

Supplementary material for

Composite nanoparticles derived by self-assembling of hydrophobic polysaccharide derivatives and lignin

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Table S1 Molecular structure characteristics of Organosolv lignin employed in the study (Bergs et al. 2019).

ratio of monomer units, % ^{a)}			ratio of most abundant linkages, % ^{b)}				molecular weight ^{c)}	
H	G	S	A	B	C	D	M _n , g/mol	M _w , g/mol
21.17	53.54	25.29	62.62	7.70	8.00	21.68	1139	2146

a) H-unit: *p*-hydroxyphenyl (derived from *p*-coumaryl alcohol), G-unit: guaiacyl (derived from coniferyl alcohol), S-unit: syringyl (derived from sinapyl alcohol);
b) A-linkage: β -aryl ether, B-linkage: phenyl coumaran, C-linkage: resinol, D-linkage: unsaturated ester; c) M_n: number average molecular weight, M_w: weight average molecular weight.

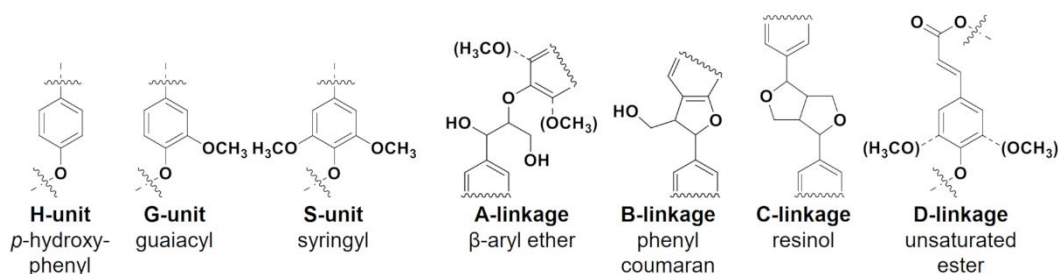


Fig. S1 Molecular structure of major structural features in Organosolv lignin.

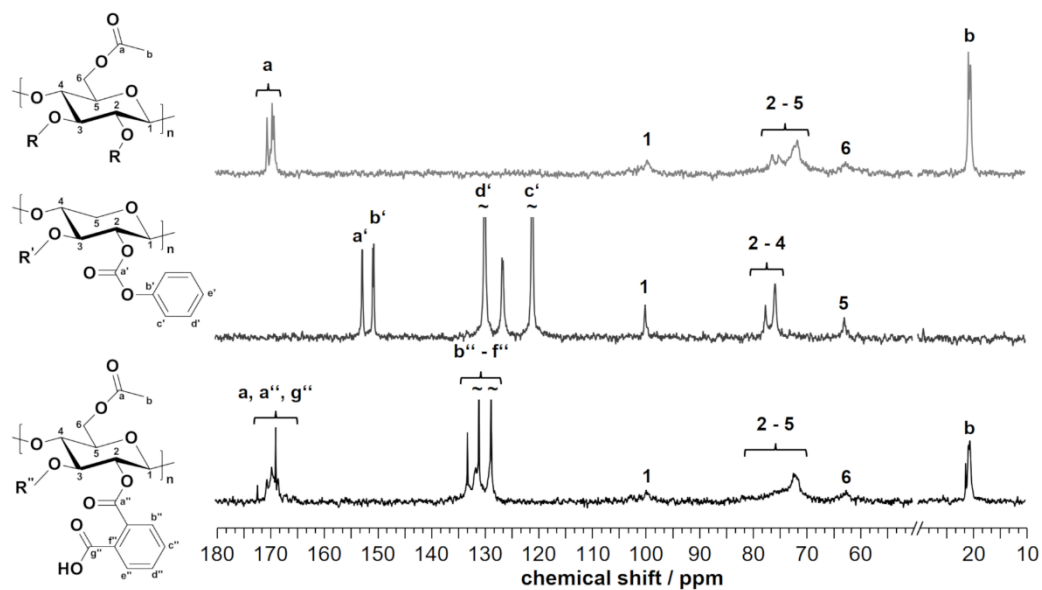


Fig. S2 ^{13}C -NMR spectra of cellulose acetate (top), xylan phenyl carbonate (middle), and cellulose acetate phthalate (bottom), recorded in $\text{DMSO-}d_6$.



Fig. S3 Images of aqueous particle dispersions prepared by dialysis of organic solutions containing either lignin (left), xylan phenyl carbonate (right), or both (middle).

References

- Bergs M et al. (2019) Miscanthus x giganteus stem versus leaf-derived lignins differing in monolignol ratio and linkage International Journal of Molecular Sciences 20:1200 doi:<https://doi.org/10.3390/ijms20051200>