

Supporting Information

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

Zhihui Wang, Ling Zhang, Jin Liu, Chunzhong Li**

Key Laboratory for Ultrafine Materials of Ministry of Education, Shanghai Engineering Research Center of Hierarchical Nanomaterials, School of Materials Science and Engineering, East China University of Science & Technology, Shanghai 200237, China.

E-mail: zlingzi@ecust.edu.cn (L. Zhang), czli@ecust.edu.cn (C. Li). Tel: +86-21-64252055, Fax: +86-21-64250624.

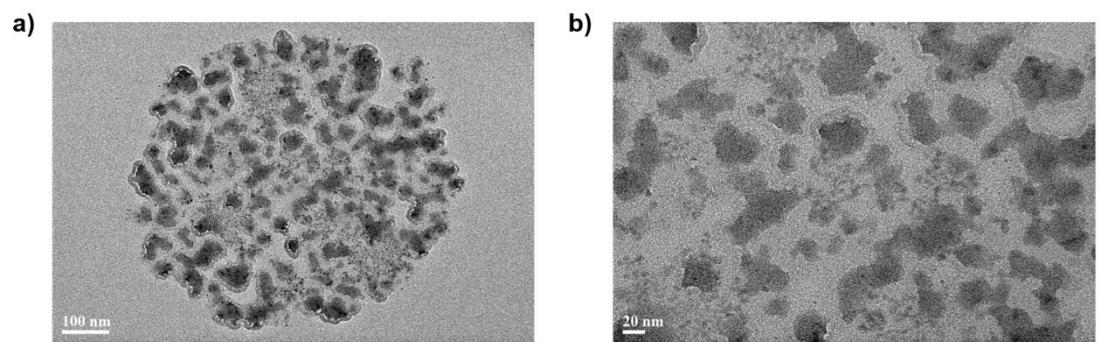


Fig. S1 (a) Cross-section TEM image of AgNP@SBS composite fiber, (b) the magnified image.

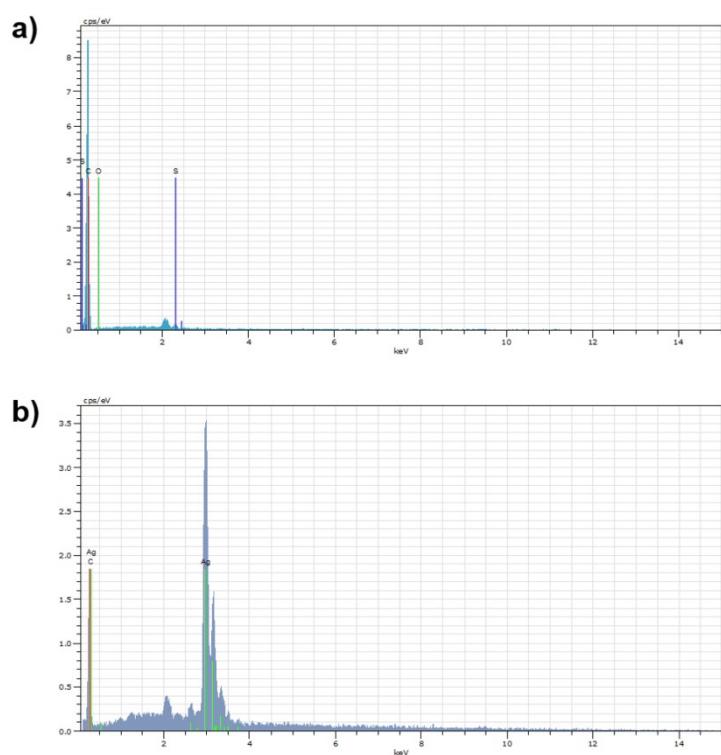


Fig. S2 EDS spectrum of PEDOT@SBS fiber (a) and AgNP@SBS fiber (b).

