Beitrag ID: **7** Typ: **Poster**

Stimuli effects on different responsive polymer brushes

Montag, 5. Dezember 2022 16:00 (2 Stunden)

The poly(N-isopropylacrylamide) (PNiPAAm) brush is a very responsive polymer. PNiPAAm reacts to different stimuli like solvent composition, Temperature, and PH. In contrast to previous studies, we vary the chain length and do investigations on PNiPAAm Hydrogels. Furthermore, we compare the PNiPAAm brush to a poly(N-Dimethylacrylamid) (DTMA) brush and argue how the wetting properties change.

Here we investigate how memory effects are affected by different atmospheres. We show how the temperature-induced collapse of the brush changes the wetting properties of the brush. The wetting properties depend not only on the brush but also on their treatment before the heating experiments.

With soft colloidal probe AFM, we investigate the adhesive properties of the brush. We are interested in changes due to co-nonsolvency effects and changes in the adhesive properties due to previous wetting treatment. We compare our findings to lateral force measurements which we perform with a self-built DAFI setup.

Hauptautoren: SCHUBOTZ, Simon; Herr SYCHEV, Dmitrii; Prof. SOMMER, Jens-Uwe; Dr. UHLMANN, Petra; Prof. FERY, Andreas; Dr. AUERNHAMMER, Günter K.

Vortragende(r): SCHUBOTZ, Simon

Sitzung Einordnung: Poster Session