

**Ion exchange in alginate gels – dynamic behaviour revealed by electron paramagnetic resonance**

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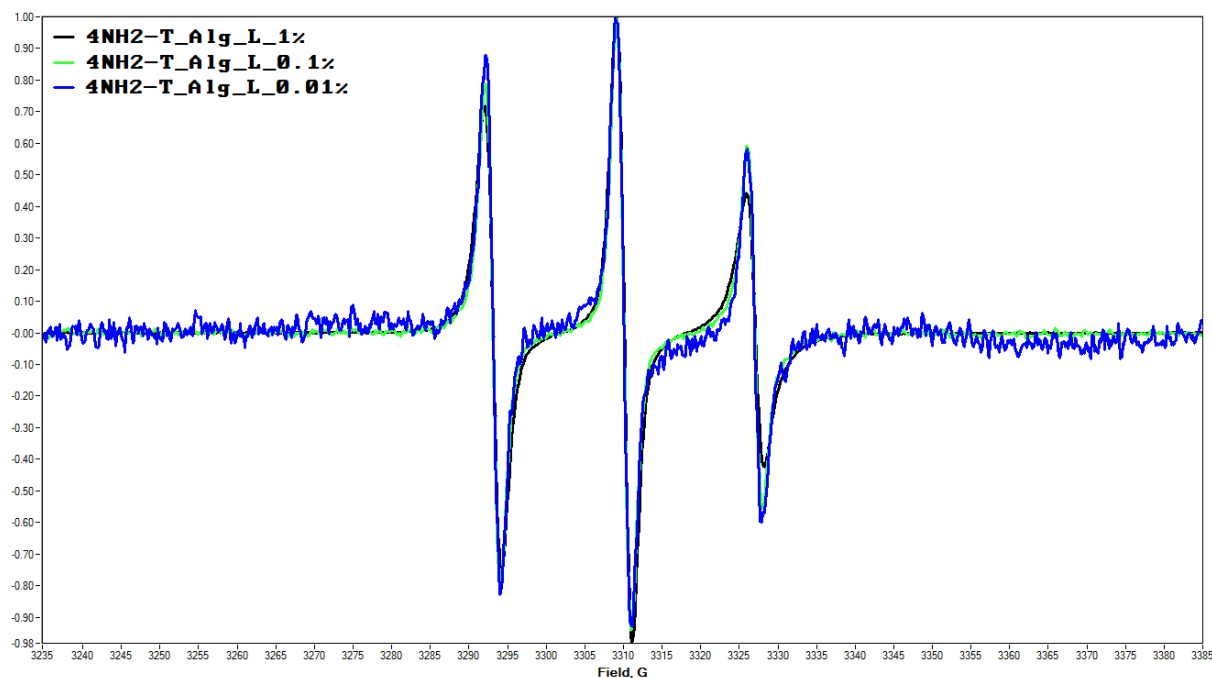


Fig. S1: EPR spectra of 4NH<sub>2</sub>T-ALG-L solutions. Line broadening was observed at 1% concentration. This was reduced when the concentration used was 0.1 %

