

## Supporting Information

### ***In situ* forming double-crosslinked hydrogels with highly dispersed short fibers for the treatment of irregular wounds**

Maidi Wang<sup>a, 1</sup>, Jingtao Du<sup>a, 1</sup>, Mengya Li<sup>a</sup>, Filippo Pierini<sup>b</sup>, Xiaoran Li<sup>a, \*</sup>, Jianyong Yu<sup>a</sup>, and Bin Ding<sup>a, \*</sup>

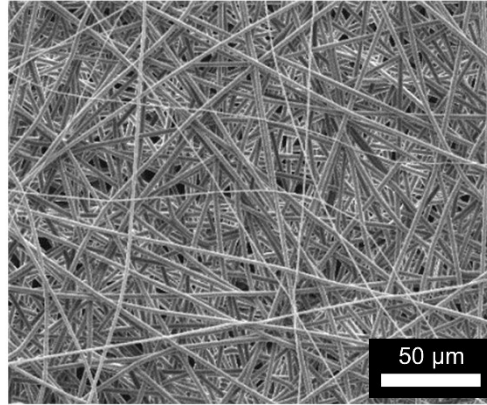
<sup>a</sup> Innovation Center for Textile Science and Technology, College of Textiles, Donghua University, Shanghai 201620, China

<sup>b</sup> Department of Biosystems and Soft Matter, Institute of Fundamental Technological Research, Polish Academy of Sciences, Warsaw 02-106, Poland

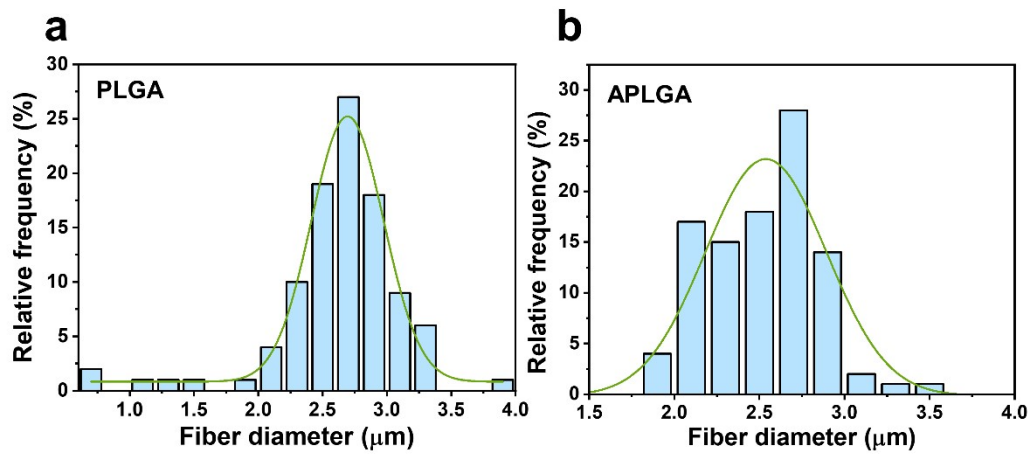
<sup>1</sup> Equal contribution

\* Corresponding authors

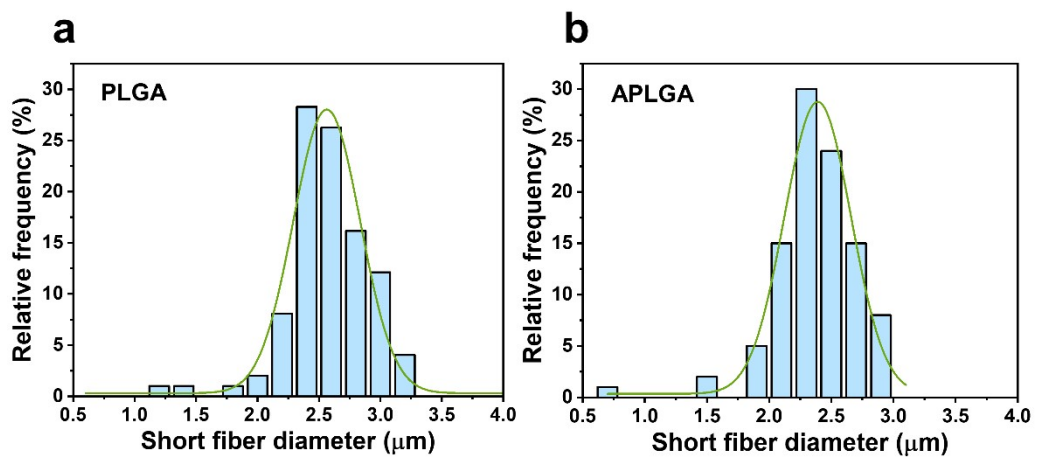
E-mails: xiaoranli@dhu.edu.cn; binding@dhu.edu.cn



**Figure S1.** SEM image of PLGA electrospun membrane.



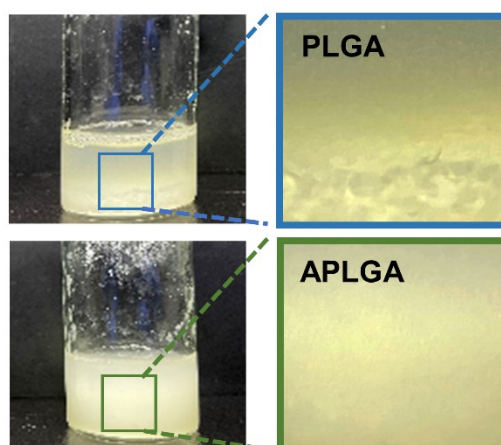
**Figure S2.** Diameter distribution plots of (a) PLGA and (b) APLGA fiber membrane.



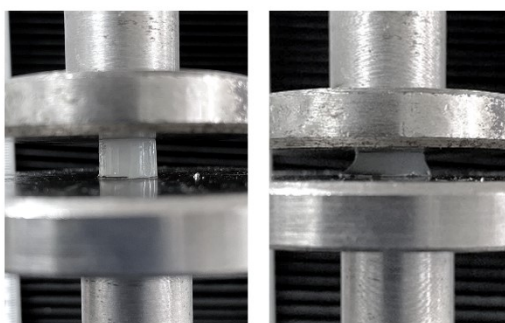
**Figure S3.** Diameter distribution plots of (a) PLGA and (b) APLGA short fibers



**Figure S4.** Optical microscope images of APLGA short fibers after 5, 10, and 15 min of homogenization.



**Figure S5.** Photographs showing the dispersion of PLGA short fibers and APLGA short fibers in precursor solution.



**Figure S6.** The GM/ODex-APLGA hydrogel before and after compression.