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Self-powered Triboelectric Wearable Biosensor Using Scotch Tape

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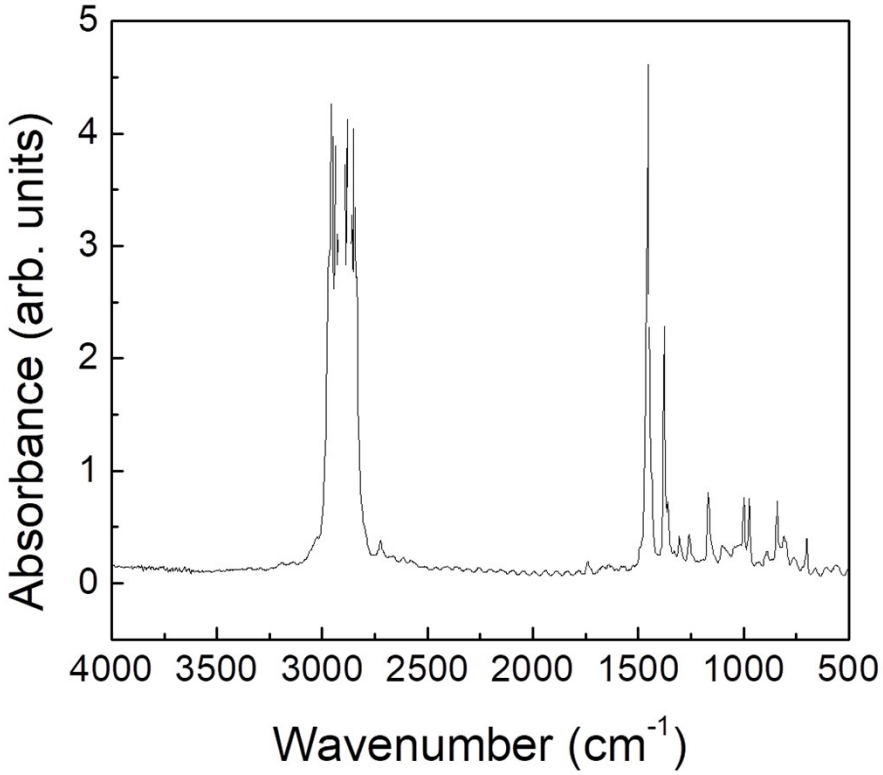
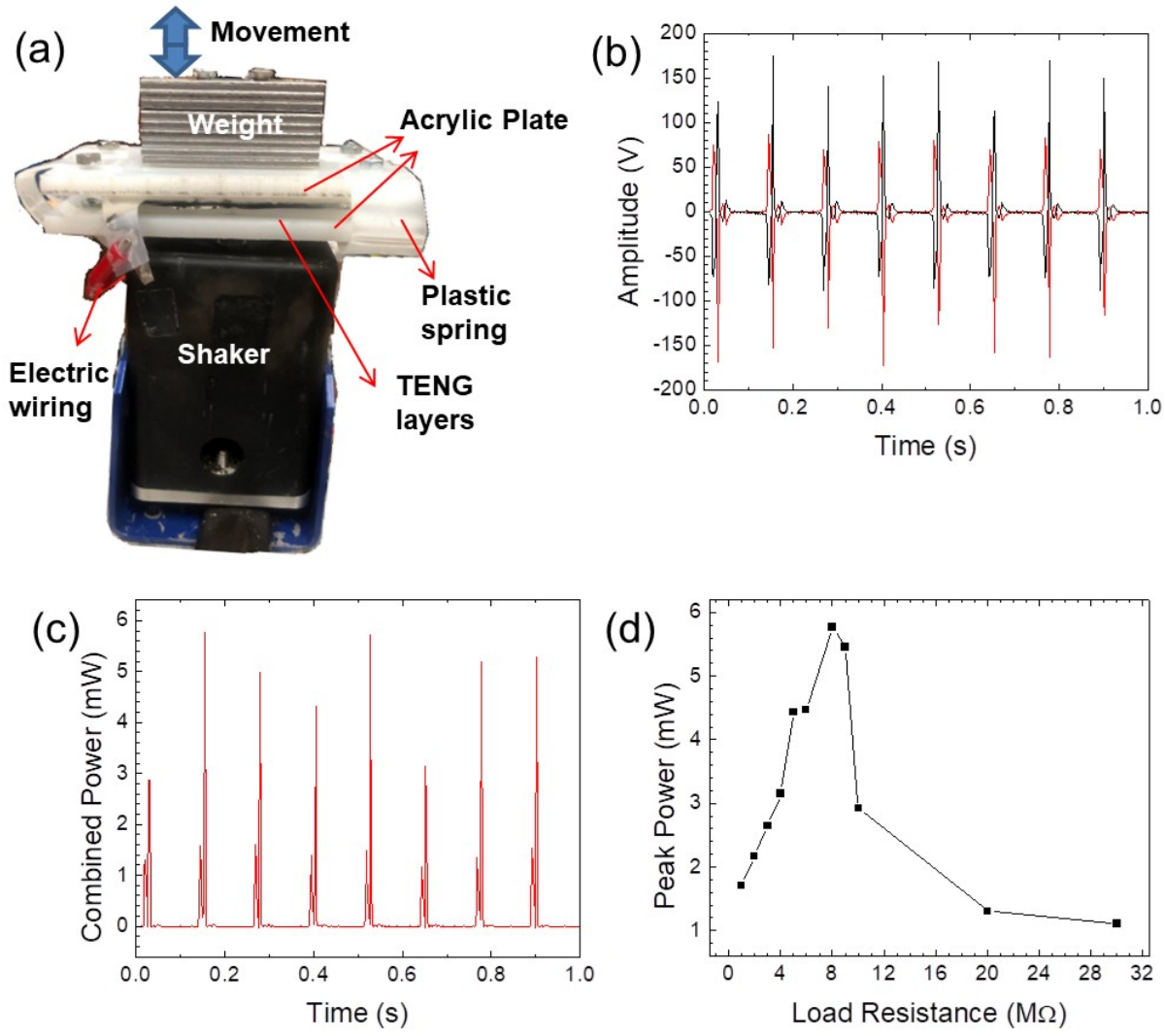