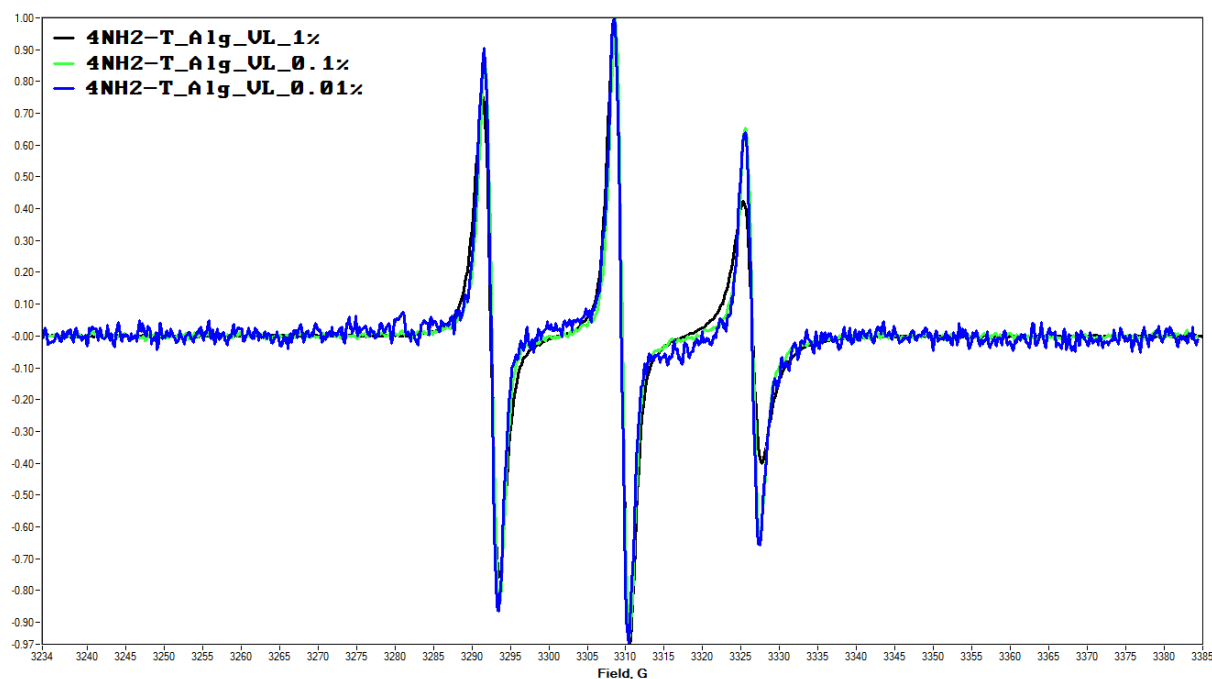


Fig. S2: EPR spectra of 4NH<sub>2</sub>T-ALG-L solutions. Line broadening was observed at 1% concentration. This was reduced when the concentration used was 0.1 %

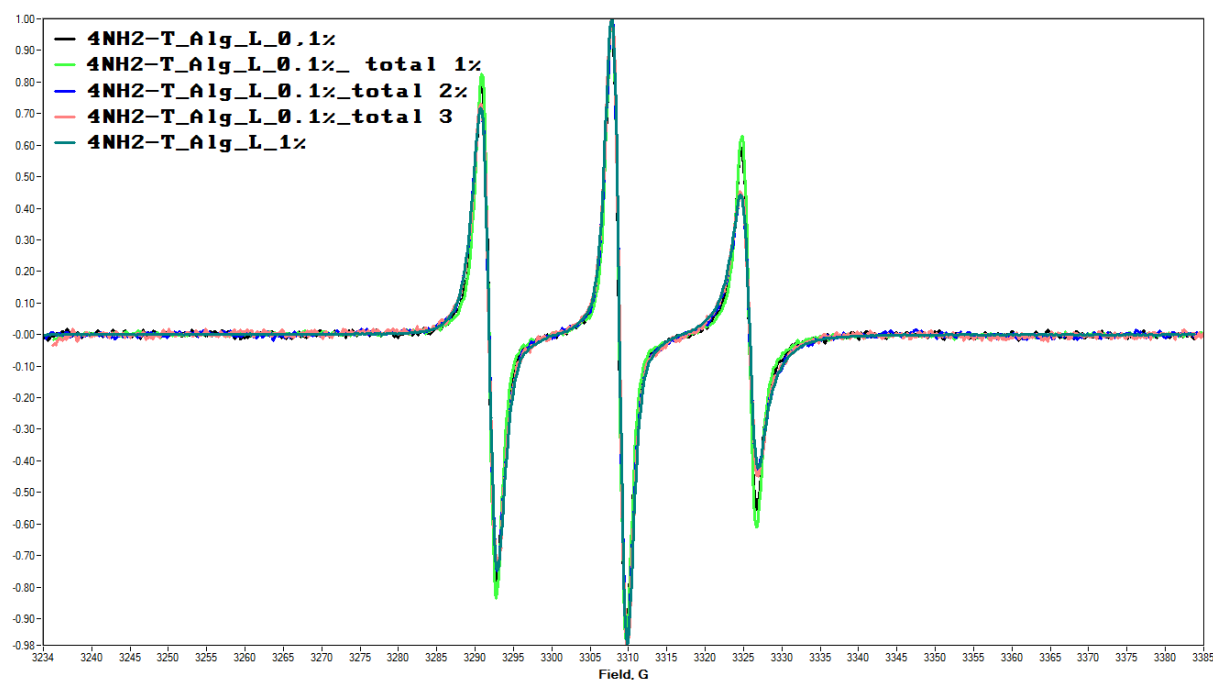


Fig. S3: The effect of alginate concentration on EPR spectra of 4NH<sub>2</sub>T-ALG-L

