

Influence of butanol isomers on the reactivity of cellulose towards the synthesis of butyl levulinates catalyzed by liquid and solid acid catalysts.

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Supplementary materials

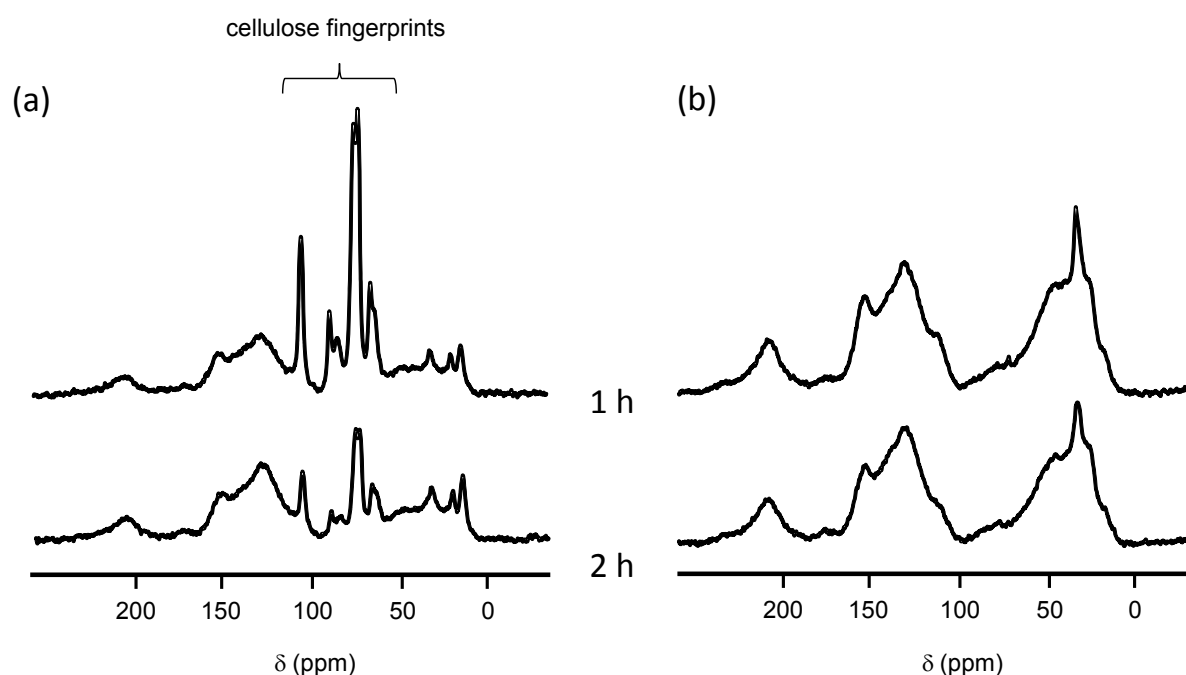


Figure S1. Solid-state ^{13}C NMR spectra of the residue obtained at various reaction times in: (a) 1-butanol (b) tert-butanol.

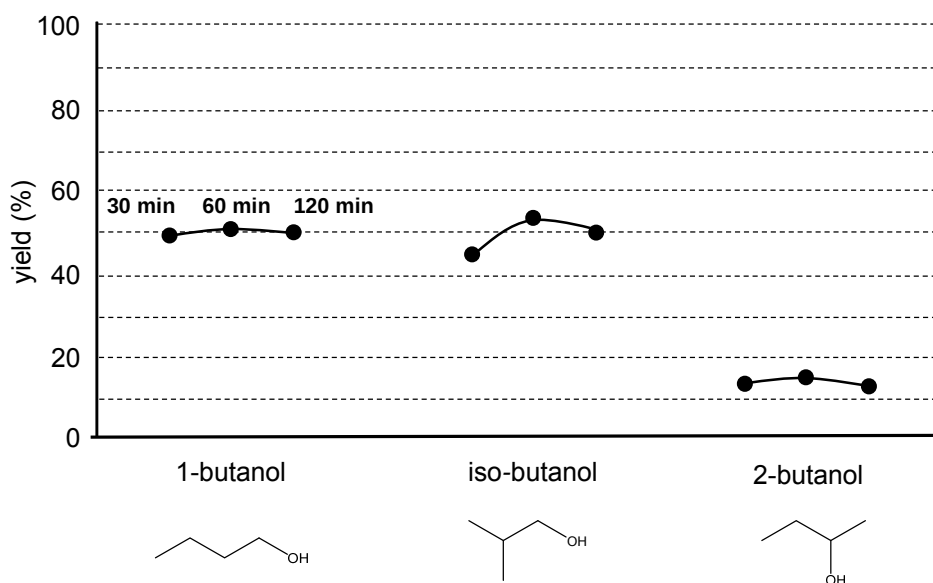


Figure S2. Butyl levulinate yields at 200 °C for different reaction times in different butanol isomers.

