Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C. This journal is © The Royal Society of Chemistry 2024

## **Supplementary Information**

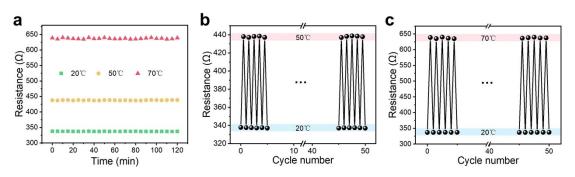


Fig. S1. a) The reliability tests of the c-PE film's resistances at 30%RH with different temperatures of 20°C, 50°C, and 70°C. Cyclic stability tests of the c-PE film's resistances b) from 20°C to 50°C and c) from 20°C to 70°C at 30%RH.

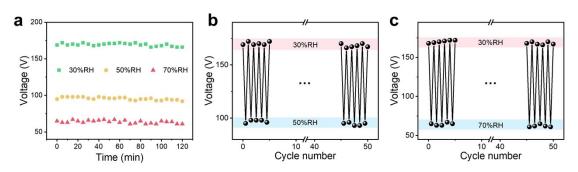


Fig. S2. a) The reliability tests of the TENG's output voltage at 20°C with different humidities of 30%RH, 50%RH, and 70%RH. Cyclic stability tests of the TENG's output voltage b) from 30%RH to 50%RH and c) from 30%RH to 70%RH at 20°C.

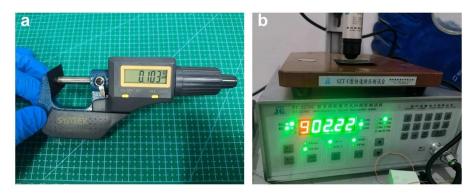


Fig. S3. Test graphs of the c-PE film's a) thickness and b) resistivity.