Supporting Information for

Flexible Ag Microparticle/MXene Based Film for Energy-Harvesting

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Supplementary Figures

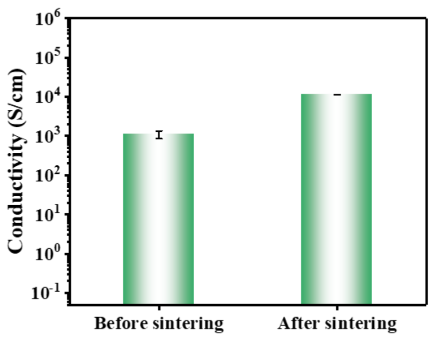

Fig. S1 Comparison of electrical conductivity before and after hot-pressing

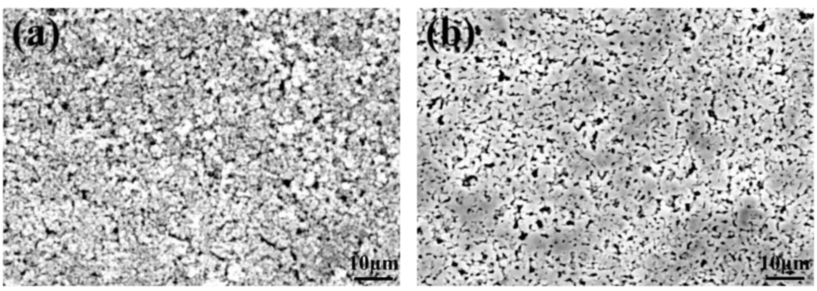

Fig. S2 Micromorphology of AgMPs **a** before and **b** after hot-pressing

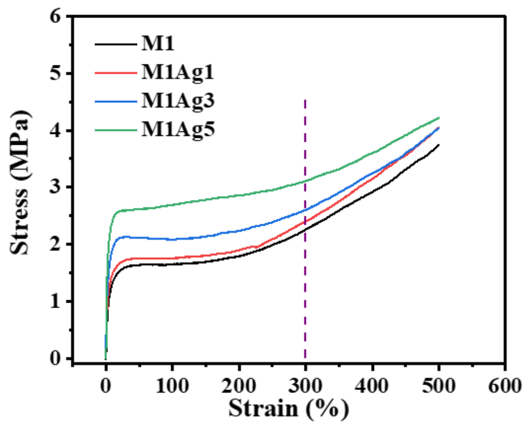

Fig. S3 Typical stress–strain curves of the MxAgy EHFs. The tensile strength increases due to the increase of AgMPs content and its embedding

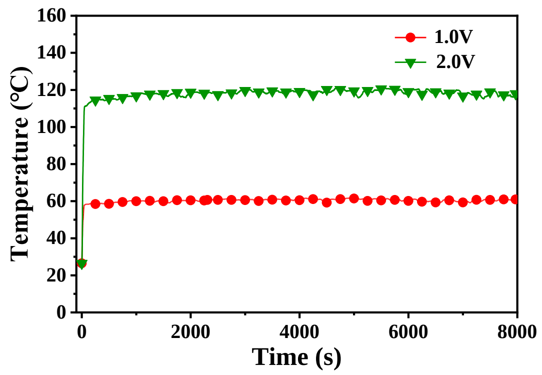

Fig. S4 Electric-thermal property of M1Ag5 film at high and low temperatures for over two hours

