

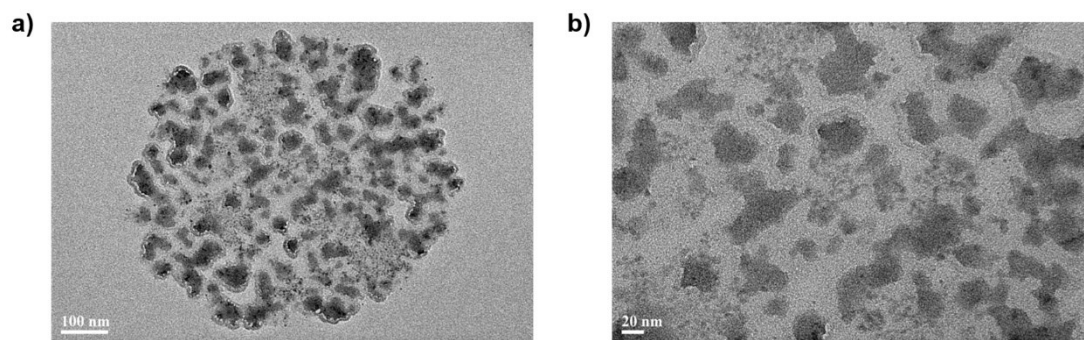
## Supporting Information

### **Flexible Bimodal Sensor Based on Electrospun Nanofibrous Structure for Simultaneous Pressure-Temperature Detection**

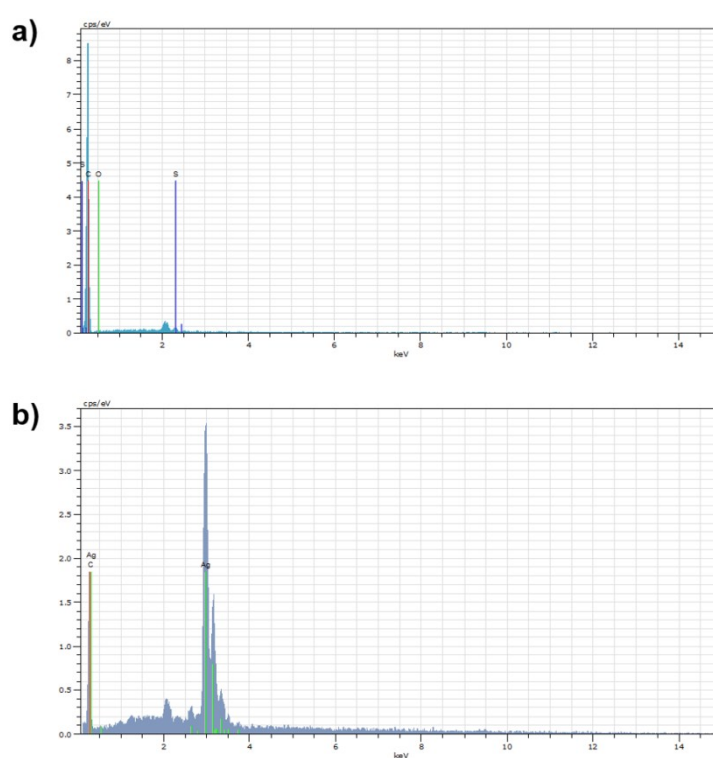
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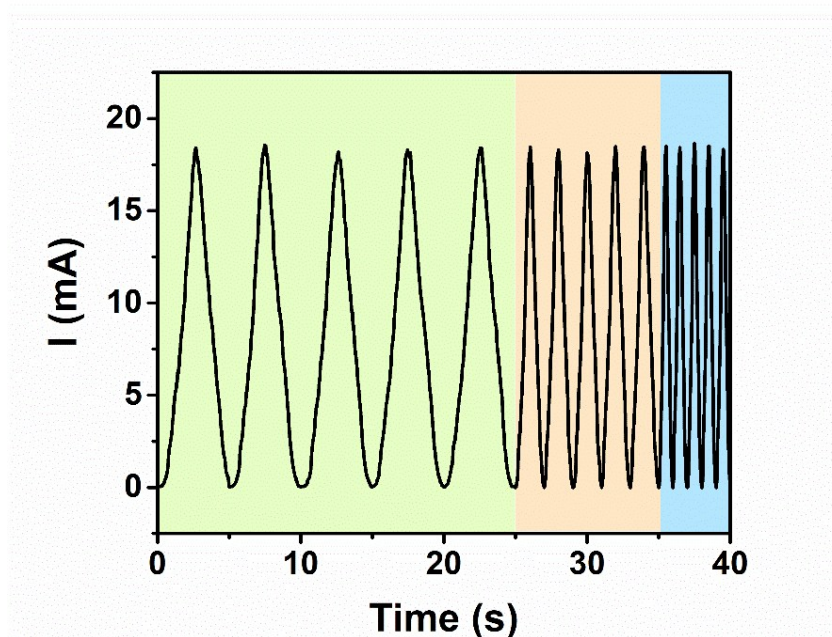
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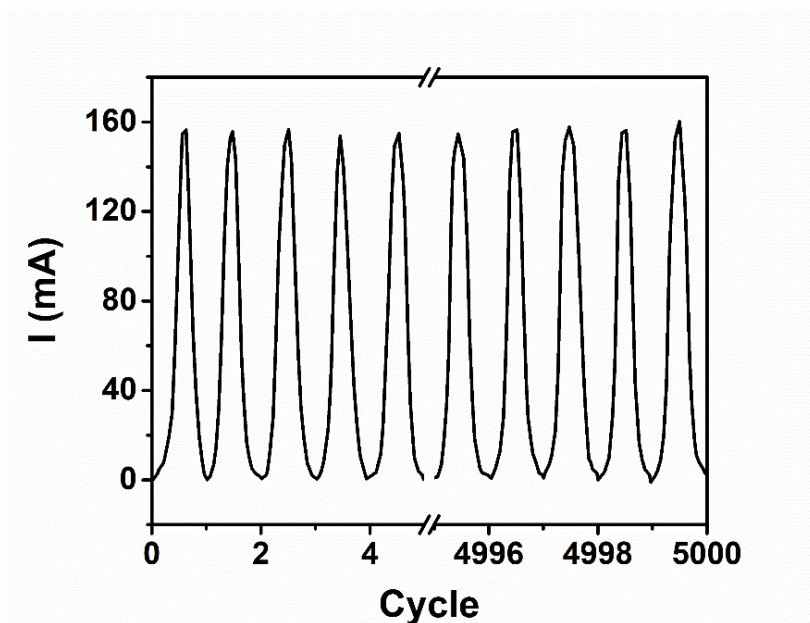
**Fig. S1** (a) Cross-section TEM image of AgNP@SBS composite fiber, (b) the magnified image.



