# Supporting Information

## Chitosan-coated PCL/nano-hydroxyapatite aerogel integrated with nanofiber membrane for potential use in antibacterial and guiding bone regeneration

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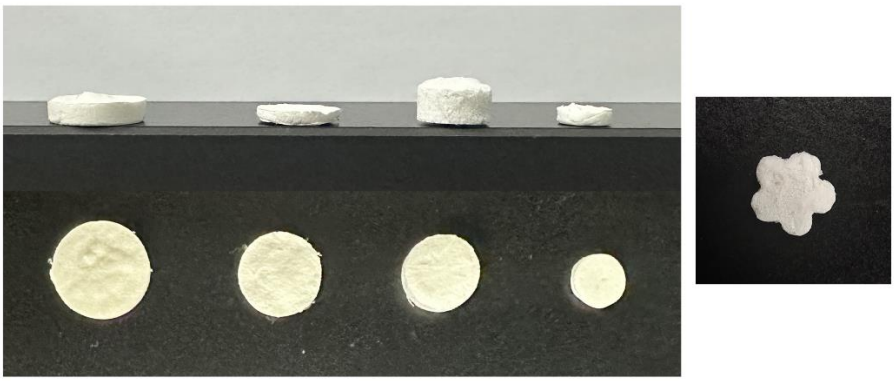

**Fig. S1.** Digital photos of composite scaffolds of different shapes and sizes.

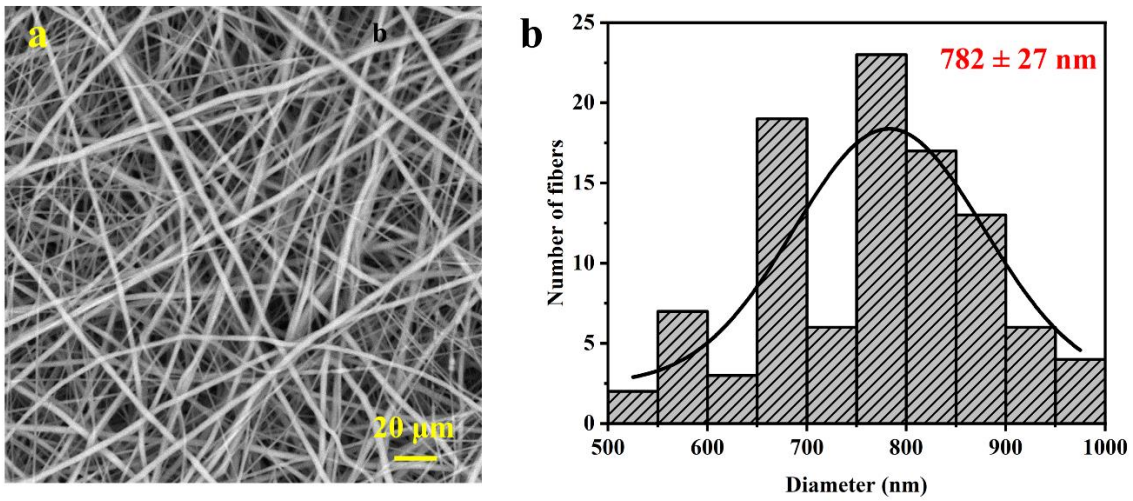


**Fig. S2.** (a) Morphological characterization of the nanofibers in dense layer. (b) Histogram of the distribution of fiber diameter.

