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ARTICLE

A facile silk fibroin based GTR membranes with appropriate mechanical performance and enhanced osteogenic capacity

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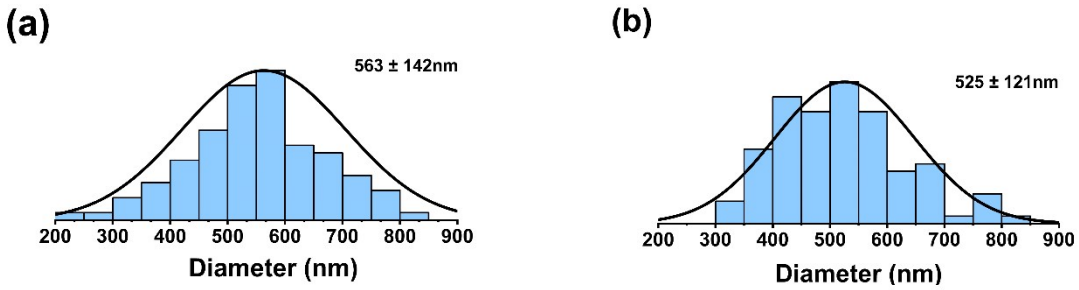

Figure S1 Diameter distribution of (a) SF and (b) ST films.

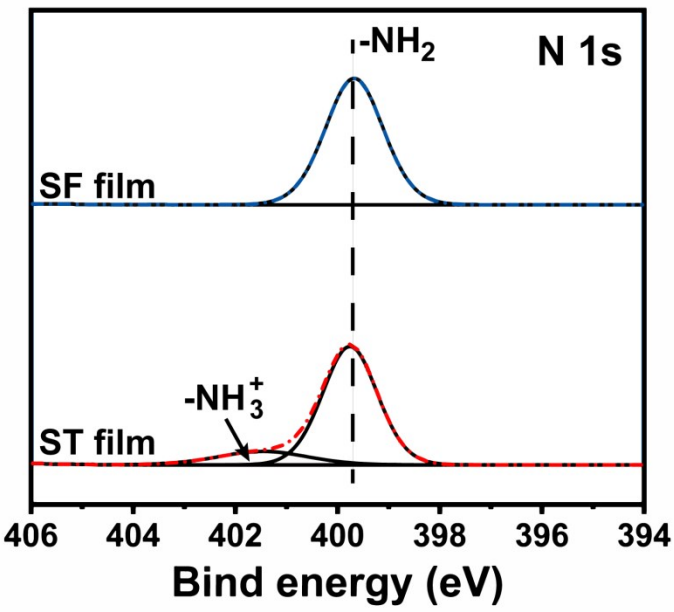

Figure S2 High-resolution XPS spectra (N 1s) of SF and ST films.

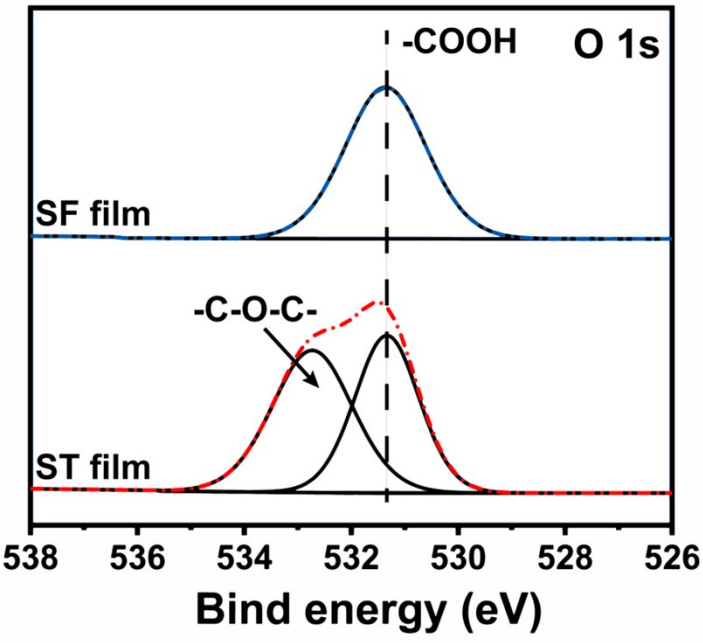

Figure S3 High-resolution XPS spectra (O 1s) of SF and ST films. The new peak of the ST film appeared at 532.8 eV (corresponding to -C-O-C- groups in TA) suggests a successful coating of TA on the SF membrane.

