LOCALIZATION OF POLYMER CHAINS AT TWO PENETRABLE INTERFACES IN A CONSTANT MAGNETIC FIELD

I.V. Gerasimchuk¹, V.S. Gerasimchuk², Yu.I. Gorobets¹, J.-U. Sommer³

¹Institute of Magnetism, Nat. Acad. of Sci. of Ukraine and Min. Edu. Sci. of Ukraine (36-b, Vernadsky Blvd., Kyiv 03142, Ukraine; e-mail: igor.gera@gmail.com),

²National Technical University of Ukraine "Kyiv Polytechnic Institute" (37, Peremohy Ave., Kyiv 03056, Ukraine),

³Leibniz Institute of Polymer Research Dresden e.V. (6, Hohe Strasse, Dresden D-01069, Germany)

Summary

We investigate the polymer chain localization in the system of two penetrable interfaces in an external constant magnetic field within the mean-field approximation. The saturation of a polymer chain in the limiting case of zero bulk concentration is studied. We obtain a non-monotonous behavior of the amount of adsorbed polymers as a function of the distance between the interfaces.