Supporting Information

Universal assembly of ordered Ag nanowires micromesh conductor on arbitrary substrates by manipulating the contact angle

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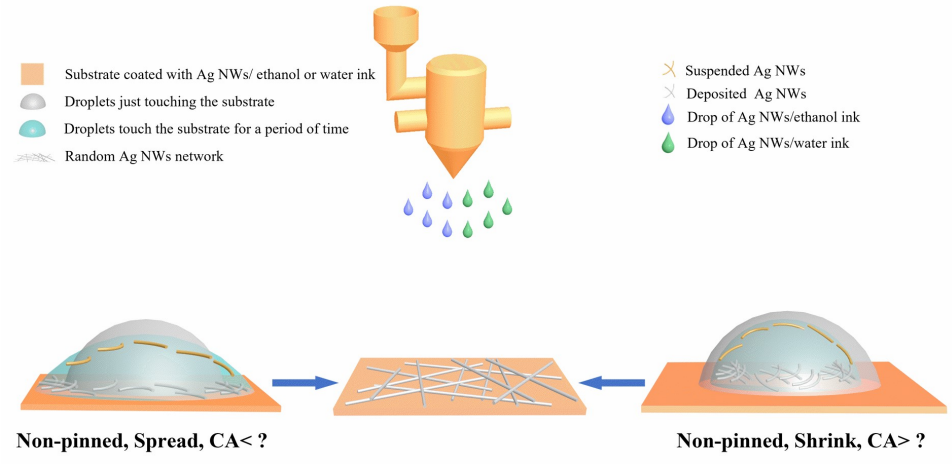

Fig. S1 Contact angle of Ag NWs ink effect on Ag NWs networks morphology.

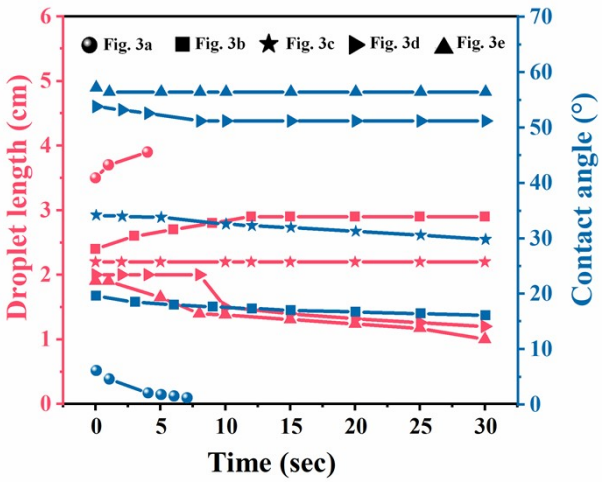

Fig. S2 The droplet length and contact angle variation of Ag NWs/ethanol ink as a function of solvent evaporation time.

