

Table S1: The onset temperature (T_{onset}) of the main degradation step, and char residues at 800 °C measured trough TGA in nitrogen and in air atmospheres.

Formulation	T_{onset} in nitrogen (°C)	Char residue in nitrogen (wt. %)	T_{onset} in air (°C)	Char residue in air (wt. %)
untreated	217	18.5	235	5.40
starch	242	15.6	232	7.50
starch + Na ₂ CO ₃	200	24.5	206	10.9
starch + K ₂ CO ₃	200	25.9	196	14.5
starch + (NH ₄) ₂ HPO ₄	216	32.5	220	4.90

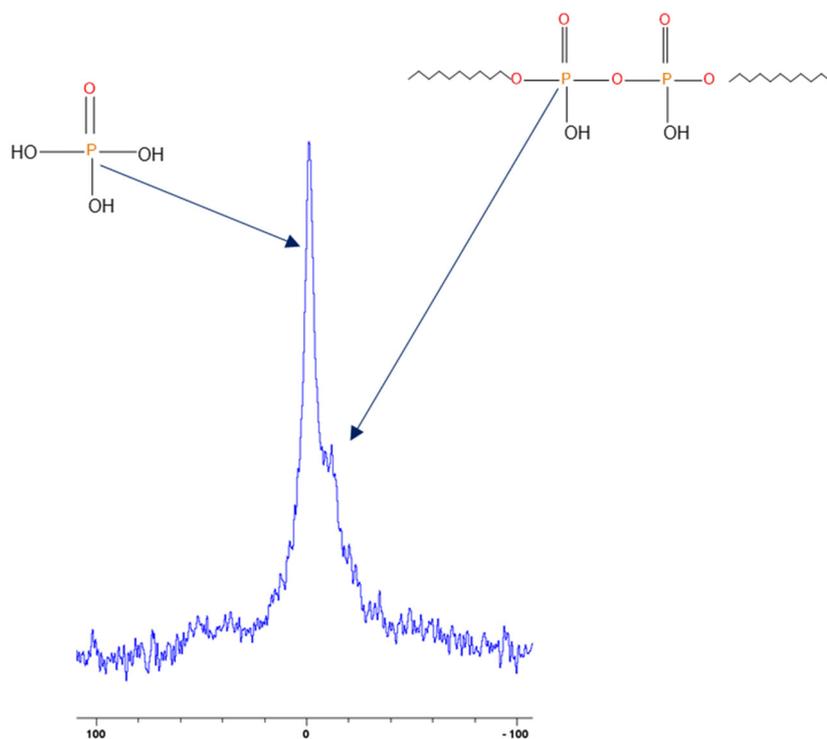


Figure S1: Solid-state ³¹P NMR spectrum of char obtained from wood coated with ‘starch + (NH₄)₂HPO₄’ formulation (the abscissa denotes the chemical shift values, δ, in ppm, and the ordinate corresponds to the signal intensity in arbitrary units).

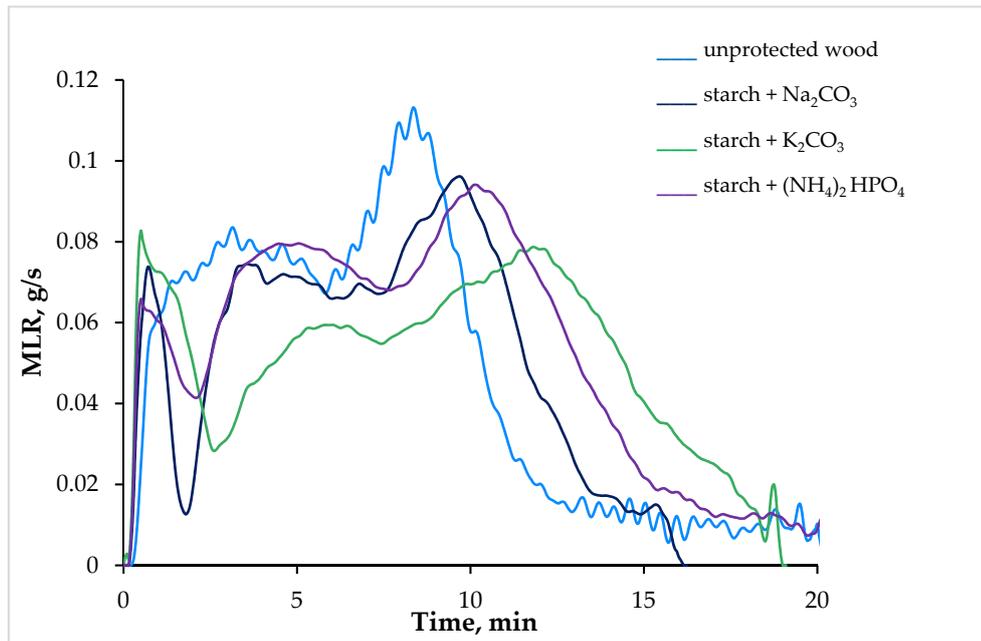


Figure S2: The MLR *vs.* time profiles of unprotected wood and the wood surfaces coated with starch + inorganic salt formulations.