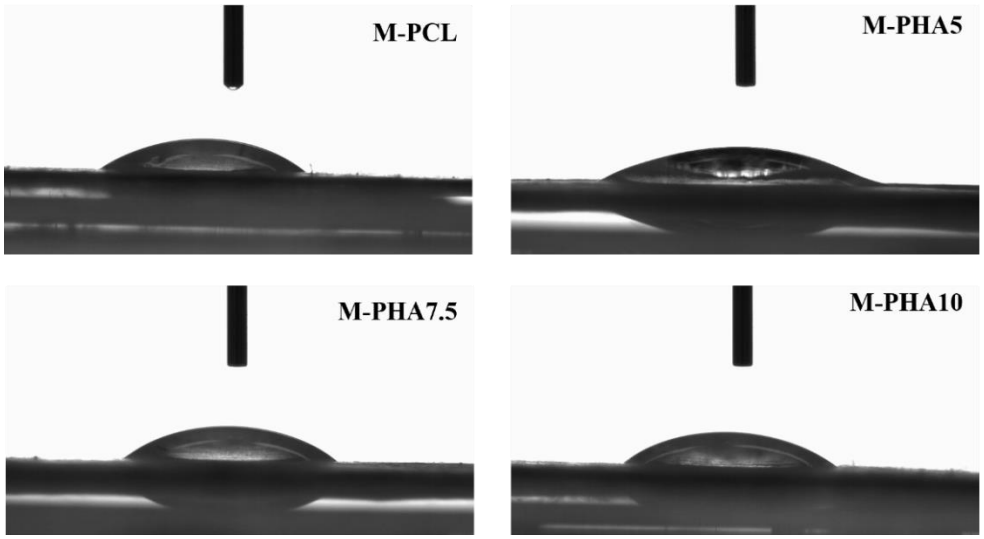


**Fig. S3.** Measurements of water contact angle of the different aligned nanofiber membranes after plasma treatment.

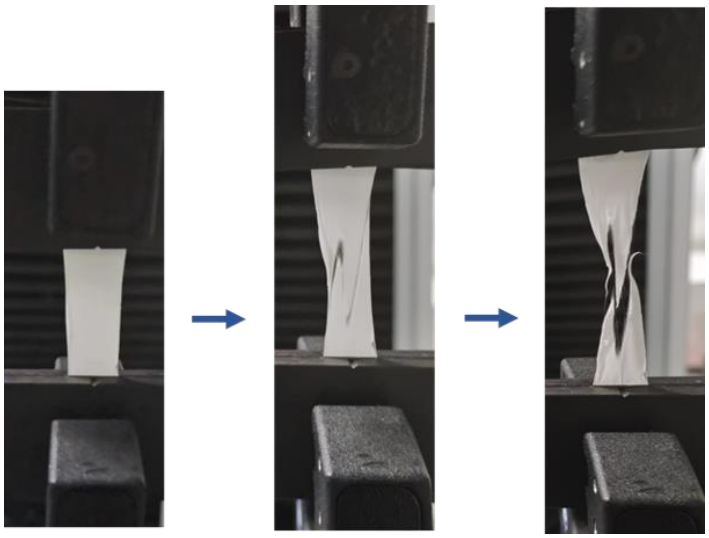

**Fig. S4.** Photographs showing the process of tensile test.

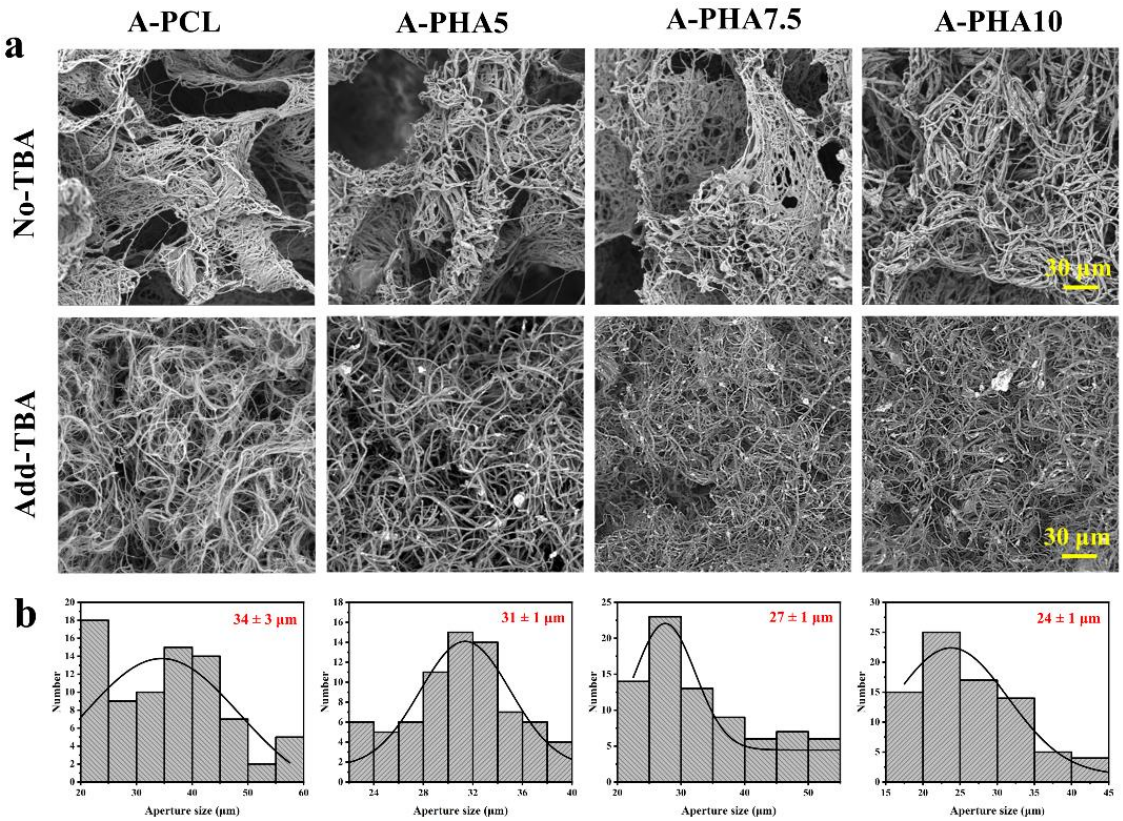