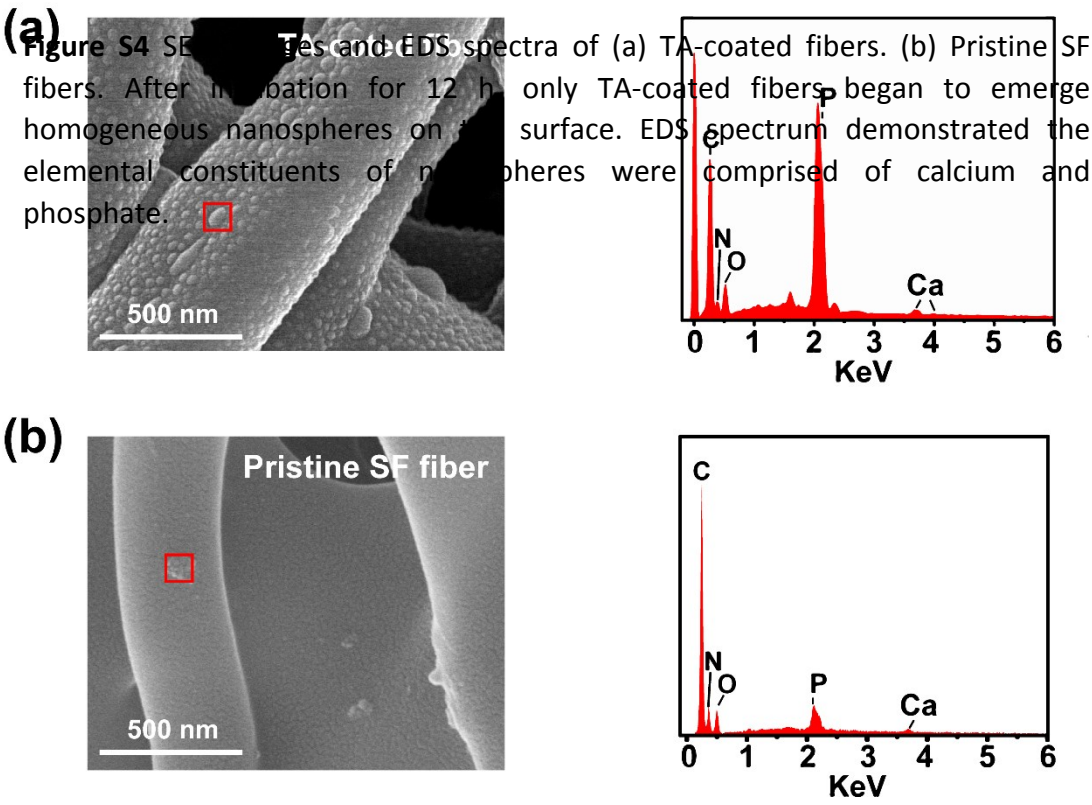

Figure S4 SE[illegible]ges and EDS spectra of (a) TA-coated fibers. (b) Pristine SF fibers. After incubation for 12 h, only TA-coated fibers began to emerge homogeneous nanospheres on the surface. EDS spectrum demonstrated the elemental constituents of nanospheres were comprised of calcium and phosphate.

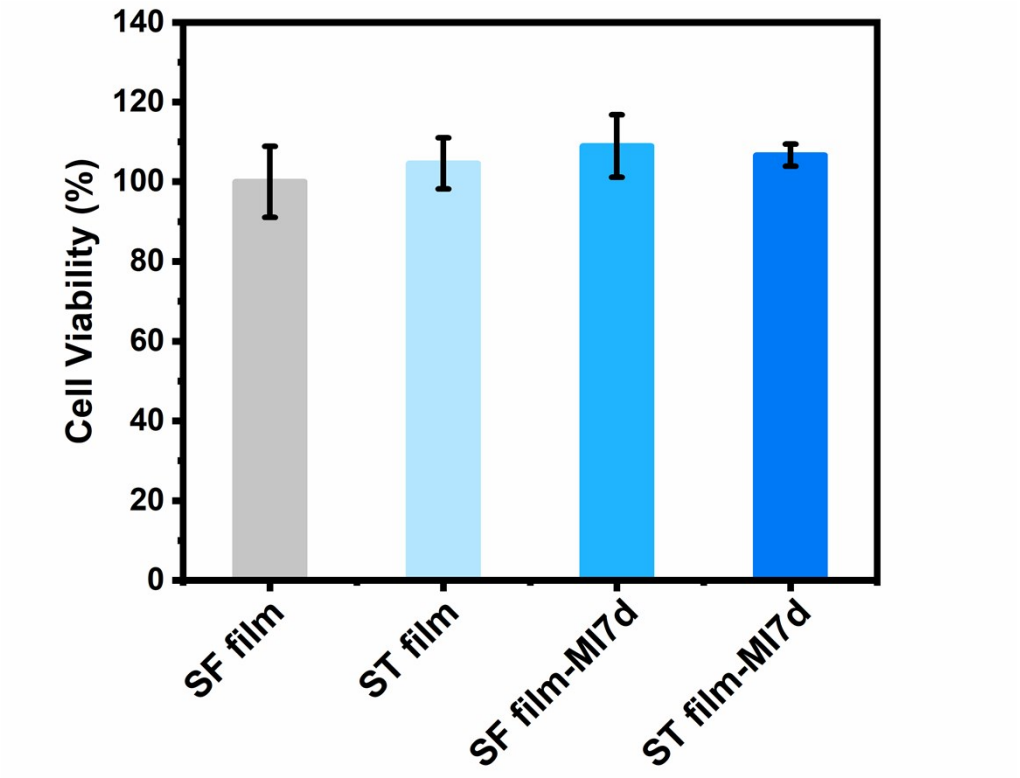

Figure S5 Cell viability of MC3T3 cells at d 1, indicating there is no significant cytotoxicity.

