Supplementary Information

Aligned P(VDF-TrFE) Nanofibers for Enhanced Piezoelectric Directional Strain Sensing

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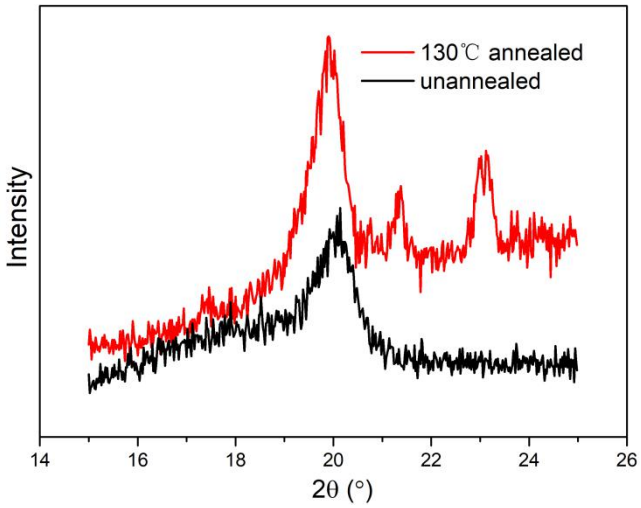

Fig. S1. XRD analysis results of spin-coating P(VDF-TrFE) films, indicate that annealing treatment contributes to the formation of β-phase in spin-coating P(VDF-TrFE) film.

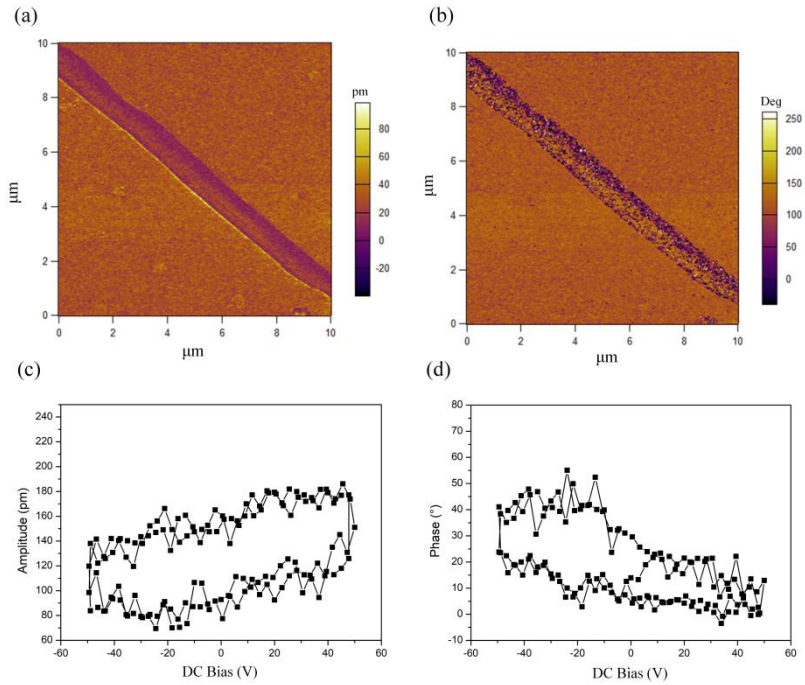

Fig. S2. PFM images of P(VDF-TrFE) nanofiber without annealing. (a) Out-of-plane PFM amplitude image and (b) PFM phase image of P(VDF-TrFE) nanofiber with 2 V driving voltage. (c) PFM amplitude and (d) PFM phase of the P(VDF-TrFE) film varying with the DC bias in single point measurements.

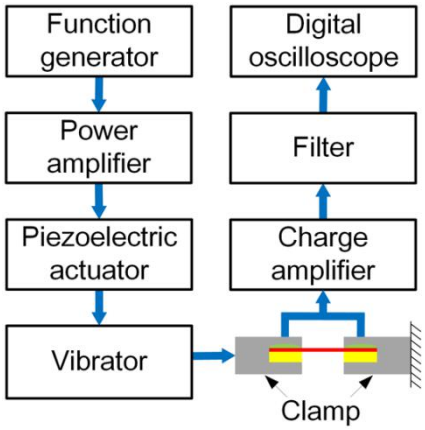

Fig. S3. Schematic illustration of the measurement setup for piezoelectric output in the nanofiber's longitudinal direction. The P(VDF-TrFE) nanofiber mat was fixed to a movable clamp that was driven by a piezoelectric vibrator. In order to drive the piezoelectric actuator, a power amplifier was used to amplify the signal from a function generator. The piezoelectric output charge was measured by a charge amplifier, and a low-pass filter was used for noise reduction.