

## Supporting Information

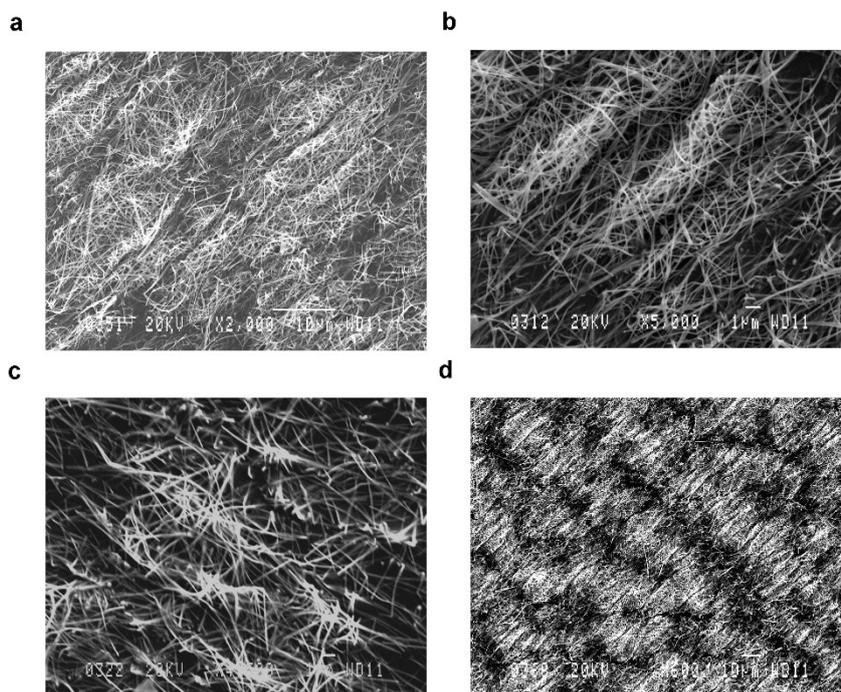


Fig. S1 Top-viewed SEM images of the Ag NWs networks on the buckled PDMS surface at different scales.

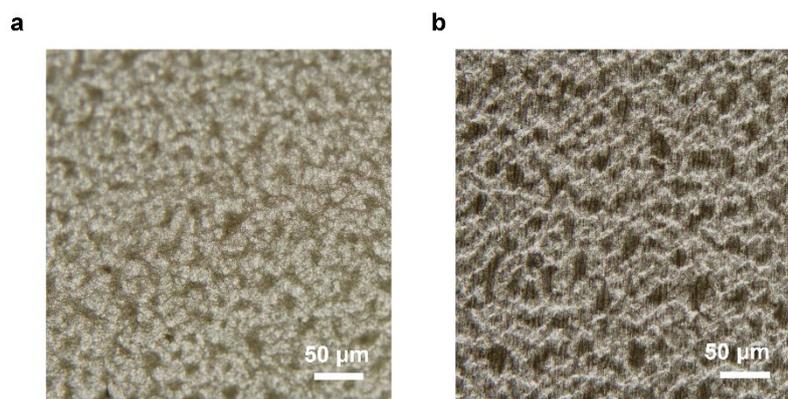


Fig. S2 Top-viewed microscopy images of the Ag NWs networks before (a) and after (b) releasing the pre-stretched PDMS.