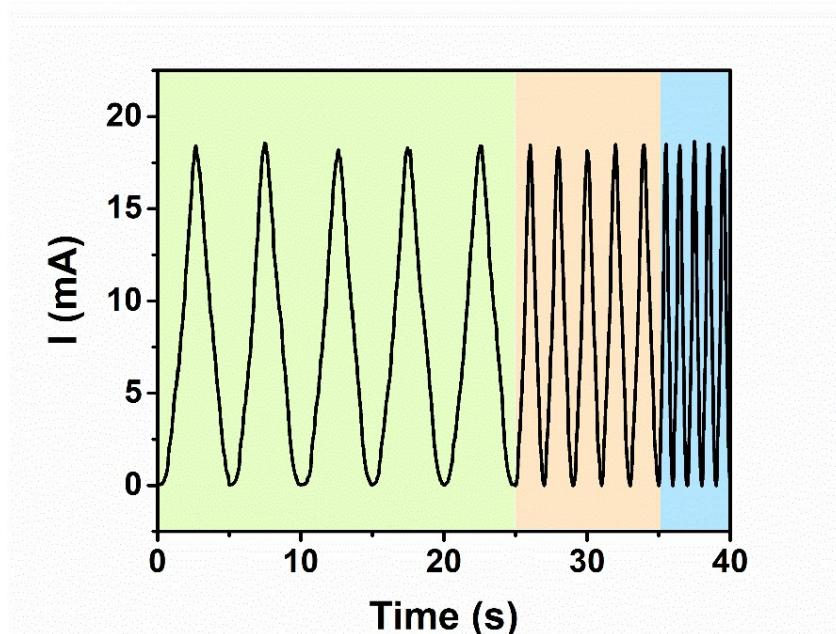


Fig. S3 Current response at different frequencies.

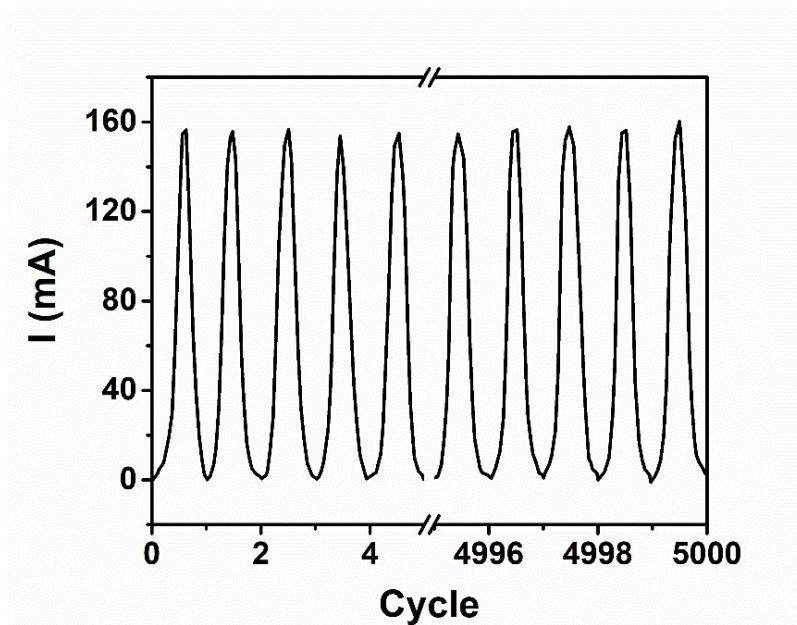


Fig. S4 Magnified curve of current response in cyclic loading-unloading process.

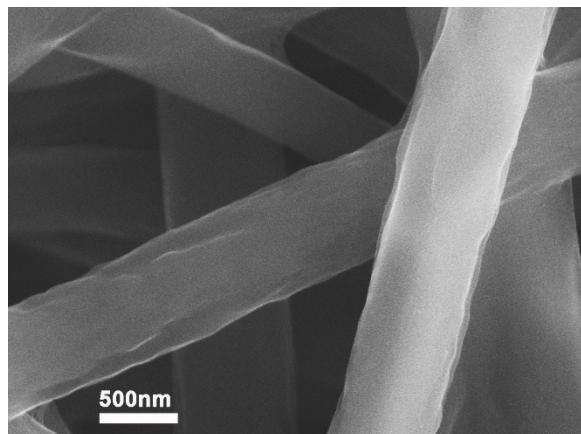


Fig. S5 SEM image of PEDOT:PSS/SBS composite fiber after 5000 cycles.

