

Supplementary Information

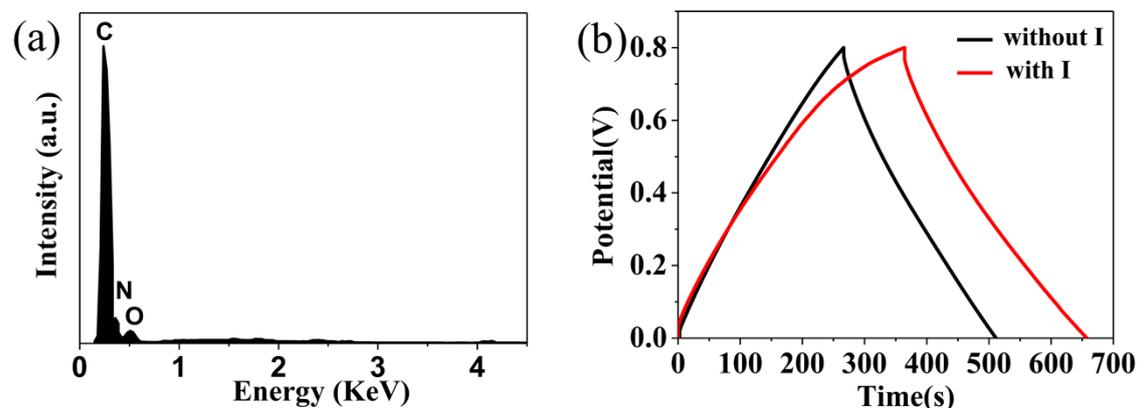


Fig. S1 (a) Energy-dispersive spectrometry (EDS) spectrum of the *iodine-free* G/PPy fiber. (b) Charge-discharge curves of the fibers with (red) and without (black) I at a current density of 0.24 mA/cm² in the two electrode system with the H₂SO₄-PVA gel polyelectrolyte.

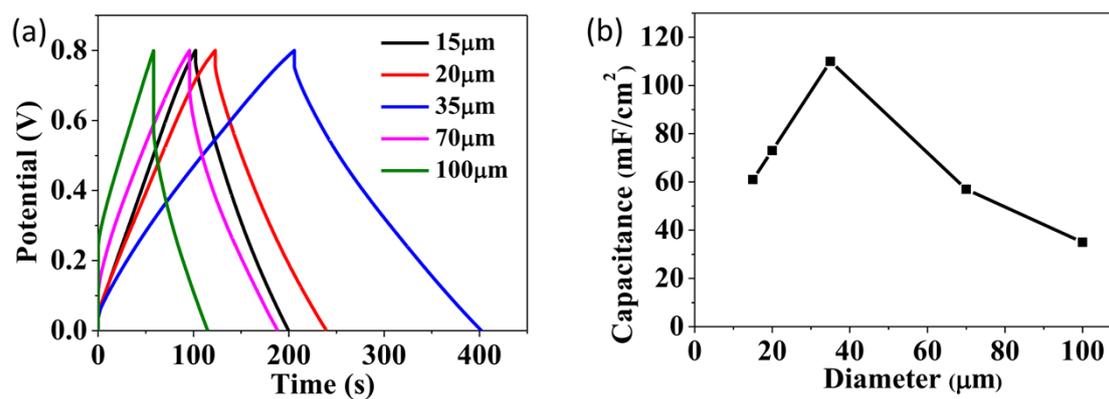


Fig. S2 (a) The charge-discharge curves of the G/PPy fibers with different diameters of 15 to 100 μm at a current density of 0.5 mA/cm² in the two-electrode system with the H₂SO₄-PVA gel polyelectrolyte, respectively. (b) The corresponding capacitances of the G/PPy fibers with different diameters of 15 to 100 μm, respectively.

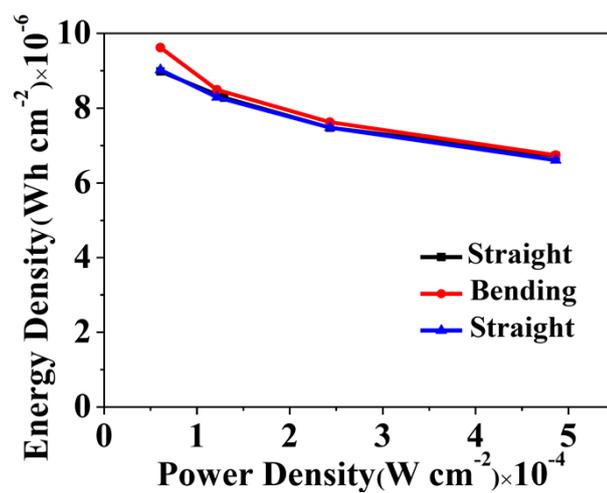


Fig. S3 Ragone plot of the supercapacitor based on G/PPy fibers of 35 μm in diameter in straight and bending states.

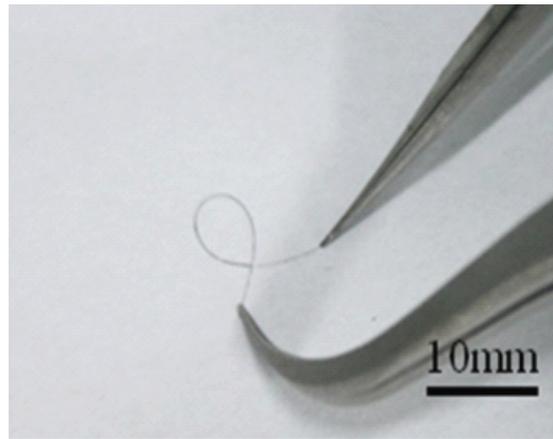


Fig S4. The photo of a distorted G/PPy fiber supercapacitor.