

## Supplementary information of

### Dynamics of aqueous peptide solutions in folded and disordered states examined by dynamic light scattering and dielectric spectroscopy.

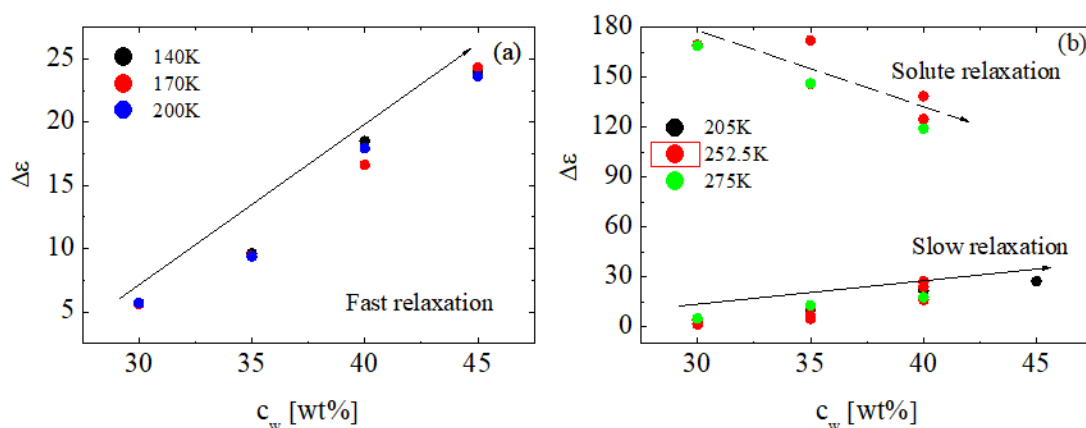
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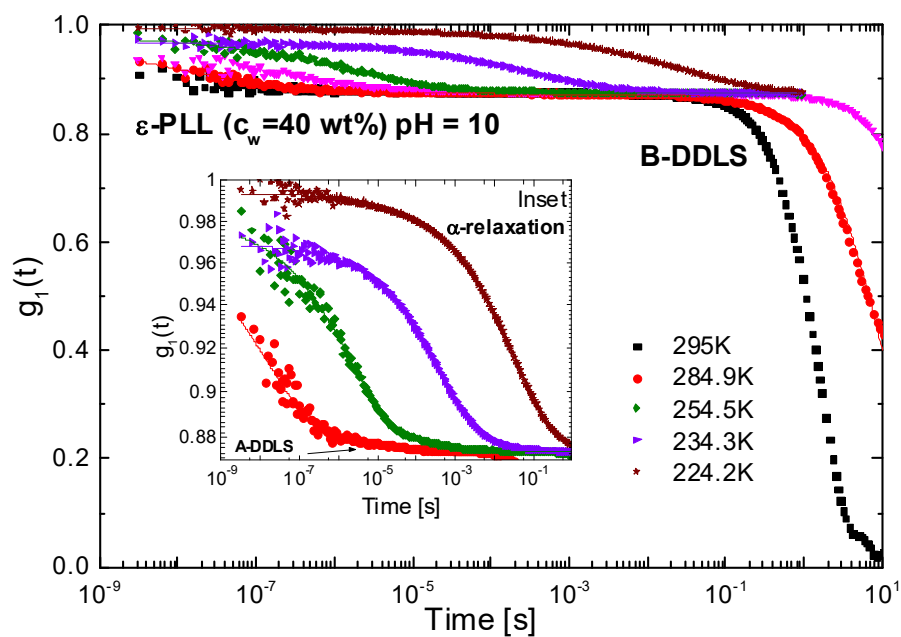
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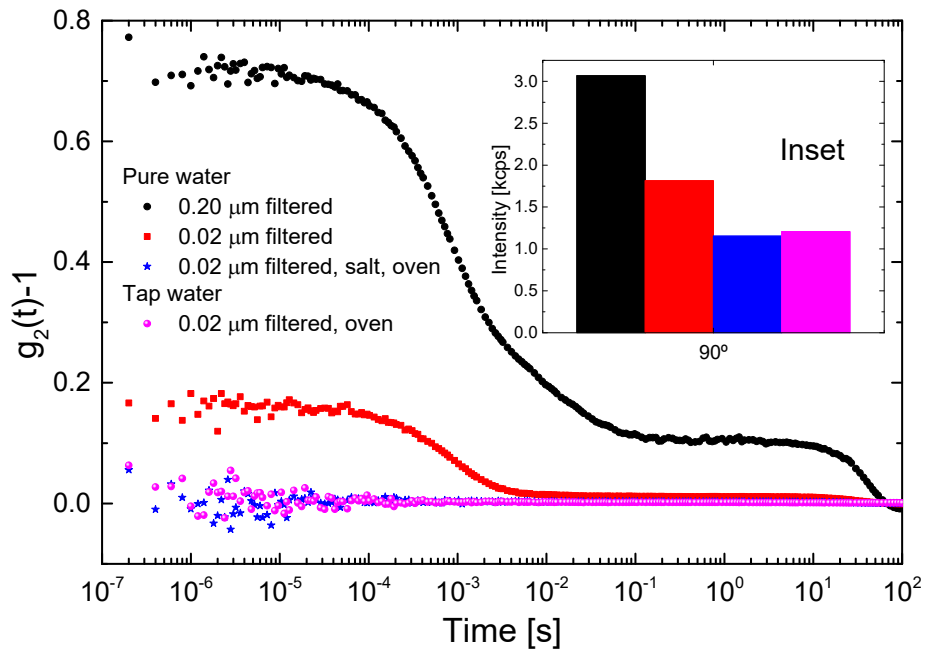
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**Figure S1.** Relaxation strengths as a function of the water content obtained from fits of the data of  $\epsilon$ -poly(lysine) solutions. (a)  $\Delta\epsilon$  for the fast water relaxation at 140, 170 and 200 K. (b)  $\Delta\epsilon$  for the slow water relaxation and the solute relaxation are shown for 205, 252.5 and 275 K.



**Figure S2.** Normalized DDLs electric field correlation function ( $g_1(t)$ ) for  $\epsilon$ -PLL-water solution with 40 wt% of water and pH = 10 at different temperatures and scattering angle of  $\theta = 90^\circ$ . The A-DDLS and B-DDLS processes as well as the  $\alpha$ -relaxation are displayed. The solid lines are the fits using two single exponential decays for slow and fast processes and an extended exponential for the  $\alpha$ -relaxation. The Inset shows both the  $\alpha$ -relaxation and the A-DDLS process.



**Figure S3.** Intensity correlation function ( $g_2(t)-1$ ) in VV geometry and angle of  $\theta=90^\circ$  for water for different treatment protocols. The Inset shows the excess light scattering (kilocounts per second) for each treatment.