

Description of Additional Supplementary Files

Supplementary Movie 1 | The PCSA equipment and activating the printed Cu-particle circuit at room temperature

Supplementary Movie 2 | Temperature-stimulated memory function of the printed NiTi film activated by the PCSA

Supplementary Movie 3 | The PCSA integrated with the roll-to-roll process for large-scale production

Supplementary Movie 4 | The coated polymer for suppressing particle segregation in the sonication vibration

Supplementary Movie 5 | Simulation results of vibration-induced particle interaction

Supplementary Movie 6 | Real-time observation of the particle microstructure densification evolution

Supplementary Movie 7 | The PCSA for joining electronic components onto the printed circuits without solder

Supplementary Movie 8 | The printed BiInSnZn electrode with healing capacity through heat softening

Supplementary Movie 9 | The 3D origami-structured electronics folded into various types of structures

Supplementary Movie 10 | The intelligent paper plane

Supplementary Movie 11 | Erasable and foldable double-sided electroluminescent

Supplementary Movie 12 | Electroluminescent display on cloth