(a)



(b)

Figure S3: The snapshots taken from the videos recorded during cone calorimetry testing, 10 seconds after the ignition: (a) untreated wood; (b) wood coated with 'starch + K₂CO₃' formulation.

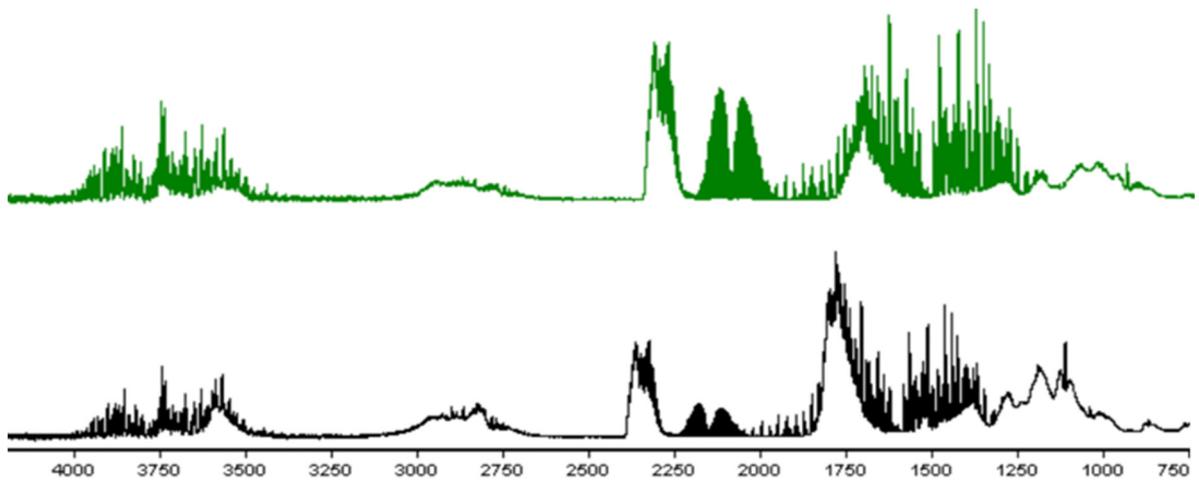


Figure S4: FT-IR spectra of gaseous products produced in the tube furnace during decomposition of untreated wood (black) and wood coated with 'starch + K_2CO_3 ' formulation (green), 350 °C, nitrogen atmosphere (the abscissa is wavenumber (in cm^{-1}) and the ordinate is absorbance (in arbitrary units)).

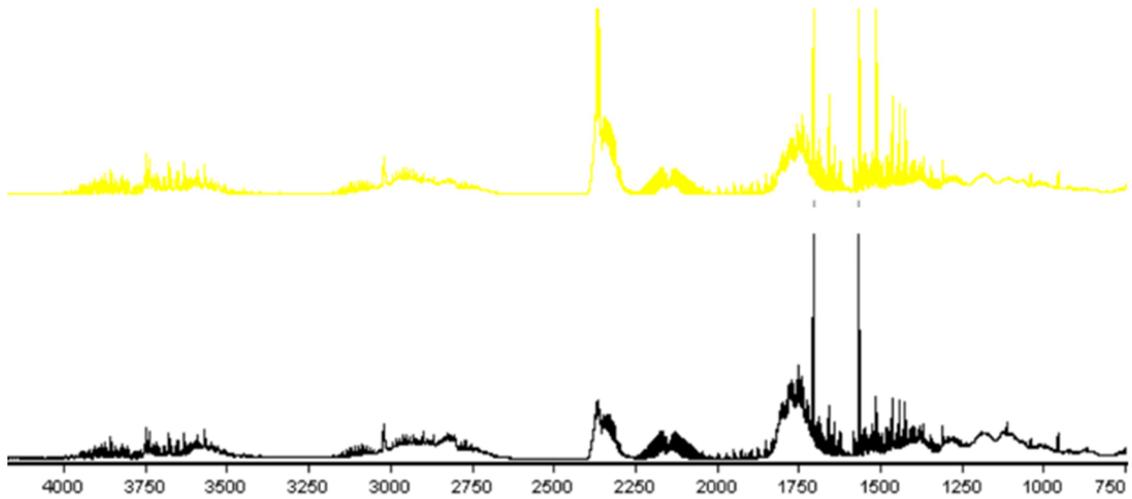


Figure S5: FT-IR spectra of gaseous products produced in the tube furnace during decomposition of untreated wood (black) and wood coated with 'starch + K_2CO_3 ' formulation (yellow), 650 °C, nitrogen atmosphere (the abscissa is wavenumber (in cm^{-1}) and the ordinate is absorbance (in arbitrary units)).