Beitrag ID: **3** Typ: **Poster**

Photoresponsive Wetting of Polymerbrushes containing Arylazopyrazoles

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

Arylazopyrazoles (AAPs) are a class of photoswitches and offer significant improvements of more established classes of photoswitches such as azobenzenes. In this work, we present the synthesis of novel poly-thiolactone-hydroxyethyl acrylate-copolymer brushes. These brushes can either be generated to cover a glass or silicon substrate homogeneously or can be structured using microcontact printing (μCP) of the polymerization initiator. Using the unique reactivity of the thiolactones we can introduce photoswitchable AAPs in form of amines as well as linear aliphatic groups in form of acrylates *via* post functionalization. The AAPs enable repeatable photoswitching of the static water contact angle over many cycles while the choice of acrylates can adjust the range of the contact angle change to more hydrophobic or more hydrophilic regions.

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Sitzung Einordnung: Poster Session