

Improving Comprehensive Performance of Strain Flexible Sensors by Electron Irradiation and Temperature Synergy

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SUPPORTING INFORMATION

Figure S1 XPS (C_{1s}) of hydroxylated MWCNTs under different irradiation fluence.

Figure S2 The resistance change rate of pre-irradiated flexible sensor under different strain.

Figure S3 The resistance change rate of irradiated flexible sensor under different strain.

Preparation of hydroxylated MWCNTs /ecoflex sensor.

Firstly, the ecoflex prepolymer (A: B = 1: 1) were uniformly mixed by magnetic stirring. Then, place the ecoflex prepolymer in a vacuum oven for 30 minutes to remove air bubbles from agitation, and the bubble-removed ecoflex prepolymer was injected into a capillary with a certain diameter. Then, the ecoflex prepolymer in the capillary was cured at 80°C for 4 h, and the capillary was etched with 40% HF solution for 10 minutes to obtain a fibrous ecoflex substrate with a large number of functional groups and microstructure on the surface. In addition, hydroxylated MWCNTs were coated on the surface of the flexible substrate until the substrate no longer adsorbed hydroxylated MWCNTs. The copper wires were fixed on the carbon based elastic conductive fiber as electrodes.

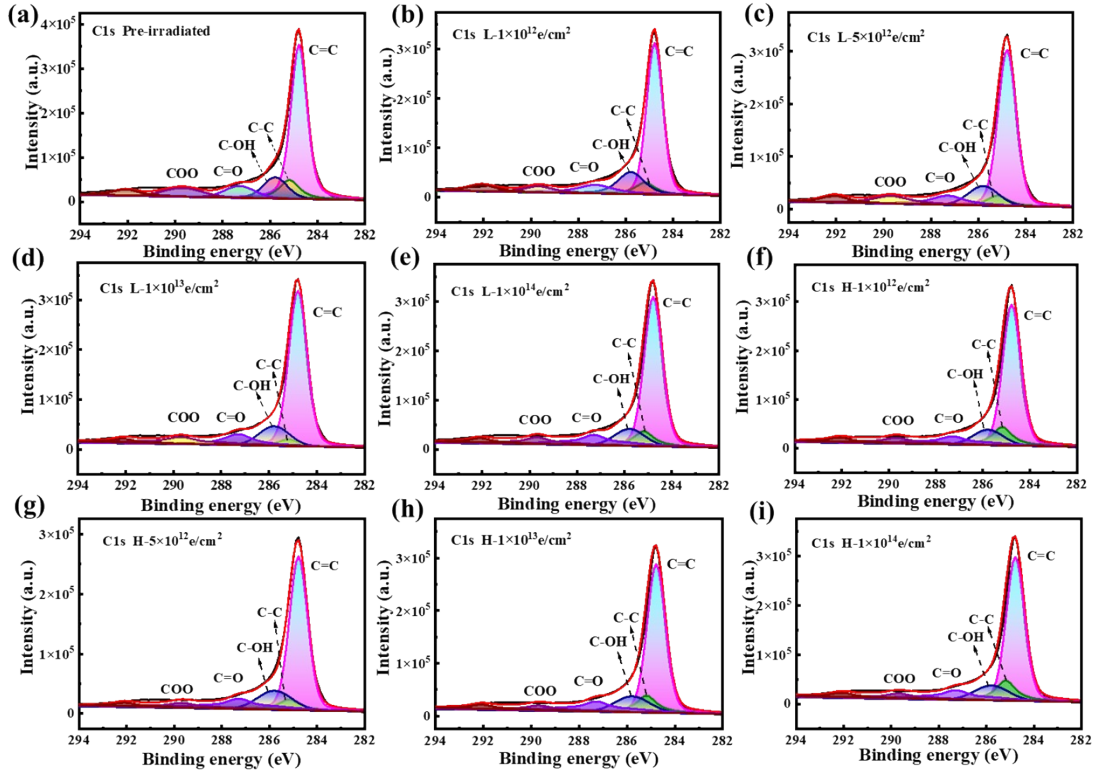


Figure S1

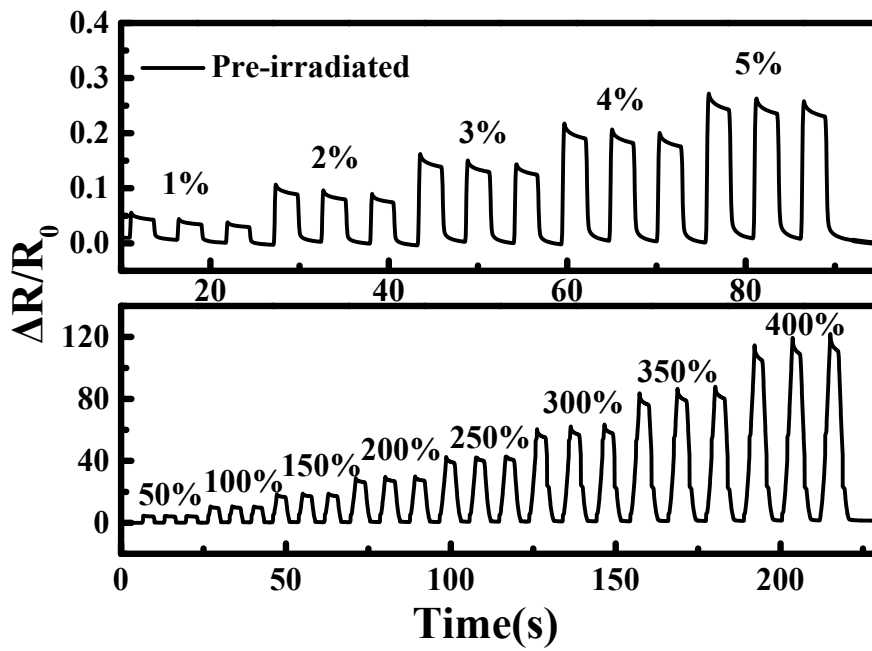


Figure S2

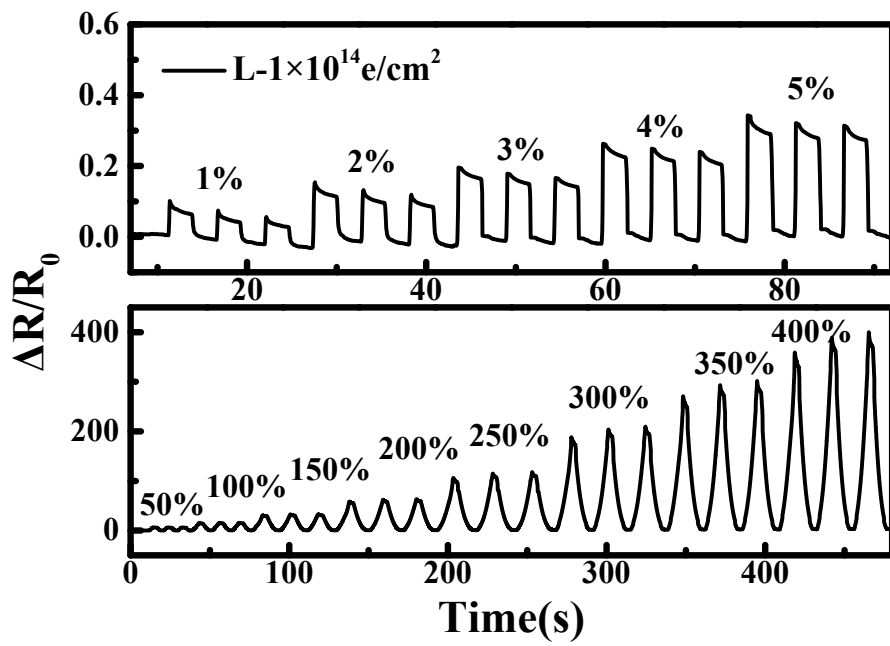


Figure S3