

## Supplementary Information

**Table S1.** FT-IR absorbance characteristics of original Kraft lignin between 4000 and 600  $\text{cm}^{-1}$  according to literature data [1–3].

Bands Origin	Wavenumber ( $\text{cm}^{-1}$ )
Phenolic and aliphatic hydroxyl groups	3510
C-H stretching in aromatic methoxyl and methyl plus methylene groups	2936
	2843
Aromatic rings vibrations	1593
	1510
C-H asymmetric deformation	1454
C-H deformation and aromatic ring vibration	1425
O-H phenolic and aliphatic C-H in methyl groups	1369
vibration of G units with C=O stretching	1265
C-C, C-O and C=O stretching	1213
C-H in plane deformation of G units	1142
C-H in plane deformation plus C-O stretching	1030

### Reference

1. Schorr, D.; Diouf, P.N.; Stevanovic, T. Evaluation of industrial lignins for biocomposites production. *Ind. Crop. Prod.* **2014**, *52*, 65–73.
2. Chu, S.; Subrahmanyam, A.V.; Huber, G.W. The pyrolysis chemistry of a  $\beta$ -O-4 type oligomeric lignin model compound. *Green Chem.* **2013**, *15*, 125–136.
3. Guigo, N.; Mija, A.; Vincent, L.; Sbirrazzuoli, N. Molecular mobility and relaxation process of isolated lignin studied by multifrequency calorimetric experiments. *Phys. Chem. Chem. Phys.* **2009**, *11*, 1227–1236.