Project 3: Squashing a Polymer

Yuan Yuxuan u6772166

September 3, 2019

1 Project

In our code, the step size is set to be 1.

fig 1,2,3 are the example polymer of 10000 steps confined by two plates separated by distance D of 58.78, 97.55 and 175.10, respectively:

fig 4 and 5 are the semilogx plot of the free energy versus plate distances and log-log plot of force versus plate distances from 20 to 400.(I do not take the loglog plot of free energy versus distance since the free energy is negative)

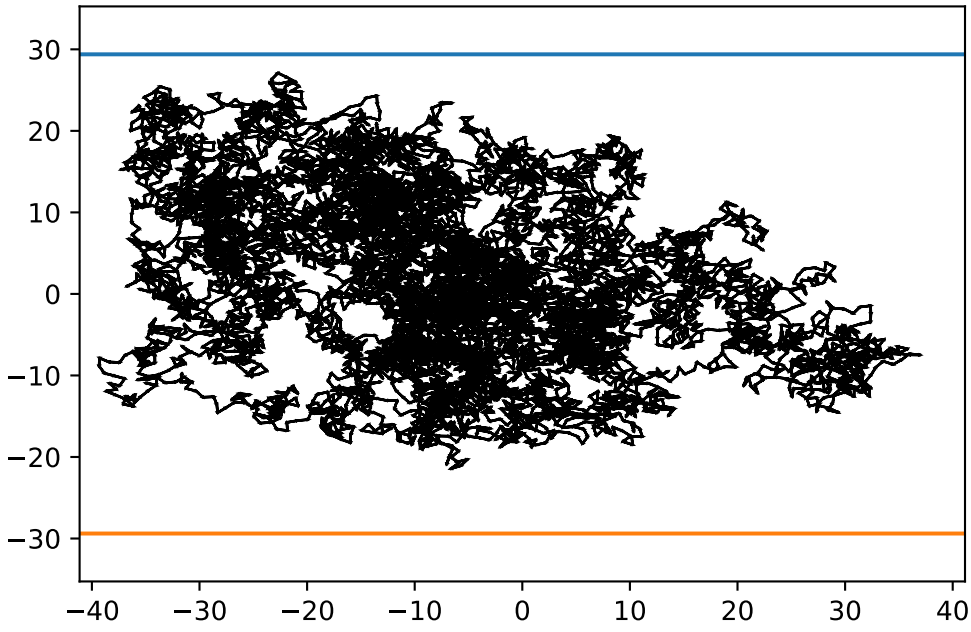

Figure 1: example polymer of 10000 steps confined by two plates separated by distance D of 58.78.

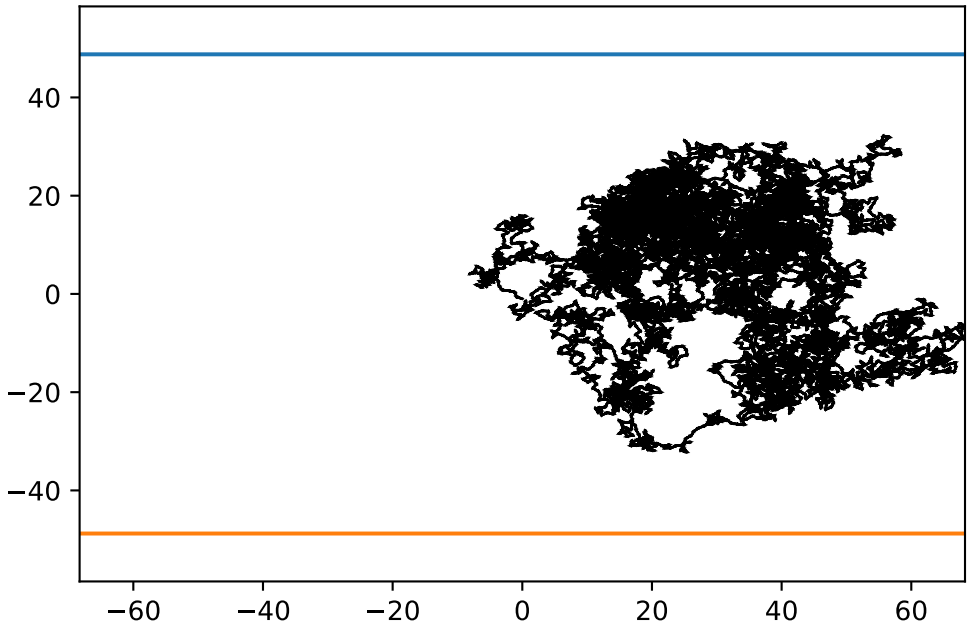

Figure 2: example polymer of 10000 steps confined by two plates separated by distance D of 97.55.

