

Continuous, strong, porous silk firoin-based aerogel fibers toward textile thermal insulation

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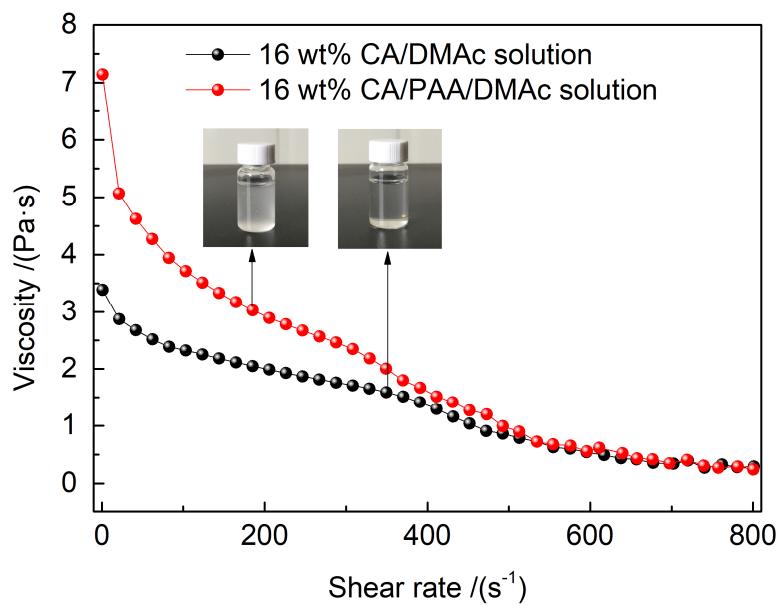


Figure. S1 Rheological curves of 16 wt. % CA/DMAc solution and 16 wt. % CA/PAA/DMAc solution.

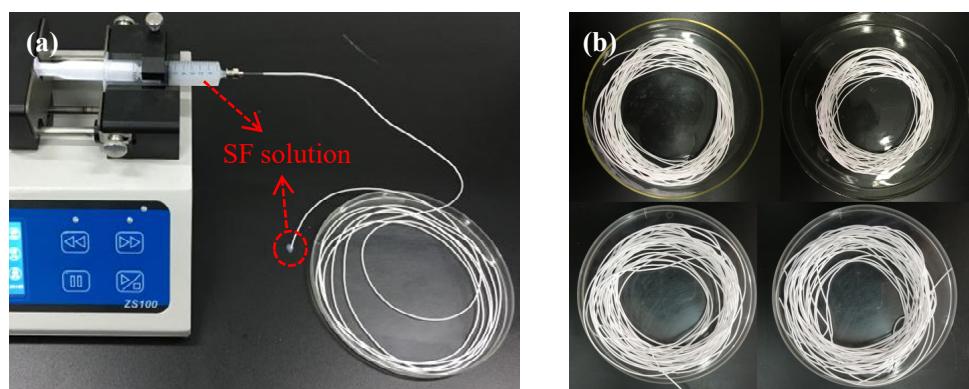


Figure. S2 (a) Filling aqueous SF solution (1.4 wt. %) into a 3 m-length CA/PAA hollow fiber. (b) CA/PAA hollow fibers containing SF solution following freezing and freeze drying.

