



Polymers under Multiple Constraints

Polymer- & Soft-Matter-Seminar

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“Phase behavior of semiflexible polymers: Monte Carlo computer simulation”

**Tuesday,
21st May 2019**

at: 5.15pm

**VDP 4 1.27,
Von-Danckelmann-
Platz 4
06120 Halle**

In this talk, I will give an overview about research in my group on phase behavior of semiflexible polymers. First, I will consider pseudo-phase diagrams of single semiflexible homopolymer chains and flexible-semiflexible copolymer chains, both in the bulk solution and at an adsorbing surface. Even in such a simple model which takes into account only Van-der-Waals interactions and intramolecular stiffness several non-trivial intraglobular anisotropic morphologies can be formed. Secondly, I will present results on polymer solutions, from dilute to concentrated, and discuss isotropic-nematic transition, both in the bulk solution and in thin films. Finally, I will also discuss methodological aspects of extended ensemble Monte Carlo and flat-histogram Monte Carlo algorithms which are most suitable for studying the phase behavior of polymer systems.



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