Electronic Supplementary Material (ESI) for RSC Applied Interfaces.

A closer examination of white-rot fungal mycelia assisted wood bonding

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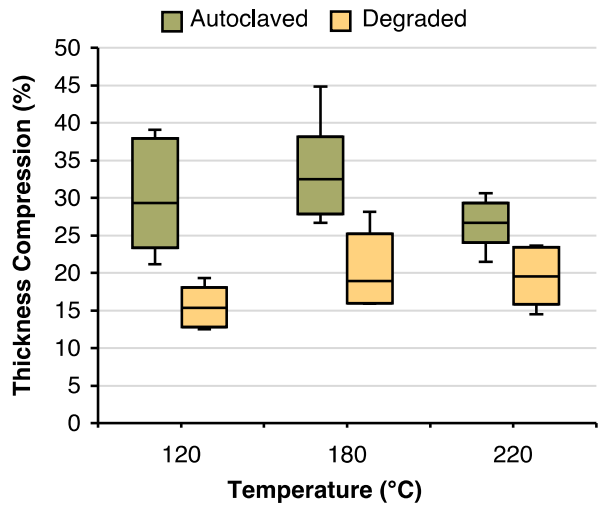

Fig. S1 Thickness compression of veneers after compression at different temperatures

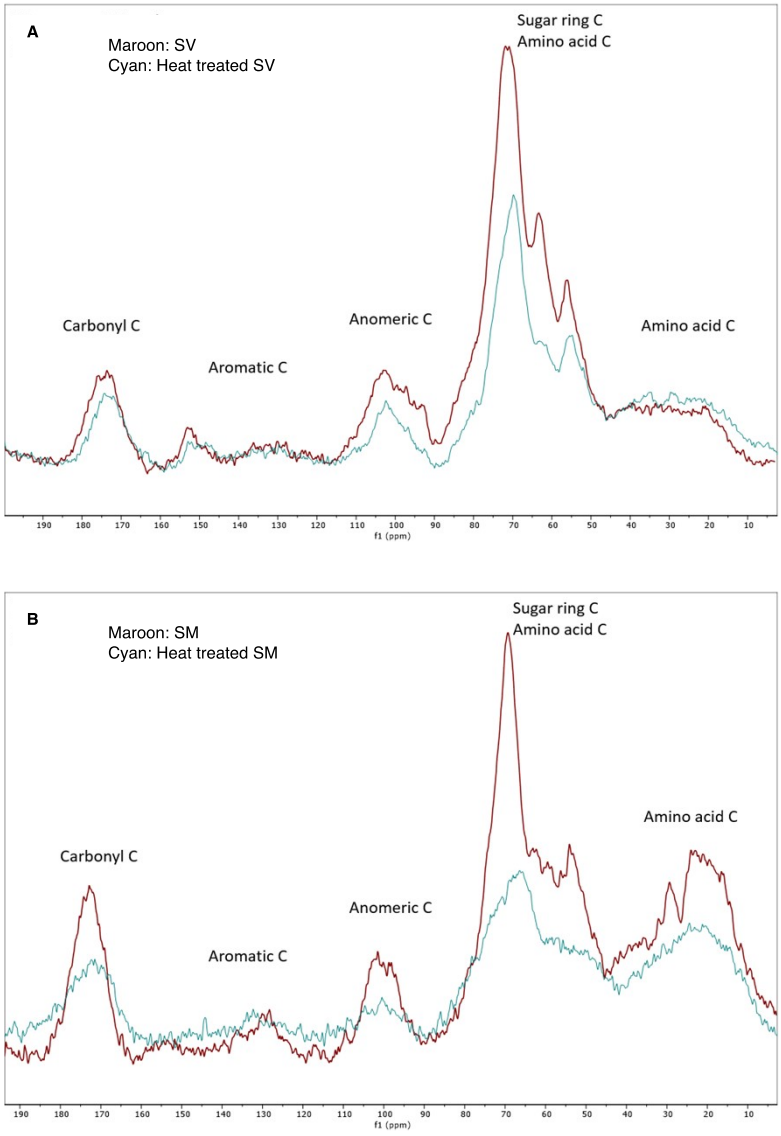

Fig. S2 ^{13}C-NMR spectra of SV (A) and SM (B) before and after heat treatment.