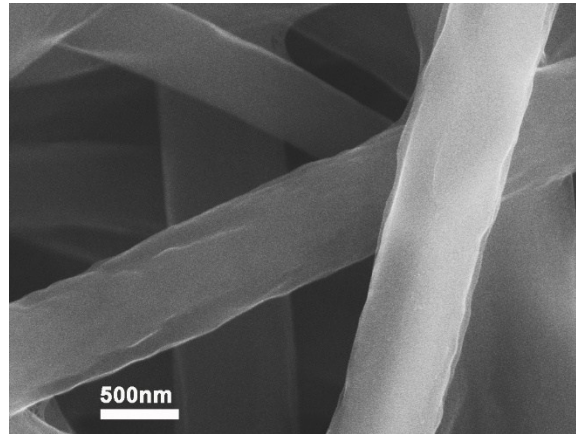
**Fig. S2** EDS spectrum of PEDOT@SBS fiber (a) and AgNP@SBS fiber (b).



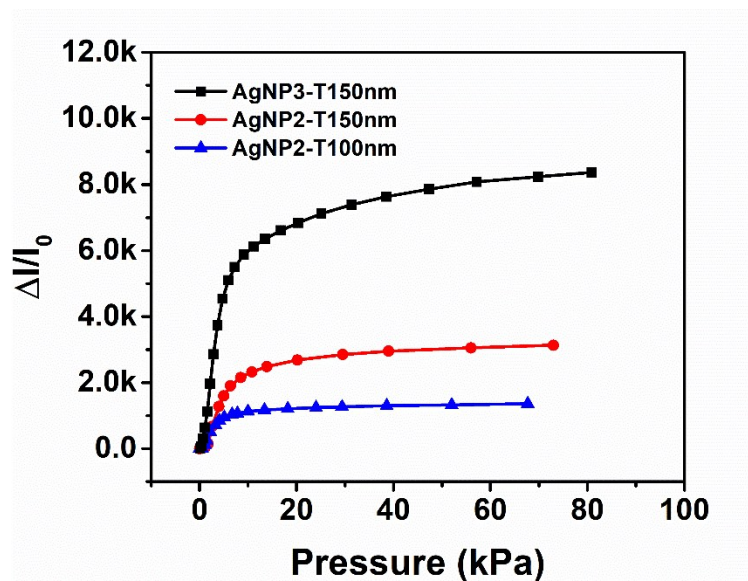
**Fig. S3** Current response at different frequencies.