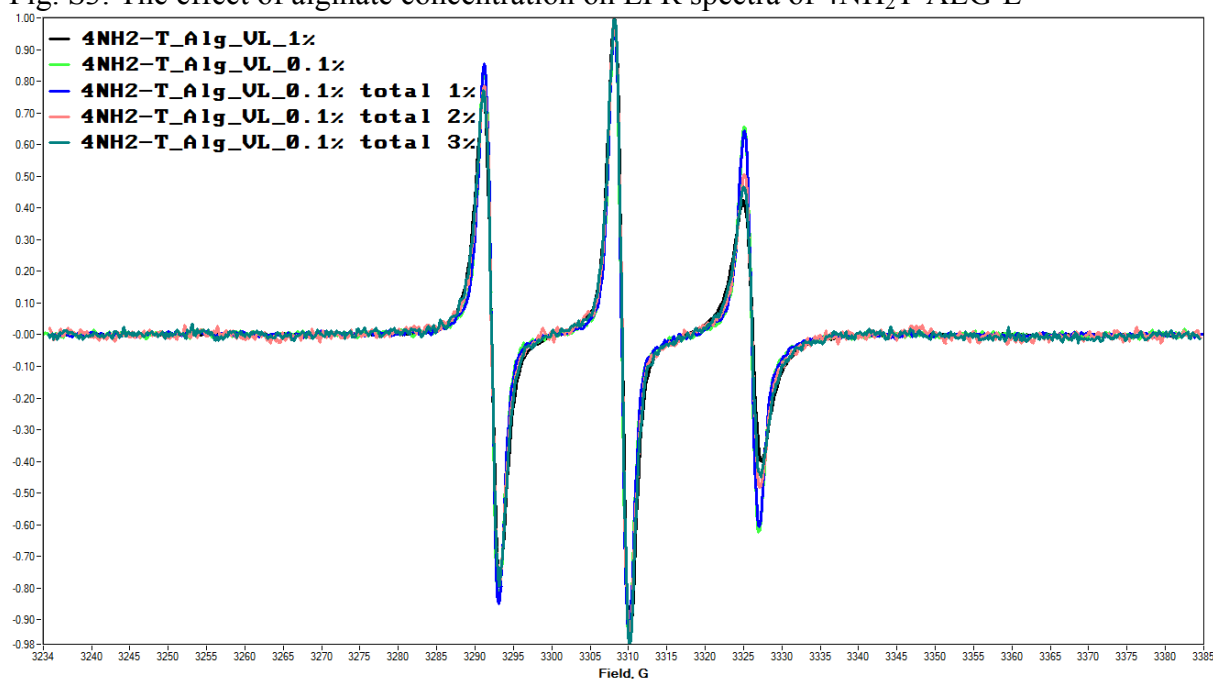


Fig. S4: The effect of alginate concentration on EPR spectra of 4NH<sub>2</sub>T-ALG-VL

