Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supporting Information

Multifunctional wearable E-textile via integrated nanowire-coated fabrics

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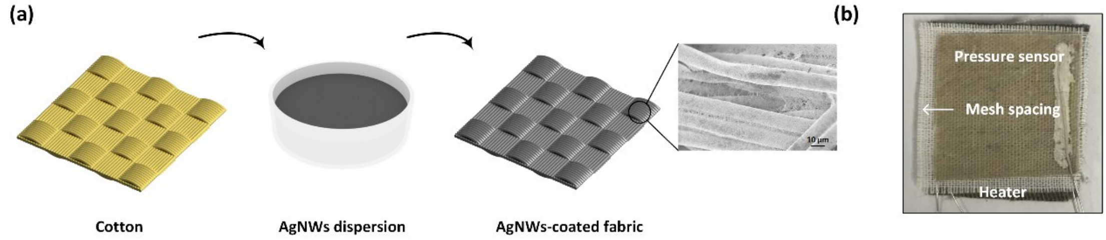

Fig. S1 (a) Schematic illustration of fabrication of the AgNW-coated fabrics. (b) Photograph of the multifunctional E-textile.

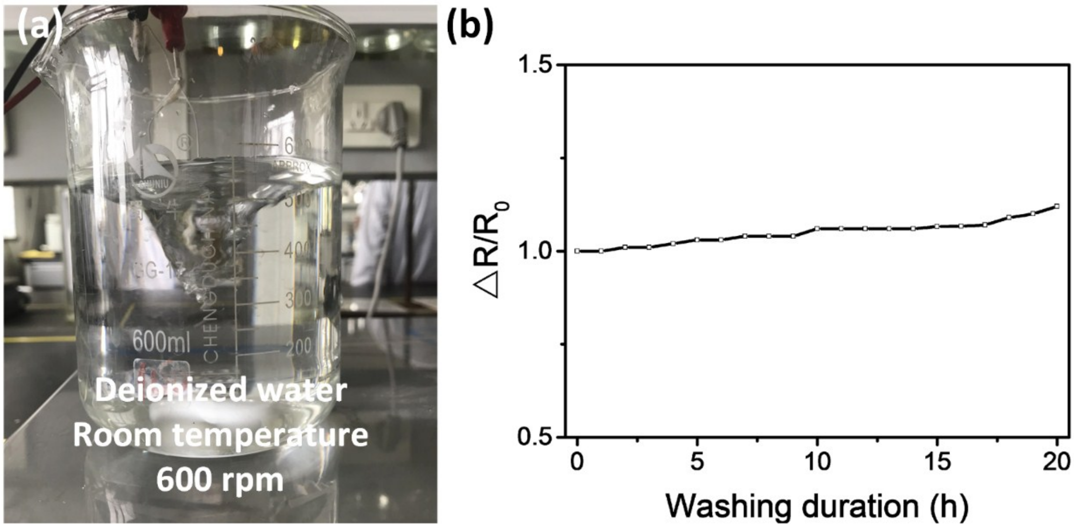

Fig. S2 (a) AgNWs-coated fabric in deionized water agitated at 600 rpm and room temperature to investigate the durability of conductive cotton sheets; (b) The resistance change of the AgNWs-coated fabric in an agitating state.

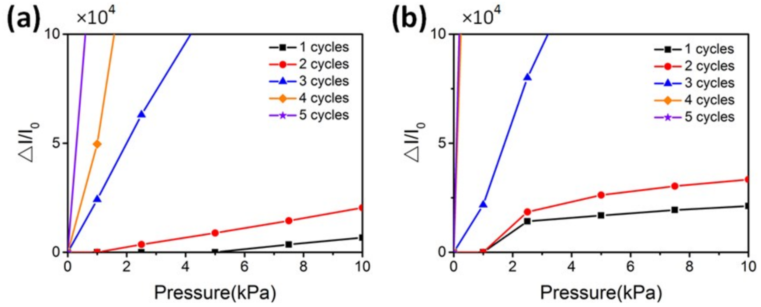

Fig. S3 The relative current changes of the multifunctional E-textile at 0-10 kPa with different dip-coating cycles, corresponding to a hole diameter of (a) 0.25 mm and (b) 0.5 mm.

