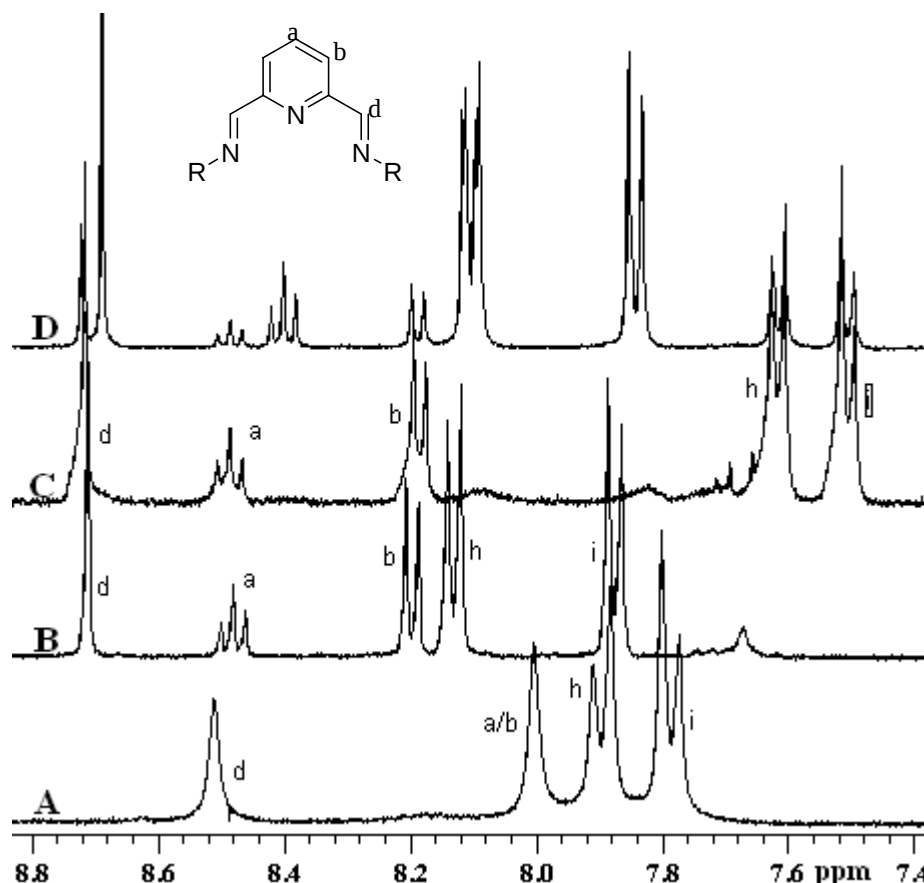


Supplementary information for

1:1 Versus 2:1 coordination of pentadentate hydrazone-type ligands to lanthanide(III) ions. Formation of cationic as well as dicationic complexes.

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¹H NMR spectra of A: ligand **5** (*DMSO-d*₆), B: [5Lu](CF₃SO₃)₃ 1:1 (*CD*₃OD), C: [5La](CF₃SO₃)₃ 2:1 (*CD*₃OD), D: [5La](CF₃SO₃)₃ 2:1 and 1:1 (*CD*₃OD). Reaction of 2 eq. of ligand **5** with 1 eq. Lu(CF₃SO₃) results in a spectrum like B, because “free” ligand **5** is not soluble in *CD*₃OD.