Supplementary materials

Flexible and Stretchable Dual Modes Nanogenerator for Rehabilitation Monitoring and Information Interaction

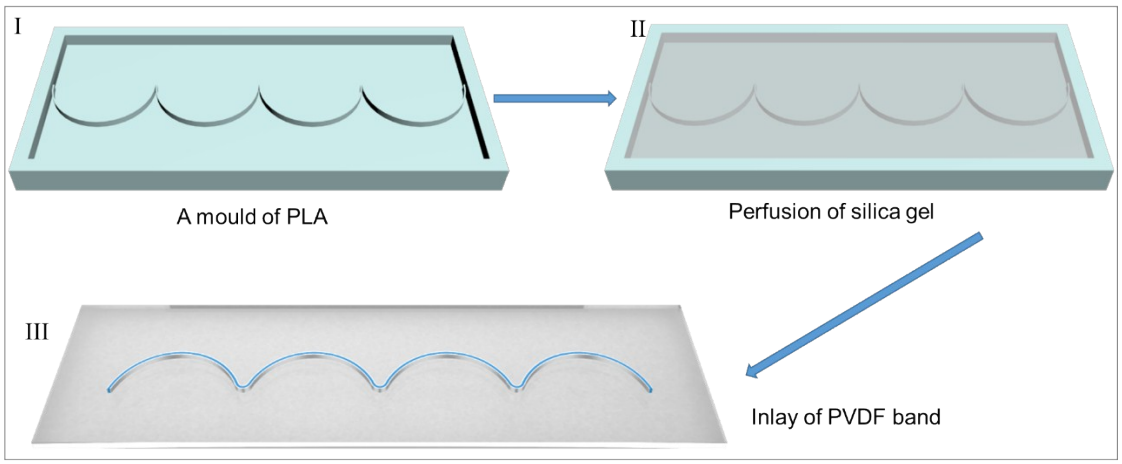

Fig S1. The fabrication process of the FSDM-NG.

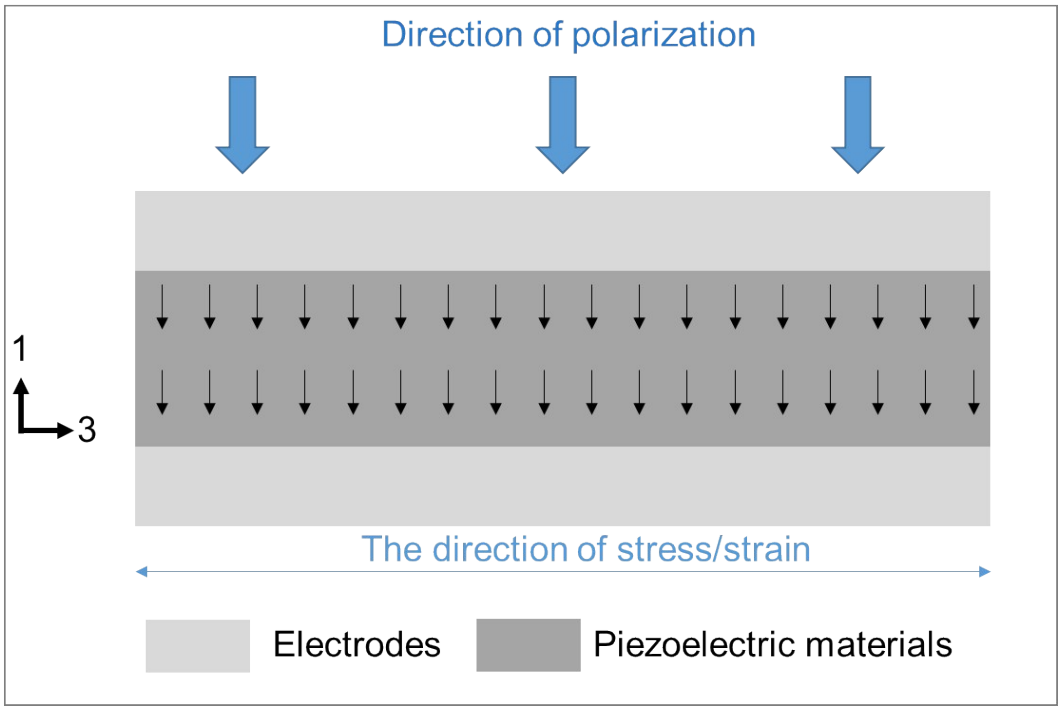

Fig S2. The schematic diagram for d_{31} mode of piezoelectric nanogenerator.