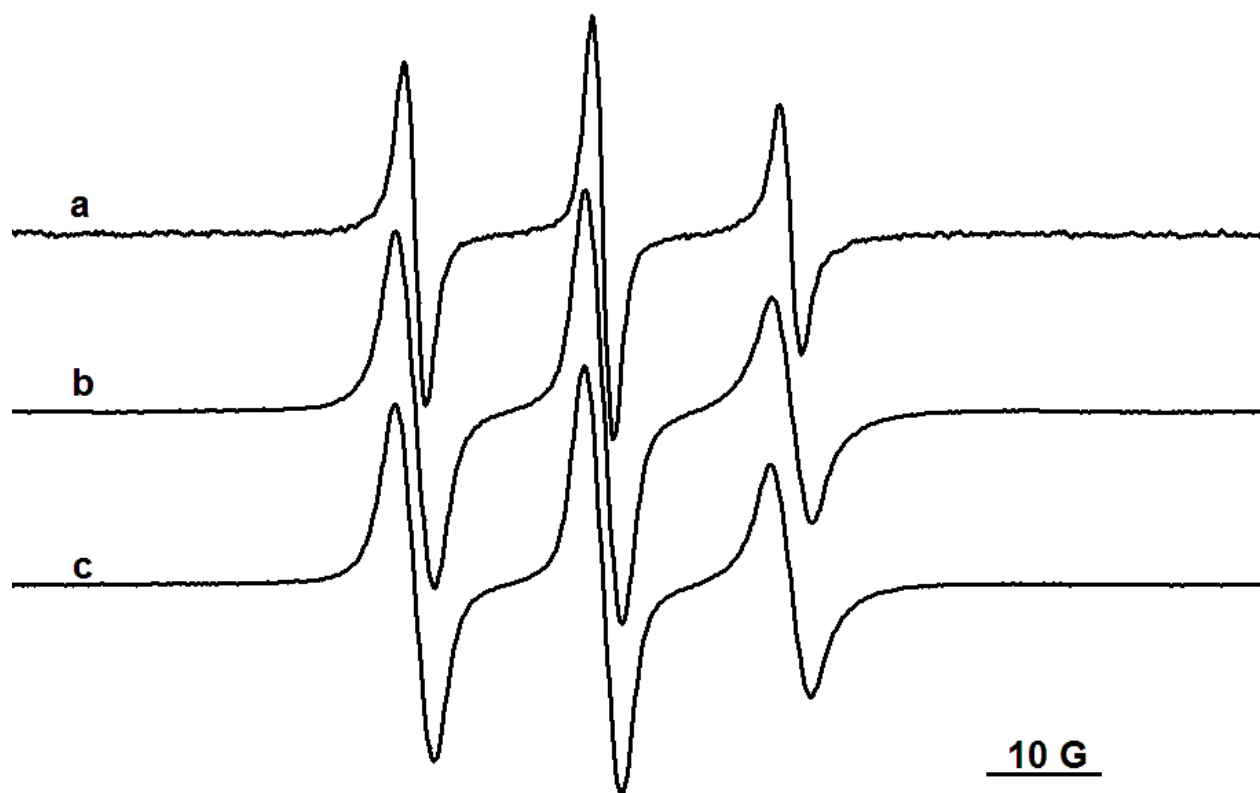


Fig. S5: The EPR spectra of 4NH<sub>2</sub>T-ALG-L in: (a) 1% alginic acid, (b) in EDTA 2M, (c) alginic acid 1% in 4M NaCl

