Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

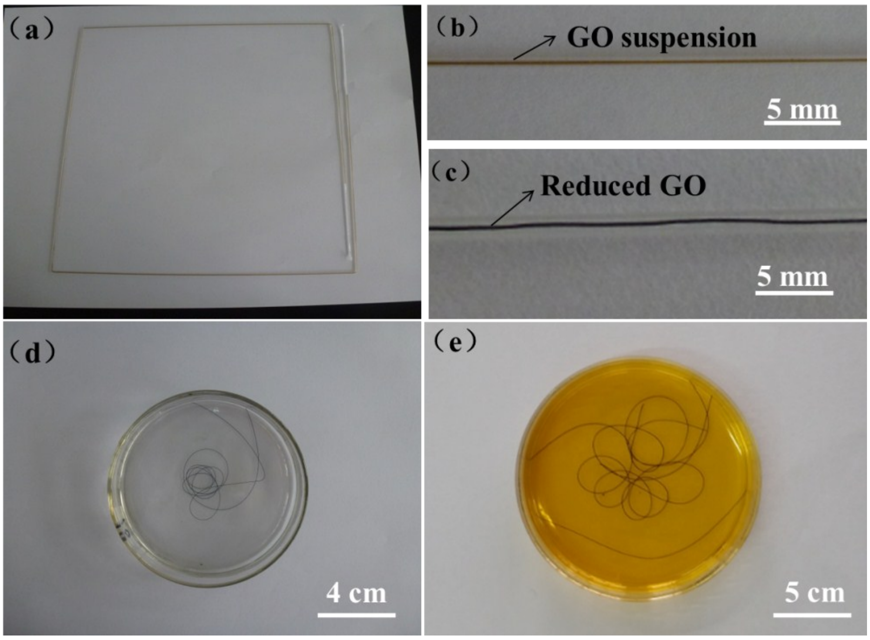

Fig. S1 (a) GO suspension in a 1.4 m long glass pipeline sealed the two ends. (b, c) 8 mg/mL GO suspension in glass pipeline before (b) and after (c) heating. (d) The released GFs in water. (e) GFs in PEDOT/$FeCl_3$/ethanol solution.

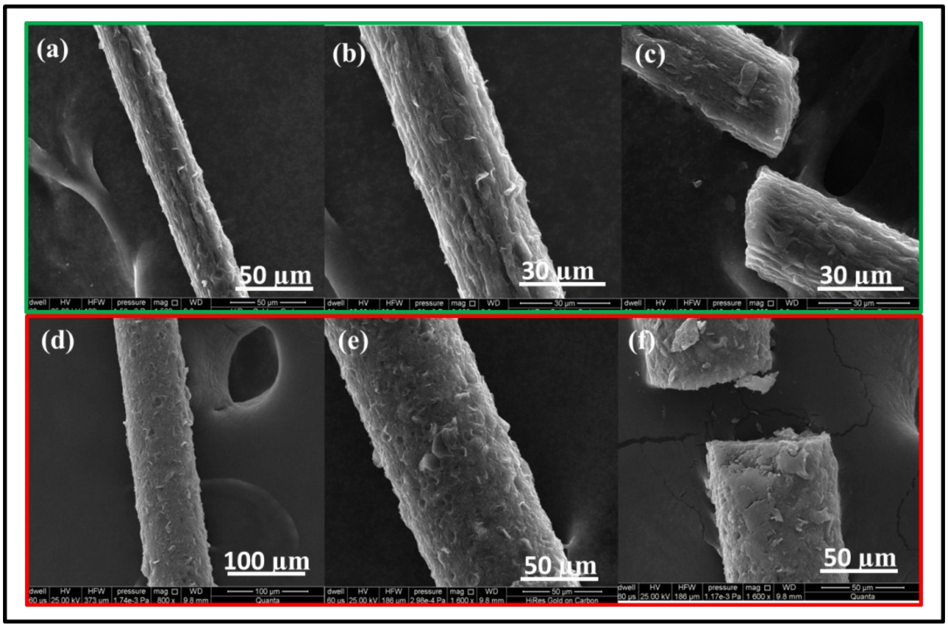

Fig. S2 (a, b) SEM images of GF, which clearly showed that their surfaces are wrinkled. (d, e) SEM images of GF@PEDOT, which clearly showed that their surfaces become uniform after coating conductive polymer. (c and f) are the SEM images of broken GF and GF@PEDOT, respectively. There are some PEDOT debris in f, indicating the PEDOT shell coated on the surface of GF.