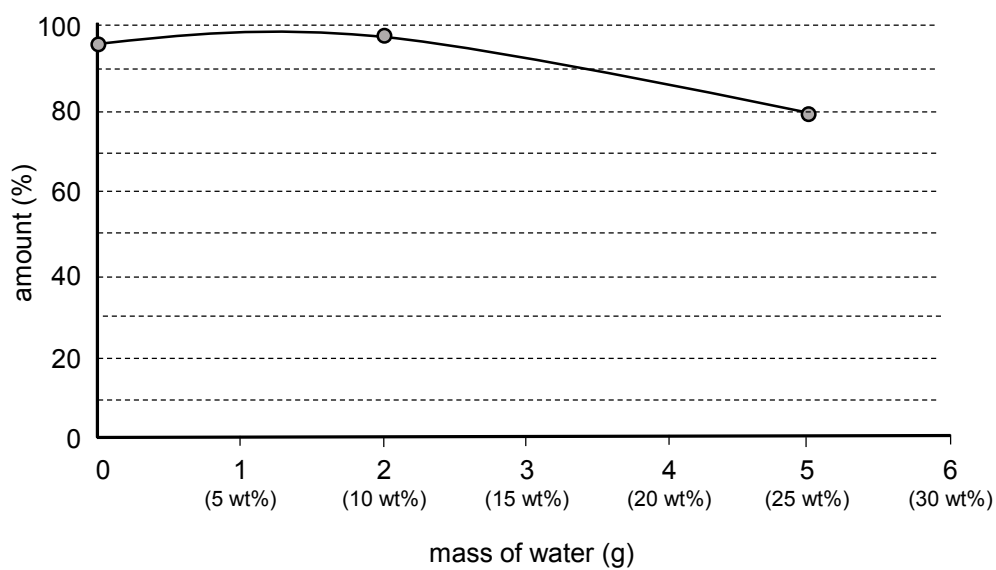


Figure S3. Percentage of introduced amount of n-Butyl levulinate remaining after treatment at 200 °C for 30 min in the presence of added water in 1-butanol (total starting mass of liquid remained 20 g).

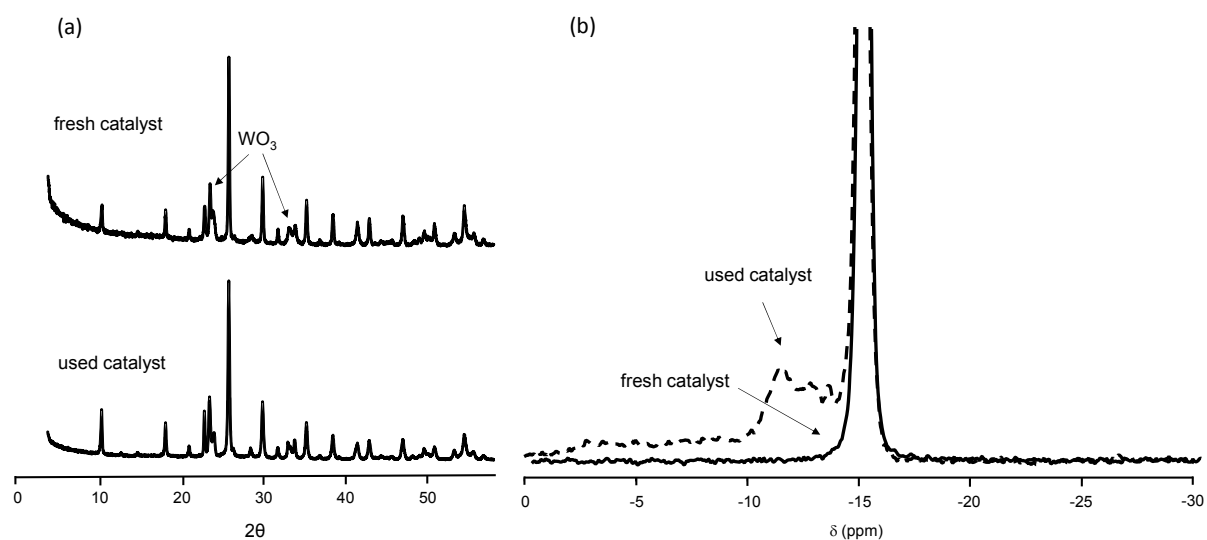


Figure S4. (a) X-Ray diffractograms and (b) Solid-state ^{31}P NMR spectra, of fresh and used $\text{C}_2\text{HPW}_{12}\text{O}_{40}$ catalyst.