

Self-Powered Dual-Mode Pressure Sensor Based on Porous Triboelectric Nanogenerator for Use in Smart Home System

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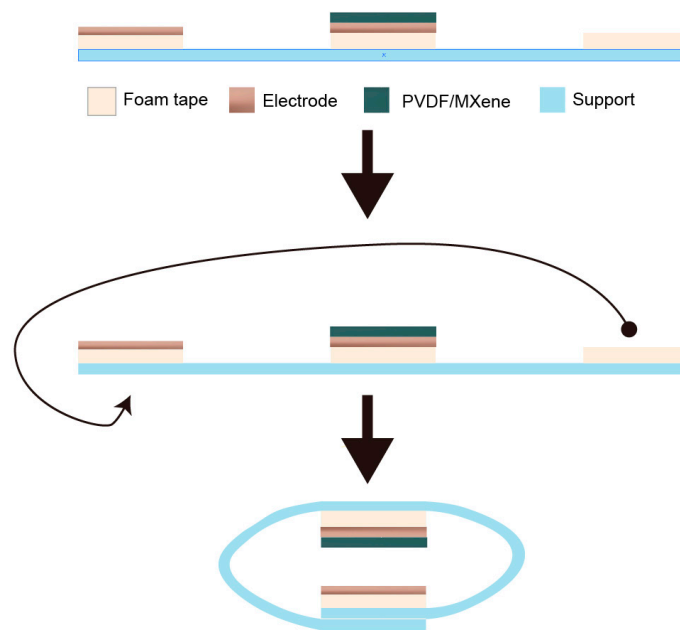


Figure S1. Production process of TENG.

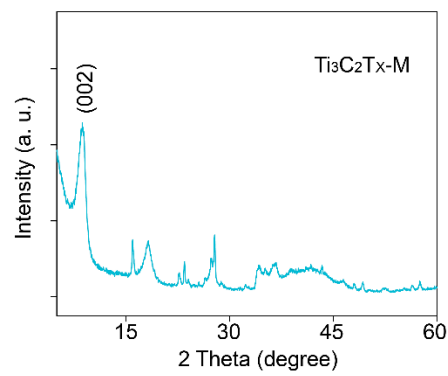


Figure S2 XRD result of the $\text{Ti}_3\text{C}_2\text{T}_x\text{-M}$.

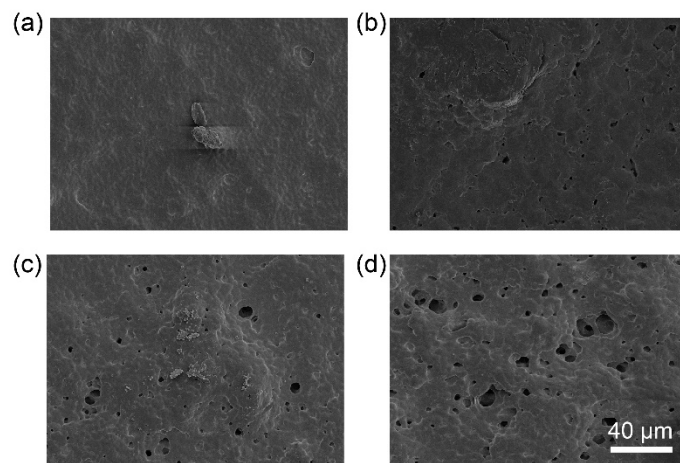


Figure S3 (a) Surface SEM image of the PVDF/MXene membrane. (b-c) SEM images

of the PVDF/MXene membranes after adding different contents of NaCl and dissolving them.

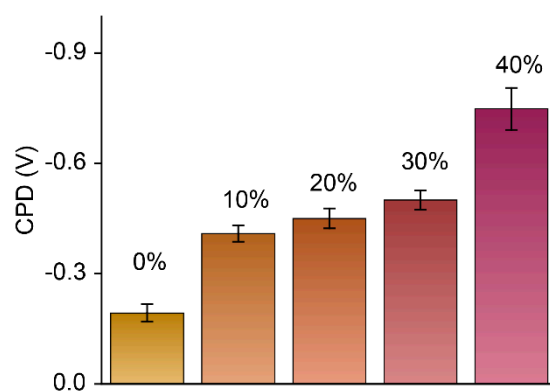


Figure S4. Contact potential difference for PVDF/MXene membranes with the different mass fractions of MXene.

