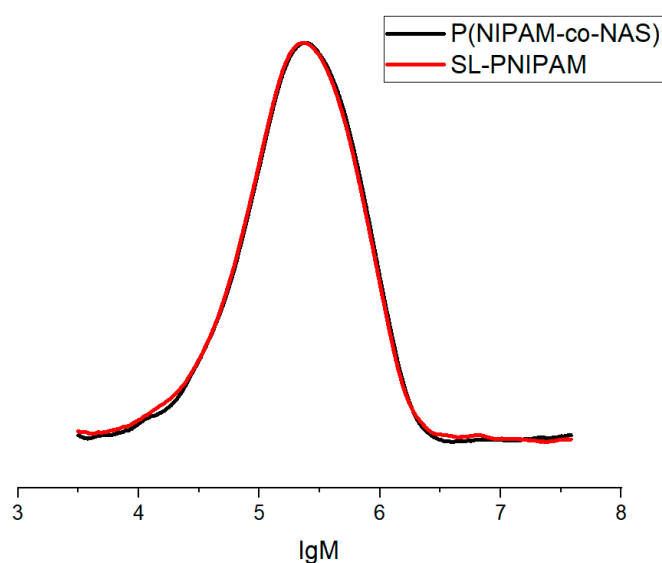


## Supplementary Materials

# Bovine serum albumin effect on collapsing PNIPAM chains in aqueous solutions: spin label and spin probe study

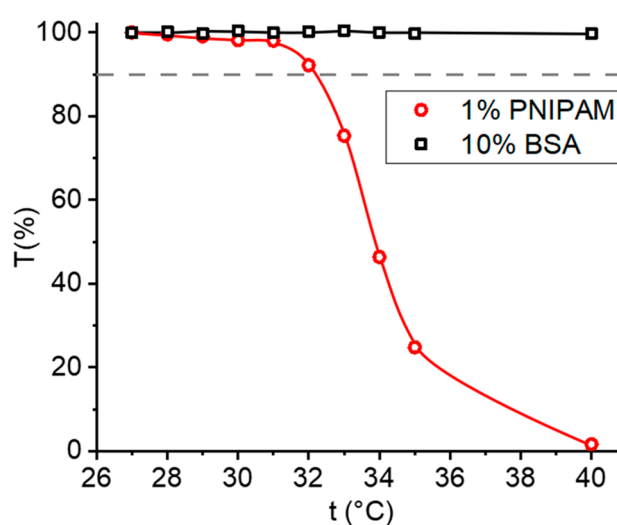
Georgii A. Simenido, Ekaterina M. Zubanova, Evgenii A. Ksendzov, Sergei V. Kostjuk, Peter S. Timashev and Elena N. Golubeva

*Size Exclusion Chromatography data for SL-PNIPAM*



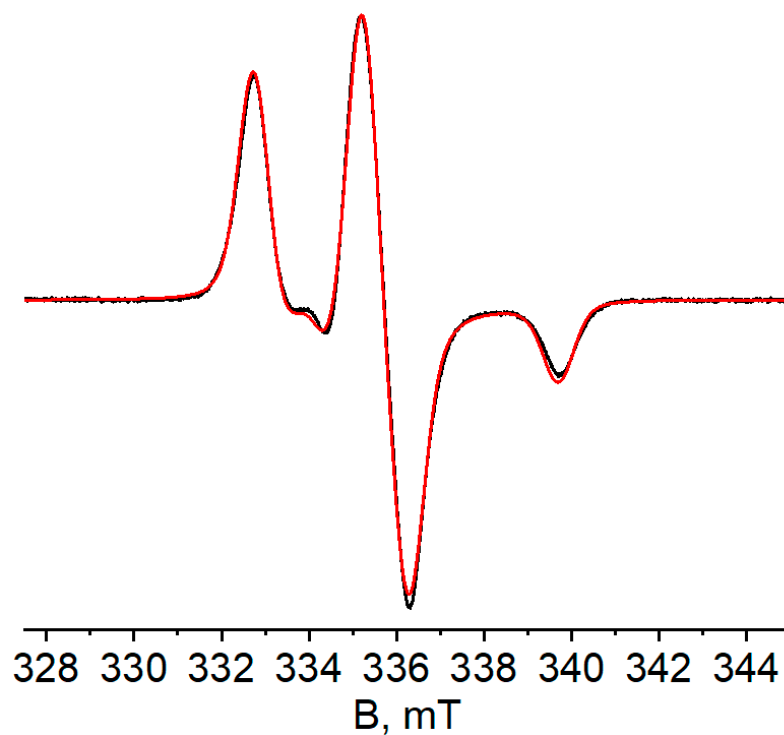
**Figure S1.** SEC curves for P(NIPAM-co-NAS) (black) and SL-PNIPAM (red).

