

## Supporting Information

### Preparation of highly stable and ultrasmooth chemically grafted thin films of chitosan

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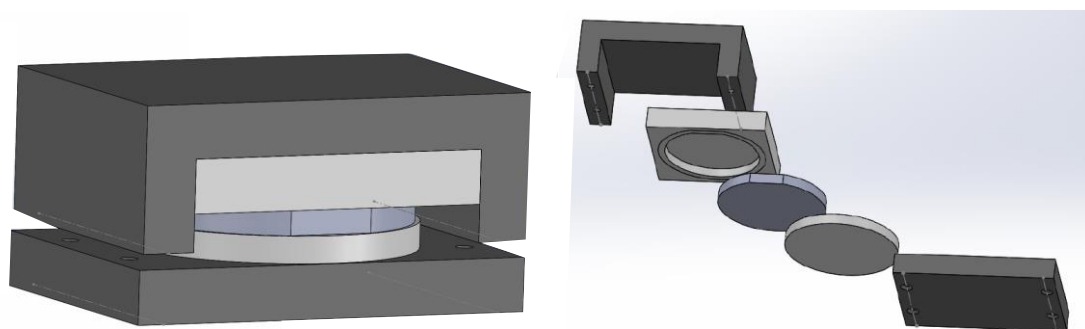


Figure S1: Customized cell for neutron reflectivity analysis: silicon blocks clamped against a Teflon trough filled with the liquid solution, held by a stainless steel device.

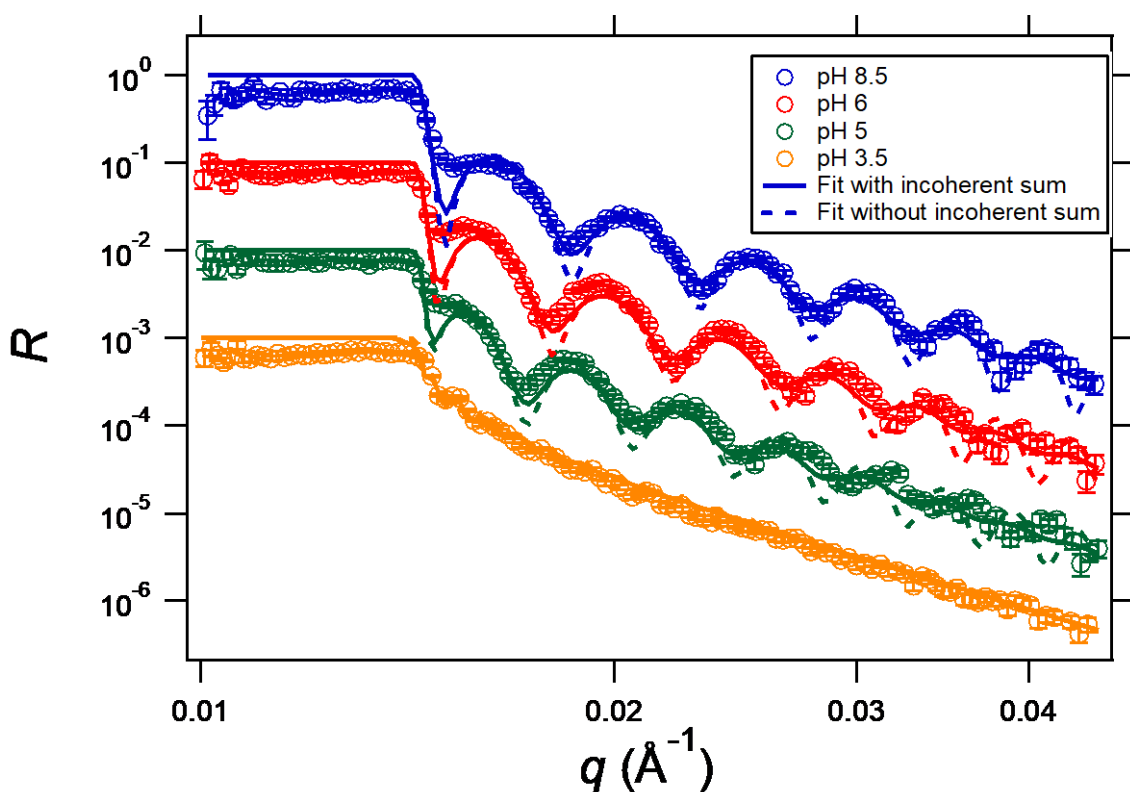


Figure S2: Neutron reflectivity curves and corresponding fits (with and without including an incoherent sum over areas with slightly different thicknesses) for chitosan films of similar thickness (45 nm) immersed in a  $\text{D}_2\text{O}$  solution (with 10 mM NaCl) at different pH: 8.5, 6, 5 and 3.5.

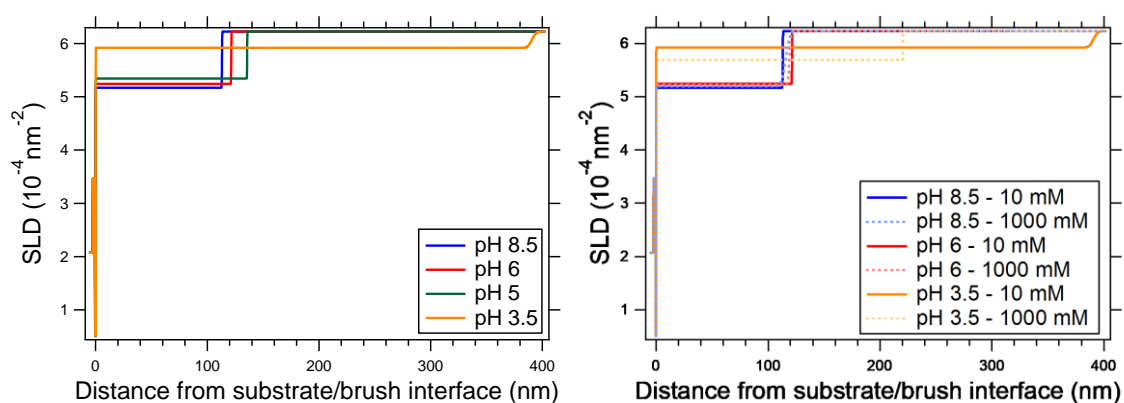


Figure S3: Profiles of scattering length density for chitosan films of similar thickness (45 nm) immersed in  $\text{D}_2\text{O}$  solutions at different pH (8.5, 6, 5 and 3.5) and different ionic strengths