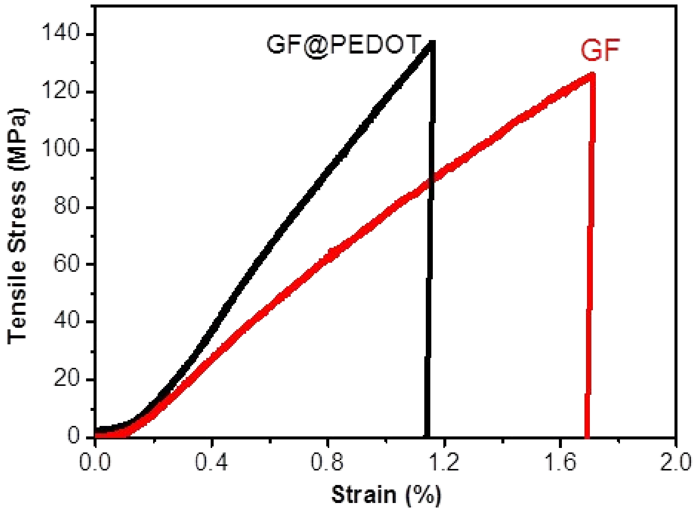

Fig. S3 Typical stress-strain curves of pure GF and GF@PEDOT. The tensile stress were calculated on the basis of the diameter of GF and GF@PEDOT, respectively.

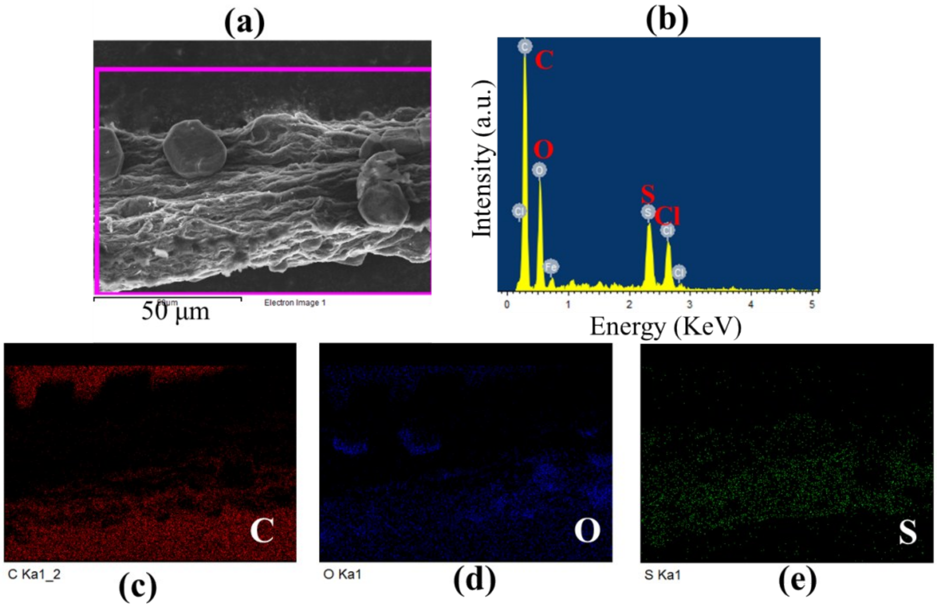

Fig. S4 (a) SEM image of GF@PEDOT. (b) The EDS of the GF@PEDOT. Corresponding EDS mapping of C element (c), O element (d) and S element (e).

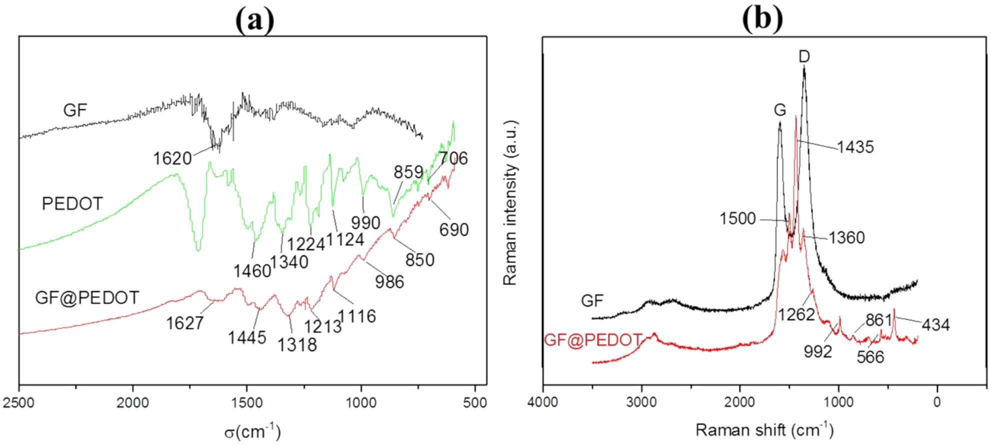

Fig. S5 (a) FT-IR spectra of GFs, PEDOT and GF@PEDOT. (b) Raman spectra of GFs and GF@PEDOT.

