

Supporting information

Engineering highly stretchable lignin-based electrospun nanofibers for potential
biomedical applications

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Fig. S1 ¹H of NMR spectra of lignin and lignin-Br in DMSO-d₆.

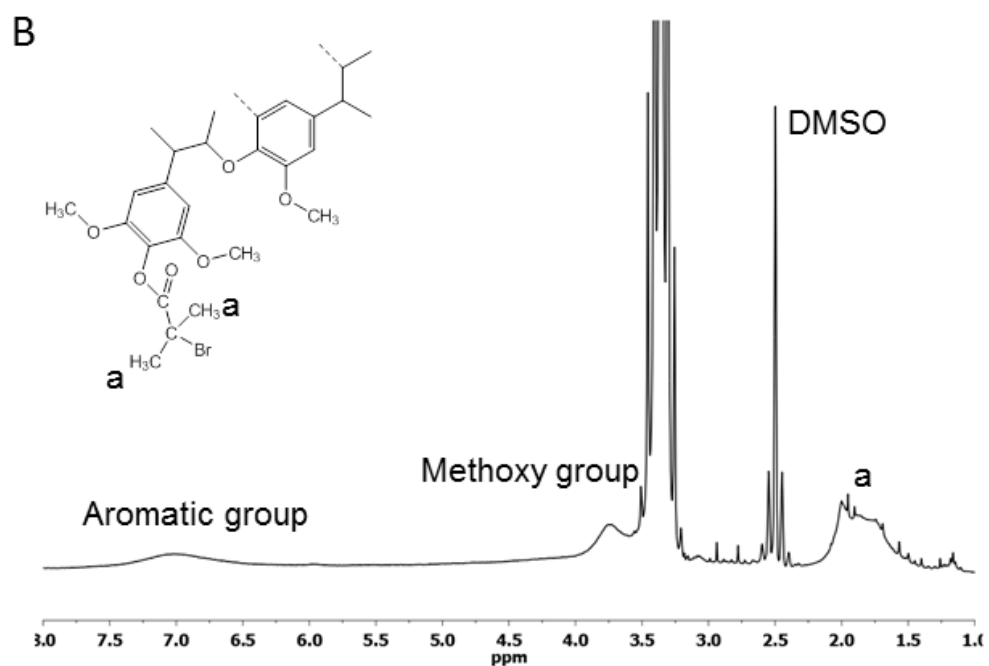
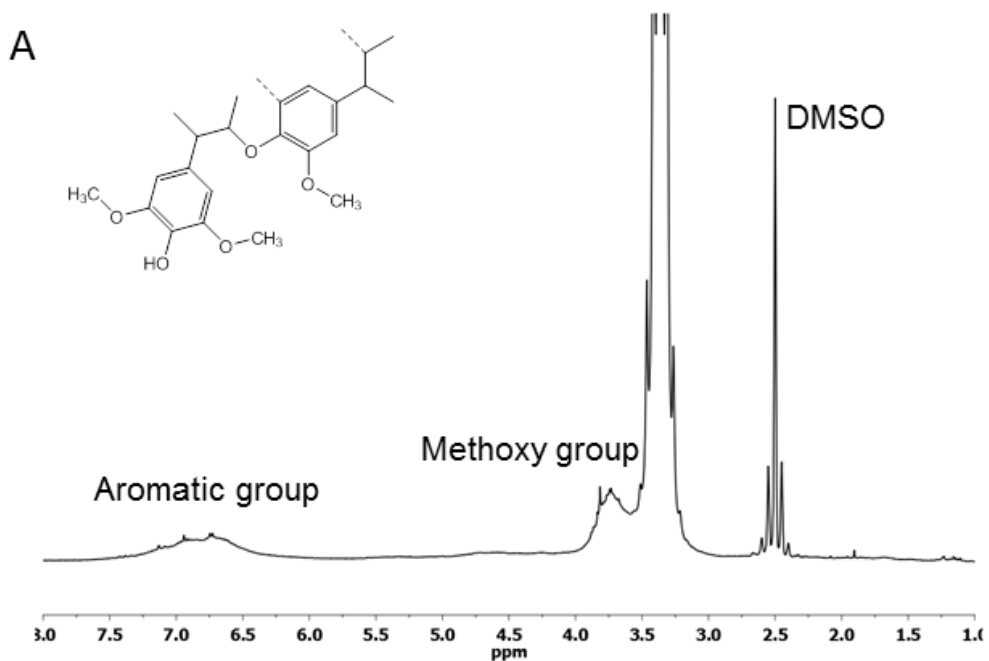
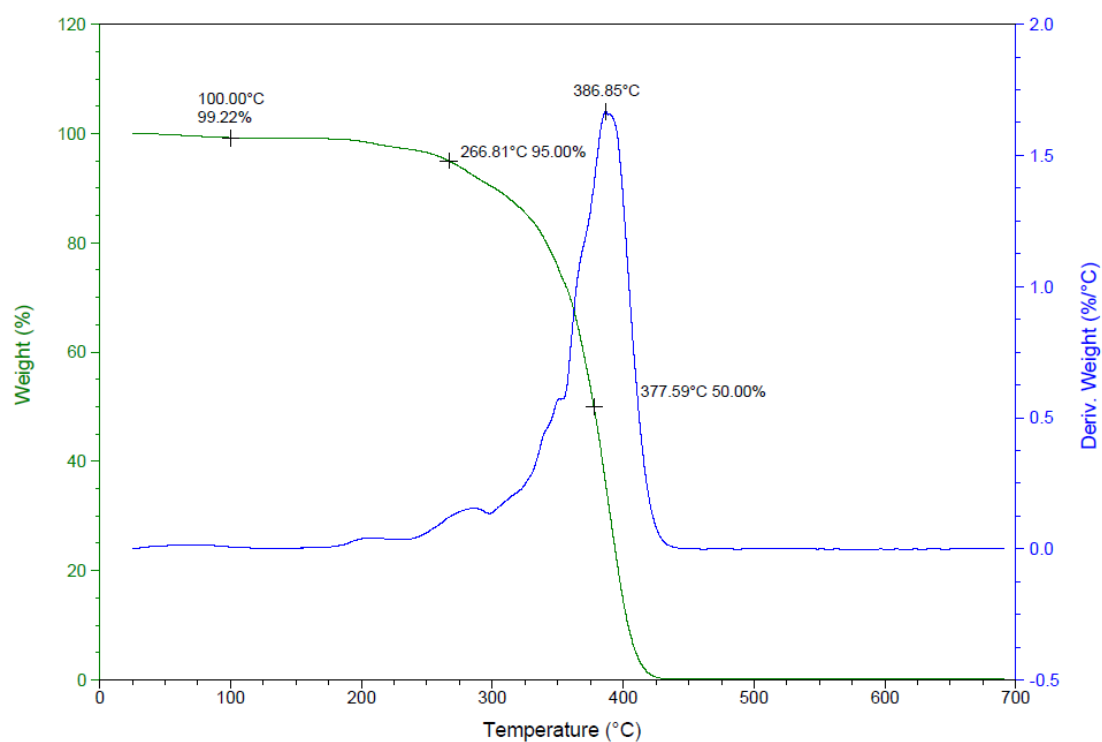


