

Article

Mechanical, Electrical, and Piezoresistive Sensing Characteristics of Epoxy-Based Composites Incorporating Hybridized Networks of Carbon Nanotubes, Graphene, Carbon Nanofibers, or Graphite Nanoplatelets

Supplementary Figures

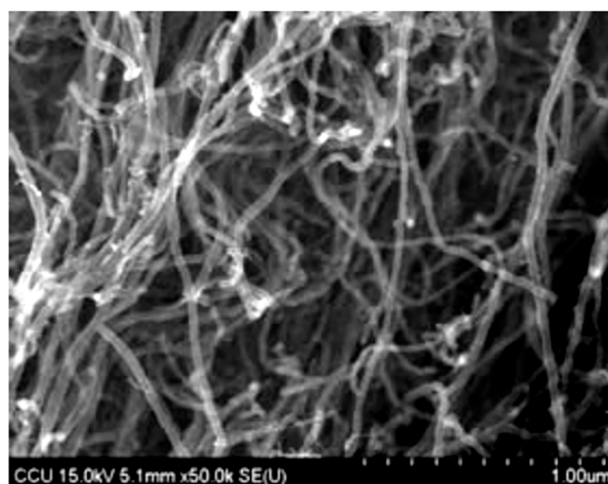


Figure S1. A SEM image of as-received CNTs provided by the manufacturer.

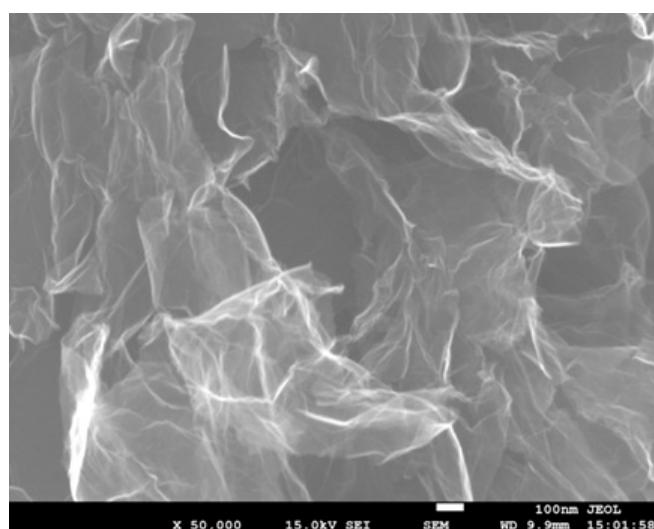
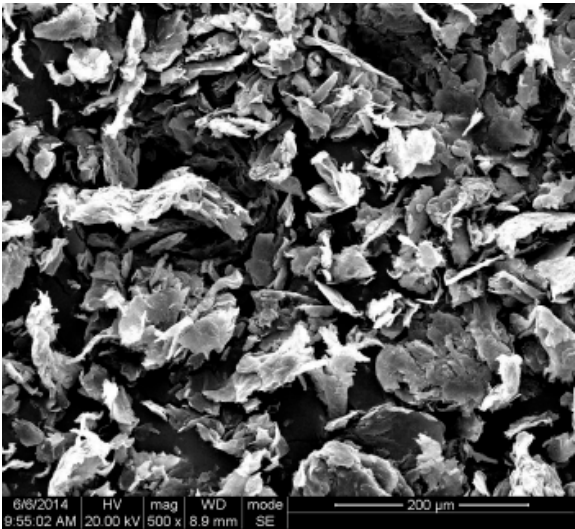
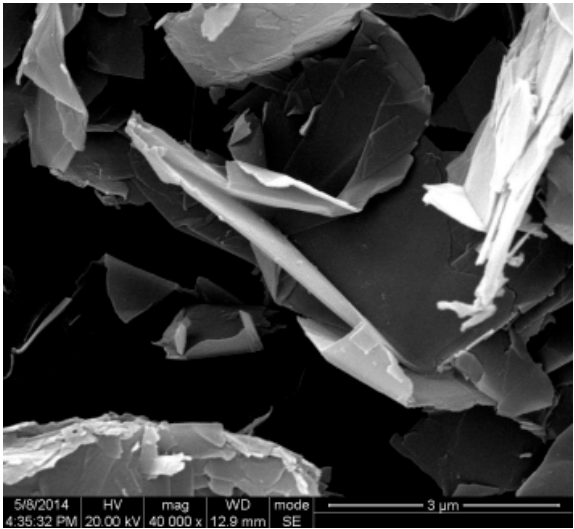


Figure S2. A SEM image of as-received graphene provided by the manufacturer.