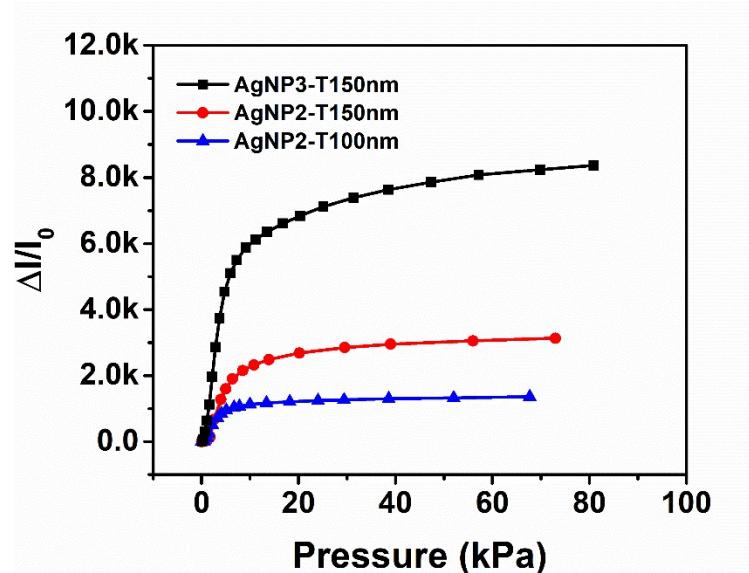


Fig. S6 The normalized current variation versus pressure curve of the sensor with different AgNP density and nanofiber mat thickness; AgNPn: n is the number of deposition times, and T represents thickness of nanofiber mat.

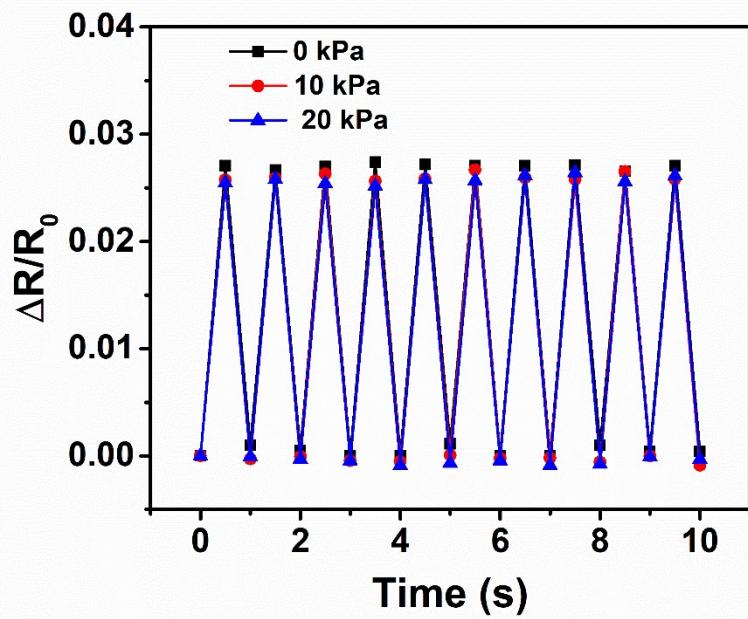


Fig. S7 Temperature response curve under different pressure loadings.

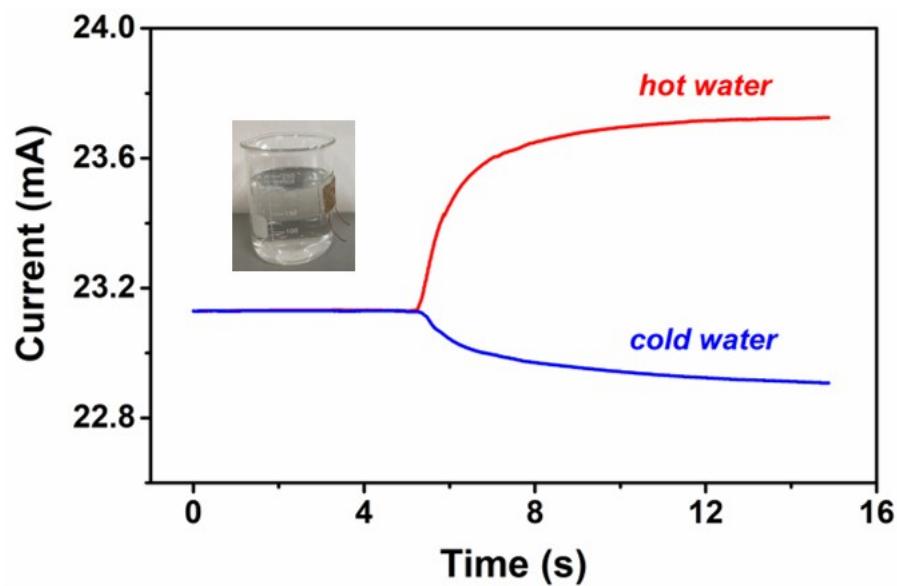


Fig. S8 Real-time response to temperature change of the bimodal sensor attached on beaker.