Electrical Supplementary Information for

Silica nanofibrous membranes with ultra-softness and enhanced tensile strength for thermal insulation

Yinsong Si,‡[a,b] Xue Mao,‡[b,c] Hongxia Zheng,[a] Jianyong Yu,[b] and Bin Ding*[a,b]

[a] *Key Laboratory of Textile Science & Technology, Ministry of Education, College of Textiles, Donghua University, Shanghai 201620, China*

[b] *Nanomaterials Research Center, Modern Textile Institute, Donghua University, Shanghai 200051, China*

[c] *State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, College of Materials Science and Engineering, Donghua University, Shanghai 201620, China*

* *Corresponding author. E-mail: binding@dhu.edu.cn; Phone: +86-21-62378202; Fax: +86-21-62378202*

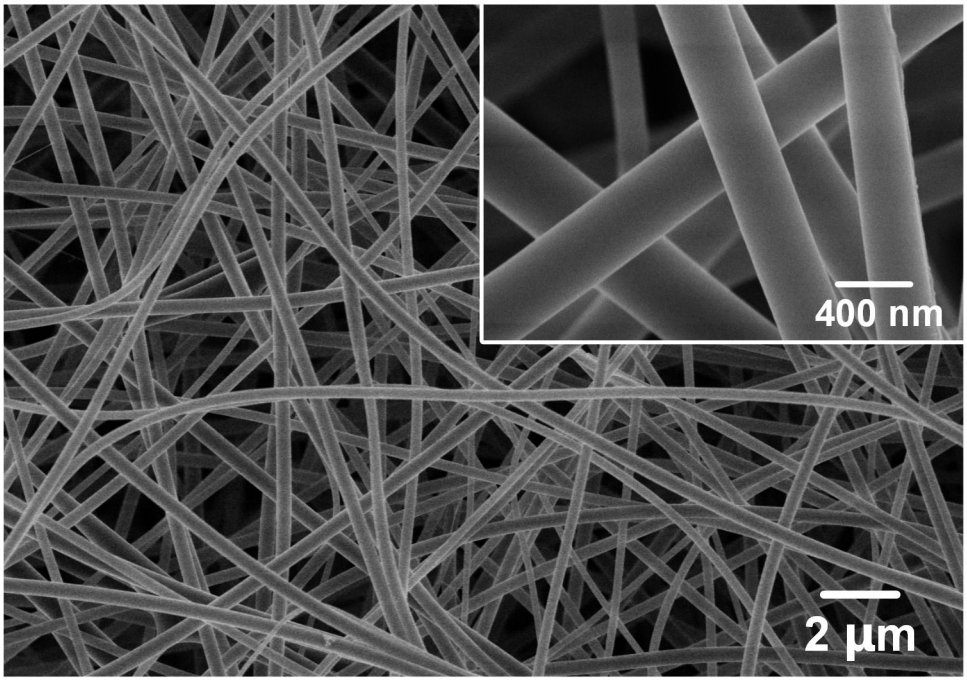

Fig. S1 FE-SEM image of electropun precursor nanofibrous membranes.

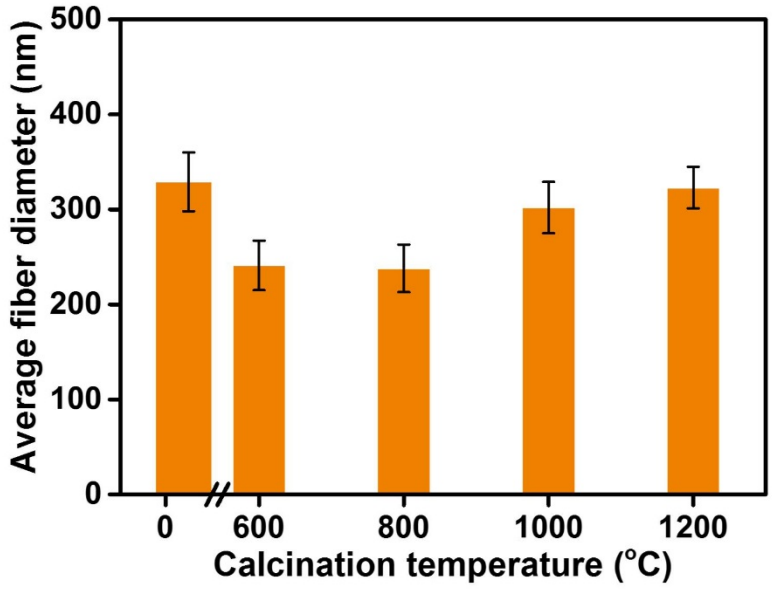

Fig. S2 The average diameter of electropun precursor nanofibers and silica nanofibers with various calcination temperatures of 600, 800, 1000, and 1200 °C.

