Abstract Submitted
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Wang-Landau simulations of polymer adsorption on diluted surfaces[1] PAULO MARTINS[2], Instituto de Física, Universidade Federal de Mato Grosso, Cuiabá, MT, Brazil, THOMAS VOGEL, DAVID LANDAU, Center for Simulational Physics, University of Georgia, Athens, GA, USA — We consider a single linear lattice homopolymer in three dimensions that interacts with a diluted planar surface. A fraction p of the total number of the sites on the substrate is attractive, while the remaining $1-p$ remains neutral. Our focus is on the conformational transitions the polymer can experience under different environmental conditions, for instance, the surface dilution and the strength of the substrate attraction, compared to the intensity of the monomer-monomer interactions. To get insights on the phase diagram we have performed extensive Monte Carlo simulations, by using the Wang-Landau sampling, for different values of the surface attraction ϵ and the concentration of attractive sites p, specially near the surface percolation threshold p_c.

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