## Supplementary material:

**Fig.S1** TEM image of alginate nanocapsules without drug (a), and cumulative release of methylene blue from alginate nanocapsules with different amount of loaded drug (b).

**Fig.S2** Microscopic images of Alg (a), Alg-E6 (b) and Alg-E12 (c) fibers after immersion in distilled water for 20 min.

Fig.S3 Processes of swelling and gel-formation of alginate fibers in different solutions.

**Fig.S4** Fitting curves of pseudo-first-order kinetics model of Alg  $(a_{1-3})$ , Alg-E6  $(b_{1-3})$  and Alg-E12  $(c_{1-3})$  fibers in distilled water  $(a_1-c_1)$ , A solution  $(a_2-c_2)$ , and PBS buffer solution  $(a_3-c_3)$ .

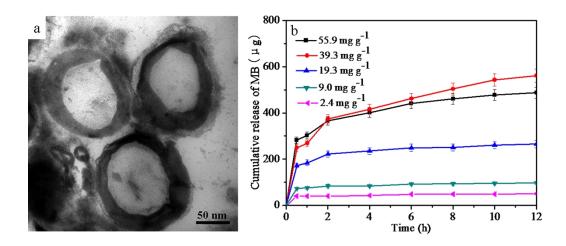


Fig. S1 Liu et al.

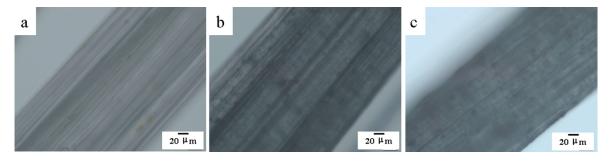


Fig. S2 Liu et al.

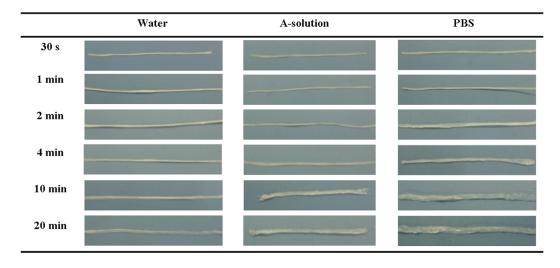


Fig. S3 Liu et al.

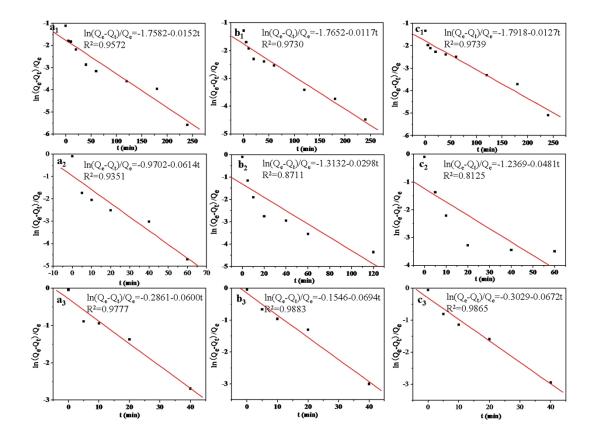


Fig. S4 Liu et al.