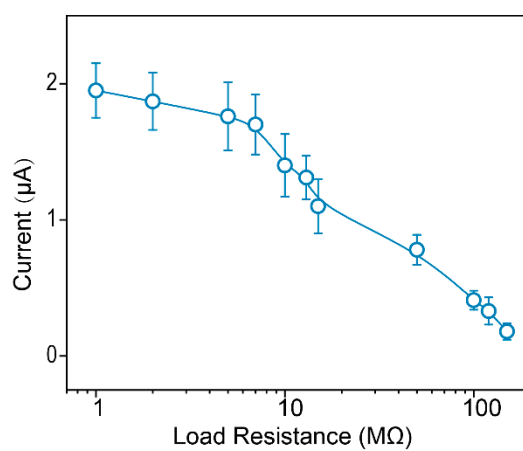


Figure S5 Variation of the output current of the TENG on the external load resistance.

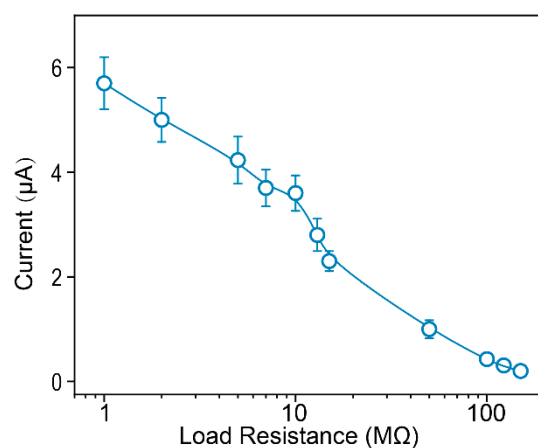


Figure S6 Variation of the output current of the porous TENG on the external load resistance.

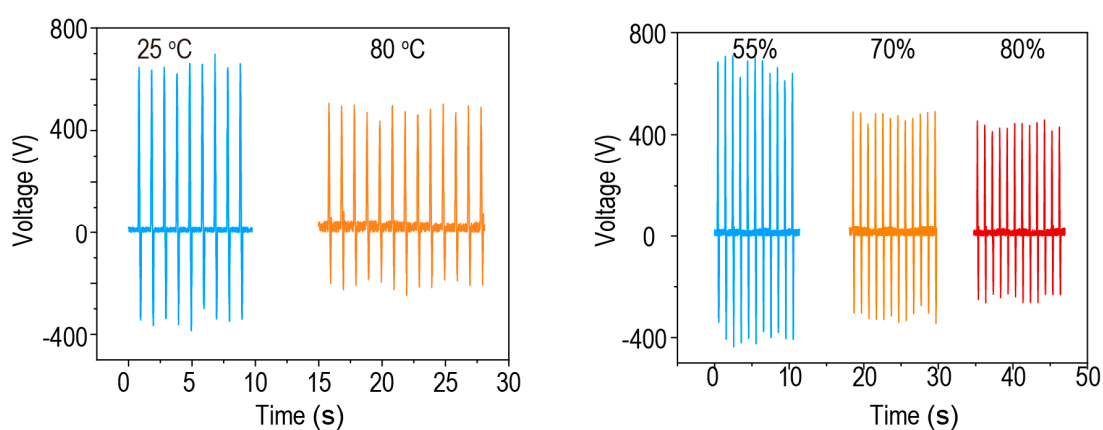


Figure S7. Effect of (a) room temperature and (b) humidity on V_{OC} of the TENG.

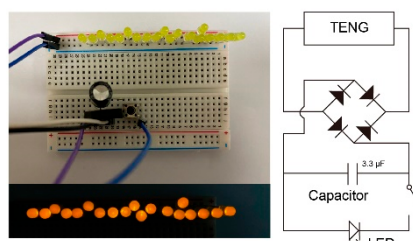


Figure S8. Photo for the energy harvesting based on porous TENG and corresponding circuit diagrammatic.

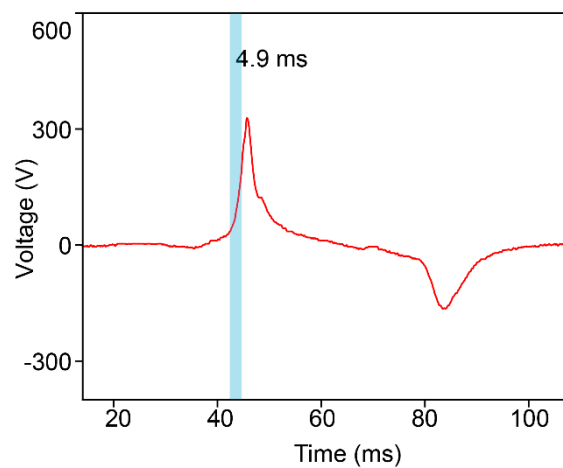


Figure S9. Enlarged view of the output voltage signal for determining the response time.

Video S1: Demonstration for Smart home system working in mode1.

Video S2: Demonstration for Smart home system working in mode2.