Supporting information for

Revealing the reinforcing effect of a nanorod network on a polymer matrix through molecular dynamics simulations

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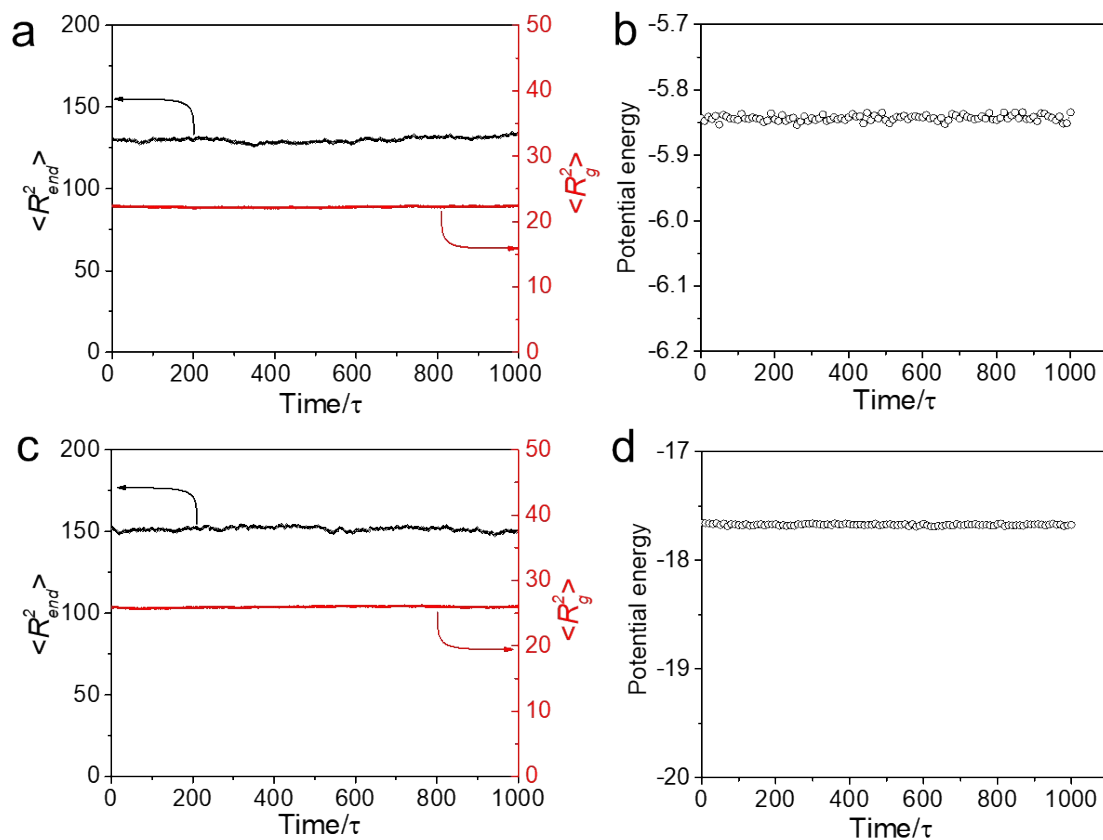*To whom correspondence should be addressed: Z. J. Zheng, zhengzj@hubu.edu.cn; J. Liu: liujun@mail.buct.edu.cn.

Fig. S1 (a, c) The variation of the mean squared end-to-end distance *R2 end*, radius of gyration *R2 g* and (b, d) the change of the potential energy of the two systems in the following 1.0×10^6 MD steps after enough equilibration with *NVT* ensemble. For a and b, the NP-polymer interaction strength ε_{np} equals 2.0, NP-NP interaction strength ε_{nn} equals 1.0, and r_{cutoff} equals 2.5. For c and d, the NP-polymer interaction strength ε_{np} equals 2.0, NP-NP interaction strength ε_{nn} equals 50.0, and r_{cutoff} equals 2.5.
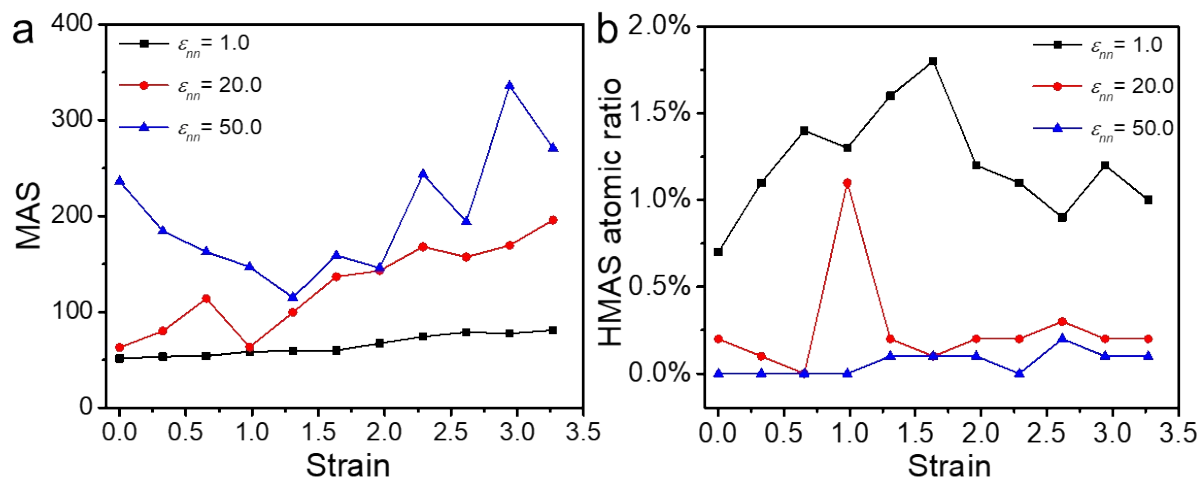
Fig. S2 (a) Maximum atomic stress (MAX) imposed on the polymer atoms for simulated systems with different NR-NR interaction strengths. (b) Density of polymer atoms with HMAS for simulated systems with different NR-NR interaction strengths.