Contribution ID: **5** Type: **Poster**

Molecular properties and growth conditions associated with PSS diffusion during annealing in polyelectrolyte multilayers

Tuesday, 18 September 2018 17:15 (15 minutes)

During annealing of polyelectrolyte multilayers in concentrated solutions (1 M NaCl) interdiffusion of polyelectrolytes occurs. We investigate the interdiffusion perpendicular to the substrate using neutron reflectivity and selectively deuterated polyanions (PSS). Multilayers formed at 10 mM NaCl consist of flatly adsorbed chains. The diffusion constant of PSS can be tuned by four orders of magnitude; it decreases exponentially with the degree of polymerization N of PDADMA. Multilayers formed at 100 mM NaCl consist of interdigitated chains. When the degree of polymerization of PDADMA exceeds the one of PSS, the diffusion constant drops suddenly by three orders of magnitude and remains low. Such sudden transitions are better known from network than from polymer theory.

Primary author: Mrs SILL, Annekatrin (Universität Greifswald)

Co-authors: Dr NESTLER, Peter (Universität Greifswald); Dr PASSVOGEL, Malte (Universität Greifswald); Mr AZINFAR, Amir (Universität Greifswald); Prof. HELM, Christiane A. (Universität Greifswald)

Presenter: Mrs SILL, Annekatrin (Universität Greifswald)

Session Classification: Poster session 2

Track Classification: P2 Soft matter