

Electronic Supplementary Information (ESI) for: Complexation of Al(III) with gluconate in alkaline to hyperalkaline solutions: formation, stability and structure

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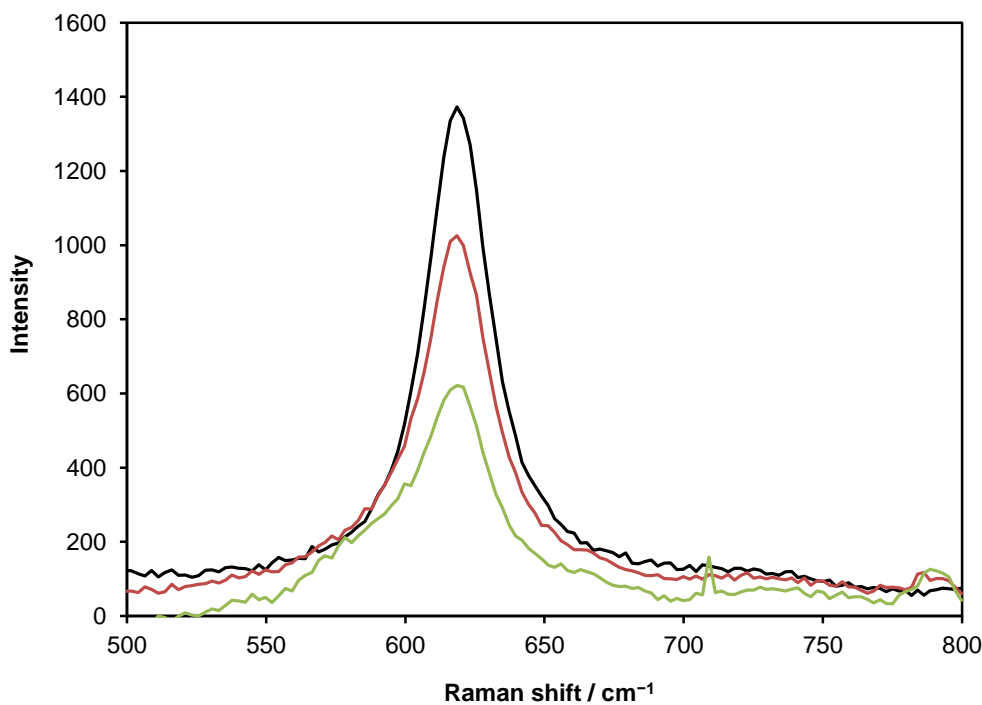


Fig. S1 Background corrected Raman spectra of aluminate solutions

¹⁵ ($[\text{Al}(\text{OH})_4^-]_{\text{T}} = 0.4 \text{ M}$; $[\text{NaOH}]_{\text{T}} = 0.8 \text{ M}$) with various added Gluc^- concentrations

(—: 0 M; —: 0.2 M; —: 0.4 M)