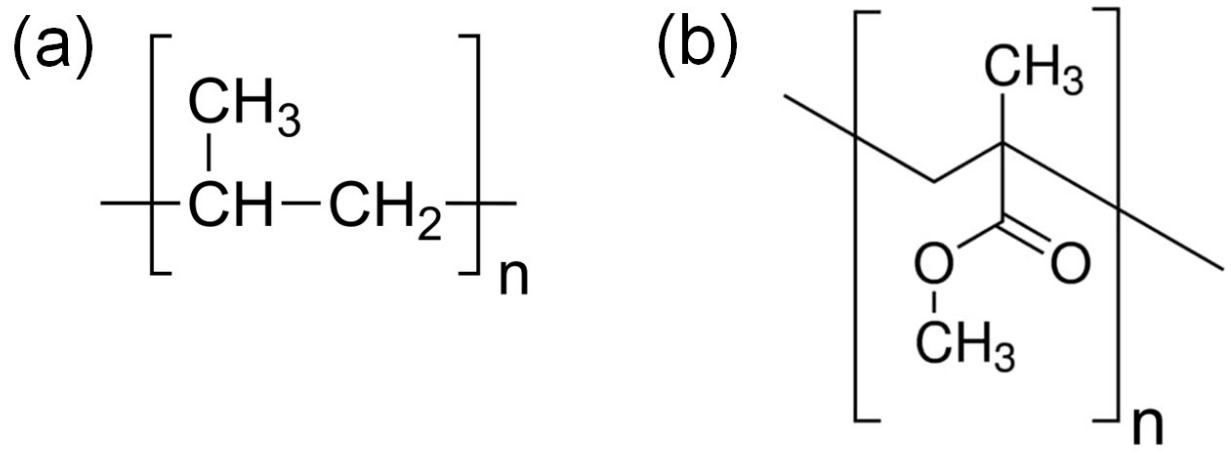
S1. FTIR absorbance spectrum of Scotch shipping tape 3580.



S2. (a)Vibration based energy harvesting test for a TENG with Al/PET/Scotch tape – PET/Al configuration (active area=50 mm x 75 mm), in which the base excitation was 1 G at 8 Hz and the mass was ~0.7 lbs. (b) Voltage amplitudes from Scotch tape side (black) and PET side (red). (c) Combined power from both sides with an electrical load of 8 MΩ. (d) Peak power values as a function of electrical loads.

S3. Video of collecting voltage amplitude as a function of time from a wearable sensor on the human elbow with flexion and extension movement patterns.

S4. Video of collecting voltage amplitudes as a function of time from a wearable sensor on the human finger with flexion and extension movement patterns.



S5. Chemical structures of (a) polypropylene and (b) acrylic.