*Turbidimetry*

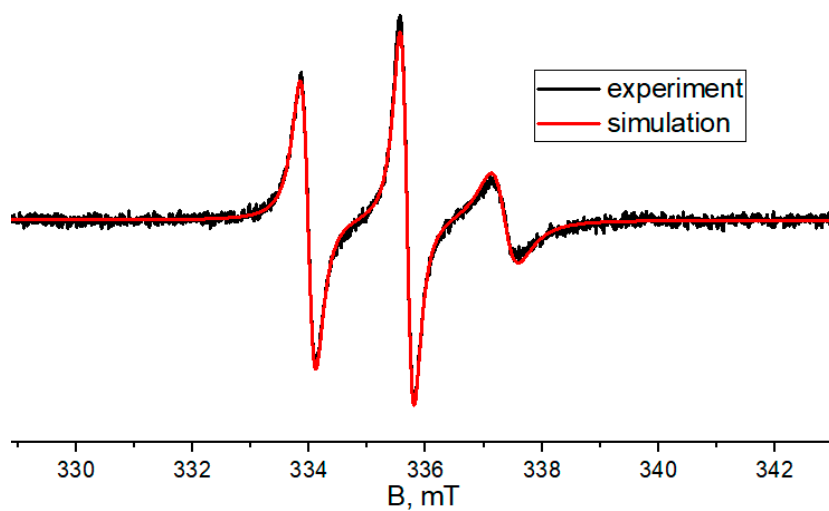


**Figure S2.** Turbidimetric data for 1 wt% PNIPAM solution (red circles) and 10 wt% BSA solution (black squares). The dash line is 90% transmittance, where  $T_{cp}$  was measured. All error bars are within the data points drawn. The lines are guides for the eye.

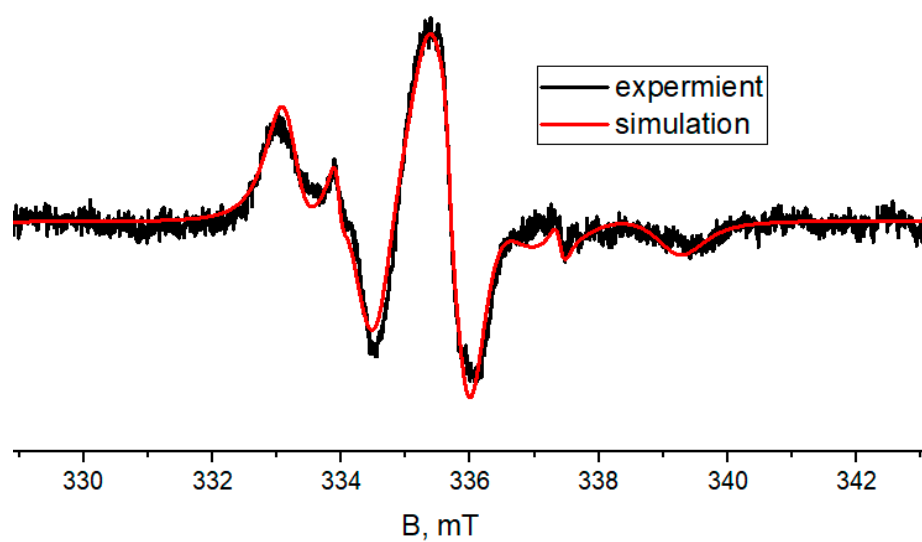
*SL-PNIPAM EPR spectra*



**Figure S3.** EPR spectrum of SL-PNIPAM powder,  $t = -183\text{ }^{\circ}\text{C}$ .  $A_{zz} = 3.51\text{ mT}$ ,  $\text{rmsd} = 0.0090$ . Experimental (black), simulation (red).

