Supporting information for:

Water droplet-driven and perforated conducting polymer composite energy harvester: Platform for powering portable and wearable electronics

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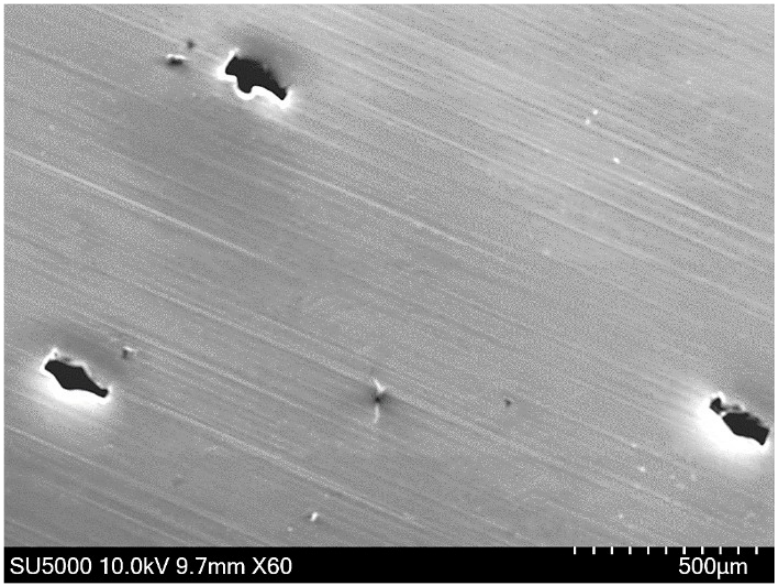

Fig. S1. SEM image, showing the prepared Al electrode by using microneedle roller.

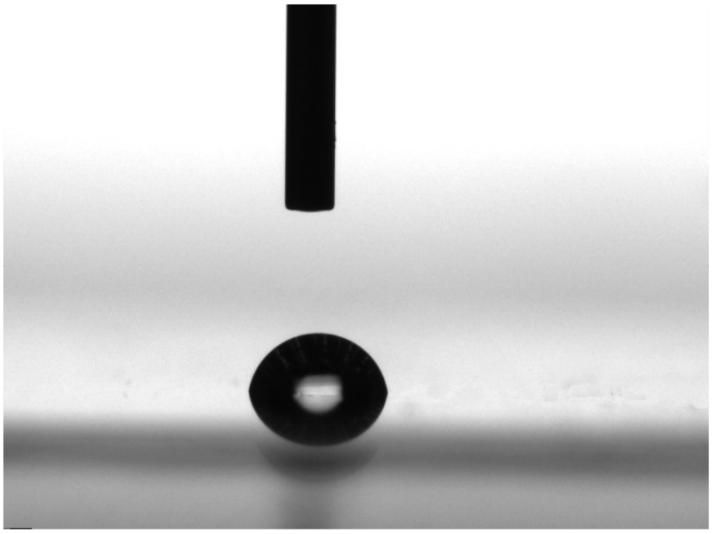

Fig. S2. Water contact angle measurement, showing the hydrophilic property of sample without the functionalization FOTS treatment.

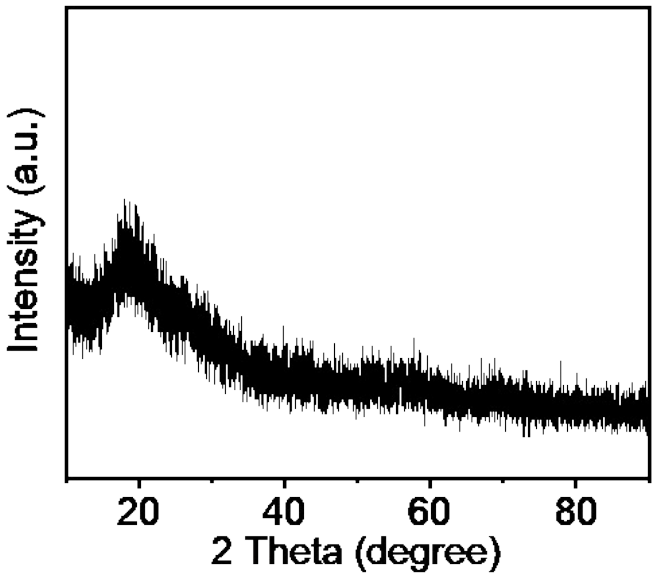

Fig. S3. XRD patterns of PVA/PSSA-MA composite showing its amorphous nature.