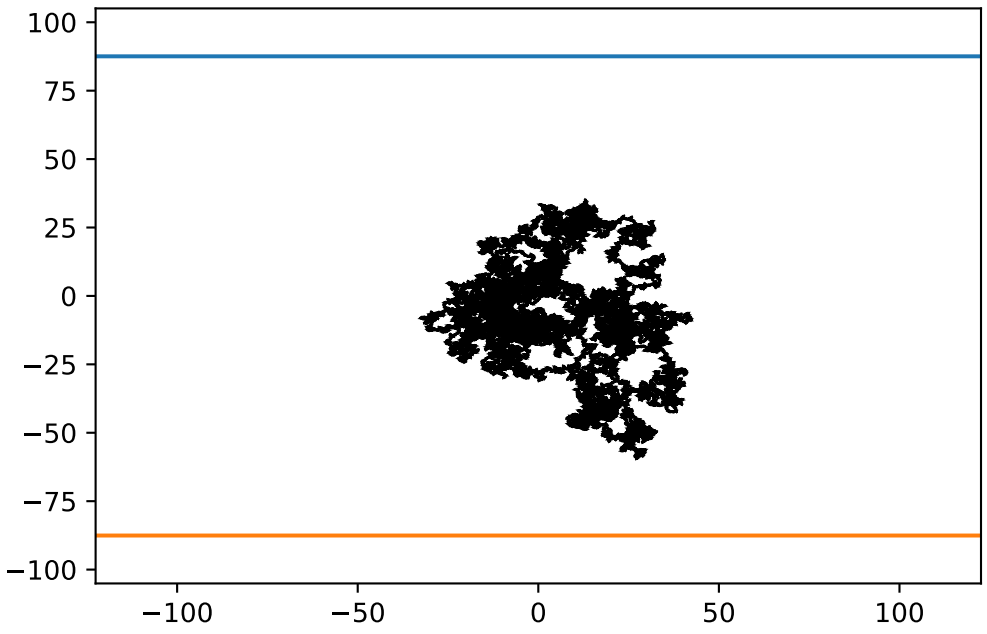

Figure 3: example polymer of 10000 steps confined by two plates separated by distance D of 175.10

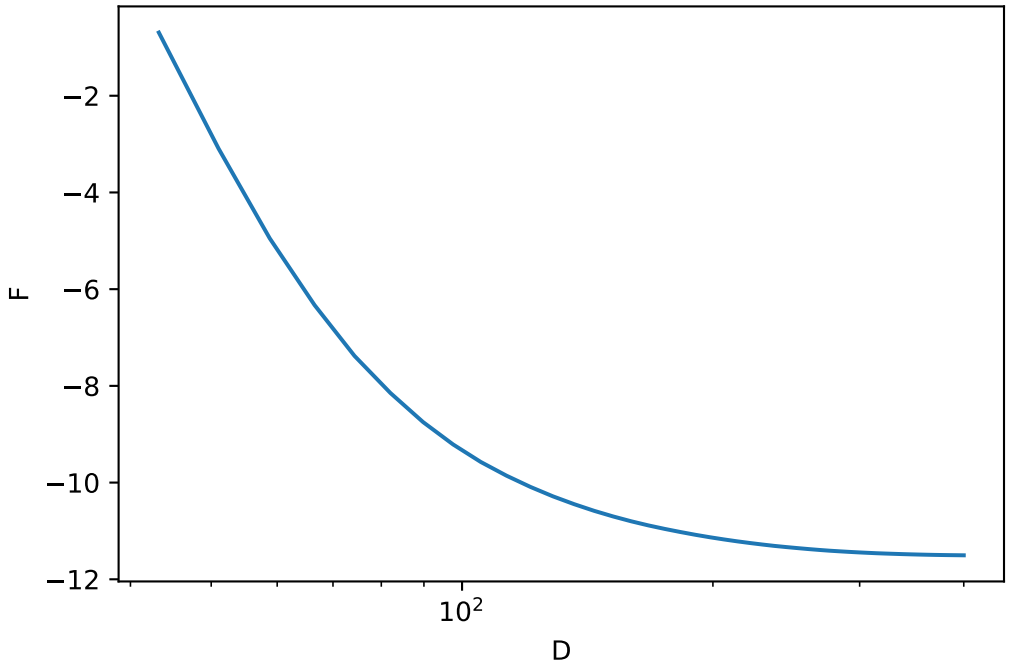

Figure 4: the semilogx plot of the free energy versus plate distances

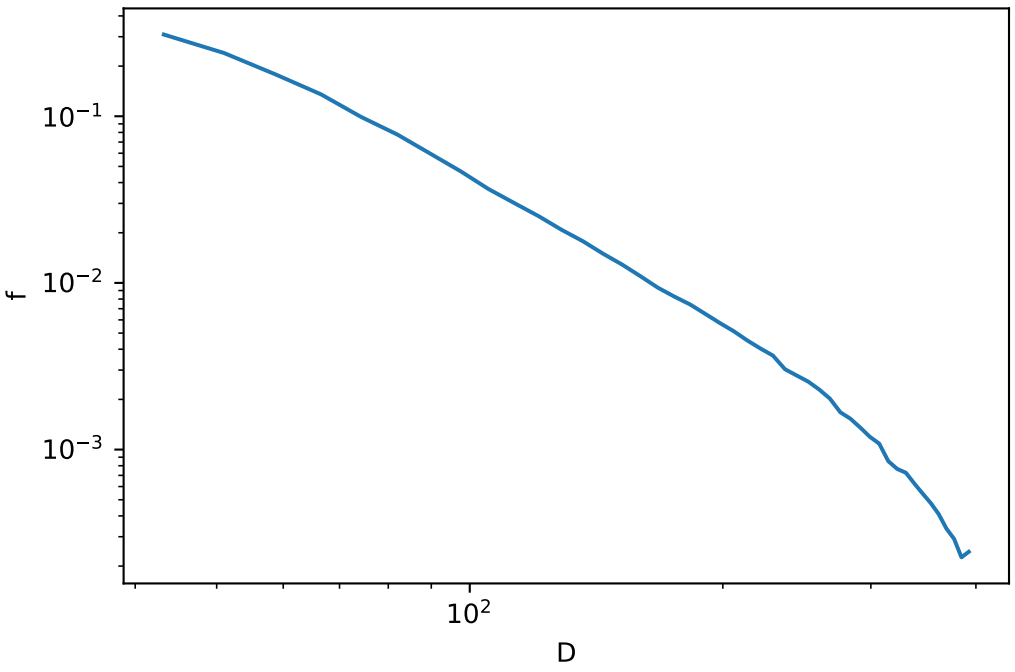

Figure 5: log-log plot of force versus plate distances