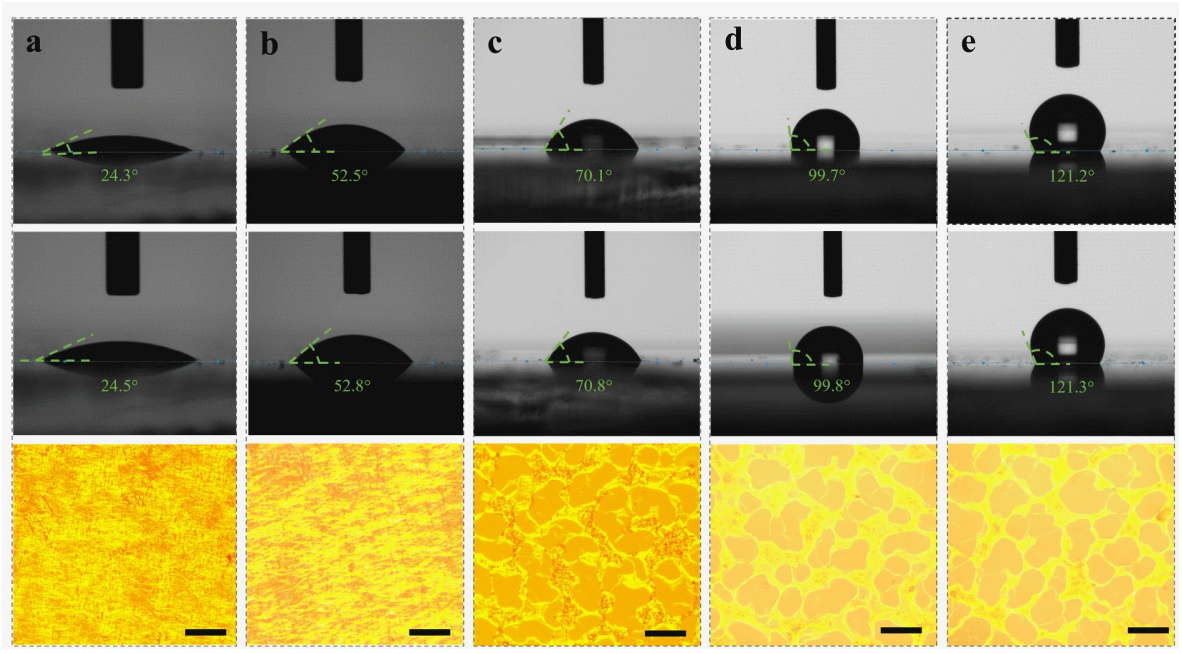

Fig. S3 (a) Water contact angle on pure glass, corresponding to Ag NWs/water ink contact angle and the morphology of Ag NWs networks. (b-e) Different water contact angles on modified glasses, corresponding to Ag NWs/water ink contact angles and the morphology of Ag NWs networks, respectively. These indicated that the water contact angle was almost same with the Ag NWs/water ink contact angle on substate. Scale bar, 30 μm.

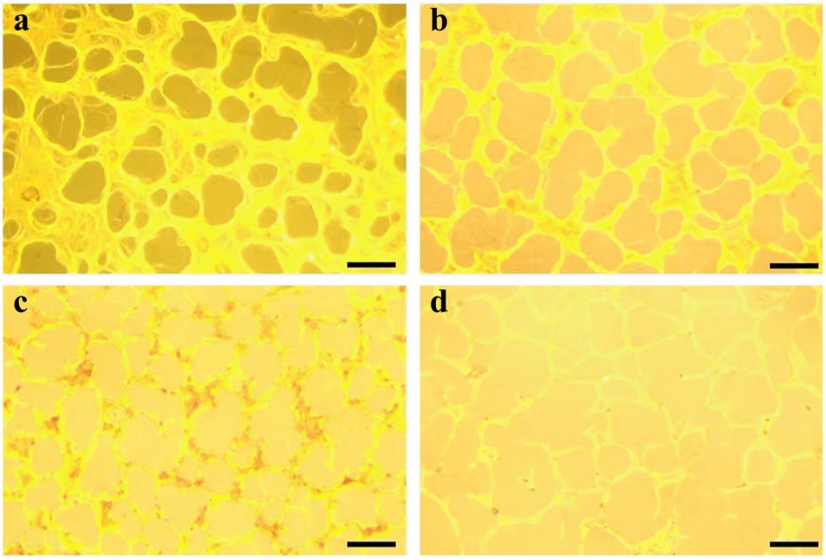

Fig. S4 (a) diameter: ~20 nm, length: 20-60 μm. (b) diameter: ~30 nm, length: 20-60 μm. (c) diameter: ~50 nm, length: 20-60 μm. (d) diameter: ~100 nm, length: 100-200 μm. Scale bar, 30 μm.