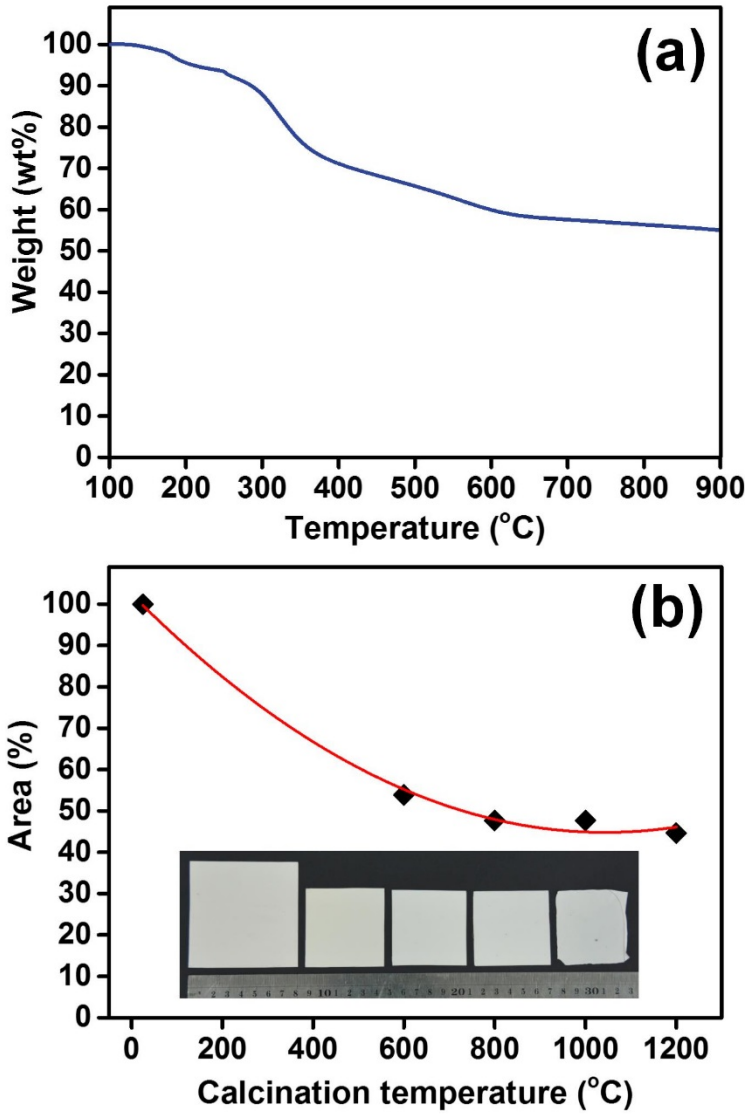

Fig. S3 (a) Thermogravimetric analysis of precursor nanofibrous membranes. (b) The area of the membranes from precursor to SNF membranes with calcination temperatures of 600, 800, 1000, and 1200 °C, respectively. The inset is the optical images of the corresponding membranes.

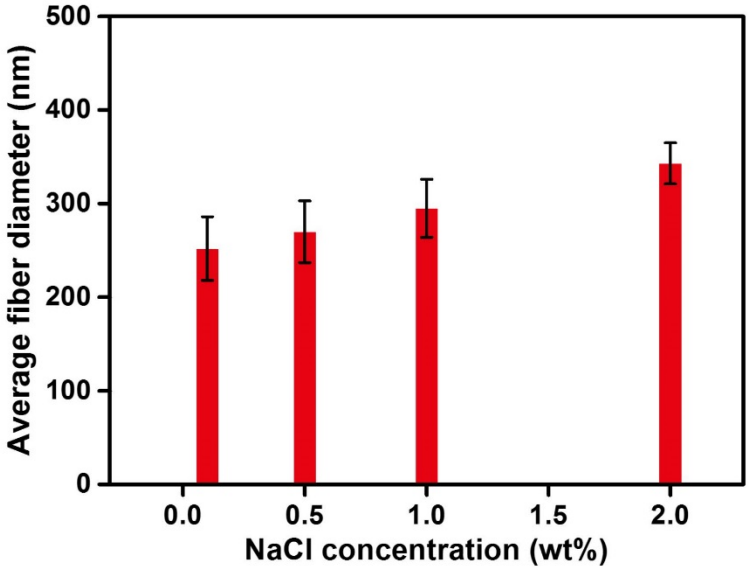

Fig. S4 The average diameter of the precursor nanofibers with various NaCl concentrations of 0.1, 0.5, 1, and 2 wt%.