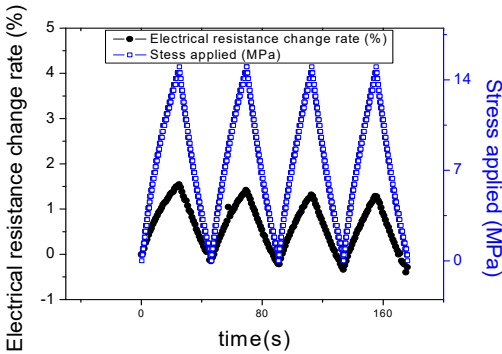


(a)

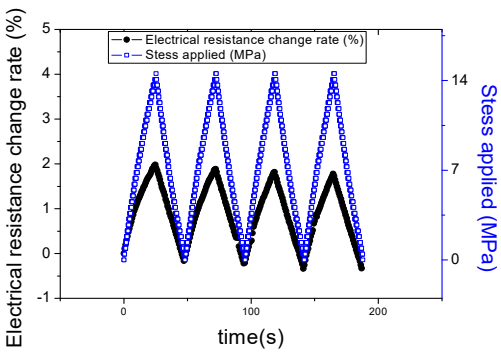


(b)

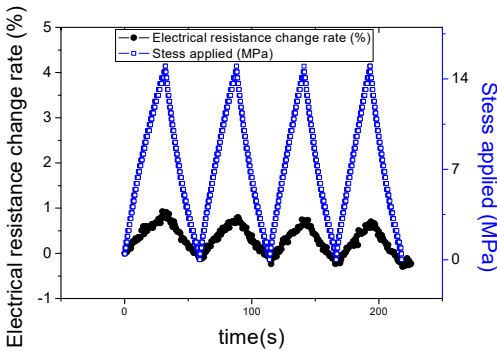
Figure S3. SEM images of as-received graphite nanoplatelet provided by the manufacturer.