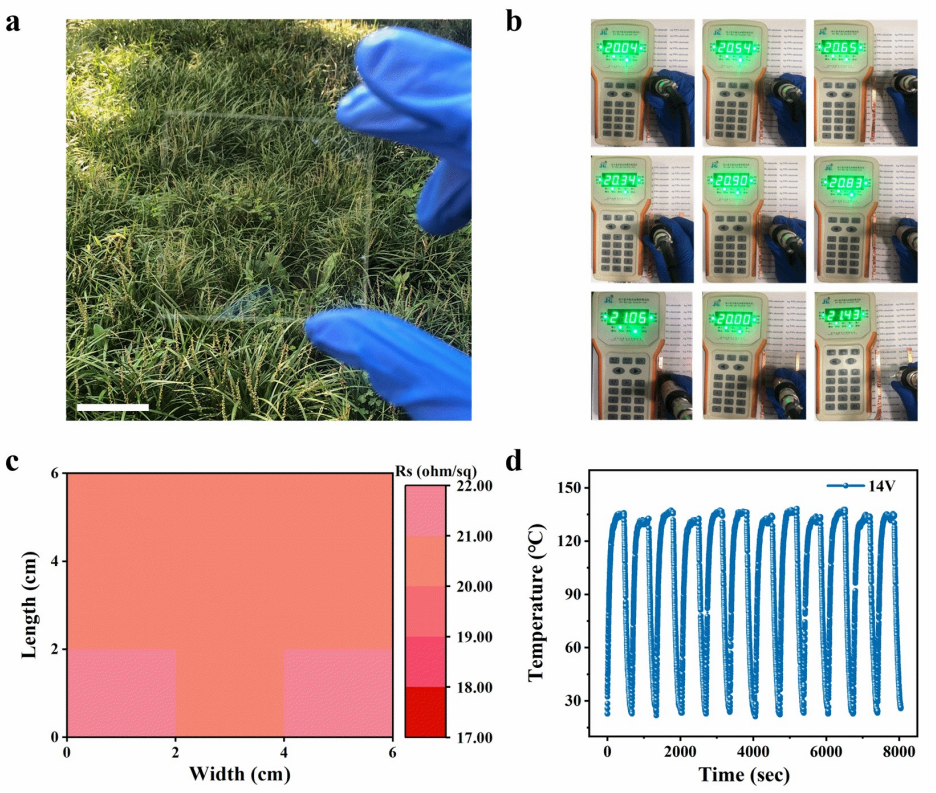

Fig. S5 (a) The photograph of transparent Ag NMs/glass heater. (b) The sheet resistance distribution of Ag NMs/glass heater (6 cm × 6 cm), corresponding to the area mapping (c). (d) Heating stability and repeatability of the Ag NMs/glass heater at 14V.

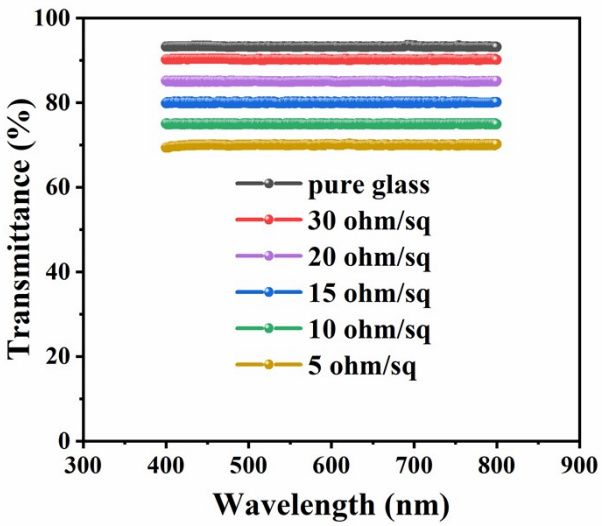

Fig. S6 Transmittance spectra of Ag NMs/glass electrode with different sheet resistances.