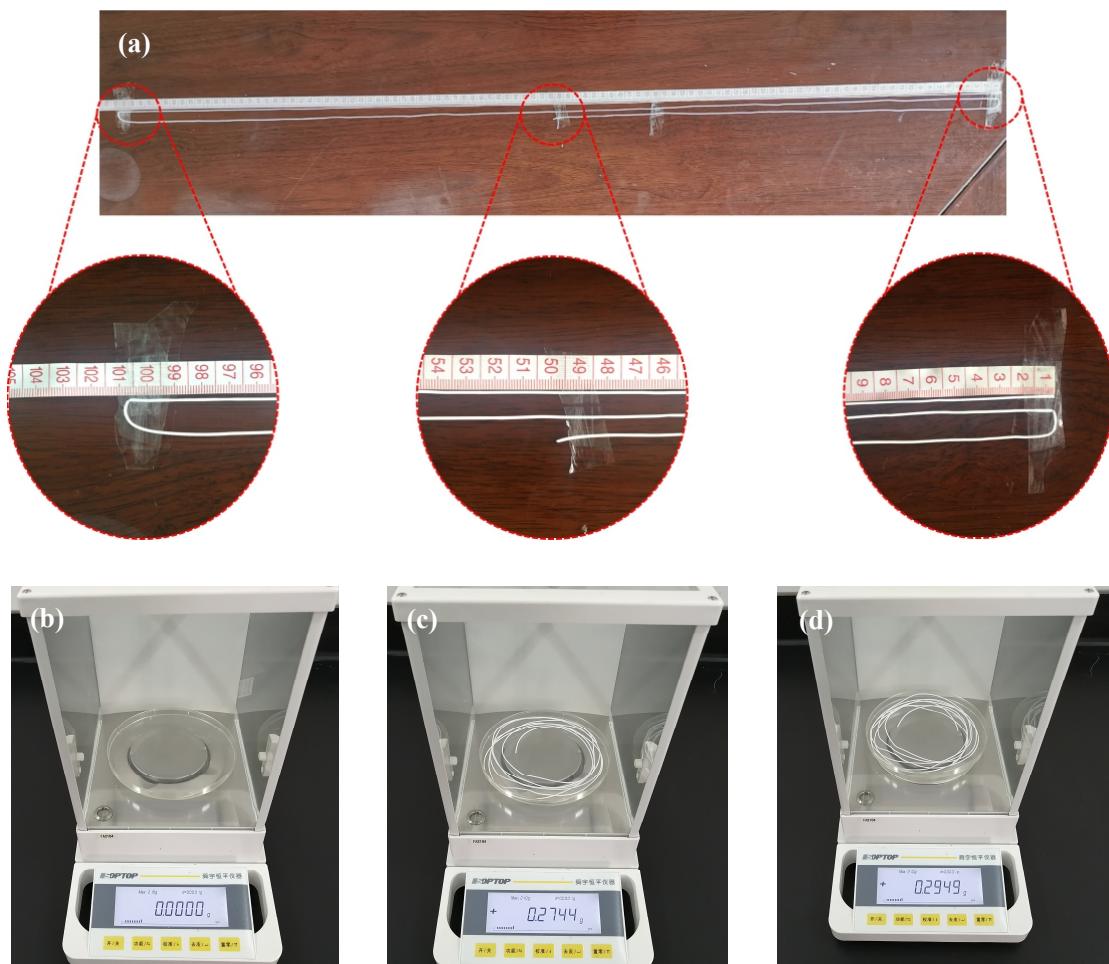


Figure S3. The length and weight CA/PAA hollow fibers and CA/PAA-wrapped SF aerogel fibers. (a) both are c.a 2.50 m length; (b-d) The weight of hollow fiber and aerogel fiber are 0.2744 g and 0.2949 g, respectively.

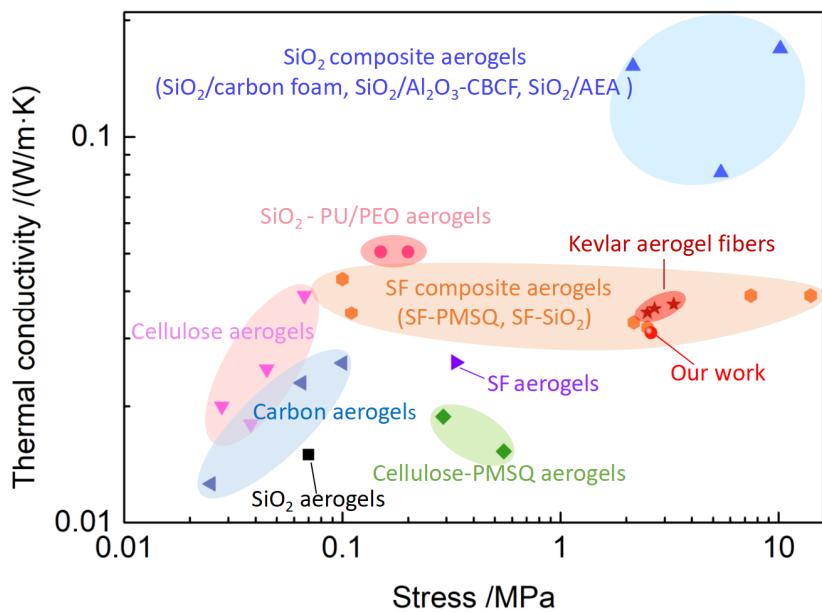


Figure S4. Thermal conductivity versus strength for the CA/PAA-wrapped SF aerogel fiber and other aerogel-based thermal insulating materials, including SiO_2 and SiO_2 -based aerogels [1-6], nanocellulose and nanocellulose-based aerogels [7,8], carbon aerogels [9-11], SF and SF-based aerogels [12,13], Kevlar aerogel fiber [14].

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