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RESEARCH ARTICLE

PVDF/AgNP/MXene composites-based near-field electrospun fiber with enhanced piezoelectric performance for self-powered wearable sensors

Supplementary File

Table S1. Mechanical properties

Material	Tensile strength (MPa)	Young's modulus (MPa)	Toughness (MJ/mm^3)	Strain of failure (%)
PVDF	2.6	110	0.0900	2.5
PVDF/Mxene	8.37	376	2.993	9.1
PVDF/Mxene/AgNP	10.23	311	8.634	11.3

Table S2. Tabulated presentation of d_{33} values of several materials

Material	d_{33} (pC/N)	References
Commercial PVDF film	28–32	[7]
PVDF	20	[2]
PVDF/AgNP	27.1	[8]
PVDF/Mxene	43	[2]
PVDF/AgNP/Mxene	52.23	Present study

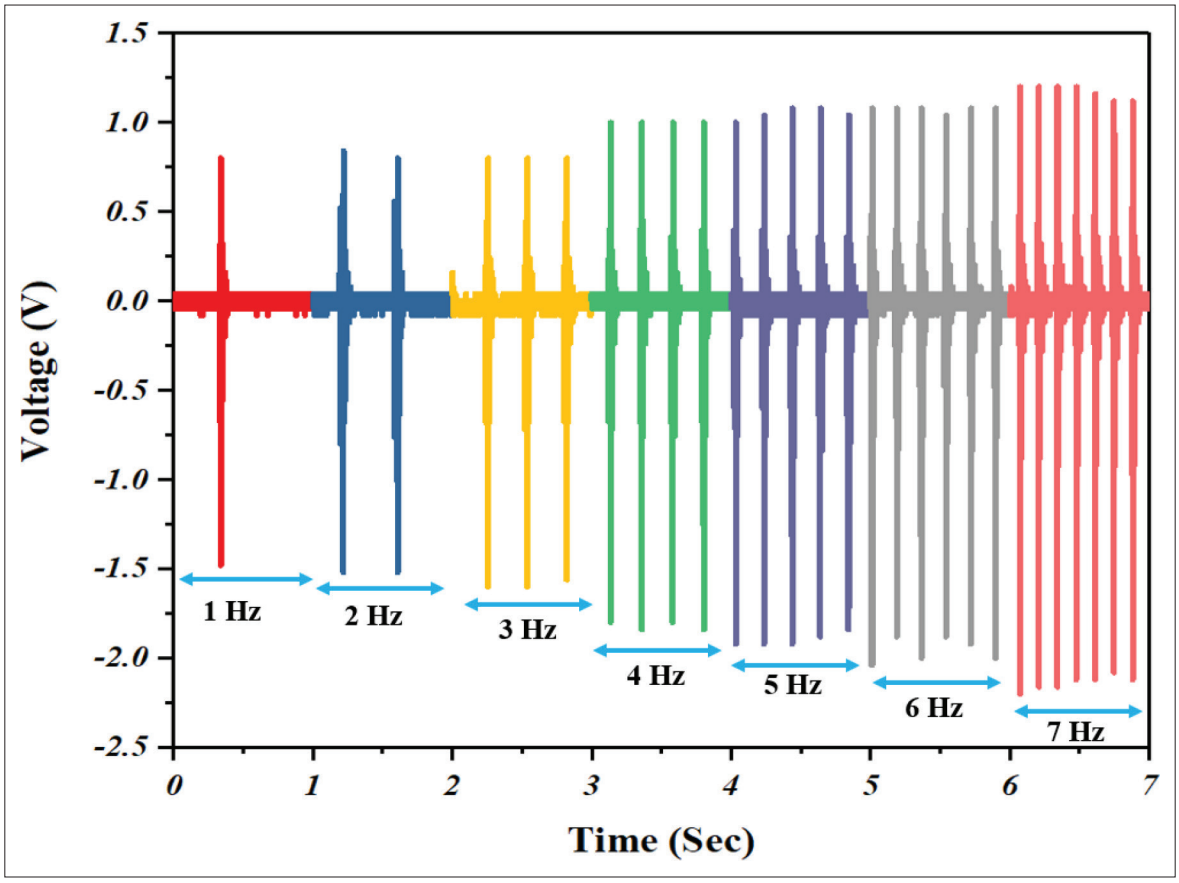

Figure S1. Output voltage was tested at several low frequencies at 1, 2, 3, 4, 5, and 7 Hz.

