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Induced force between colloidal particles with end-grafted polydisperse polymer chains : The role of the grafting mode

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Abstract

We consider a low-density assembly of identical spherical colloids, on which one has grafted f linear chains from an initial polymer solution of volume fraction, Φ_0 . Once the grafting process is accomplished, the clothed colloids are immersed in a good solvent. We assume that the lengths of the grafted chains are randomly distributed around the core of the clothed particles. For simplicity, we suppose that the clothed particles are small enough to be considered as polydisperse star-polymers.

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