Fig. S2 TGA curve of PMMA and the T_{d5} (the temperature at which the mass of the sample is 50% less than its mass measured at 50°C) of lignin and lignin-PMMA copolymers.



Polymers	T_{d5} (°C)
Lignin	260
LM30	199
LM50	221
LM70	297
LM100	314
PMMA	267

Fig. S3 DSC curves of PCL and PCL/lignin-PMMA nanofibers. (A) The comparison of nanofibers containing 50% of different lignin-PMMA copolymers, (B) the comparison of nanofibers containing different amounts of LM70.

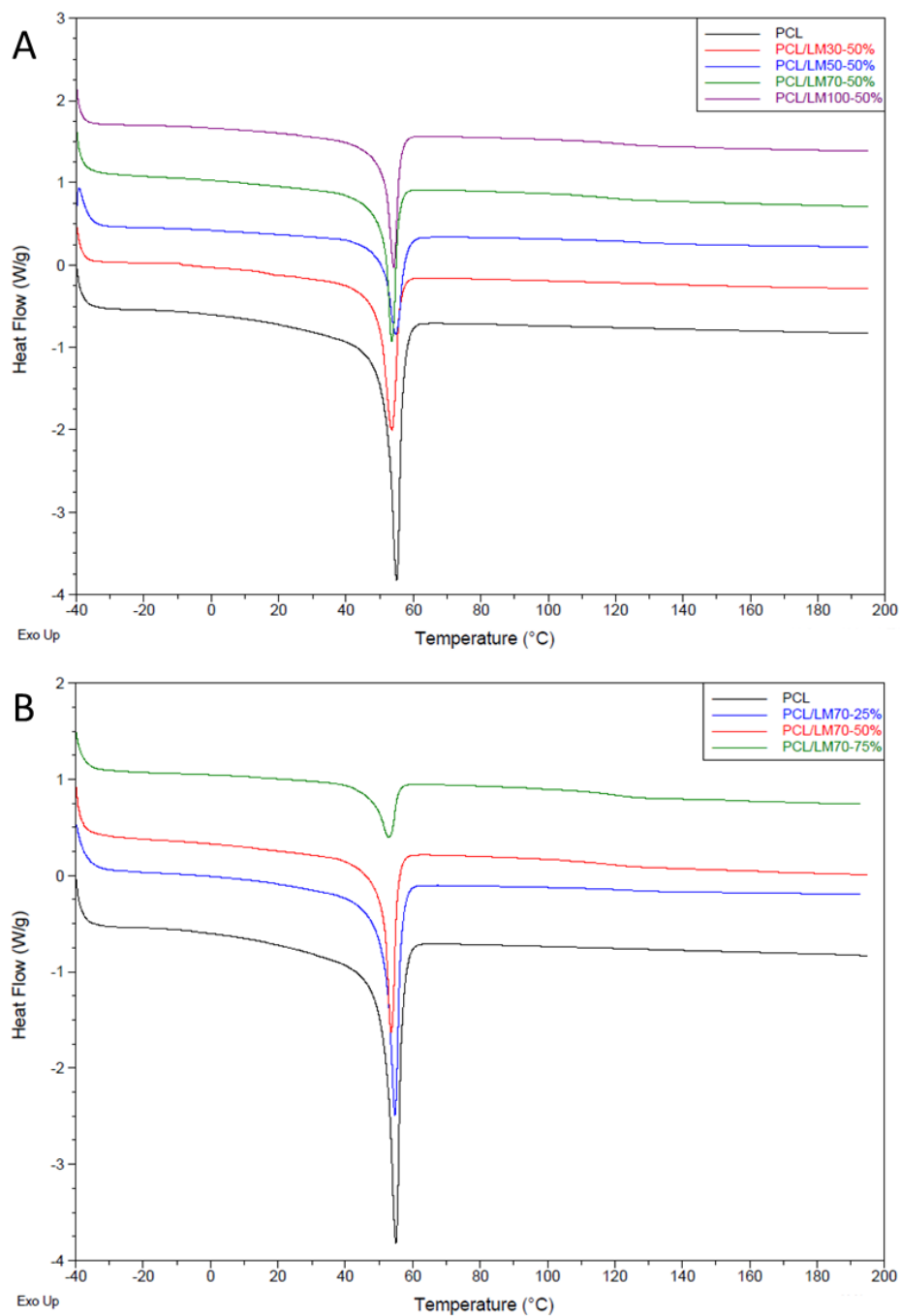


Fig. S4 TGA curves of PCL and PCL/lignin-PMMA nanofibers. (A) The comparison of nanofibers containing 50% of different lignin-PMMA copolymers, (B) the comparison of nanofibers containing different amounts of LM70.