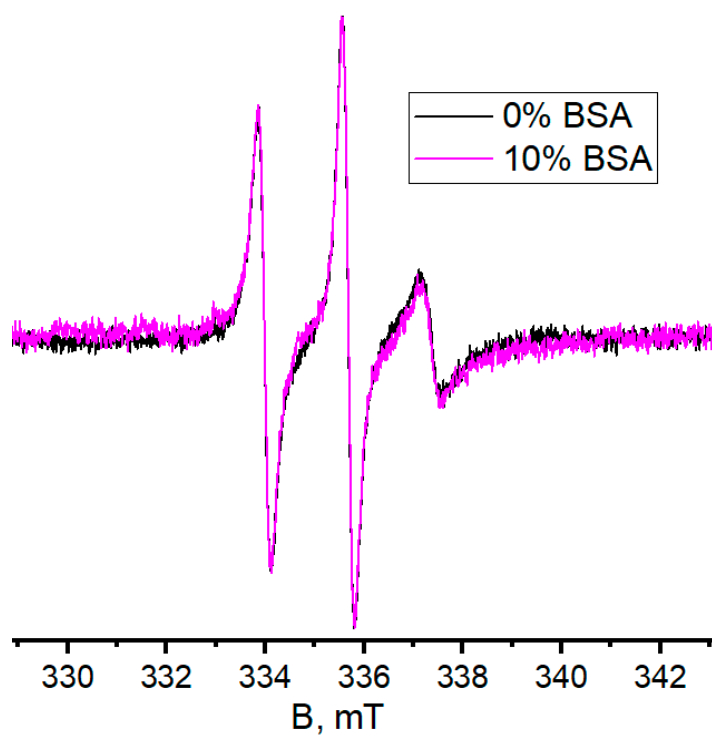


**Figure S4.** Simulation of EPR spectrum of 10 wt% SL-PNIPAM aqueous solution,  $t = 31\text{ }^{\circ}\text{C}$ .  $a_{\text{iso}} = 1.71\text{ mT}$ ,  $t_{\text{iso}} = 1.6\text{ ns}$ ,  $\text{rmsd} = 0.0053$ . Experimental spectrum (black), simulation (red).

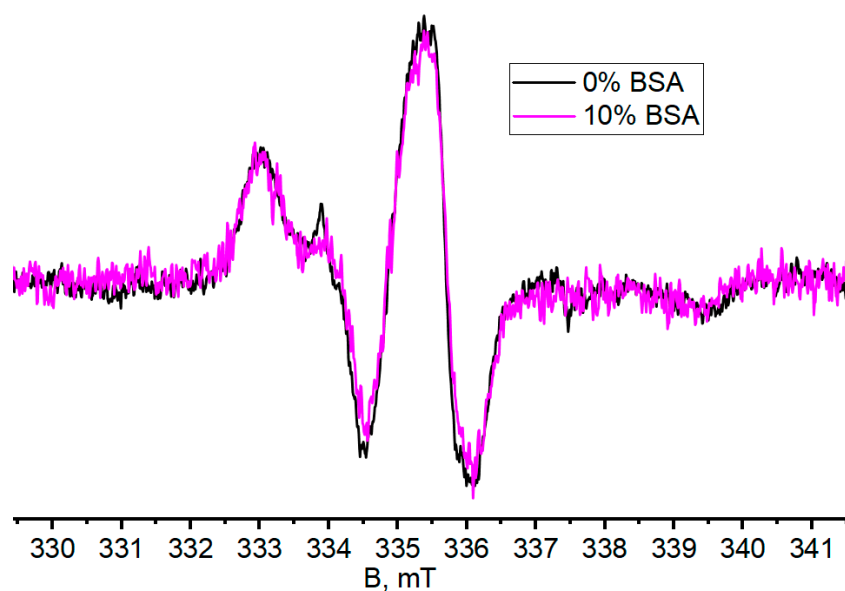


**Figure S5.** Simulation of EPR spectrum of 10 wt% SL-PNIPAM aqueous solution,  $t = 40\text{ }^{\circ}\text{C}$ .  $a_{\text{iso}} = 1.67\text{ mT}$ ,  $t_x = 9.2$ ,  $t_y = 100.0$ ,  $t_z = 9.7\text{ ns}$ ,  $\text{rmsd} = 0.0051$ . Experimental (black), simulation (red).

