## **Supplementary Information**

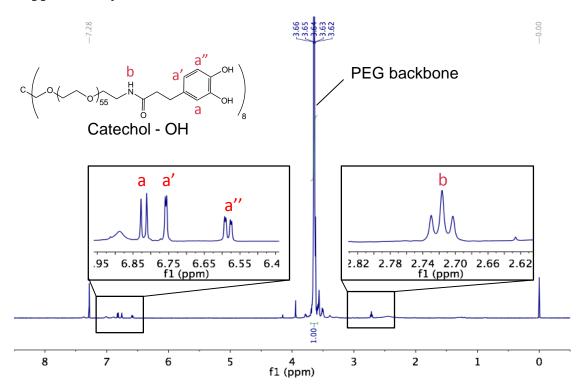


Figure S1. <sup>1</sup>H-NMR of catechol-modified 8-arm PEG.

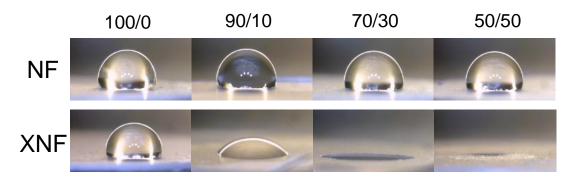


Figure S2. The image of water drop at 15s after a water droplet was touched the surface of the nanofibrous mesh.

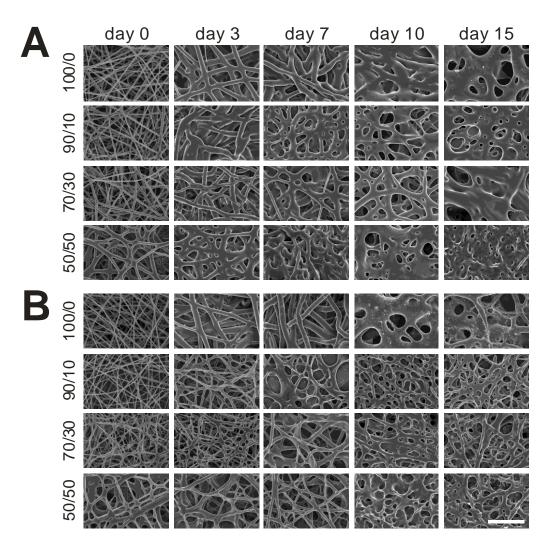


Figure S3. SEM images of the morphology of (A) non-crosslinked NF and (B) crosslinked NF at day 0, 3, 7, 10 and 15 after degradation (scale bar= $10\mu m$ ).

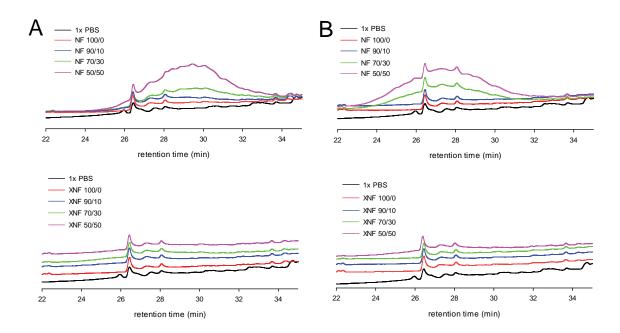


Figure S4. RP-HPLC results of the supernatant of the mass erosion at day 3 (A) and day 15 (B). NFs showed significant release out of 8cPEGa from the mesh while there was no sign of 8cPEGa in XNFs even at day 15.