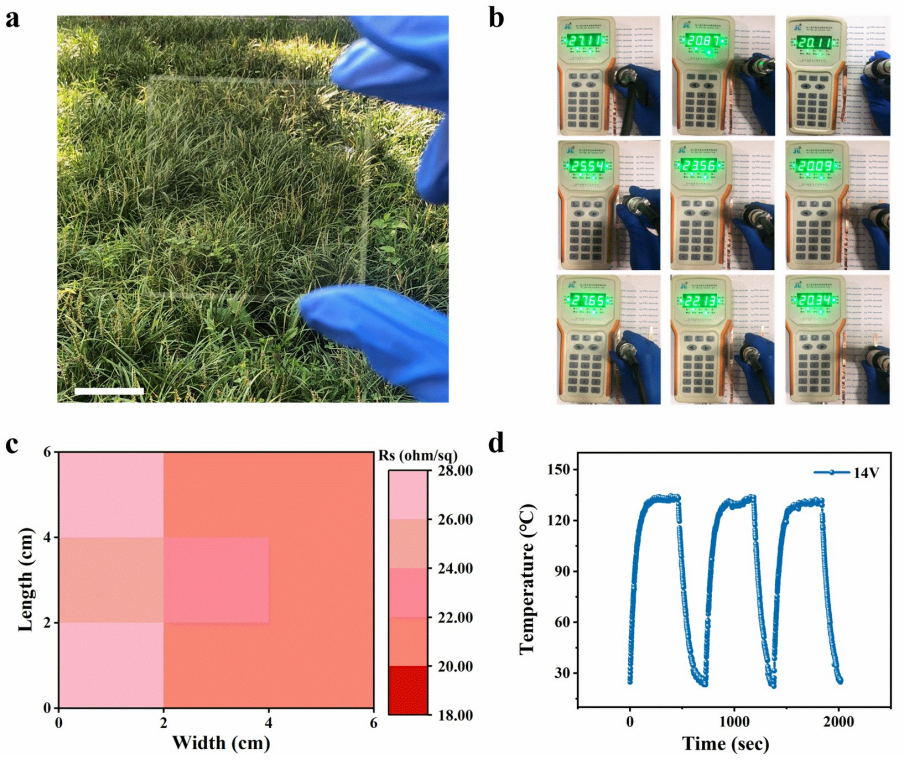

Fig. S7 (a) The photograph of transparent random Ag NWs/glass heater. (b) The sheet resistance distribution of random Ag NWs/glass heater (6 cm × 6 cm), corresponding to the area mapping (c). (d) Heating stability and repeatability of the random Ag NWs/glass heater at 14V.

Supplementary Movies

Movie S1. Dynamic evolution process of Ag NWs/ethanol ink on pure glass surface. The initial Ag NWs/ethanol CA was ~6.1°.

Movie S2. Dynamic evolution process of Ag NWs/ethanol ink on modified glass surface. The initial Ag NWs/ethanol CA was ~19.6°.

Movie S3. Dynamic evolution process of Ag NWs/ethanol ink on modified glass surface. The initial Ag NWs/ethanol CA was ~34.2°.

Movie S4. Dynamic evolution process of Ag NWs/ethanol ink on modified glass surface. The initial Ag NWs/ethanol CA was ~53.8°.

Movie S5. Dynamic evolution process of r Ag NWs/ethanol ink on modified glass surface. The initial Ag NWs/ethanol CA was ~57.2°.

Movie S6. Dynamic evolution process of Ag NWs/water ink on modified glass surface. The initial Ag NWs/water CA was ~52.8°.

Movie S7. Dynamic evolution process of Ag NWs/water ink on modified glass surface. The initial Ag NWs/water CA was ~56.7°.

Movie S8. Dynamic evolution process of Ag NWs/water ink on modified glass surface. The initial Ag NWs/water CA was ~60.5°.

Movie S9. Dynamic evolution process of Ag NWs/water ink on modified glass surface. The initial Ag NWs/water CA was ~139.8°.

Movie S10. Dynamic evolution process of Ag NWs/water ink on modified glass surface. The initial Ag NWs/water CA was ~147.2°.

Movie S11. Dynamic evolution process of Ag NWs/water ink on modified glass surface. The initial Ag NWs/water CA was ~157.5°.

Movie S12. The thermo-chromic processes of chameleon pattern on Ag NMs/PET heater surface upon different temperature.

Movie S13. The color change process of chameleon pattern on Ag NMs/PET heater surface upon different temperature under mechanical bending.

Movie S14. The thermo-chromic processes of QR code on Ag NMs/glass heater surface upon different temperature.