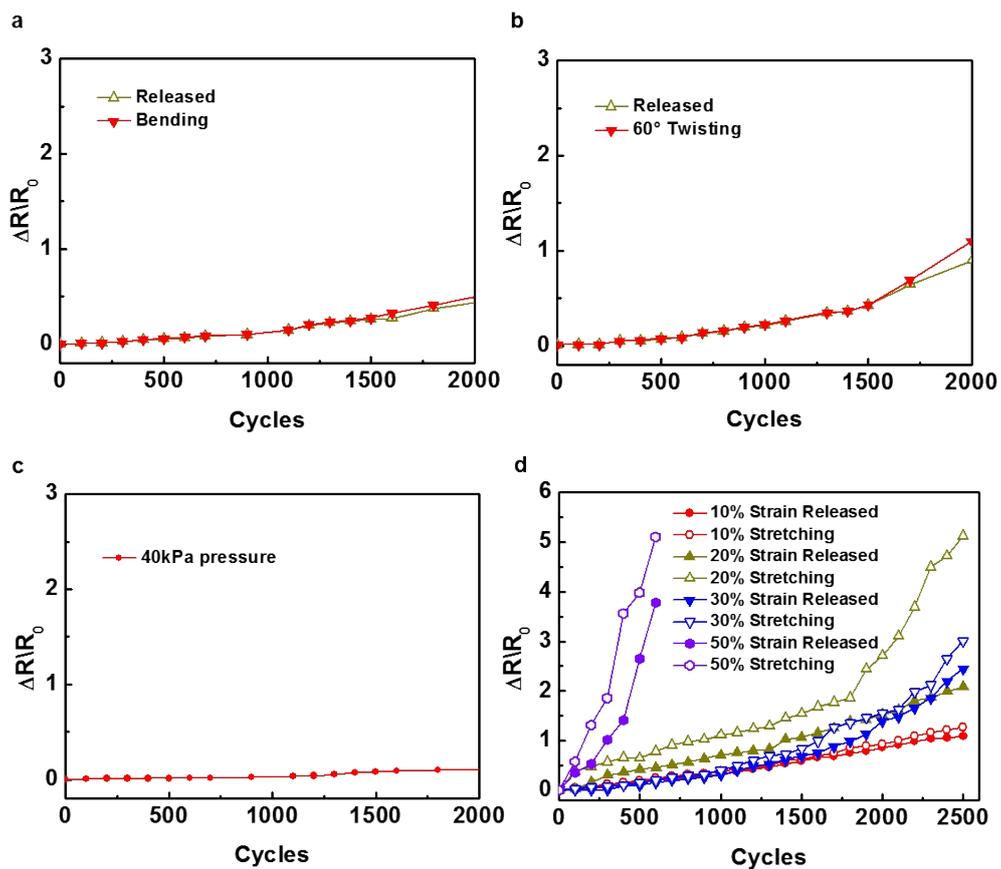


Fig. S3 Resistance variation of the electrode under different mechanical deformations: (a) bending tests; (b) twisting tests; (c) pressing tests and (d) stretching tests.

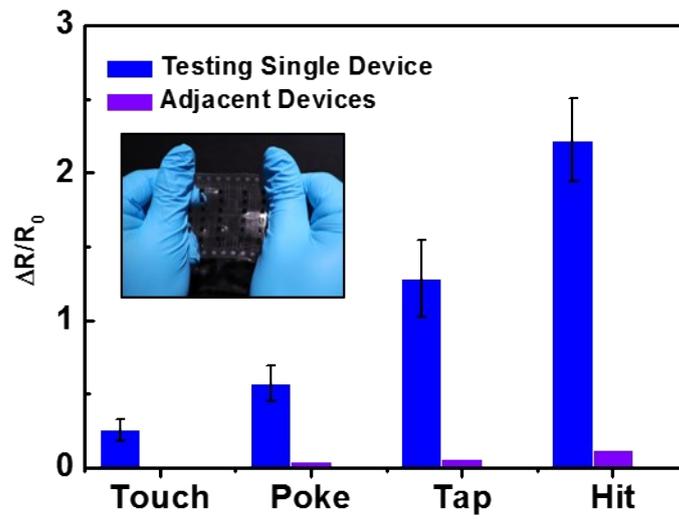


Fig. S4 Resistance variation measurement of single piezoresistive component and its adjacent sensors under 10% stretched condition.

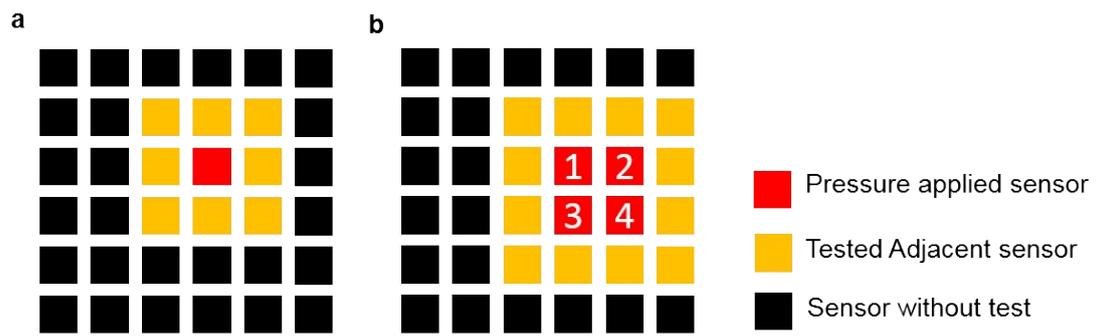


Fig. S5 Schematic illustration of the pressure applied sensor, tested adjacent sensor and sensor without test.

