Electronic Supplementary Information

From lignin subunits to aggregates: insights into lignin solubilization

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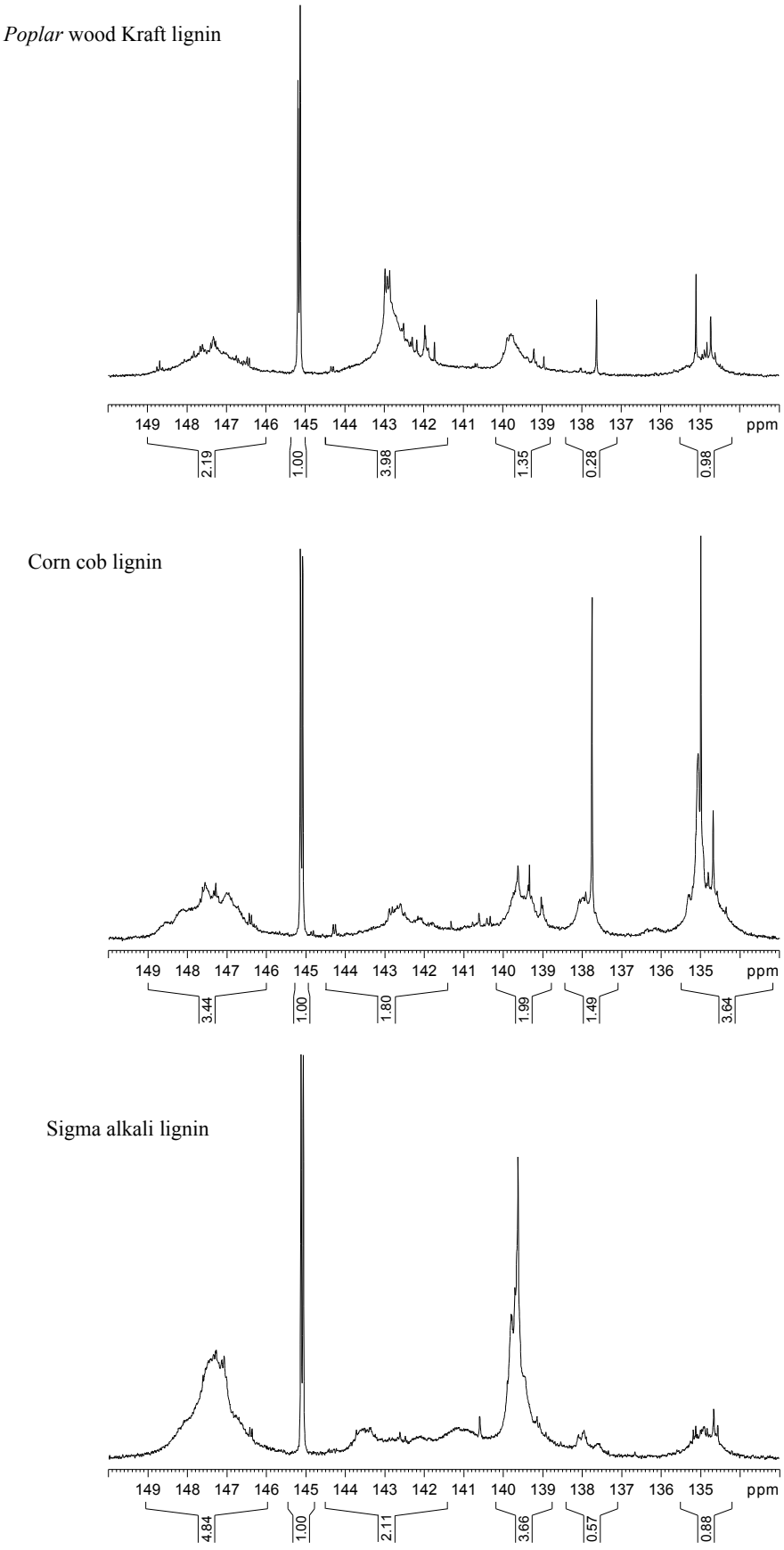

Fig. S1 Quantitative ^{31}P NMR spectra of the lignin samples

Elemental analysis

Elemental analysis for carbon, nitrogen, oxygen and sulfur was carried out using a organic element analyzer (Vario EL cube, Elementar Analysensysteme GmbH). 1-10 mg samples were injected into a standard 80-position tray, and the samples were decomposed at 950-1200 ℃. When the sample was decomposed by a certain amount of oxygen, with helium as the carrier gas, the combustion gas is passed through the combustion tube and the reducing tube. The sample burns into the gas in the tube filled with the catalyst, discharges the impurity gas, separates the elements of the gas to be measured, and uses the thermal conductivity detector(TCD) to detect. Carbon,nitrogen and sulfur was detecyed in the operating mode of CHNS.

	N[%]	C [%]	O[%]
Poplar lignin	0.26	56.5	29.9
Corncob lignin	0.63	61.1	29.5
Sigma lignin	0.70	62.9	27.2