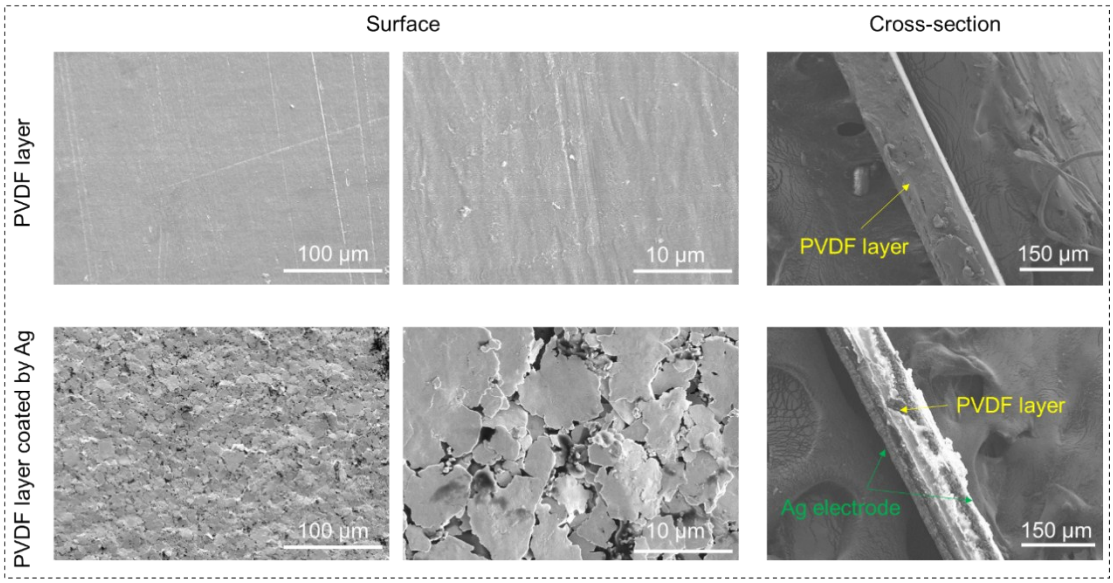

Fig S3. The SEM images for the surface and cross-section of PVDF layer with or without Ag electrode.

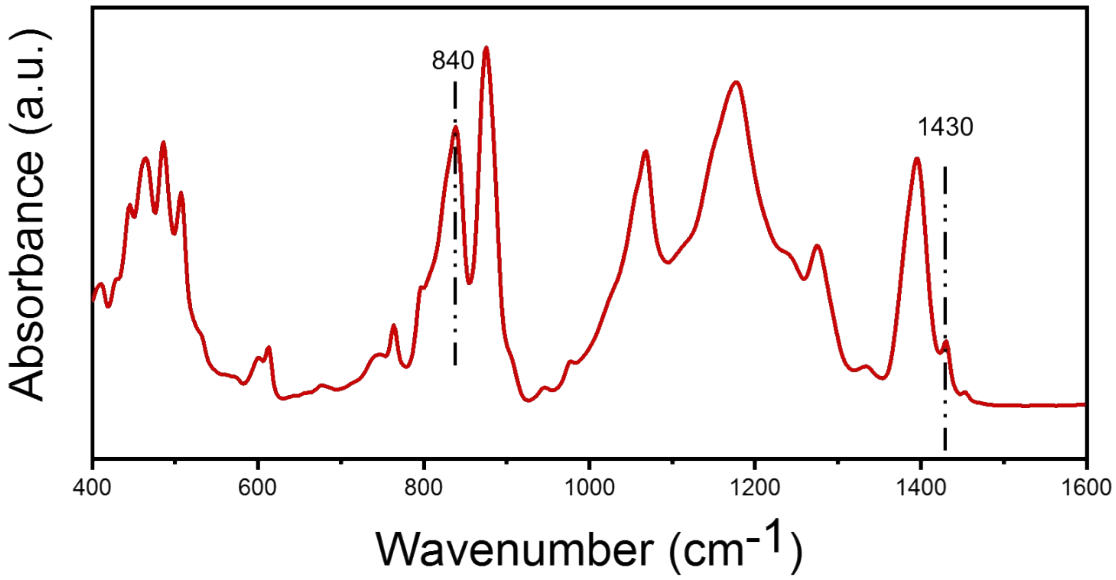

Fig S4. Fourier transform infrared spectra of the PVDF layer.

