SUPPORTING INFORMATION

Diglycolamide-functionalized poly(propylene imine) diaminobutane dendrimers for sequestration of trivalent *f*-elements: Synthesis, extraction and complexation

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Contents

S1. UV-Vis Spectrophotometric studies

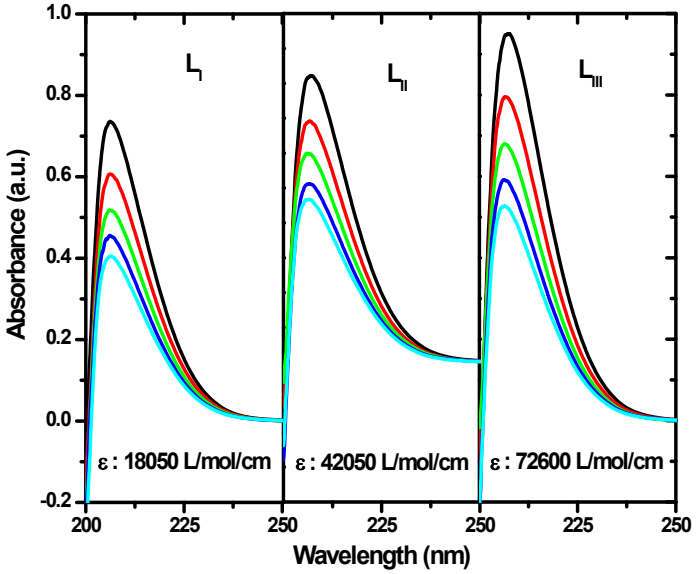
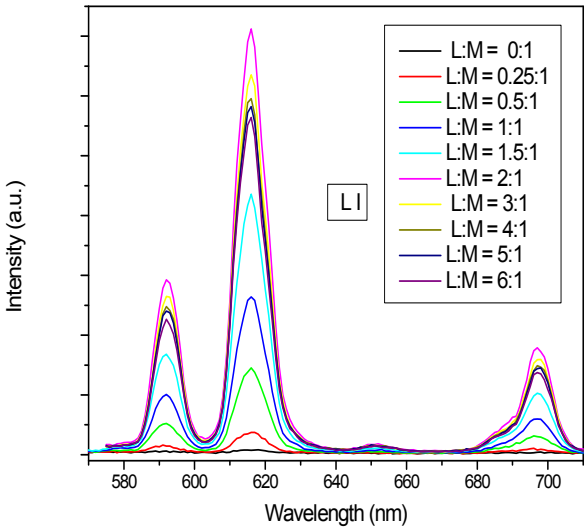


Fig.S1 Absorption spectra of ligands $\mathbf{L_{I\text{-}III}}$with increasing ligand concentration (0.01 – 0.1 mmol/L). The absorbance band between 204 – 215 nm follows Beer's law.