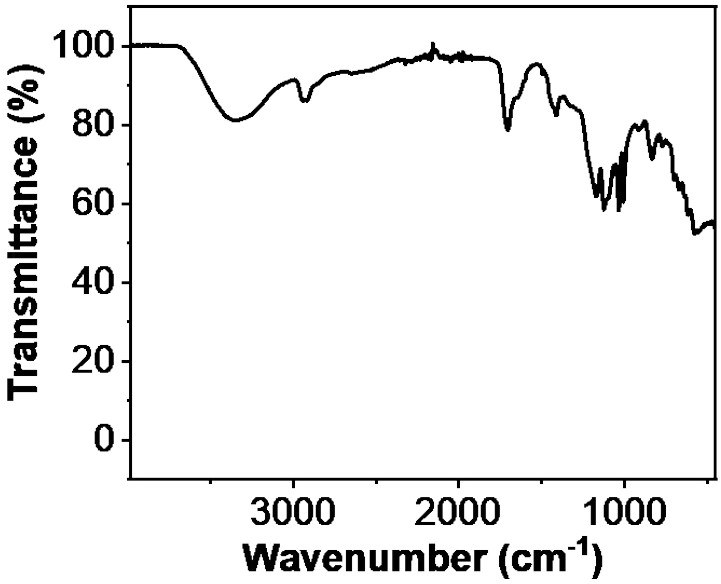

Fig. S4. FTIR curve of PVA/PSSA-MA composite.

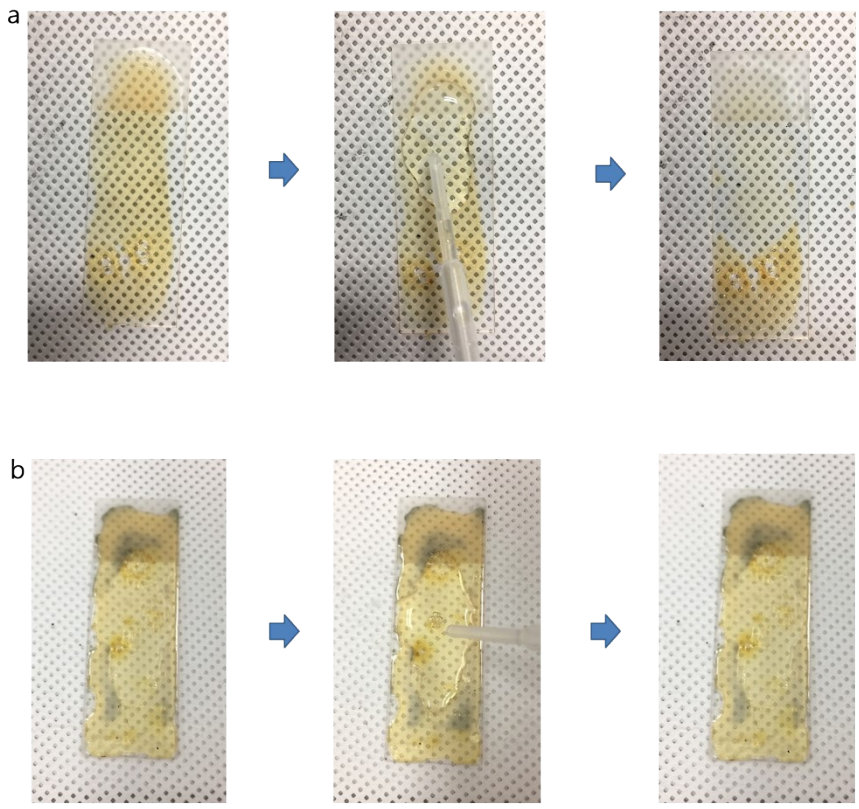

Fig. S5. Photograph of the different composite. (a) Poor durability of sample based on PSSA only. (b) Durable sample by water contact, attributed to the crosslinked network.

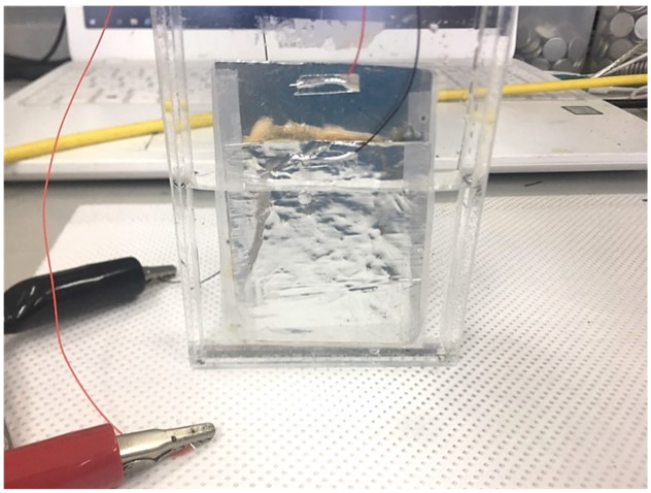

Fig. S6. (a) Photograph, showing the output measurement in dipping state.