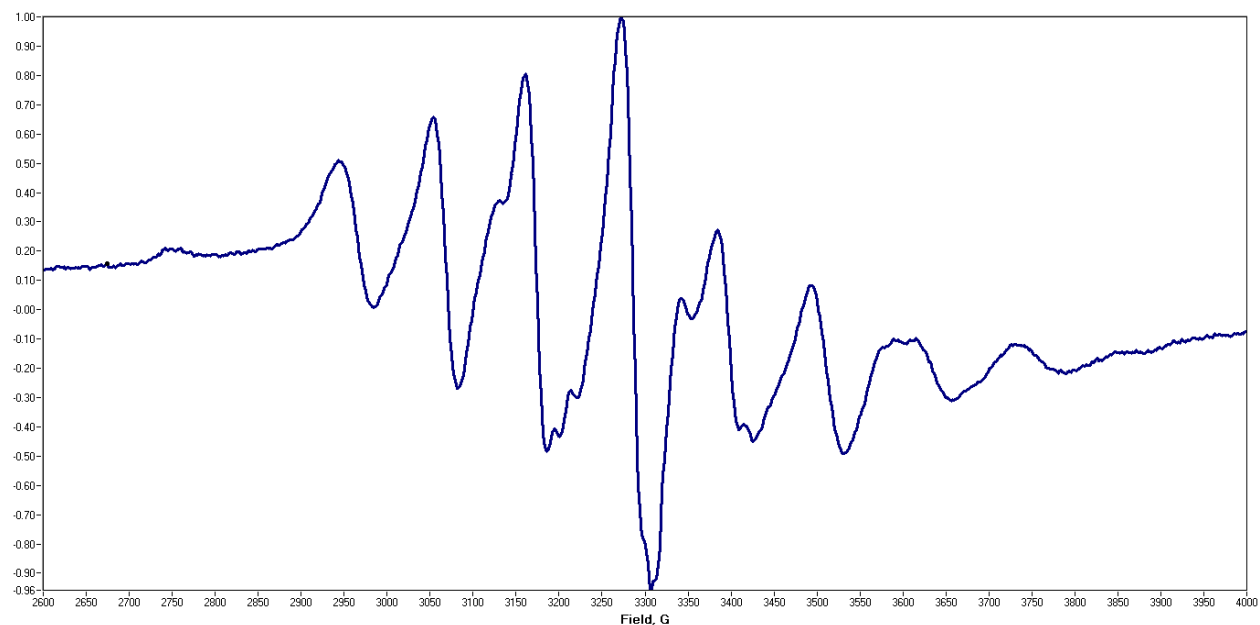


Fig. S6: EPR spectrum of the gel phase after diffusion of  $\text{VO}^{2+}$  into  $\text{Zn}^{2+}$ -alginate gel shows evidence of some immobilised  $\text{VO}^{2+}$ .

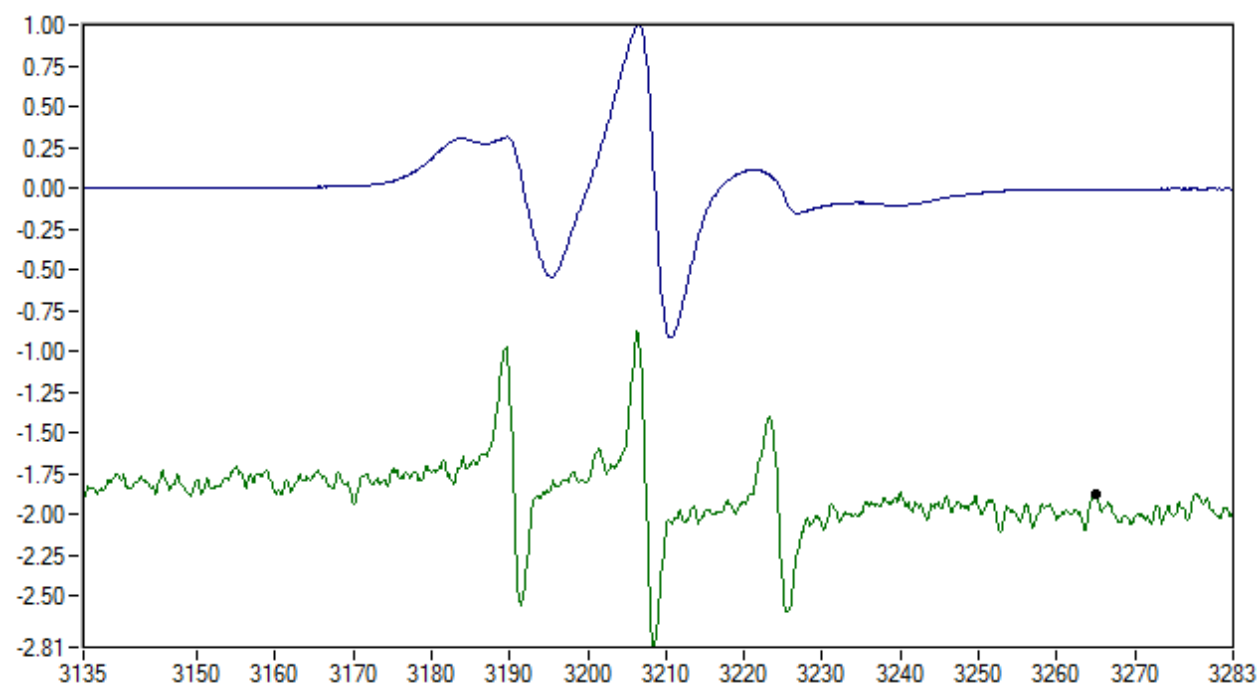


Fig. S7: EPR spectrum of the solution phase after a spin-labelled  $\text{Ca}^{2+}$ -alginate gel (blue) was mixed with a 2% solution of unlabelled alginate.