



"Soft-Matter Seminar"

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Title:

Polyelectrolyte adsorption

Polyelectrolytes (PEs) are polymers containing a variable (usually large) amount of ionizable monomer along the chemical backbone. Once dissolved in a suitable polar solvent such as water, the ion pairs dissociate by creating a charged chain with floating counterions. PEs represent a broad and interesting class of materials that attract an increasing attention in the scientific community. PEs have applications in modern technology as well as biology, since virtually all proteins, as well as DNA, are charged. The adsorption of PEs onto surfaces is an important process, since they modify the physico-chemical properties of the surface. From a theoretical point of view, charged polymers (in bulk or adsorbed) are much less understood than neutral ones. One of the main difficulties is the addition of new length scales set by the tremendous long-ranged Coulomb interaction. Hence, the study of adsorption of PEs is motivated by fundamental aspects as well as practical ones. In this seminar, I will present Monte Carlo computer simulations that address the problem of PE adsorption and PE multilayering.

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14:00 Uhr

Raum PH 3344

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