**Fig. S5.** (a) Morphological characterization of the aerogels with or without TBA treatment. (b) Distribution of pore size of the different aerogels after TBA treatment.

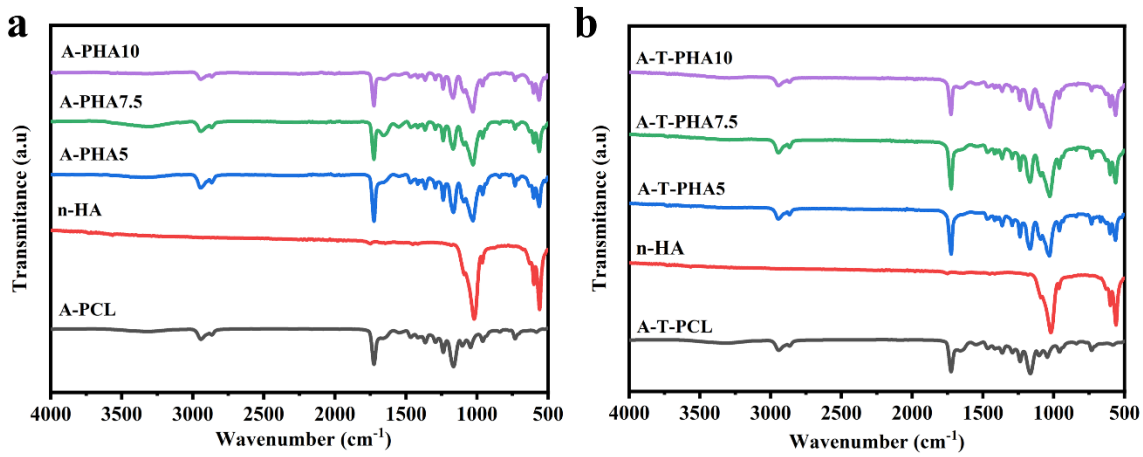


**Fig. S6** (a) FTIR spectra of the different aerogels without TBA treatment. (b) FTIR spectra of different aerogels treated with TBA.