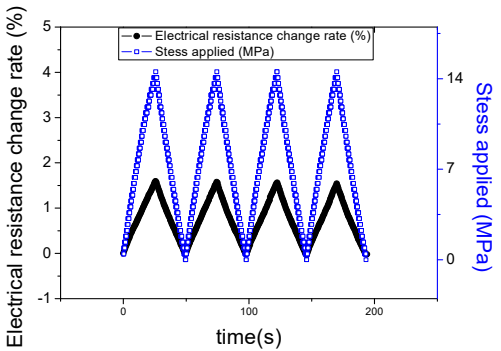
(a) CNT-only composite, 1%



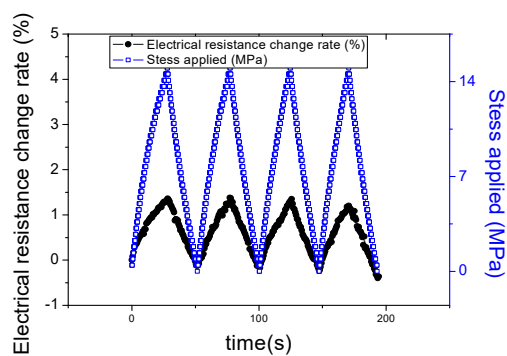
(b) CNT-only composite, 1.5%



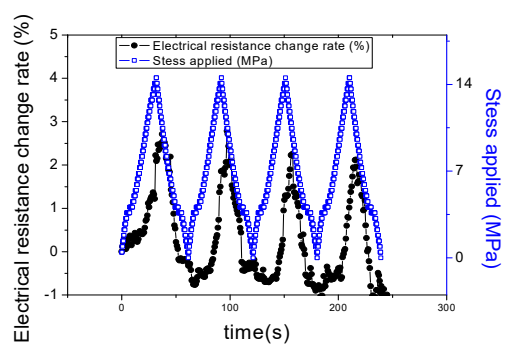
(c) CNT-only composite, 3%



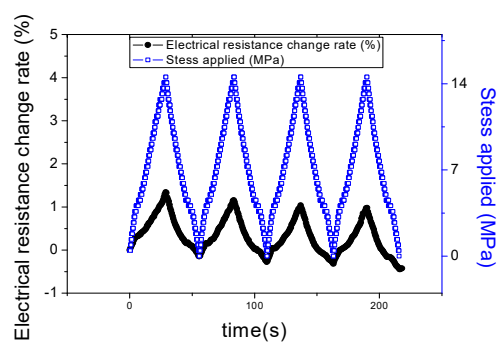
(d) CNT-graphene composite, 1%



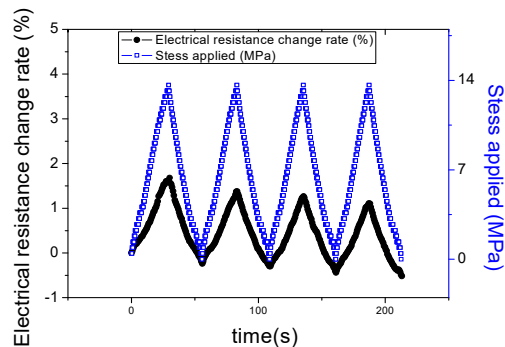
(e) CNT-graphene composite, 1.5%



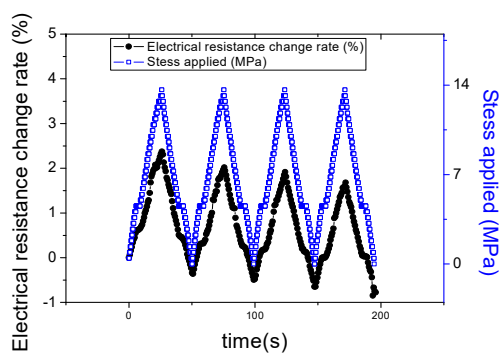
(f) CNT-CNF composite, 1%



(g) CNT-CNF composite, 1.5%



(h) CNT-CNF composite, 3%



(i) CNT-GNP composite, 1.5%

Figure S4. Electrical resistance change rates and applied stress simultaneously determined under repetitive tensile loadings.

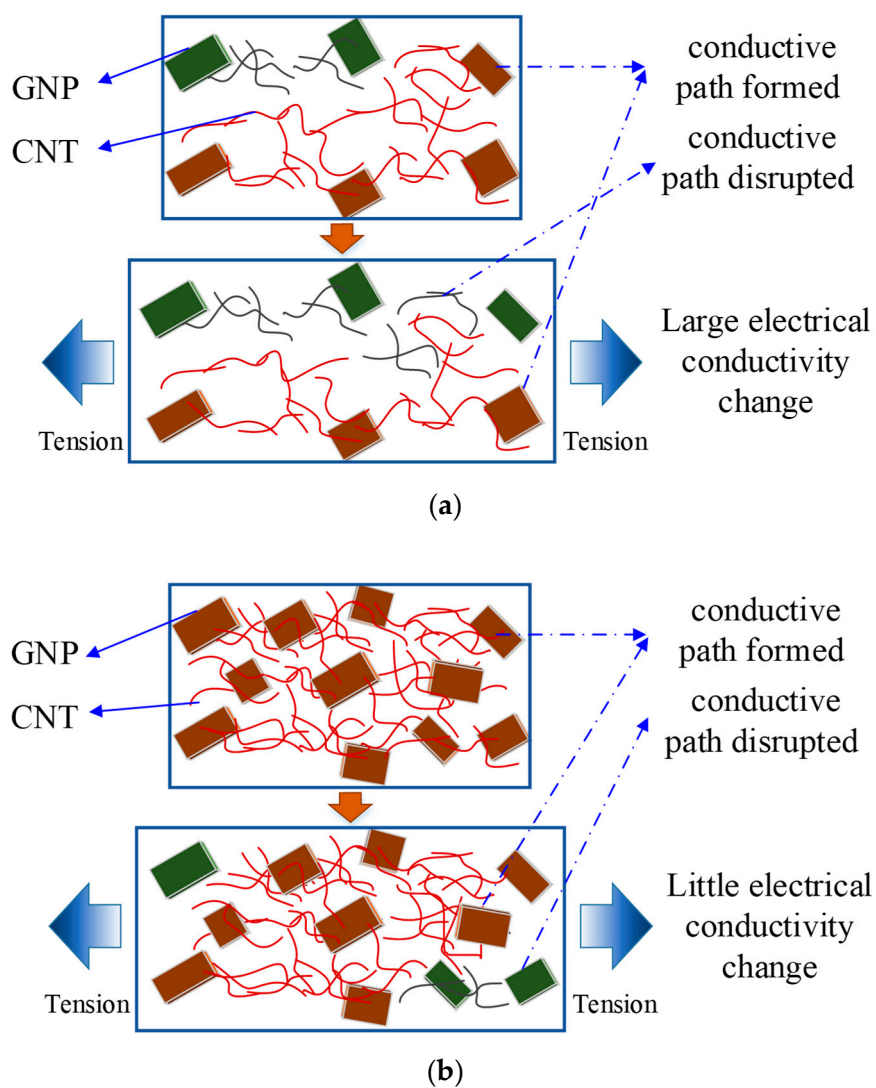


Figure S5. Schematics of carbon nanomaterials network at (a) a content ratio adjacent to percolation threshold and (b) a content ratio far greater than percolation threshold.