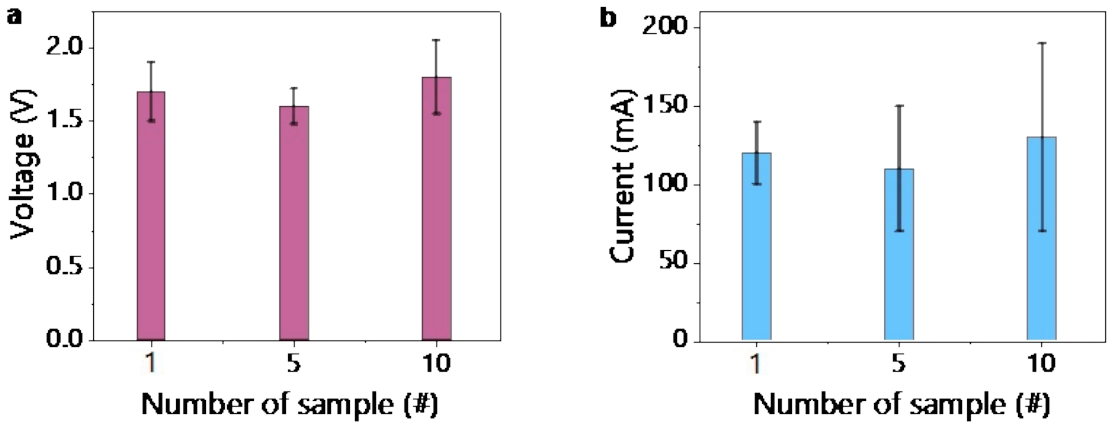

Fig. S7. Measurement data, showing the deviation using 1, 5, 10 samples. (a) Output voltage deviation. (b) Output current deviation.

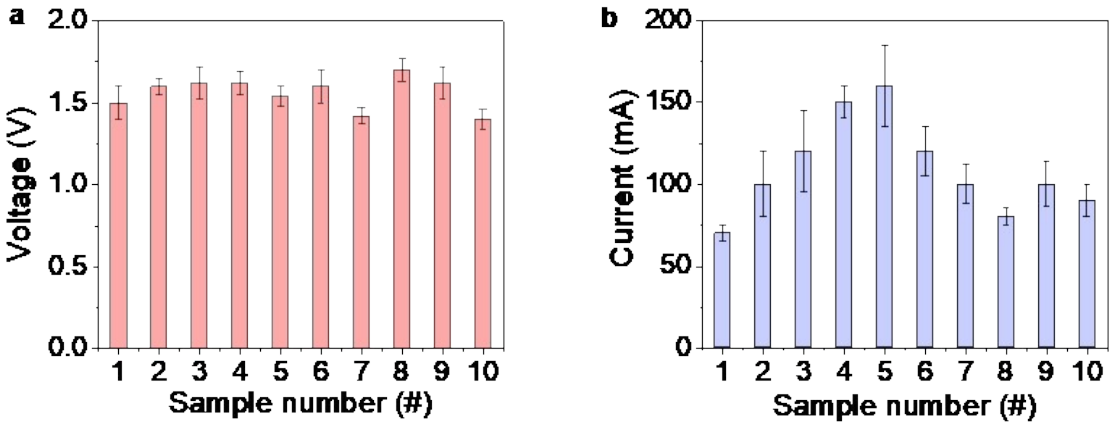

Fig. S8. Measurement data, showing the deviation under five repetitive cycles for each samples. (a) Output voltage deviation. (b) Output current deviation.

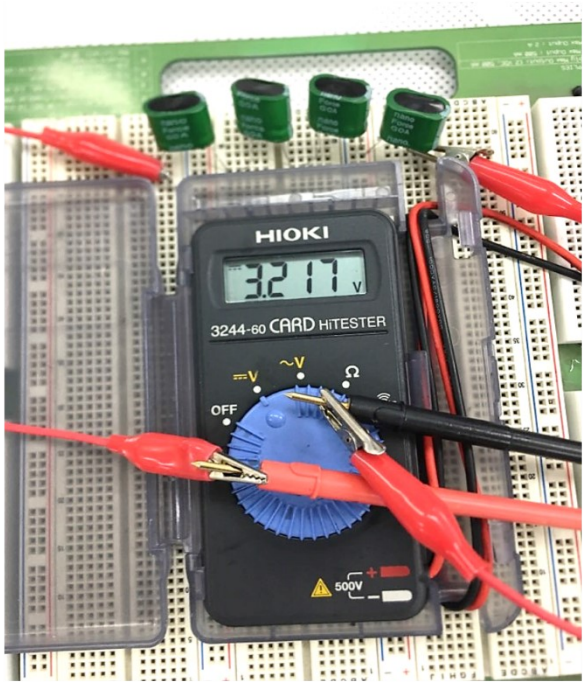

Fig. S9. Charged output voltage using four supercapacitors of 200 mF in serial connection.