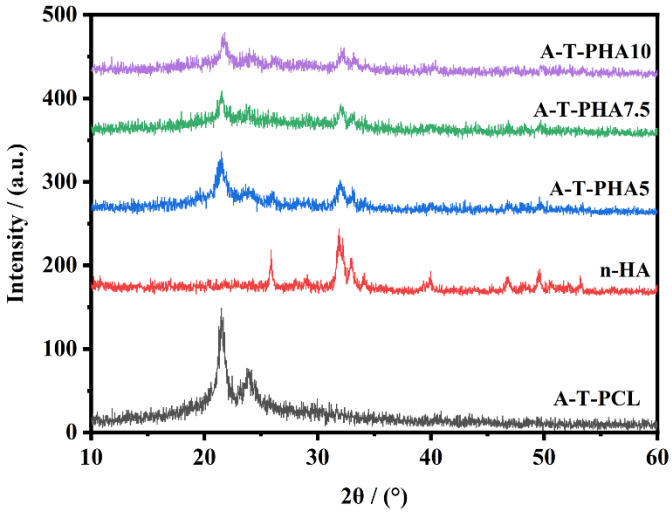


**Fig. S7.** XRD patterns of n-HA and the different aerogels.

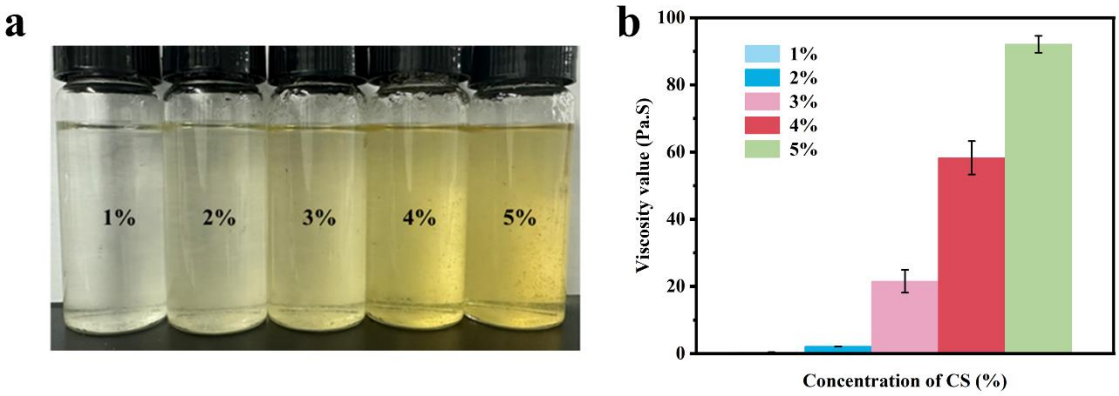


**Fig. S8.** (a) Photographs of the CS solutions with different concentrations. (b) The viscosity of different CS solutions.

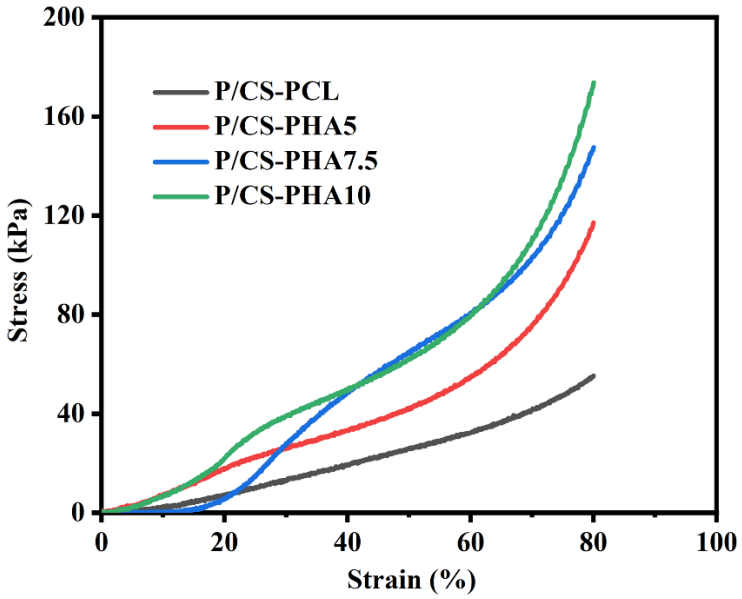


**Fig. S9.** Compressive stress-strain curves of the composite scaffolds containing different n-HA contents and without TBA treatment.

**Table S1.** The maximum tensile stress and strain of the aligned nanofiber membranes.

| Aligned nanofiber membranes | Maximum strain/% | Maximum stress/MPa |
|---|---|---|
| M-PCL | 85.98 | 43.95 |
| M-PHA5 | 73.93 | 33.09 |
| M-PHA7.5 | 93.78 | 22.81 |
| M-PHA10 | 89.73 | 16.24 |