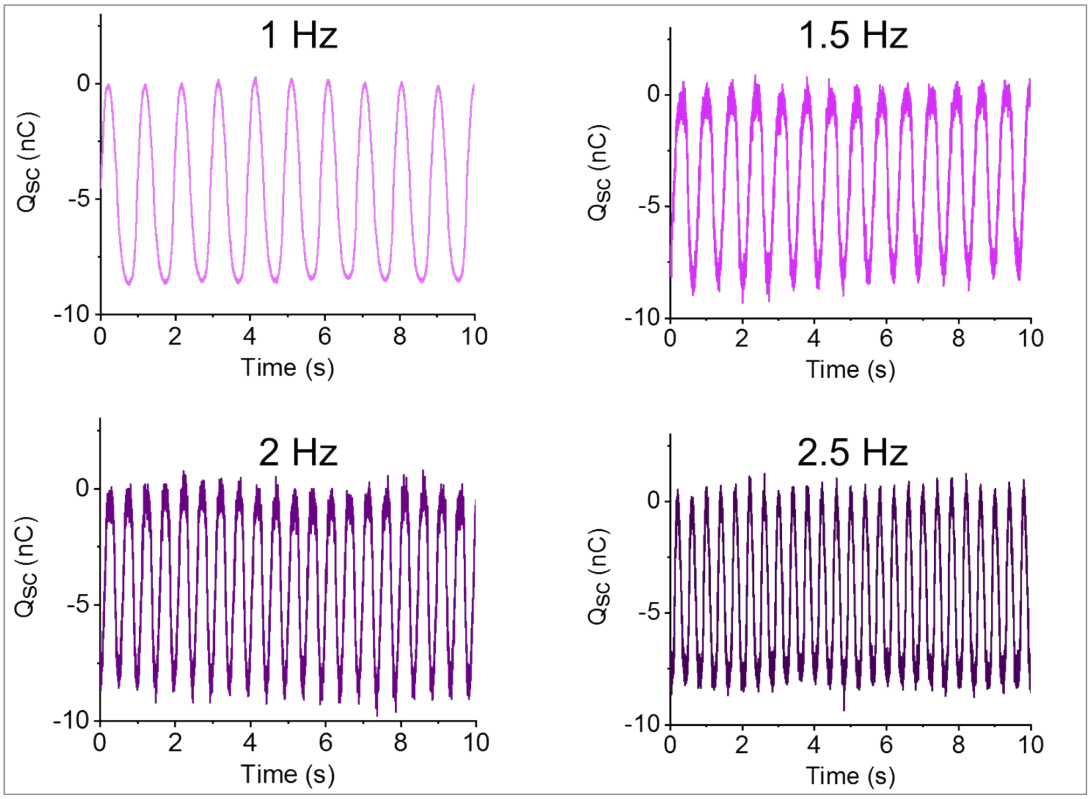

Fig S5. Q_{sc} of the FSDM-NG under different loading frequencies from 1 Hz to 2.5 Hz.

Table S1.Comparing the current density between the device and previously reported piezoelectric polymer-based nanogenerator.