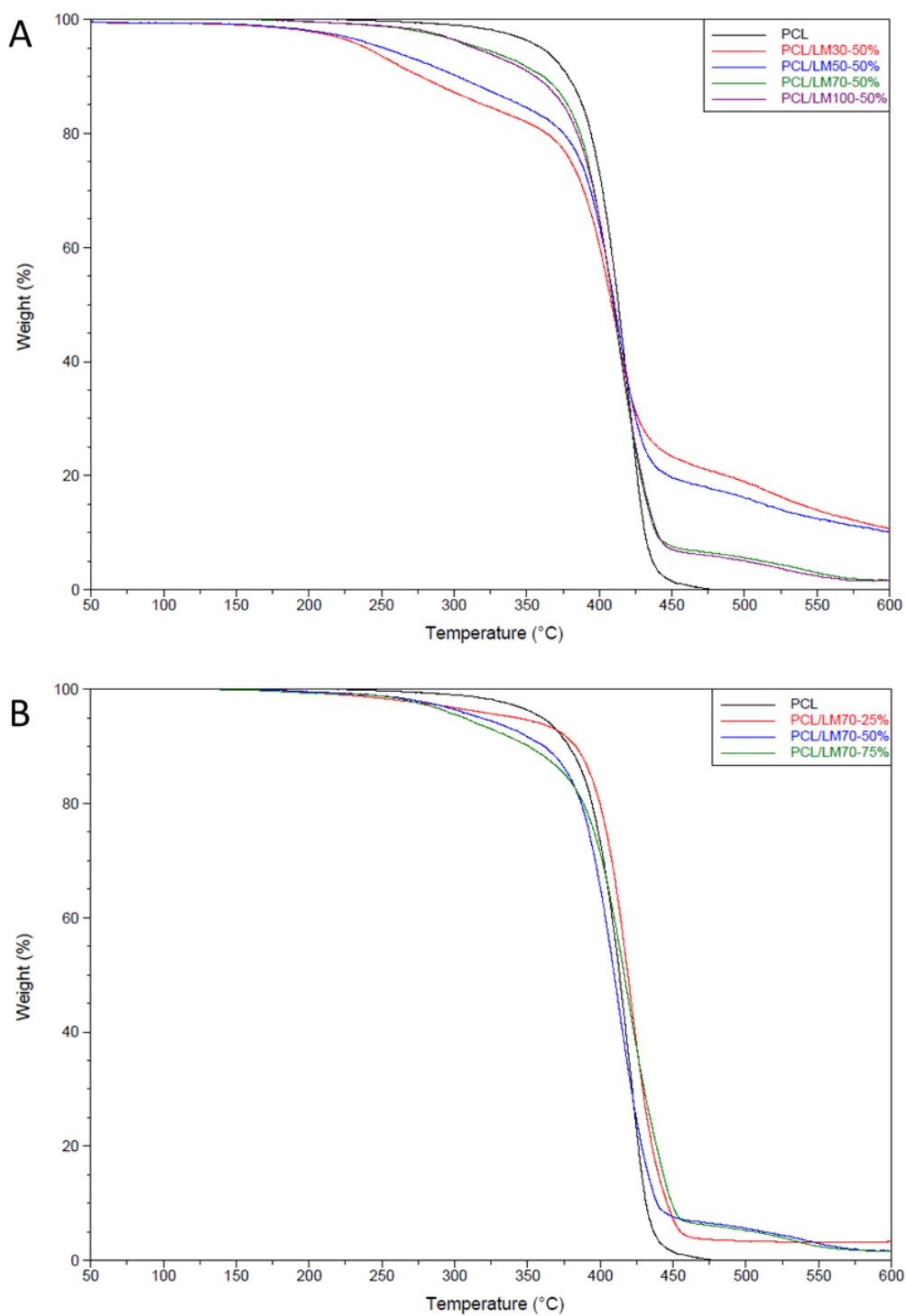


Fig. S5 Morphology of human dermal fibroblasts on electrospun nanofibers (A, C) PCL/LM50-50, (B, D) PCL/LM70-50 after 7 days of culture. C and D are the corresponding images of A to B at a higher magnification, showing the interactions between cells.