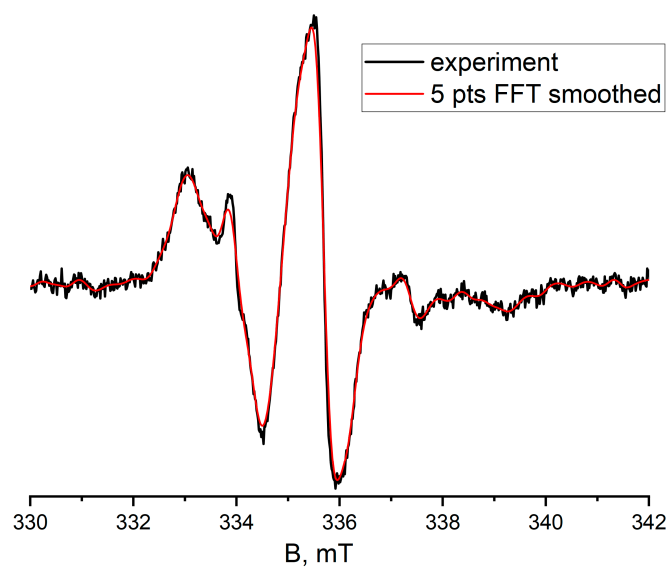
*SL-PNIPAM/BSA Solutions EPR Spectra*



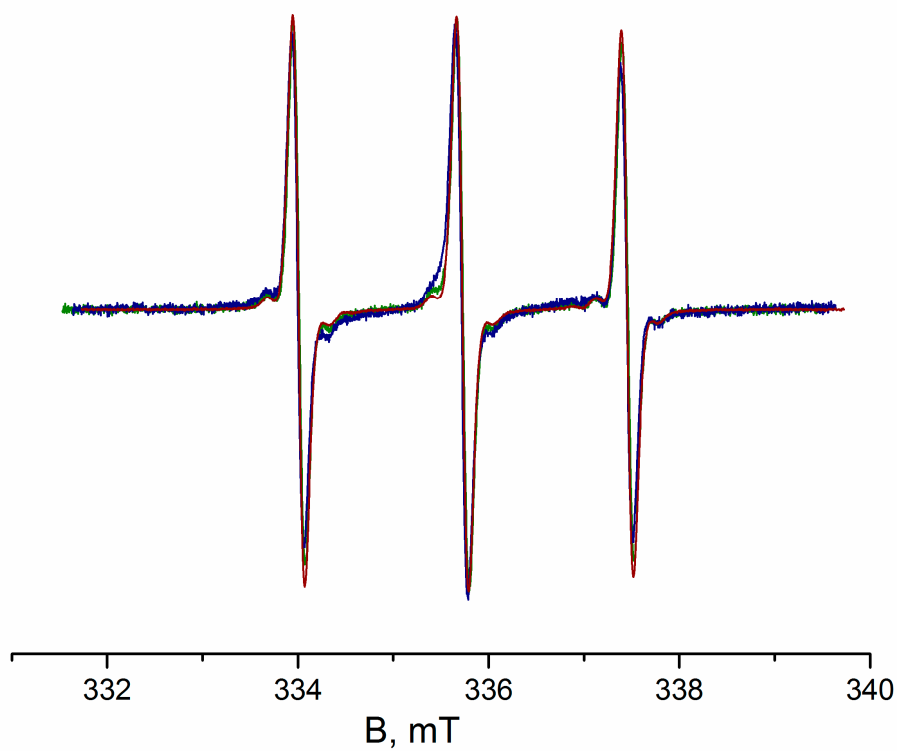
**Figure S6.** EPR spectra of SL-PNIPAM solutions,  $t = 31\text{ }^{\circ}\text{C}$ . 0 wt% BSA (black), 10 wt% BSA (magenta).



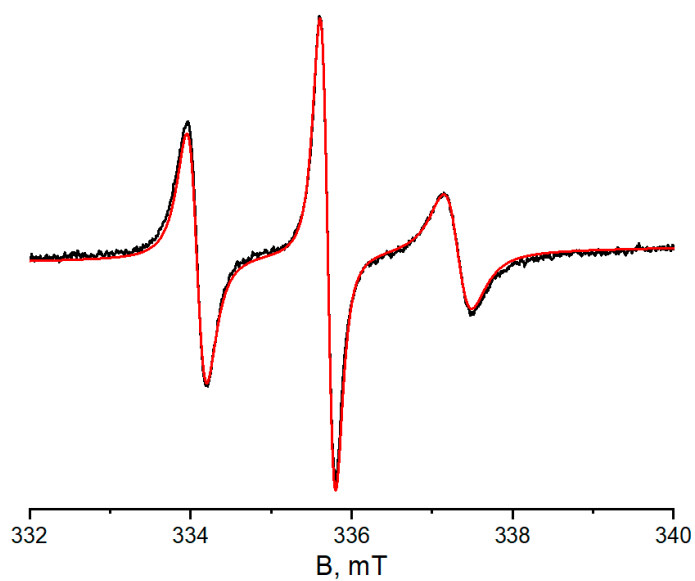
**Figure S7.** EPR spectra of SL-PNIPAM solutions,  $t = 40\text{ }^{\circ}\text{C}$ . 0 wt% BSA (black), 10 wt% BSA (magenta).



**Figure S8.** Smoothed EPR spectrum of 5 wt% SL-PNIPAM solution in presence of 10 wt% BSA,  $t = 33\text{ }^{\circ}\text{C}$ . Experimental (black), smoothed (red).



**Figure S9.** EPR spectra of TEMPO probe in solutions with different PNIPAM concentrations,  $t = 40\text{ }^{\circ}\text{C}$ . 1 wt% PNIPAM (wine), 5 wt% PNIPAM (green), 10 wt% PNIPAM (navy).



**Figure S10.** Simulation of EPR spectrum of TEMPO in 1 wt% PNIPAM solution in the presence of  $\text{Cu}^{2+}$  ions,  $t = 60\text{ }^{\circ}\text{C}$ .  $a_{\text{iso}} = 1.60\text{ mT}$ ,  $t_x = 17.8$ ,  $t_y = 0.3$ ,  $t_z = 1.8\text{ ns}$ . Experimental (black), simulation (red).