

Supporting Information

Sensitized terbium (III) macrocyclic-phthalimide complexes as luminescent pH switches

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^1H NMR study on the kinetics of the hydrolysis of lanthanum (III) complexes of $\text{L}^{1\text{a}}$

The samples of $\text{LaL}^{1\text{a}}$ were prepared by mixing 0.02 M stock solutions of La(III) and $\text{L}^{1\text{a}}$ in D_2O in equivolumes. The initial pD was 2.5 and the ^1H NMR spectrum, recorded at room temperature, was obtained after a period 5 minutes after the pD had stabilized. The ^1H NMR of the sample was then re-run every 5 minutes for a total period of 1 hour. A second, fresh solution $\text{LaL}^{1\text{a}}$ in D_2O was prepared in the same way and then the pD was adjusted by addition of NaOD (0.5 M) to 4.6. The ^1H NMR spectrum was recorded 5 minutes after the pD had stabilized and the ^1H NMR of the sample was re-recorded every 5 minutes for a total period of 1 hour. Similar experiments were carried out at pD 6.5, 8.2, 9.8 and 11.1 respectively.

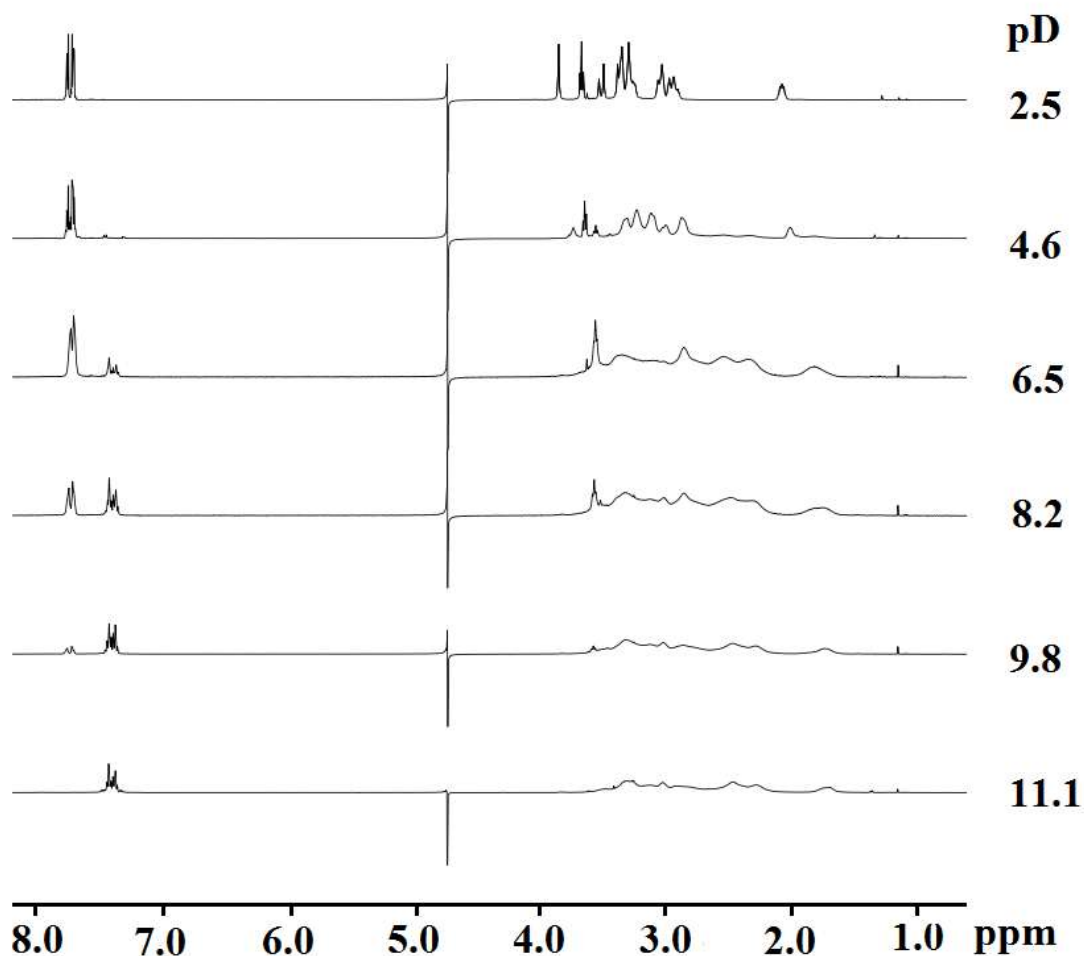


Figure S1. ^1H NMR (D_2O) spectra of $\text{LaL}^{1\text{a}}$ at various pD recorded 5 minutes after stabilization of pD; all subsequent NMR spectra from later time points were identical indicating equilibrium established within 5 minutes.