Supporting Information for

Magnetic Array Assisted Triboelectric Nanogenerator Sensor for Real-Time Gesture Interaction

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Supplementary Figures

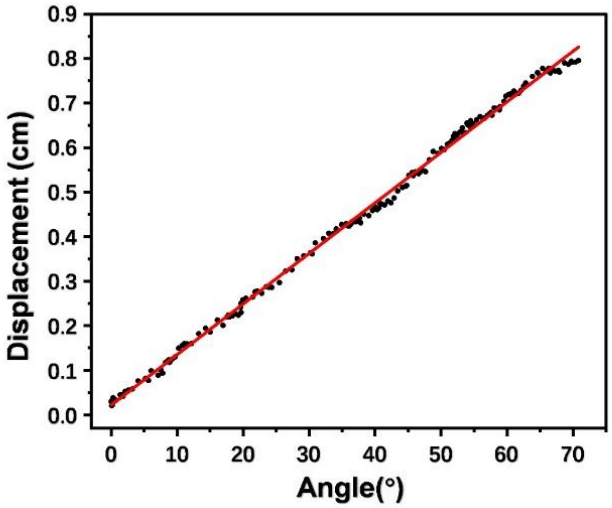

Fig. S1 Relationship between the angles of joint bending and the sliding displacement

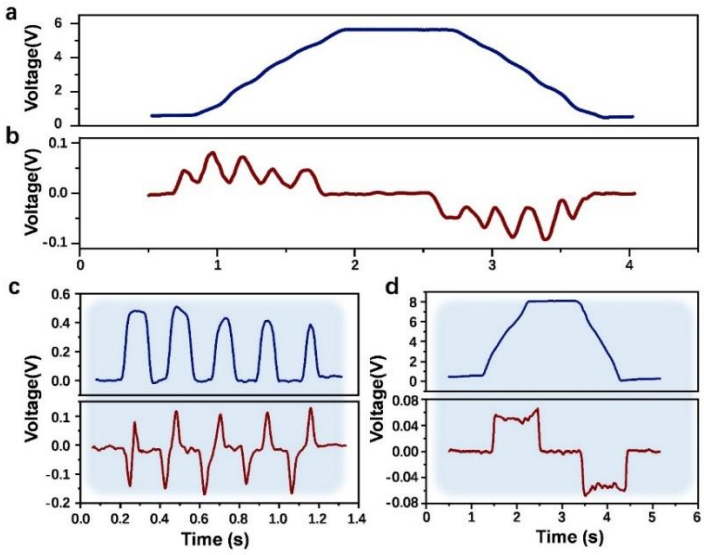

Fig. S2 Open circuit voltage and load voltage (20MΩ) of Ma-s-TS. (a-b) Open circuit voltage and load voltage of the coupled two parts of Ma-s-TS. **(c)** Open circuit voltage (up) and load voltage (down) of part A in half a cycle. **(d)** Open circuit voltage (up) and load voltage (down) of Part B in a full cycle

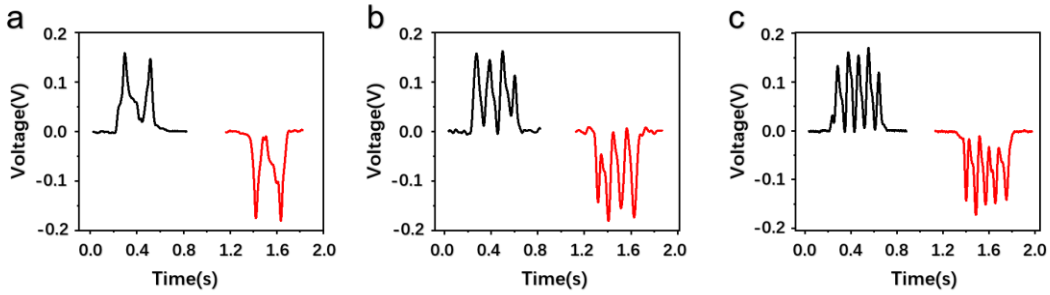

Fig. S3 Accuracy affected by the thickness of magnetic stripe. The pulses produced from the Ma-s-TS adopting magnetic stripe with different thickness (**(a)** 1.000 mm, **(b)** 0.500 mm and **(c)** 0.315 mm) when rotating through the same degree at a certain rotation speed

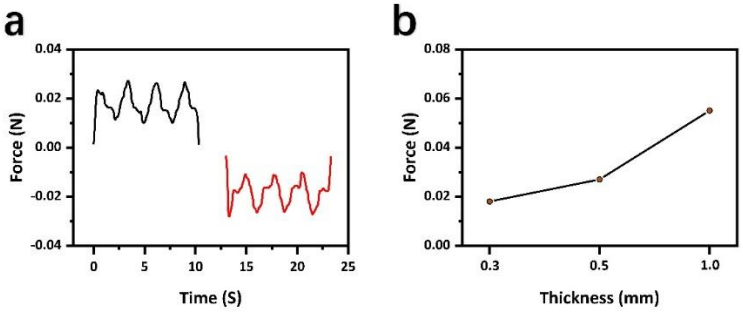

Fig. S4 Relationship between driven force and thickness (a) the force-time curve of the magnetic stripe thickness of 0.5 mm. **(b)** Minimum driving force under different magnetic stripe thicknesses (0.3, 0.5, and 1.0 mm)

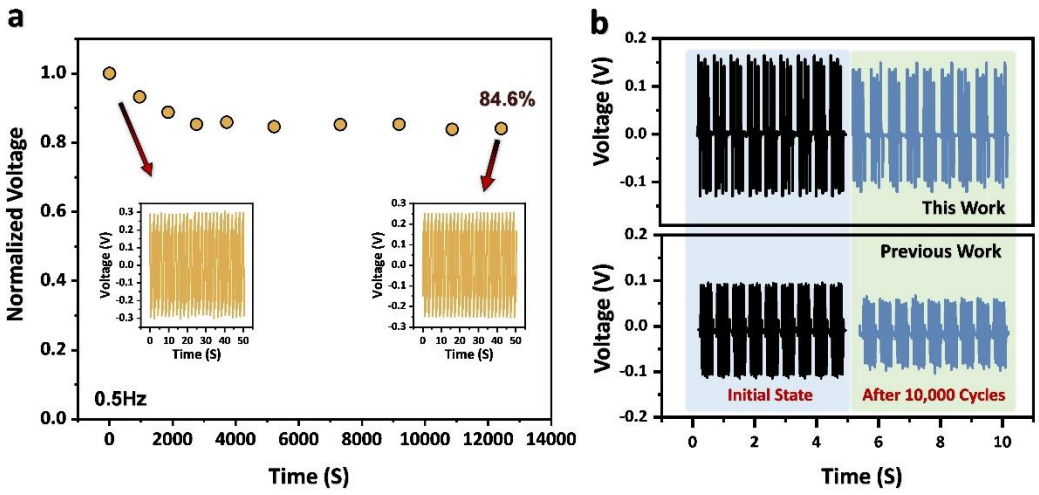

Fig. S5 Durability of Ma-s-TS. (**a**) After 6,200 continuous operation cycles, the normalized output of Ma-s-TS declined to 84.6%. (**b**) After 10,000 cycles, the durability of the narrow pulse segment is compared between this work and precious work