

# GRK 2516 Soft Matter Seminar

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None

Research seminar of the DFG Research Training Group GRK 2516 (<https://grk2516.uni-mainz.de>).

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## Surface-Confined Supramolecular Polymers

We report the sequential growth of supramolecular copolymers on gold surfaces, using oppositely charged dendritic peptide amphiphiles. By including water-solubilizing thermoresponsive chains in the monomer design, we observed non-linear effects in the temperature-dependent sequential growth. The step-wise copolymerization process is characterized using temperature dependent SPR and QCM-D measurements. At higher temperatures, dehydration of peripheral oligoethylene glycol chains supports copolymer growth due to more favorable comonomer interactions. Both monomers incorporate methionine amino acids but remarkably, desorption of the copolymers via competing Sulphur gold interactions with the initial monomer layer is not observed. The surface-confined supramolecular copolymers remain kinetically trapped on the metal surface at near neutral pH and form viscoelastic films with a tunable thickness.