Table S1. Raman results (cm^{-1}) of GF@PEDOT in this work compared with reference results.[S1]

this work	**Reference**	
1500	1506	C=C antisymmetric stretching in plane modes
1435	1435	C=C Symmetric stretching in plane modes
1360	1369	C–C stretching in plane modes
1262	1267	C–C inter-ring stretching in plane modes
992	989	Oxyethylene ring deformation
861	850	O–C–C deformatio
566	574	C–O–C deformation
434	440	C–O–C deformation

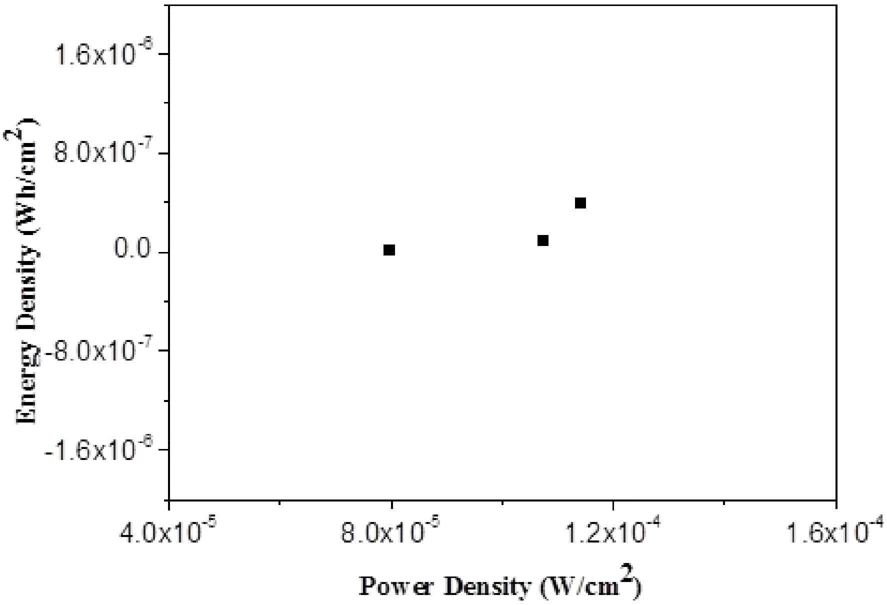

Fig. S6 Ragone plot of the GF@PEDOT fiber supercapacitor. Galvanostatic charge/discharge current density in 0.53 mA/cm^2-1.06 mA/cm^2.

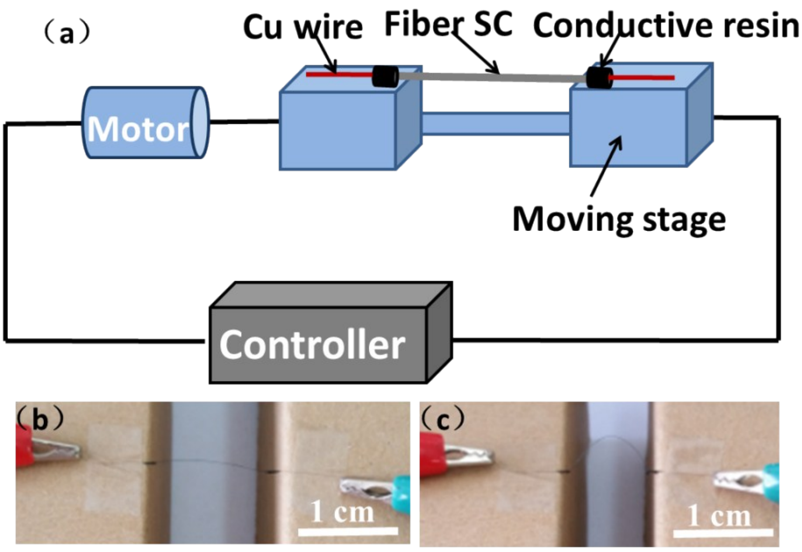

Fig. S7 (a) Schematic illustration of fiber SC for bending test. The two ends of the fiber SC are stabilized on the moving stages and connected with electrodes by Cu wire. (b, c) Photos of a 1 cm fiber SC at straight and bending status.