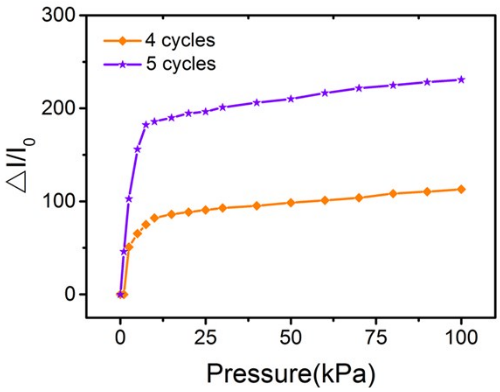

Fig. S4 The I/I_0 of the multifunctional E-textile with a mesh hole diameters of 1 mm.

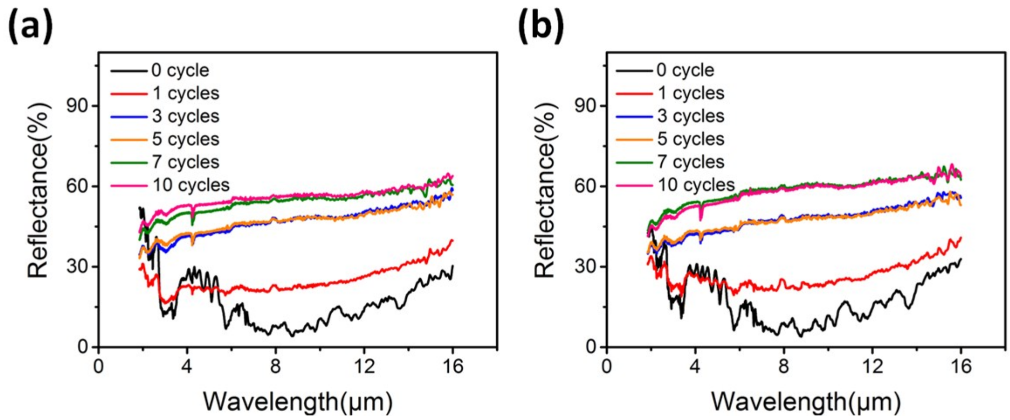

Fig. S5 IR reflectance of the AgNW-coated fabrics based on the substrate of (a) cotton 2 and (b) cotton 3 with different dip-coating cycles.

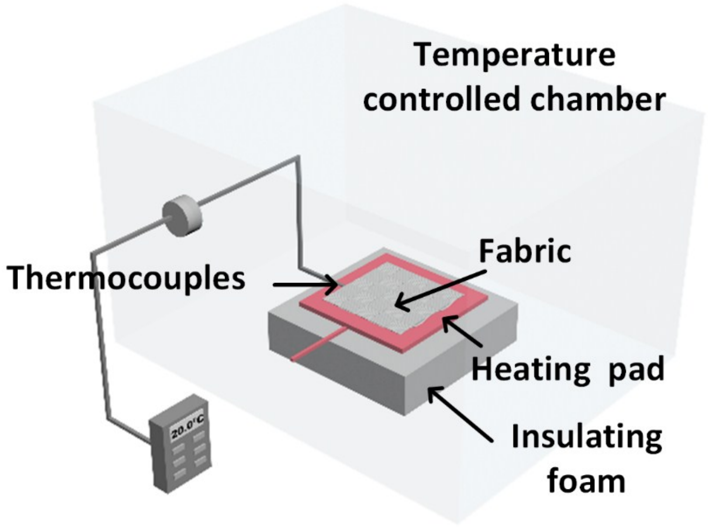

Fig. S6 Schematic representation of the thermal measurement set-up.