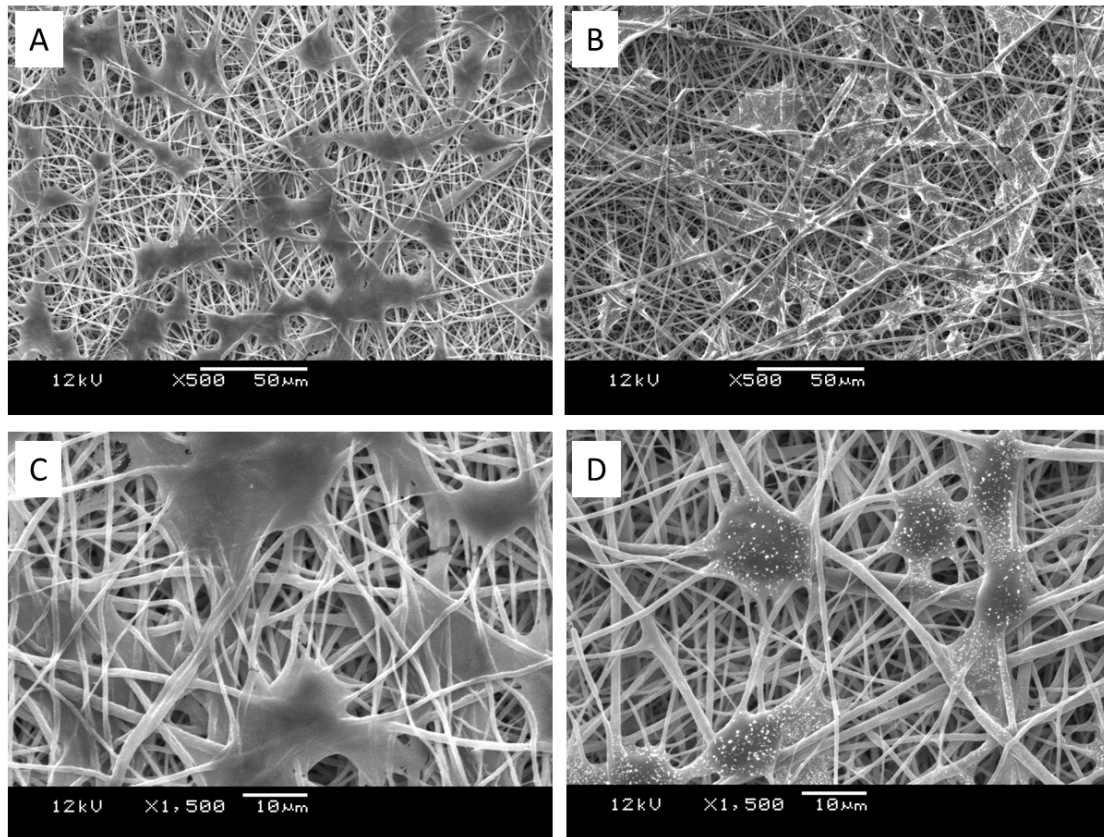


Fig. S6 Laser scanning confocal microscopic images of human dermal fibroblasts on electrospun nanofibers (A) PCL/LM50-50, (B) PCL/LM70-50 immunostained for F-actin (Green) and nuclei (Blue).