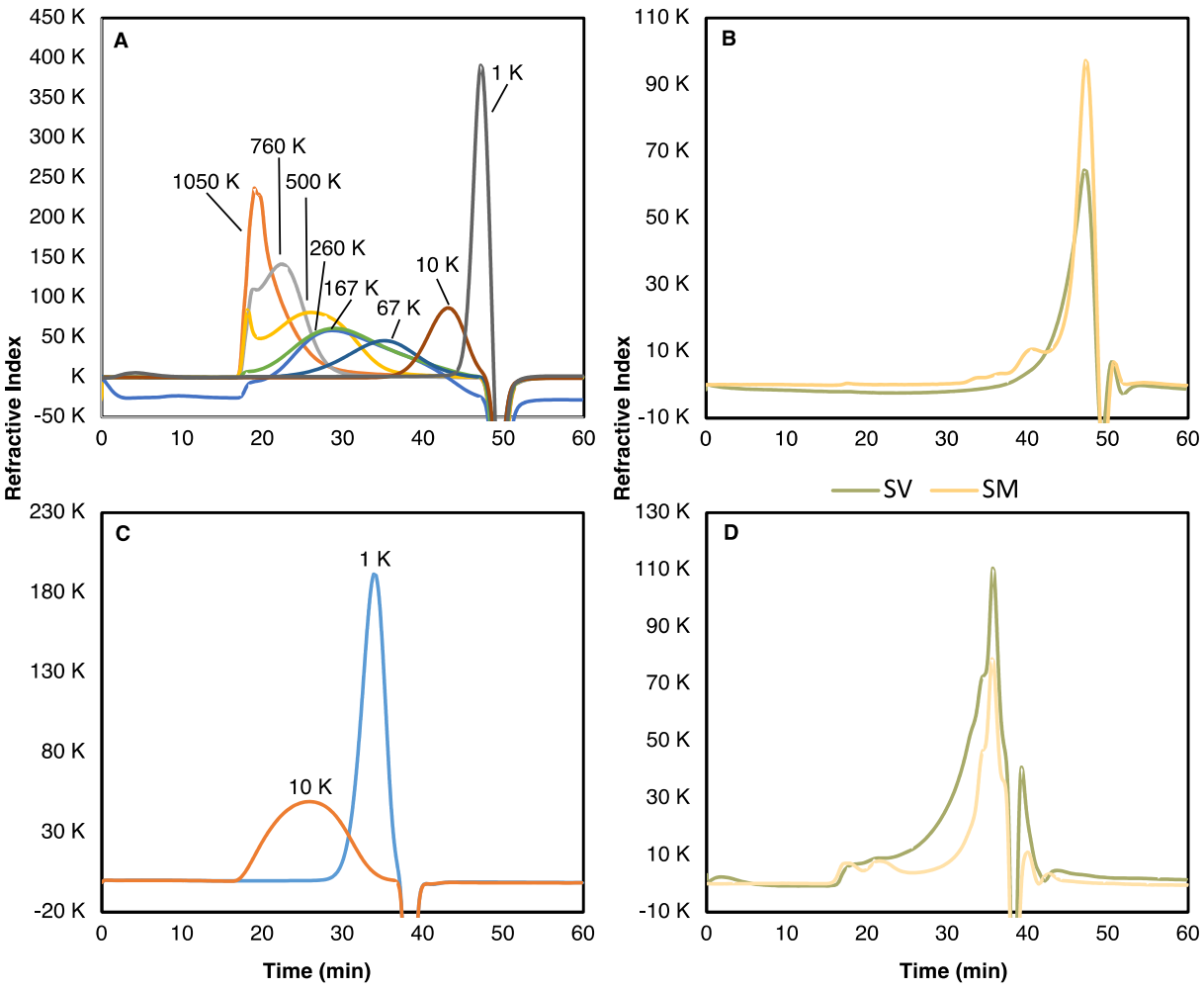

Fig. S3 SEC chromatograms of dextran standards (A, C) and the two samples (B, D) on a Superose-6 SEC column (A, B) and a Superdex-75 SEC column (C, D) monitored with a reflective index detector. The values in the top panel are the average molecular weights of corresponding dextran standards.

One-Dimensional Carbon-13 Nuclear Magnetic Resonance Spectroscopy

Aliquots of 50-60 mg of each sample were ground into fine powders and firmly packed into a 50-µL rotor. The rotor was sealed with an insert and a rotor cap. One dimensional (1D) ^{13}C-

NMR spectra were collected on a Bruker Neo 600 MHz system, equipped with a high-resolution magic-angle spinning (HRMAS) probe operated at 10000 Hz.

Specifically, the field was locked with NaOAc standard dissolved in D_2O. Cross polarization (CP) was set up with 13C-labeled glucose solid standard with a CP pulse sequence. With this setup, 1D 13C spectra of each sample was collected with 720 scans (1 hr), which was repeated 17 times (Total 18 spectra per sample). The 18 spectra of each sample were processed, referenced to the 13C spectrum of glucose standard, and summed as the final ^{13}C spectrum with MestReNova X64.

Size measurement using size-exclusion chromatography (SEC)

Size measurement of the samples was conducted using size-exclusion chromatography (SEC). Briefly, dextran standards were separated on an SEC column to obtain a correlation between the molecular weights and retention times. The molecular weight of the sample was estimated based on the retention times of dextran standards.

An analytical Superose 6 column (10 × 300 mm, GE Healthcare Life Sciences) and an analytical Superdex - 75 column were used for the measurement, which was eluted with 50 mM ammonium acetate buffer, on an Agilent 1260 Infinity II LC system (Agilent) operated at a flow rate of 0.45 mL/min and monitored with a refractive index detector. One hundred or 200 micrograms of the sample or dextran standards were loaded and separated on the column for analysis.