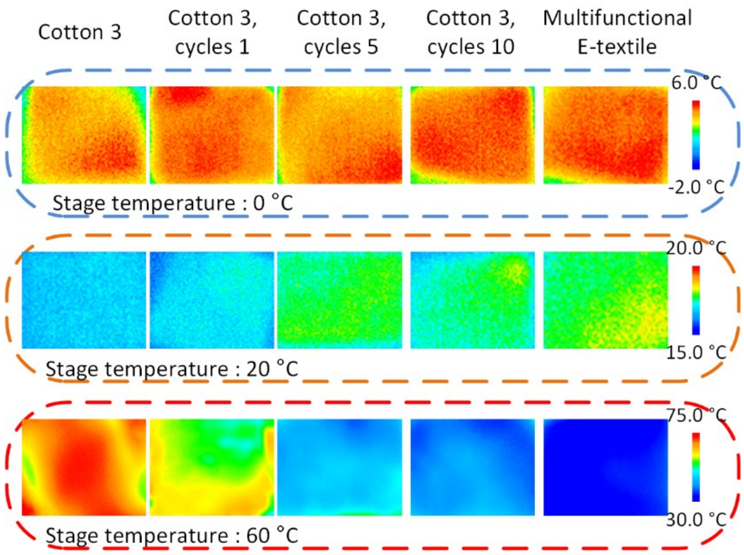

Fig. S7 Infrared images of the normal cottons, the single-layered fabric with different dip-coating cycles, and the multifunctional E-textile under stage temperatures of 0 °C, 20 °C, 60 °C.

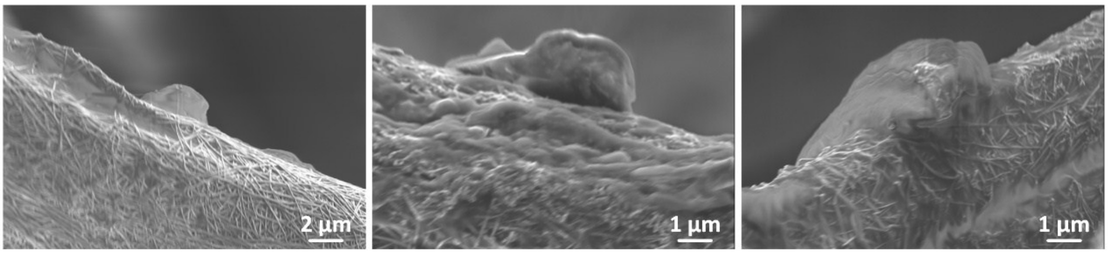

Fig. S8 SEM micrographs showing the morphological features of the captured particles at different positions.

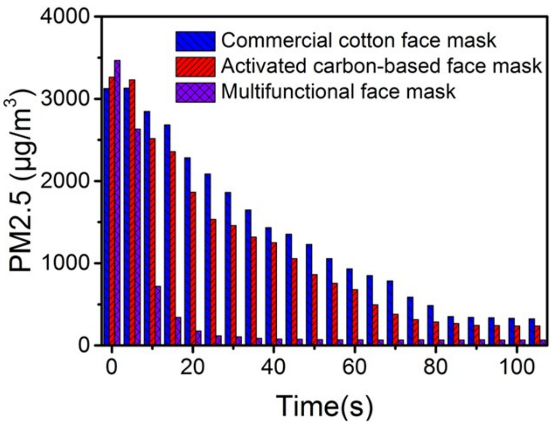

Fig. S9 PM2.5 number concentration measurement of car exhaust in real time from 0 to 105 s with commercial cotton face mask, activated carbon-based face mask, and multifunctional face mask.

Movie S1: Performance of the heater layer under a DC voltage of 1.5V.

Movie S2: PM2.5 measurement of the car exhaust.