Supporting Information

Directional Sensing Based on Flexible Aligned Carbon Nanotube Film Nanocomposites

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Section 1: CGMD simulation of aligned SWCNT film with entanglements.

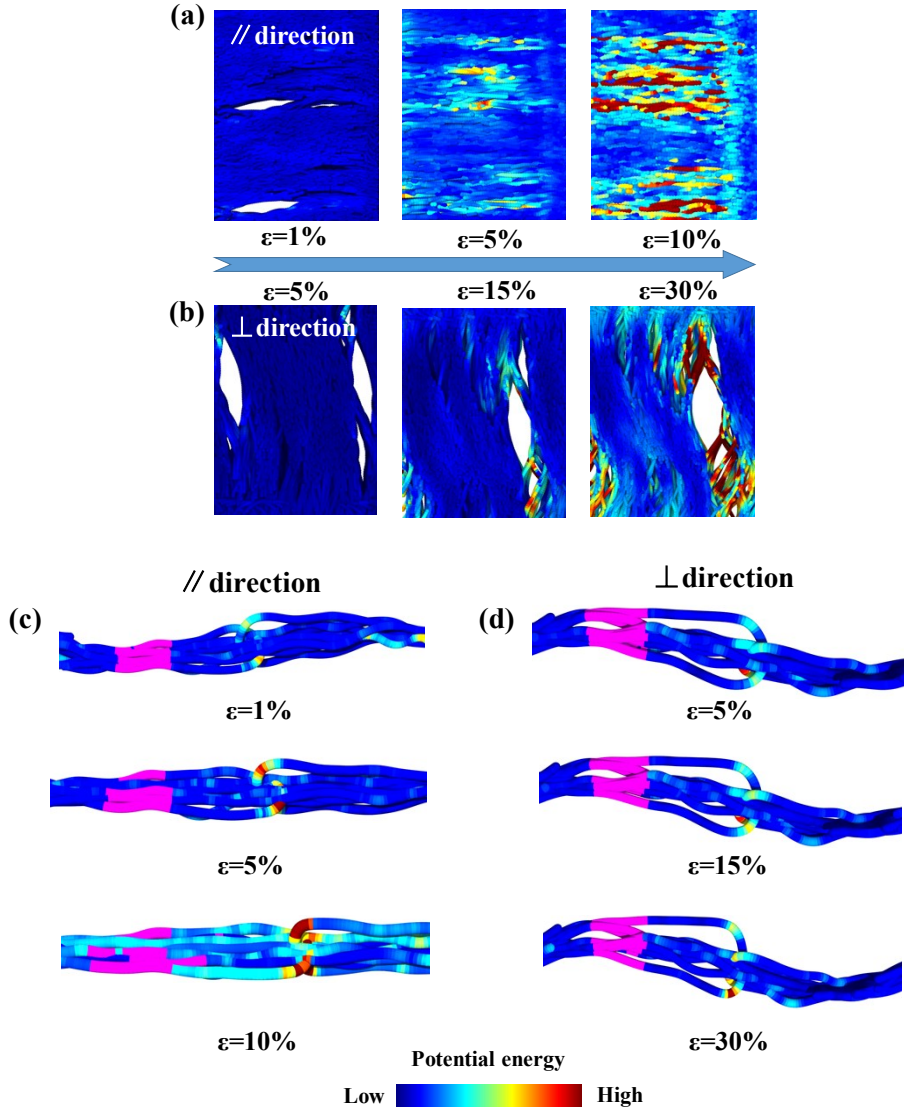

Fig. S1. CGMD simulation for the case that the entanglement was considered, where the interlocking effect on stress-transfer and failure fashions was presented.

Section 2: Electrical testing system and micromechanical tester.

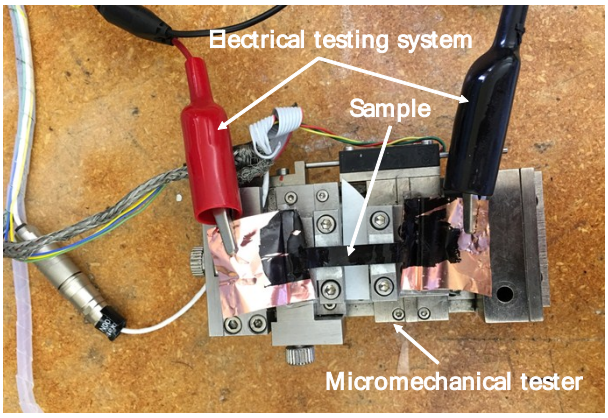

Fig. S2. Image for setup of electromechanical measurement, where the SWCNT film composite was fixed on the micro-tester and the copper electrodes were connected with an electrical measurement system.

Section 3: Sample preparation of single aligned SWCNT film for in situ tensile test.

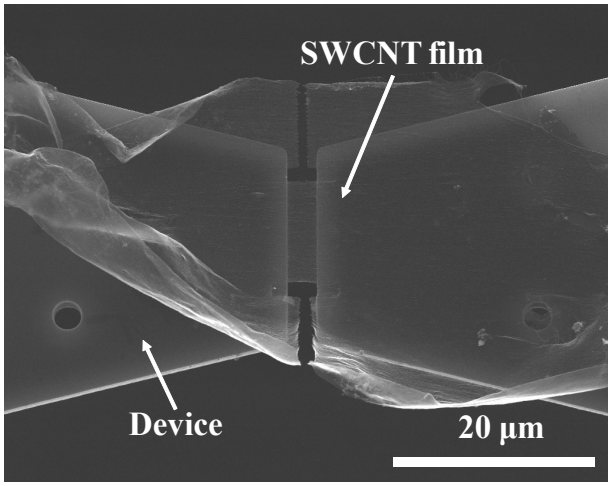

Fig. S3. SEM image for fixing a SWCNT film onto a micromechanical device, where the testing region was cut into a rectangula shape using FIB.