Supporting Information

Highly Sensitive and Stretchable Strain Sensor Based on Wrinkled Chitosan-Multiwall Carbon Nanotube Nanocomposite

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Fig. S1. Photograph of the strain sensor placed on the vertical palm of the hand.



Fig. S2. (a, b) SEM images of the wrinkled structure at different magnifications.



Fig. S3. (a) The conductivity of the sensor in the initial and stretched states. (b) The conductivity of the sensor at different ratios of MWCNTs: CS.



Fig. S4. Mechanical performance testing of PDMS.



Fig. S5. Stability test of the strain sensor at 50% strain.



Fig. S6. SEM images of the distribution of MWCNTs in the wrinkled (a) and stretched (b) states of the sensing layer.



Fig. S7. (a) Photograph of 4×4 piezoresistive sensor array. (b) Photographs of the sensor array bent 180° and recovered flat.



Fig. S8. Real-time monitoring system.

The strain sensor device, data acquisition board and cell-phone constitute a real-time monitoring system as shown in Fig. S8. The resistance signal of the strain sensor is converted into a voltage signal easily recognized by the microcontroller through the resistance to voltage module, and the microcontroller can process the collected voltage signal, and then transmit the processed signal to the mobile terminal for digital/graphical display through the Wi-Fi module, thus achieving real-time monitoring of the strain sensor signal.