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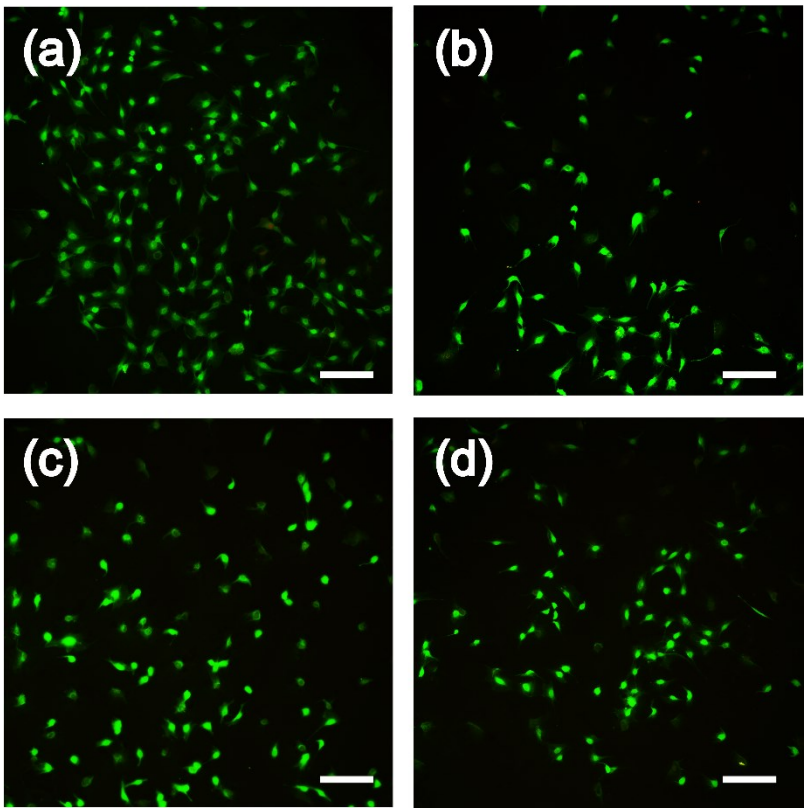

Figure S6 Representative live/dead cell images of (a) SF film, (b) ST film, (c) SF film-MI7d, and (d) ST film-MI7d. live cells (green, FDA) and dead cells (red, PI). Scale bar = 100 μm

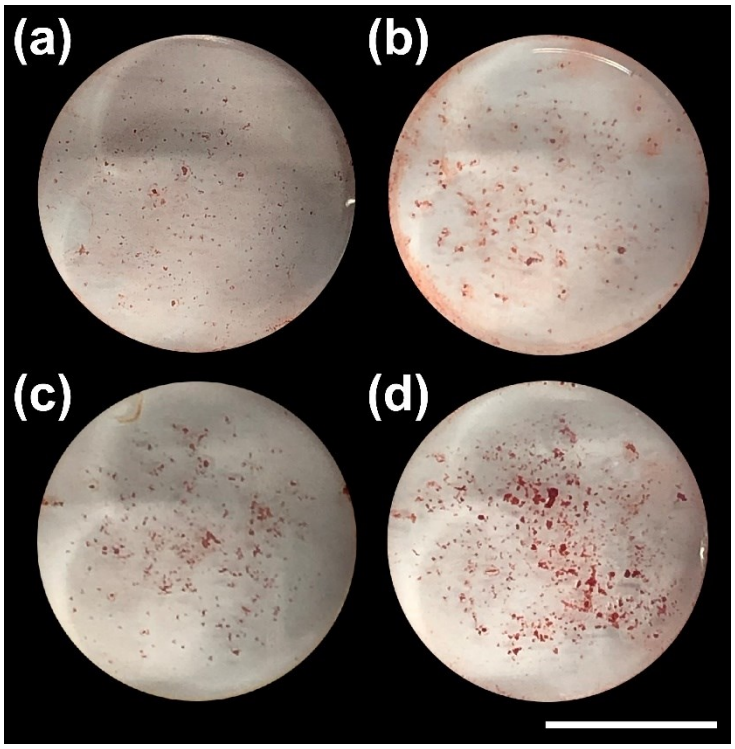

Figure S7 Images of calcium deposition on extracellular matrix by alizarin red stain. (a) SF film, (b) ST film, (c) SF film-MI7d, and (d) ST film-MI7d. Scale bar = 1 cm