S2. Luminescence spectroscopic studies



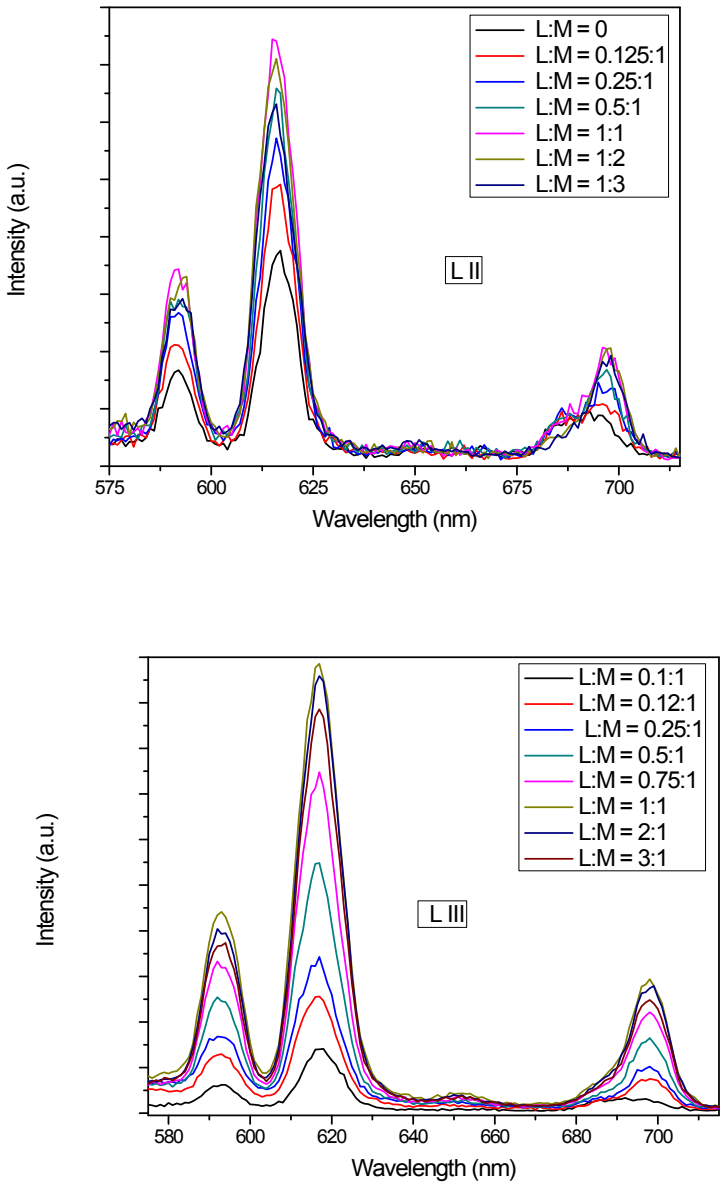


Fig.S2 Changes in the emission profile on gradual addition of ligands $\mathbf{L_{I\text{-}III}}$in Eu^{3+}.