References	Materials	Current density (nA cm^{-2})
This work	**PVDF**	**166.7**
52	hβ-PVDF	145
53	P(VDF-TrFE)	31.5
54	Fe-RGO/PVDF)	42.2
55	P(VDF-TrFE)	30
42	PVDF	64
56	P(VDF-TrFE)	83

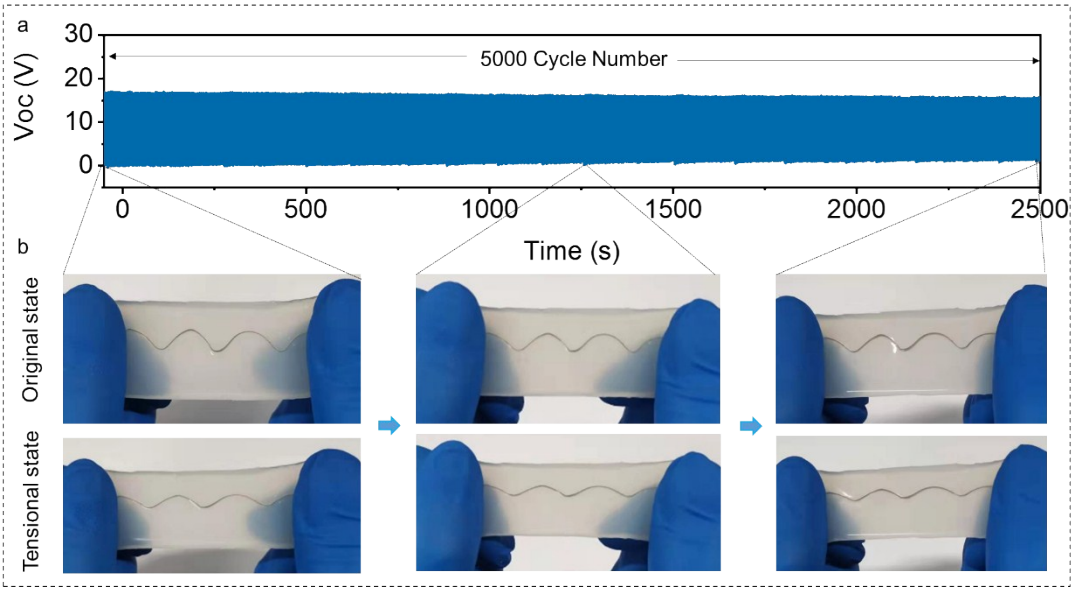

Fig S6. Durability test of the device. (a) Voc of the device that lasted for ~5000 cycles stretched by a linear motor at 2 Hz. (b) the surface of device after durability test at different times.

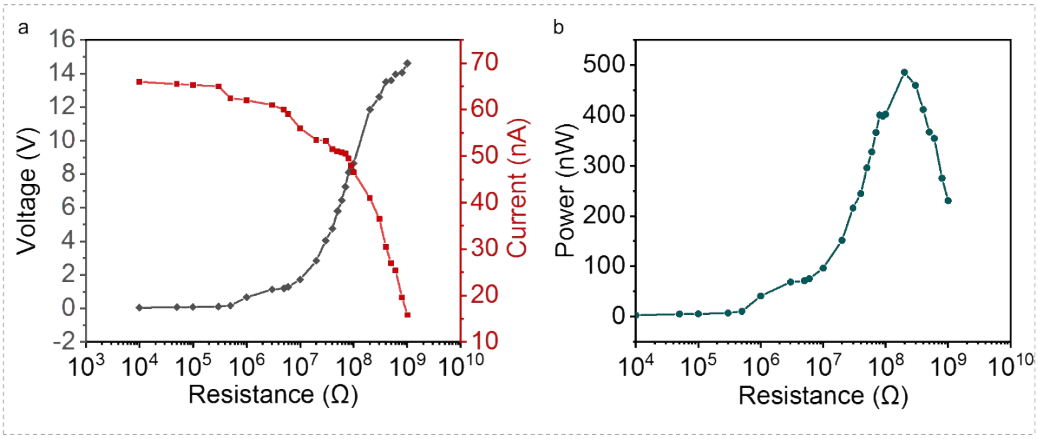

Fig S7. Characterization of output performance of the device with load resistances. (a) Voltage and current of the device at different load resistances. (b) Output power of the device at different load resistances