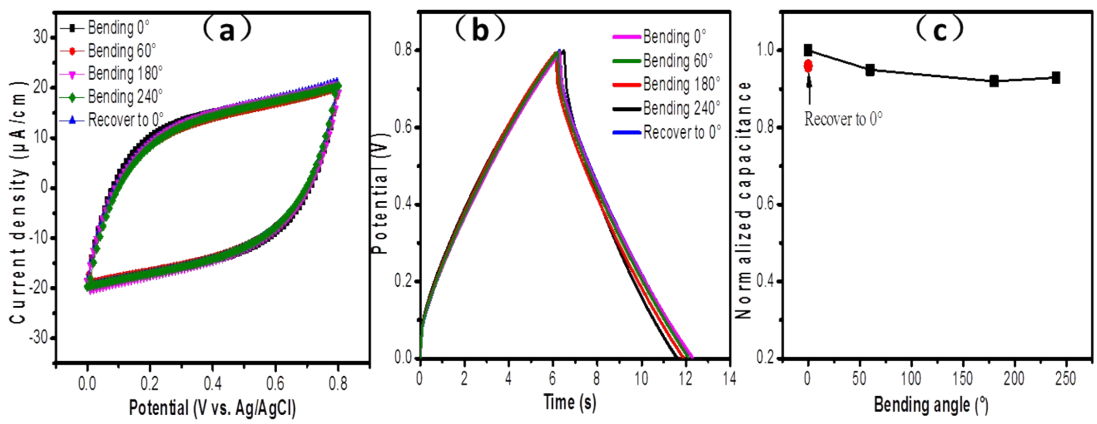

Fig. S8 The electrochemical performance of a 1.5 cm long fiber SC at different bending angles of 0°, 60°, 180°, 240° and recover to 0°. (a,b) CV and charge-discharge curves of this fiber SC. The scan rate in (a) is 15 mV/s. The current density in (b) is 0.85 mA/cm^2. (c) Normalized capacitance values versus bending angle. The capacitance slightly decreased as the bending angle increasing and then basically maintained at about 90% of the initial value. When the bending fiber SC is recovered to 0°, the capacitance is almost back to its initial value.

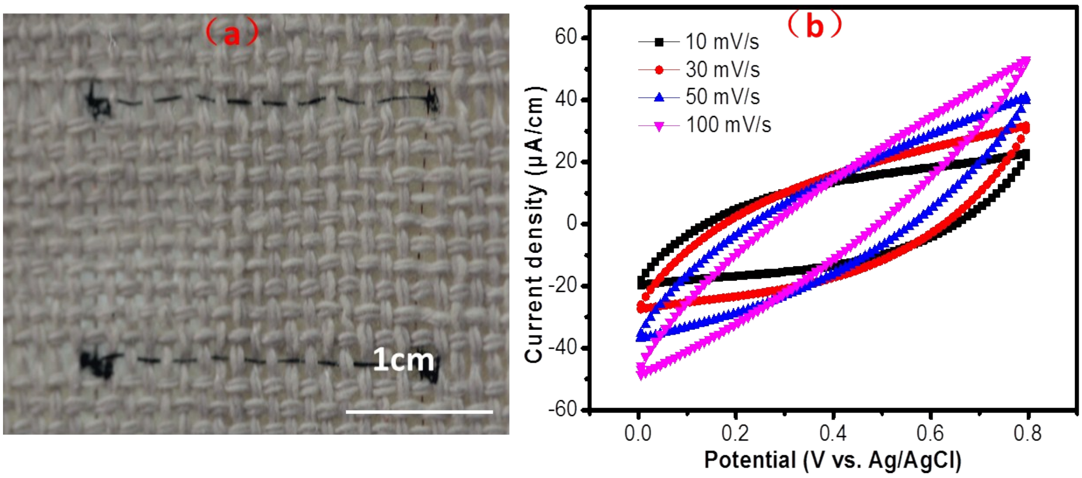

Fig. S9 (a) Photo of the textile embedded with two fiber SCs. (b) CV curves of these two fiber SCs tested by Cu wire as the connecting electrodes.

S1 L. Jin, T. Wang, Z. Q. Feng, M. K. Leach, J. H. Wu, S. J. Mog and Q. Jiang, *J. Mater. Chem. B* 2013, **1**, 1818.