Appendix of: Novel controllable auxetic effect of linearly elongated supported polyelectrolyte multilayer with amorphous structure

Johannes Frueh,*^a Gerald Reiter,^b Helmuth Möhwald,^b Qiang He,^a Rumen Krastev,^{b,c}

^a Key Laboratory of Microsystems and Microstructures Manufacturing, Ministry of Education, Micro/Nano Technology Research Centre, Harbin Institute of Technology, Yikuang Street 2, Harbin 150080, China

^bMax Planck Institute of Colloids and Interfaces, Am Mühlenberg 1, 14424 Golm/Potsdam, Germany

^c NMI Natural and Medical Sciences Institute at the University of Tübingen, Markwiesenstraße 55, 72770 Reutlingen, Germany



Fig. A1 Thickness change upon elongation a) PEM prepared with NaCl, b) PEM prepared without NaCl. In case of b) released state. The shown thickness in b) was determined on "bright" areas only.



Fig. A2 (a) Structure of PSS (polystyrenesulphonate) (b) Structure of PDDA (polydimethyldiallyl chloride)



Fig. A3 Used ellipsometry setup. The substrate was 4mm thick to shift the reflection from the top and the bottom of the substrate away from each other. The beam reflected from the substrate bottom was blocked with a piece of black paper (black backside reflection beam blocker in image).