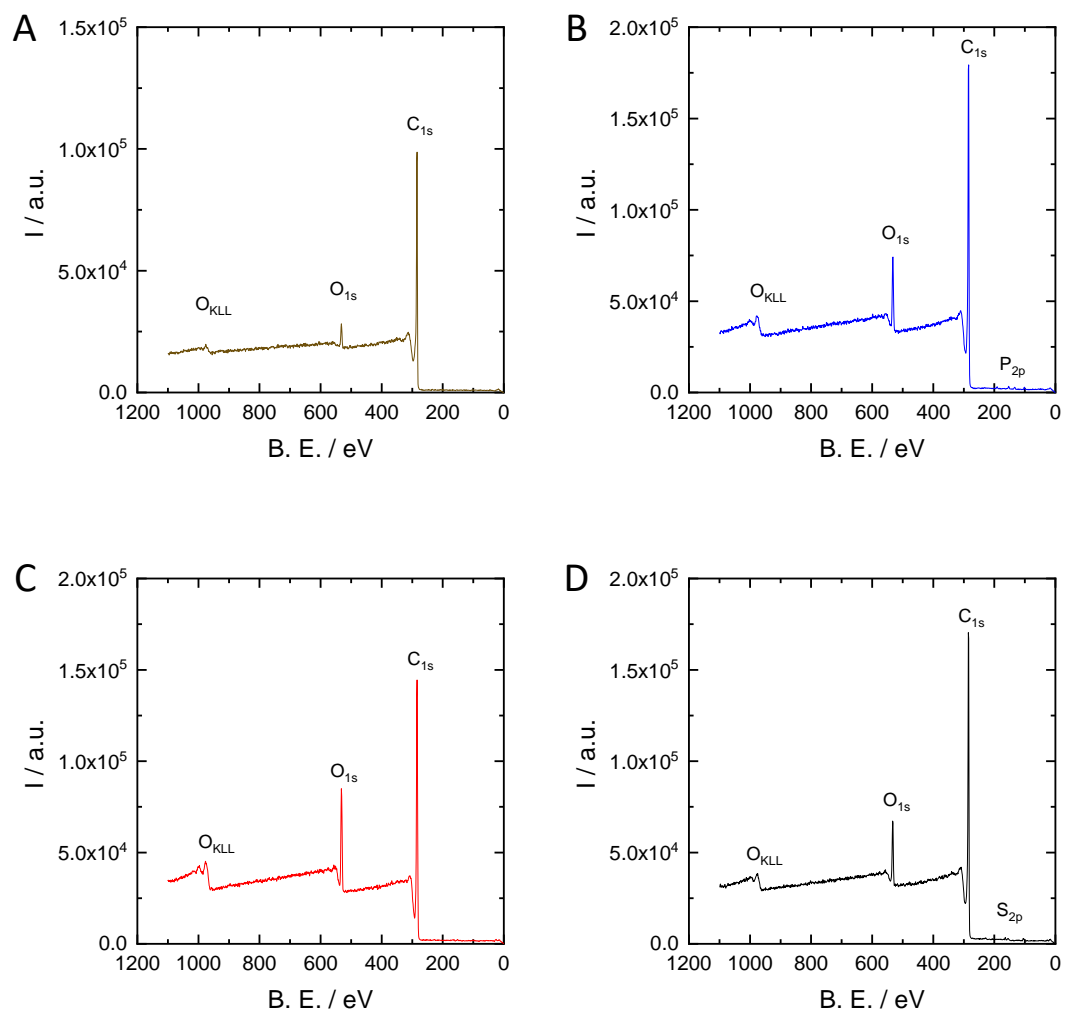


Figure S4. XPS survey spectra for CNFs obtained from: (A) EOL; (B) PL; (C) KL; (D) KL loaded with KB.