Supporting Information

Mechanical and thermal properties of carbon nanotubes in carbon nanotube fibers under tension-torsion loading

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Figure S1 (a) Potential energy of representative DWCNT with $\alpha=0.25 \, ^\circ/\text{Å}$ during relaxation process; (b) Snapshots of fully relaxed DWCNT under temperature 1 K and 300 K.
Figure S2. (a) Stress and strain energy versus strain curves of TWCNT; (b) Snapshot of tensile process of TWCNT under $\alpha=0 \, ^\circ$/Å and $\alpha=0.75 \, ^\circ$/Å, atoms are colored by von mises stress; (c) The corresponding diagram of different bond length distribution of TWCNT in (a).