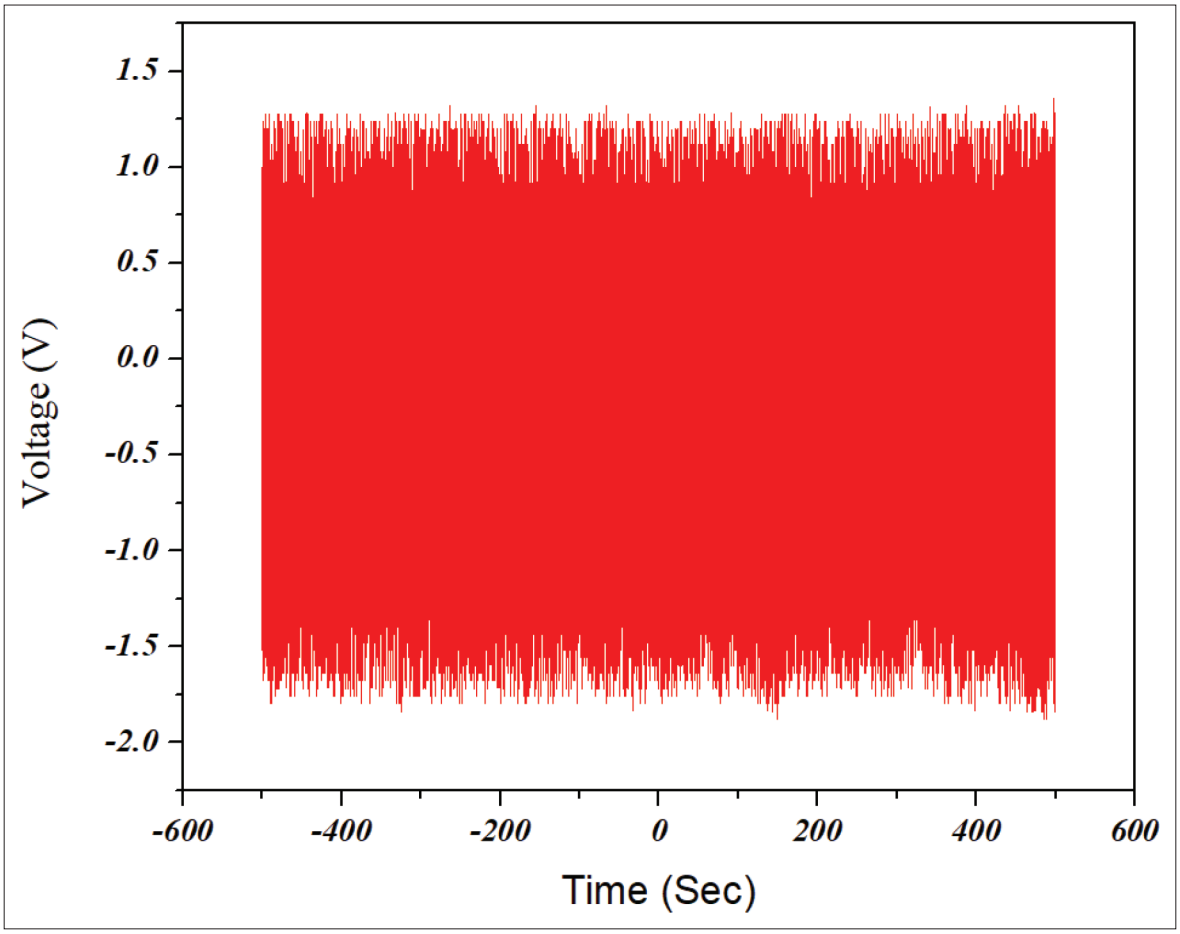

Figure S2. Verification of recycling performances over a long period of 1 week (one cycle of 1,000 s per day).

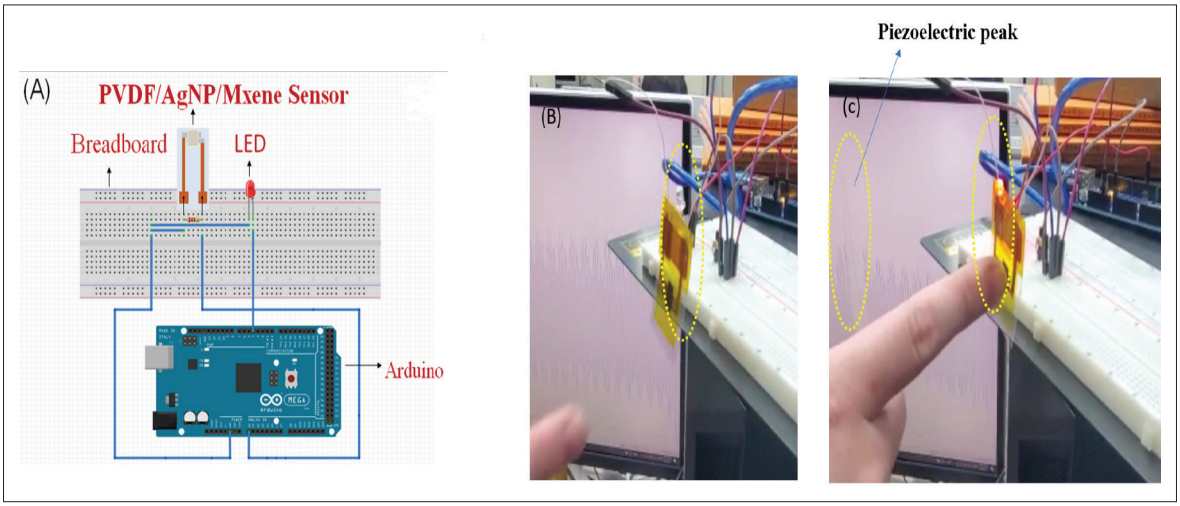

Figure S3. (A) Circuit schematic representation of LED which is incorporated into the circuit. (B) Image of the LED before it was lit up. (C) Image of the LED that was lit up when the sensor is touched.