

Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Behavior of a polymer chain confined by a membrane FABRICE THALMANN, University of Strasbourg and Institut Charles Sadron CNRS, CARLOS M. MARQUES, Institut Charles Sadron CNRS and University of Strasbourg — We consider a single polymer chain, grafted on a flat and rigid substrate, covered by a membrane. The membrane presents some affinity for the surface, caused by non specific adhesive interactions. The challenge is to anticipate and describe the different possible relative configurations of the membrane and the polymer chain, depending on parameters such as the surface tension and curvature of the membrane, or the chain gyration radius. We propose for this system a phase diagram of the different regimes, as well as quantitative predictions for comparison with some recent experiments.

Fabrice Thalmann
University Louis Pasteur and Institut Charles Sadron CNRS

Date submitted: 21 Nov 2008

Electronic form version 1.4