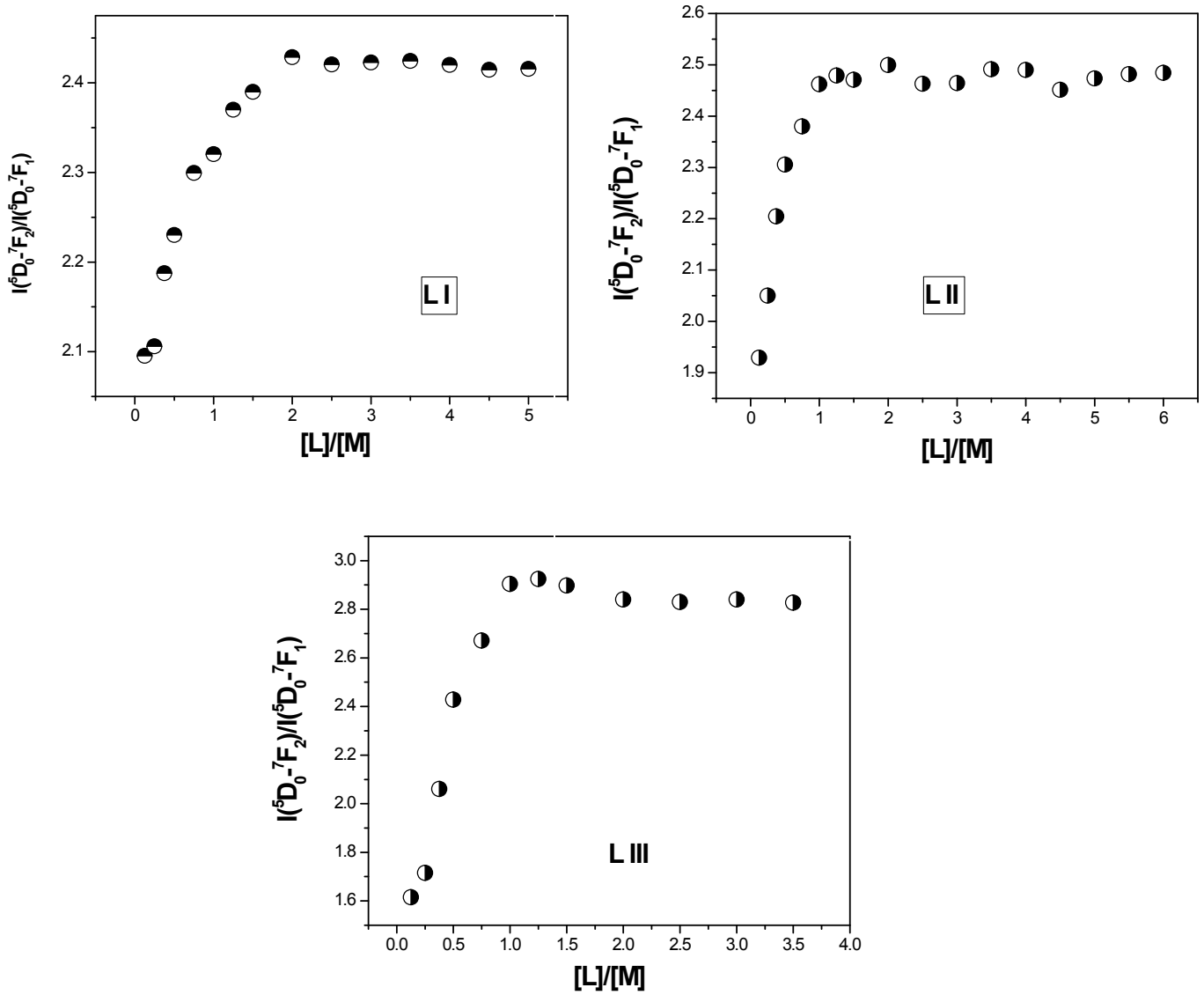
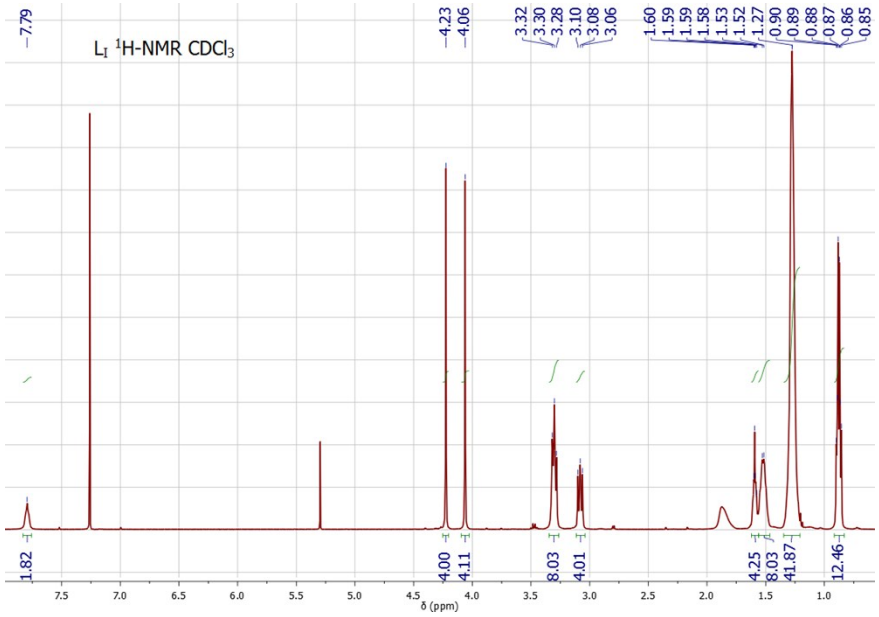
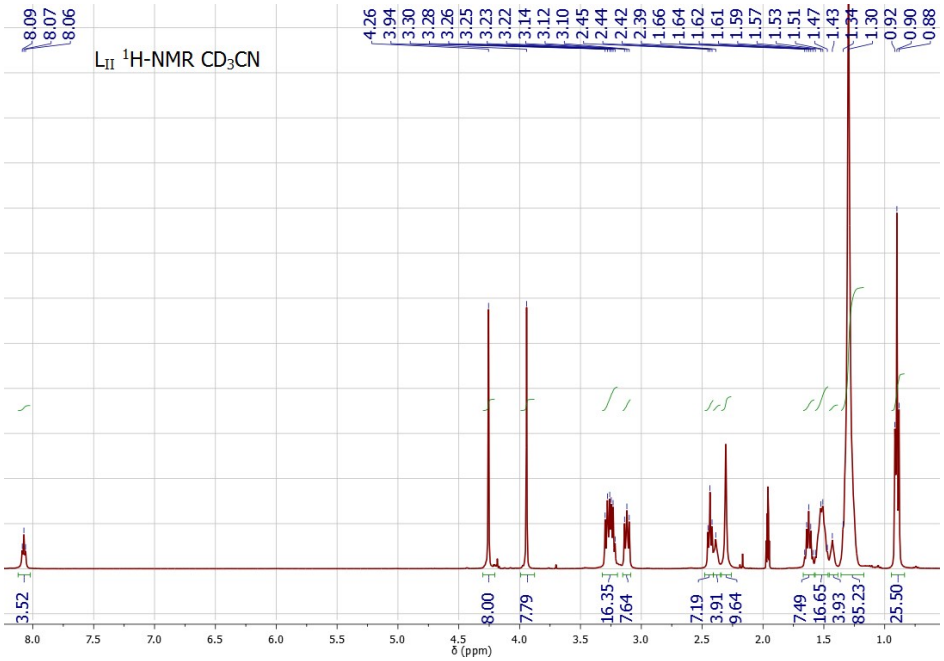