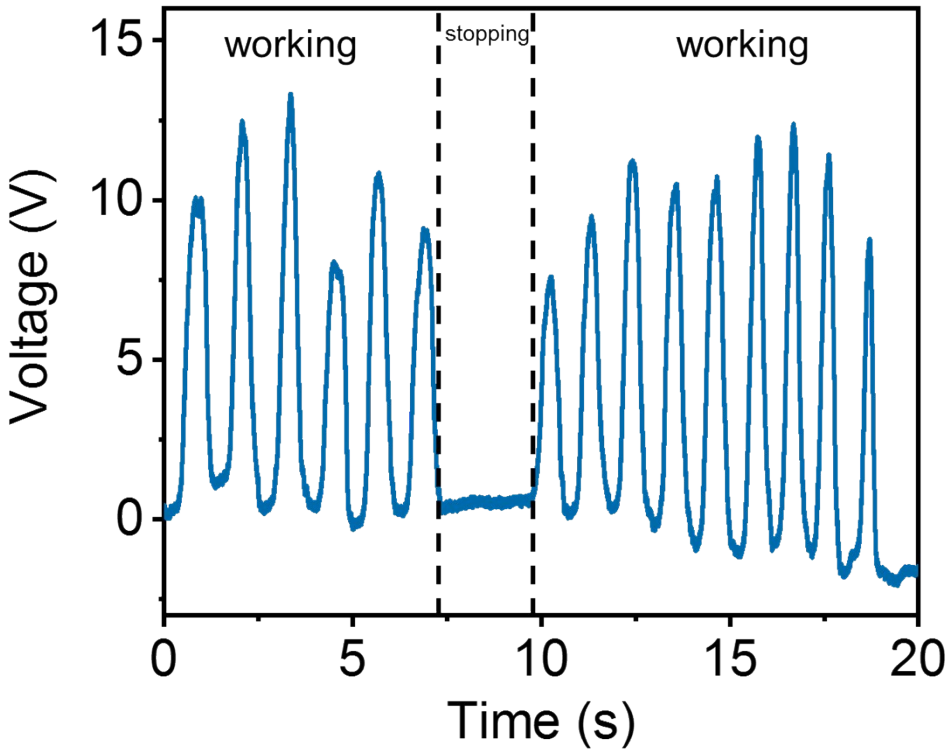

Fig S8. Output performance of the FDDM-NG under water.

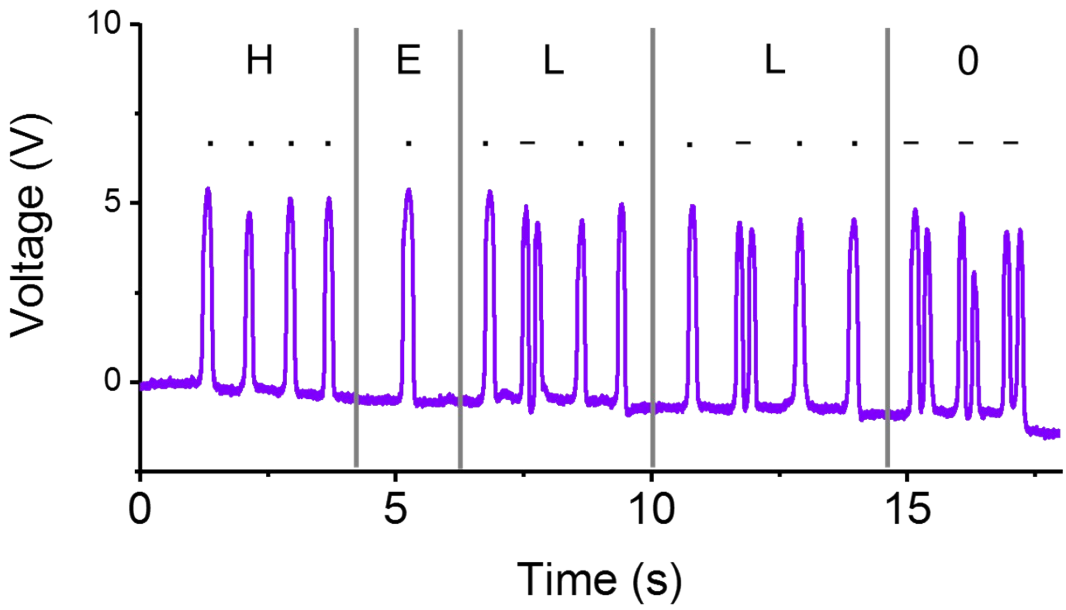

Fig S9. The word “HELLO” encoded by the voltage signal from the FSDM-NG.