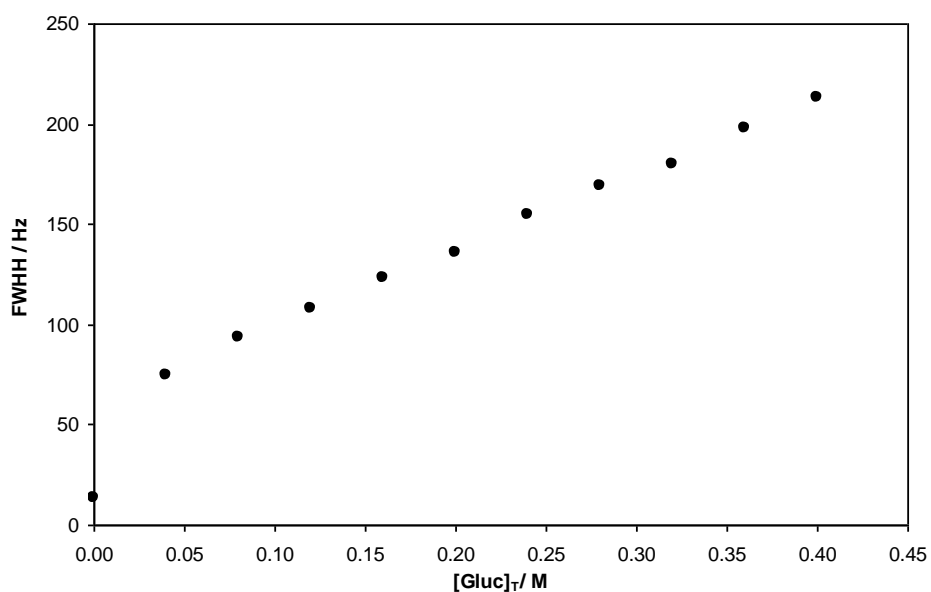


Fig. S2 The variation of the FWHH of Al on the ^{27}Al NMR spectra with rising Gluc^- concentration in solutions of $[\text{Al}(\text{OH})_4^-]_{\text{T}} = 0.200 \text{ M}$ and $[\text{NaOH}]_{\text{T}} = 0.400 \text{ M}$

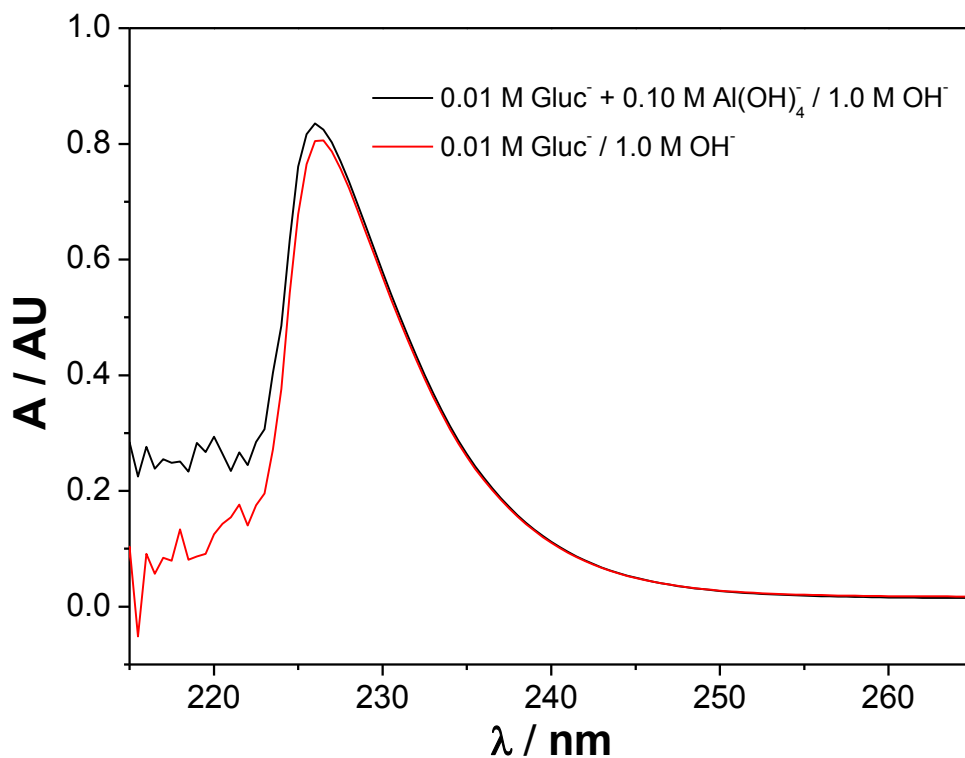


Fig. S3 The UV-Vis spectra of the $[\text{Gluc}^-]_{\text{T}}$ (0.01 M) in the absence (red) and the presence of the $[\text{Al}(\text{OH})_4^-]_{\text{T}}$ (black; 0.10 M) in 1.0 M $[\text{OH}^-]_{\text{T}}$ medium at 25 °C