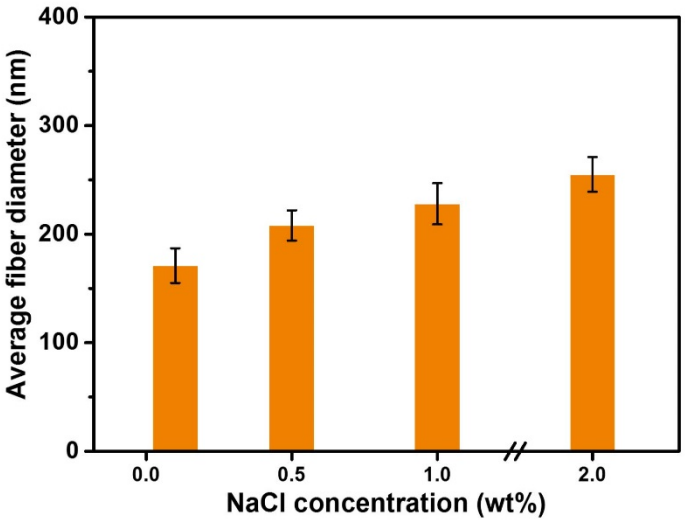

Fig. S5 The average diameter of silica nanofibers with various NaCl concentrations of 0.1, 0.5, 1, and 2 wt%.

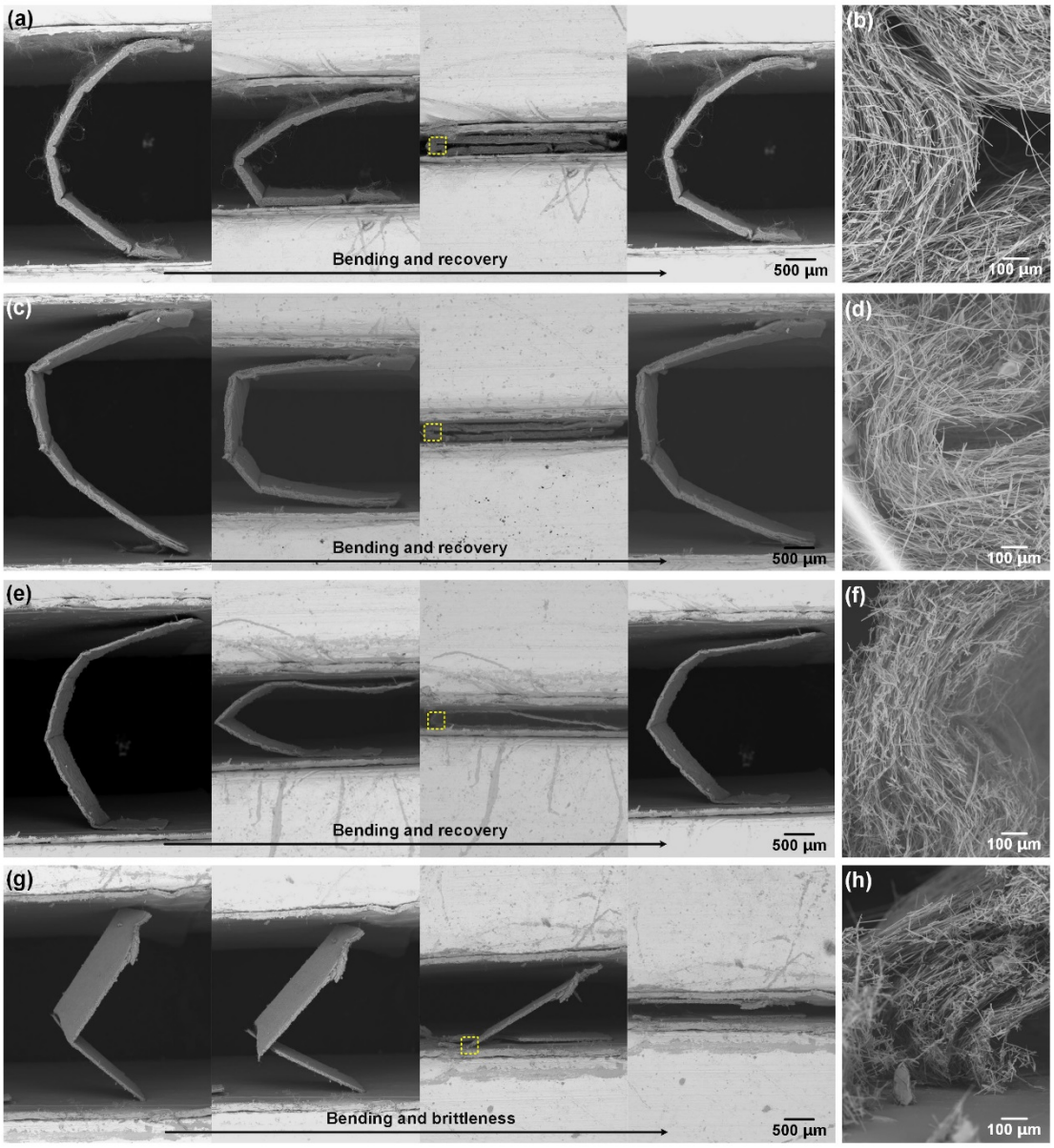

Fig. S6 SEM images of SNF membranes with various NaCl concentrations of (a) 0, (c) 0.1, (e) 0.5, and (g) 2 wt% during the bending process. (b), (d), (f), and (h) SEM images with higher magnification of the relevant membranes in the yellow dashed box, respectively.