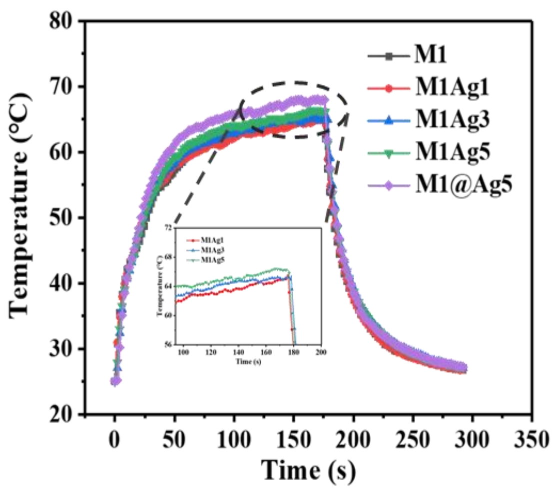

Fig. S5 Temperature of different films under 100 mW cm^{-2}

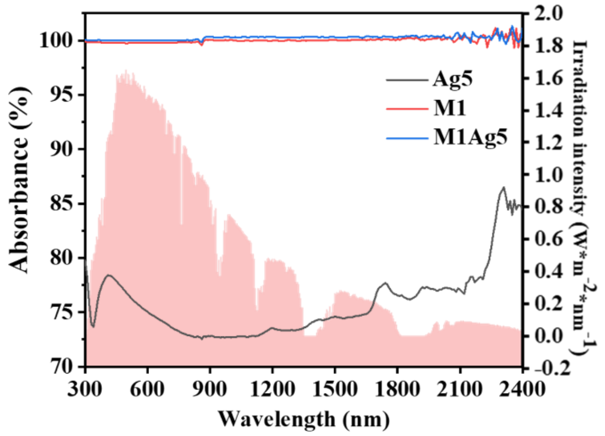

Fig. S6 Absorbance of the Ag5, M1, and M1Ag5 films

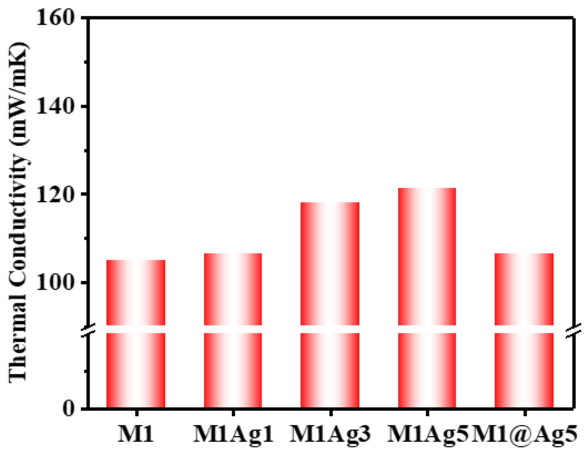

Fig. S7 Thermal conductivity of MxAgy EHFs in through-plane

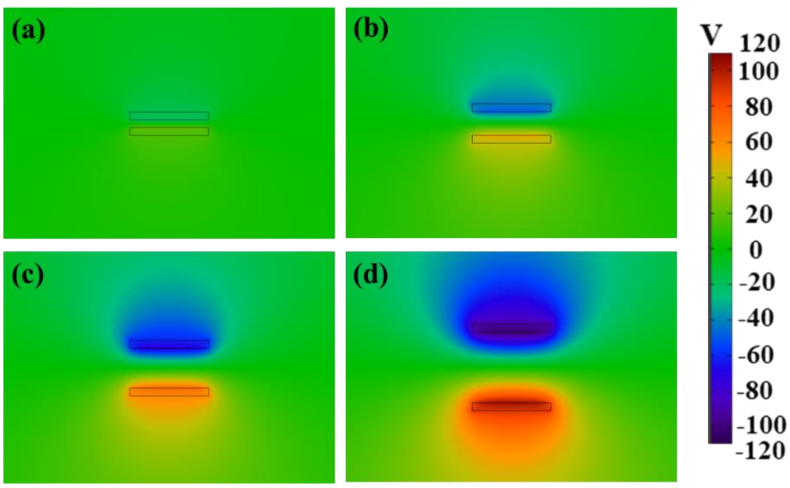

Fig. S8 Electrical potential distributions of the MxAgy-based STENG simulated by the COMSOL software

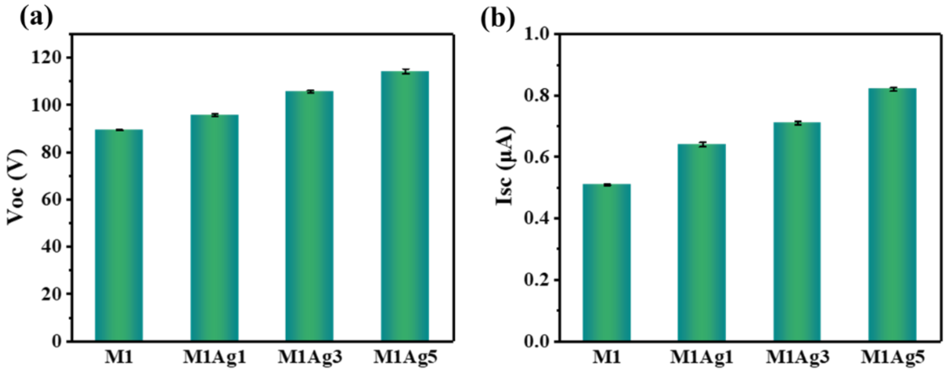

Fig. S9 Variations in the **a** V_{OC} and **b** I_{SC} for MxAgy-based STENG with various AgMPs content at a frequency of 5 Hz and a force of 10 N

