

## Supporting information

### Molecular dynamics simulation for insight into microscopic mechanism of polymer reinforcement

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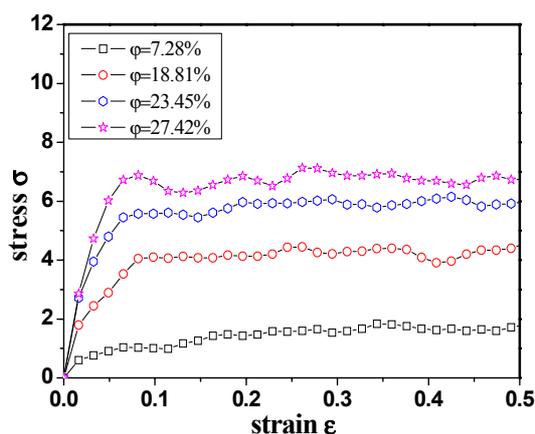
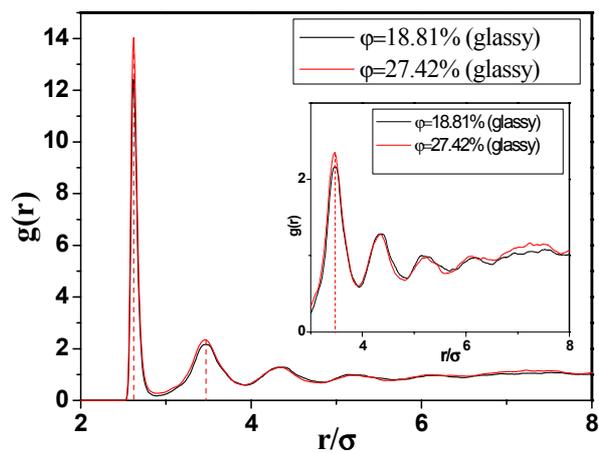


Figure S1. The stress at small strain for different nanoparticle volume fractions with  
polymer-nanoparticle interaction strength  $\epsilon_{np} = 12.0$ .

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**Figure S2.** The radial distribution function (RDF) for the polymer beads around the filler particles for glassy polymer systems filled with two different filler volume fractions.