Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Conductive Ternary Network of Highly Stretchable AgNWs/AgNPs Conductors Based on Polydopamine-Modified Polyurethane Sponge**

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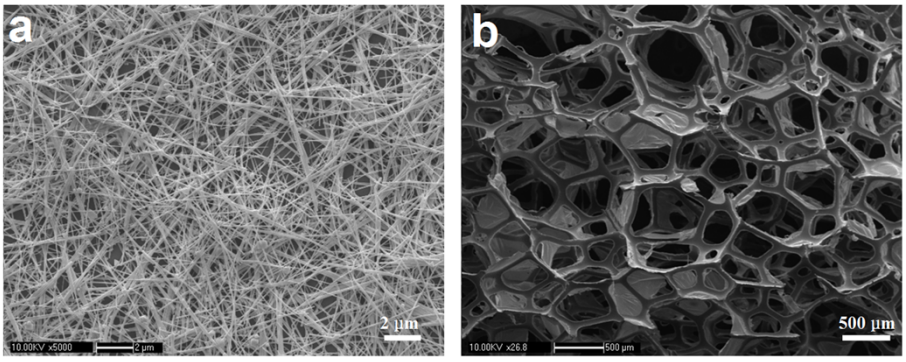

Figure S1. SEM images of AgNW (a) and PU sponge (b).

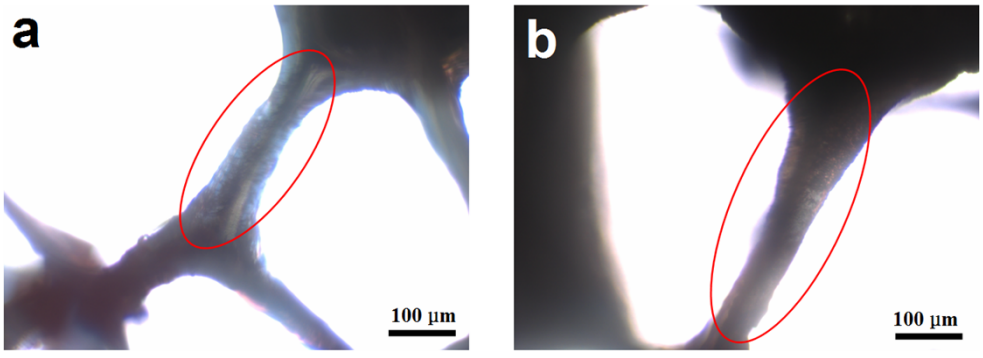

Figure S2. Optical microscope images of (a) PUS-AgNW-Ag-PDMS and (b) PDA-PUS-AgNW-Ag-PDMS stretchable conductors.

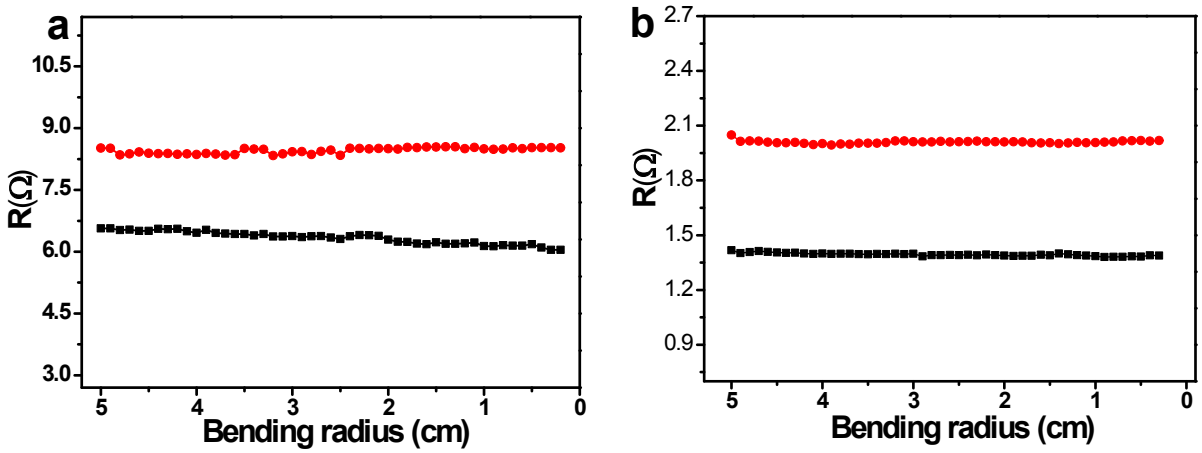

Figure S3. (a) Electrical resistance of PDA-PU-AgNW-PDMS (black) and PU-AgNW-PDMS (red) stretchable conductors at different radii in the fist bending cycle. (b) Electrical resistance of PDA-PU-AgNW-Ag-PDMS (black) and PU-AgNW-Ag-PDMS (red) stretchable conductors at different radii in the 1000th bending cycle.

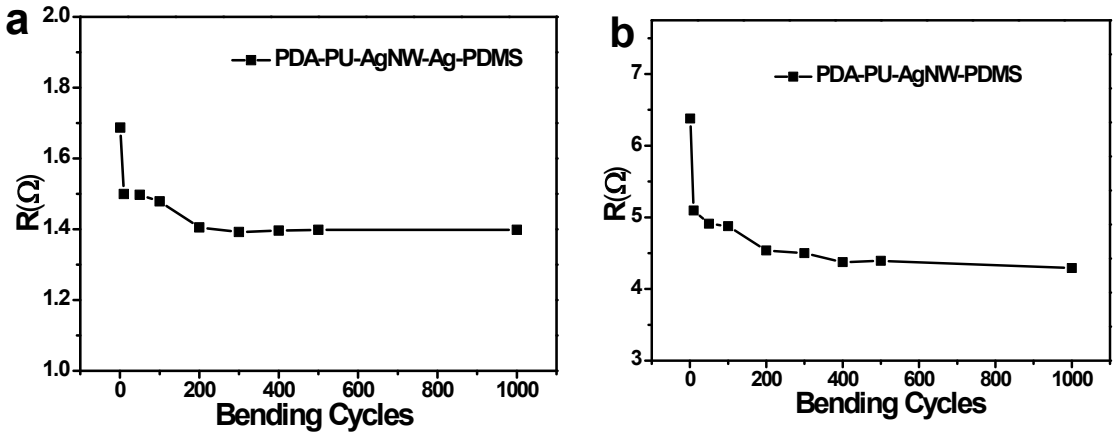

Figure S4. Electrical resistance of (a) PDA-PU-AgNW-Ag-PDMS and (b) PDA-PU-AgNW-PDMS stretchable conductor as a function of bending cycles at bending radius of 3 cm.

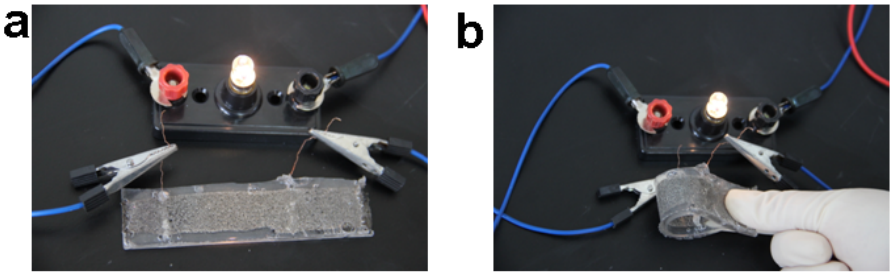

Figure S5. Optical images of a bulb illuminated by using a PDA-PUS-AgNW-Ag-PDMS stretchable film as the connecting wire under a) no strain, b) bending.