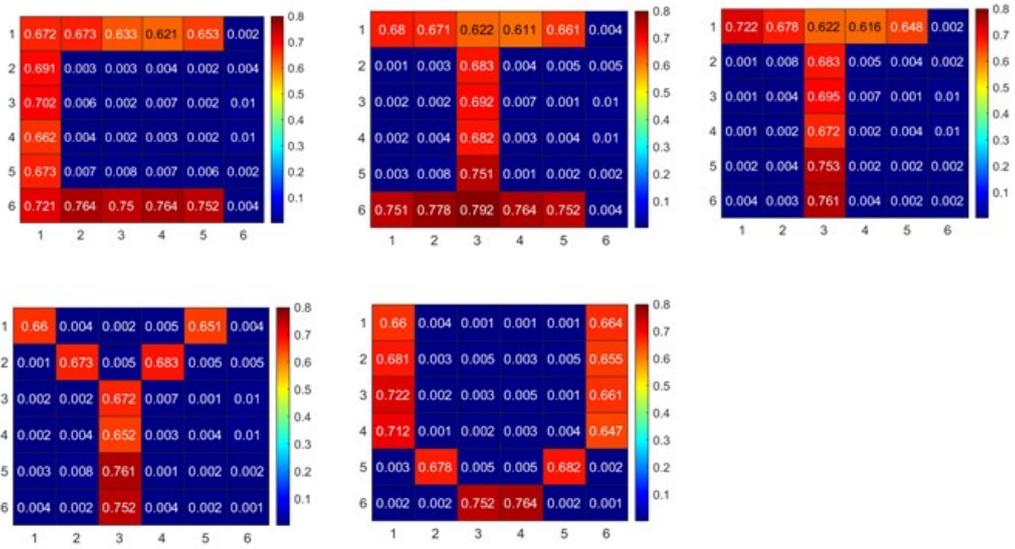


Fig. S6 Data of the corresponding resistance variation distributions with a “CITYU” pattern.

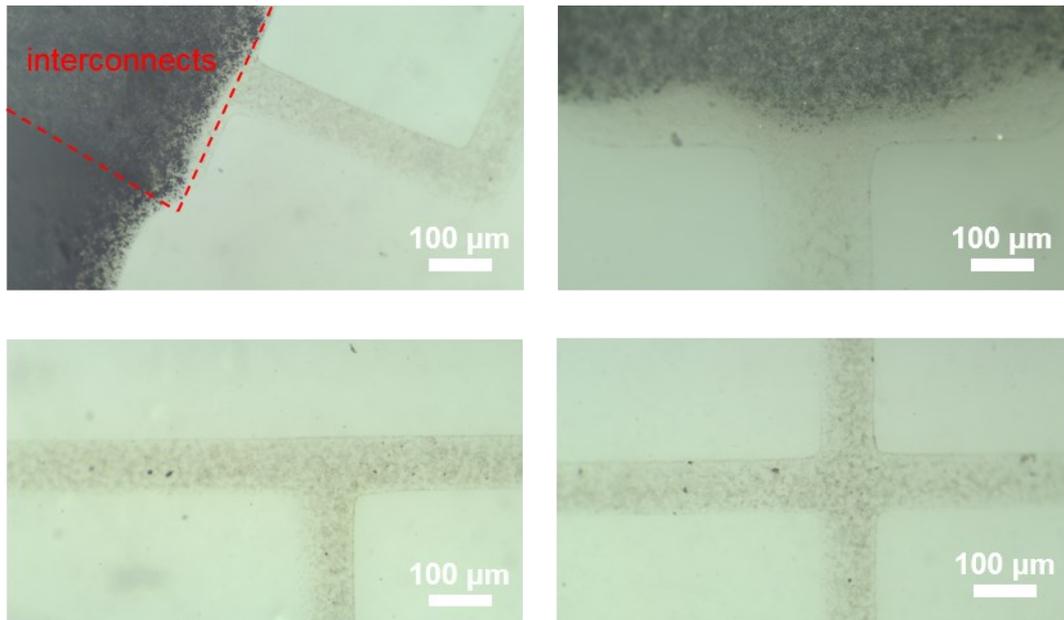


Fig. S7 Optical images of the Ag NWs interconnects for the sensor arrays.

**Table S1** Conductivity and optical transparency summary of the electrodes corresponding to the coating duration.

Coating duration (s)	Conductivity ( $\Omega/\text{sq}$ )	Transparency (%)
12	78	84
20	18	78
30	8	69
50	3.9	54