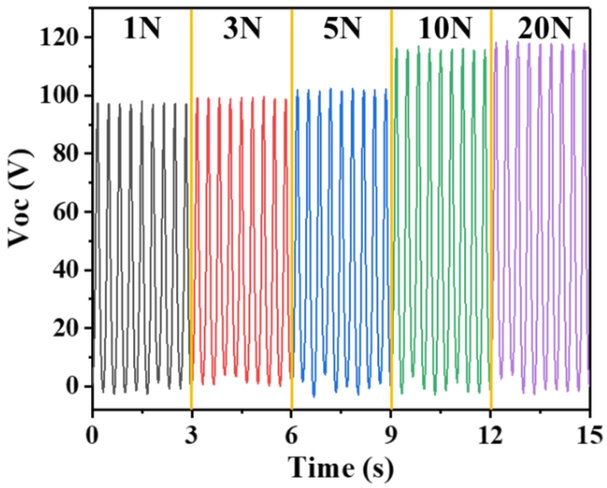

Fig. S10 V_{OC} of the STENG with various applying pressure (fixed frequency of 5 Hz)

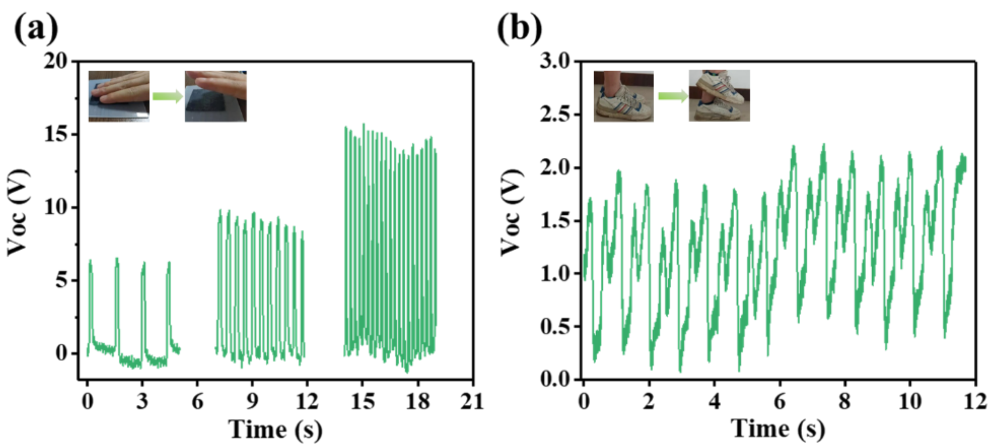

Fig. S11 Corresponding Voc of the MxAgy-based STENG to monitor **a** finger bending of different frequencies and **b** regular steps

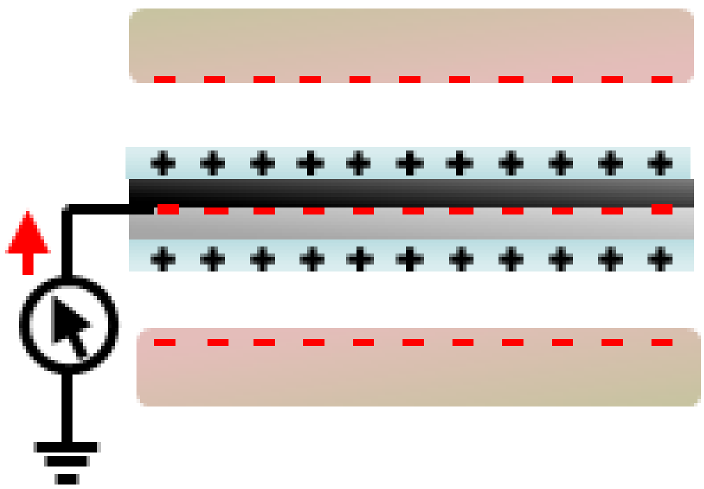

Fig. S12 Electrical output mechanism of double triboelectrification layers