FIG. 1: A few snapshots showing different time points for two different initial configurations. a) A straight initial configuration and b) a random extended configuration.
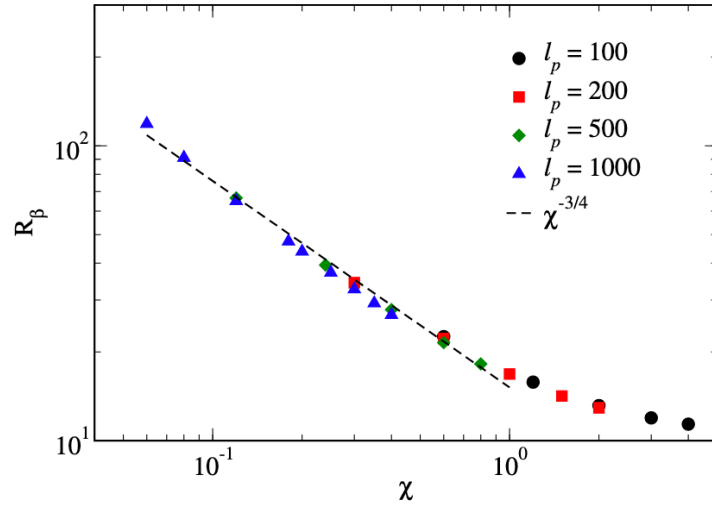
FIG. 2: The curvature radius $(R_\beta)$ at $\rho = 0$ as a function of flexure number defined as $\chi = l_0 Pe/l_p$ for various persistence lengths $(l_p = 100, 200, 500, \text{ and } 1000)$ as mentioned in the plot .