**Fig. S4** Magnified curve of current response in cyclic loading-unloading process.



**Fig. S5** SEM image of PEDOT:PSS/SBS composite fiber after 5000 cycles.



**Fig. S6** The normalized current variation versus pressure curve of the sensor with different AgNP density and nanofiber mat thickness; AgNP<sub>n</sub>: n is the number of deposition times, and T represents thickness of nanofiber mat.

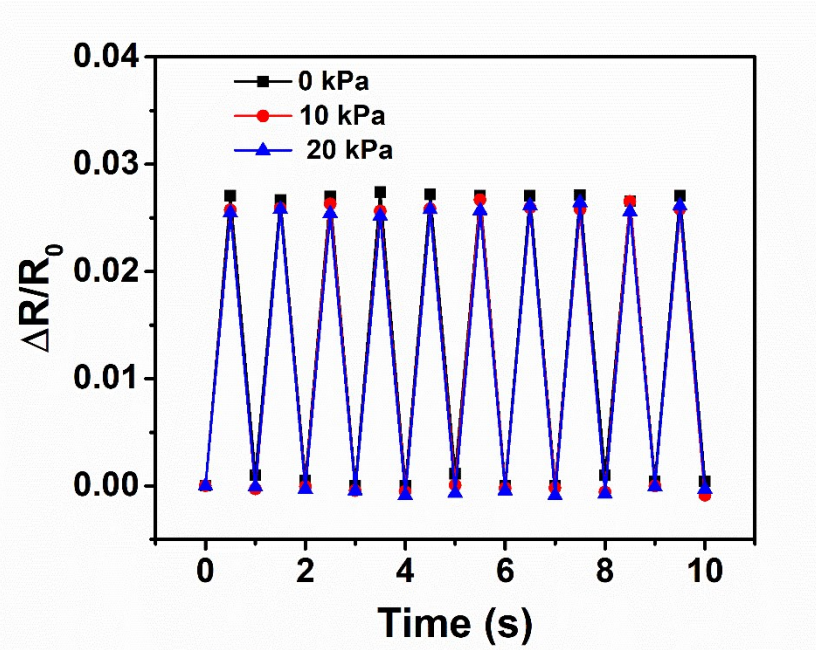
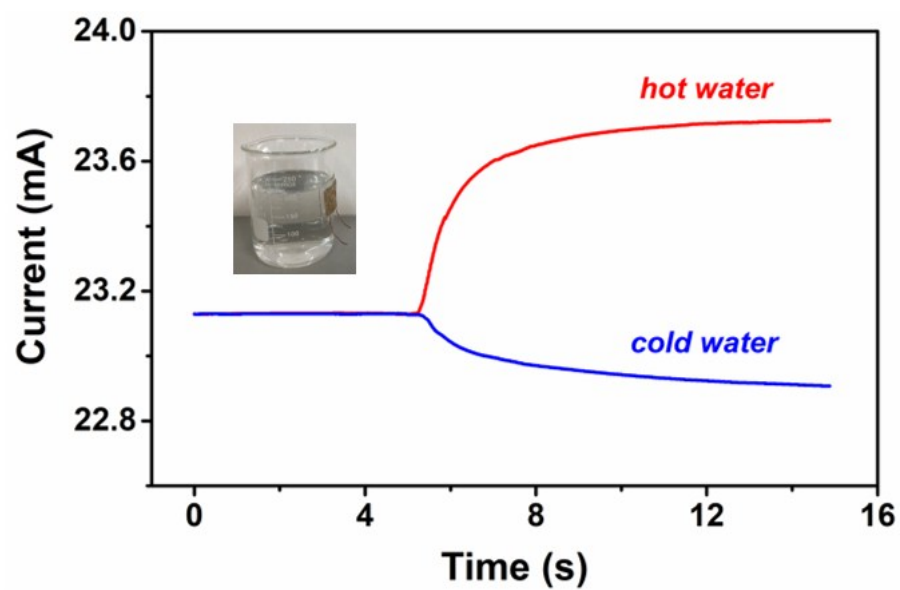


Fig. S7 Temperature response curve under different pressure loadings.



**Fig. S8** Real-time response to temperature change of the bimodal sensor attached on beaker.