Fig.S3 Changes in the asymmetry factor upon titration of Eu^{3+} by ligands $\mathbf{L_{I\text{-}III}}$.

S3. Characterization of ligands





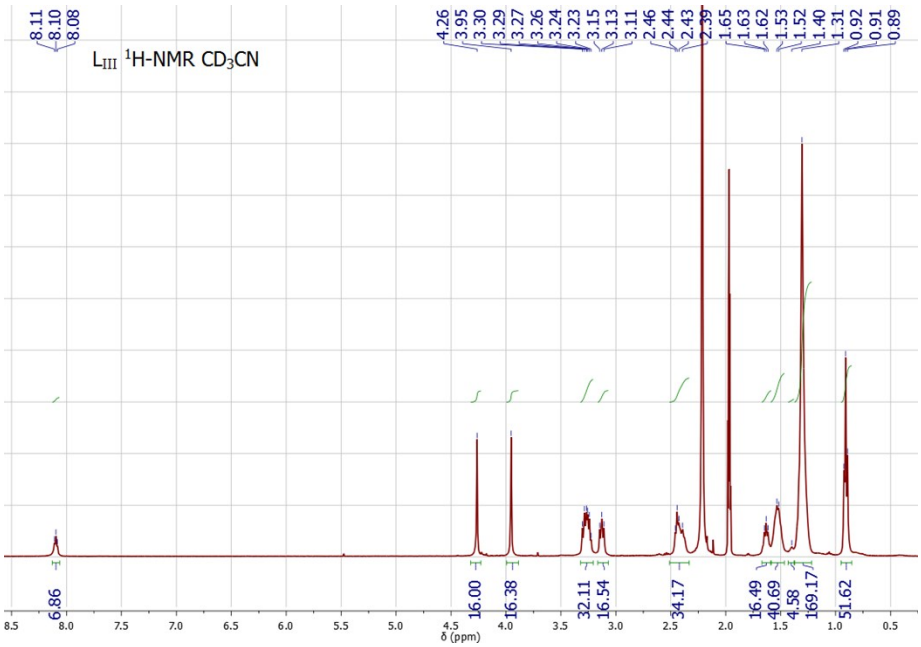


Fig. S4^{1}H NMR spectra of ligands $\mathbf{L_{I\text{-}III}}$.

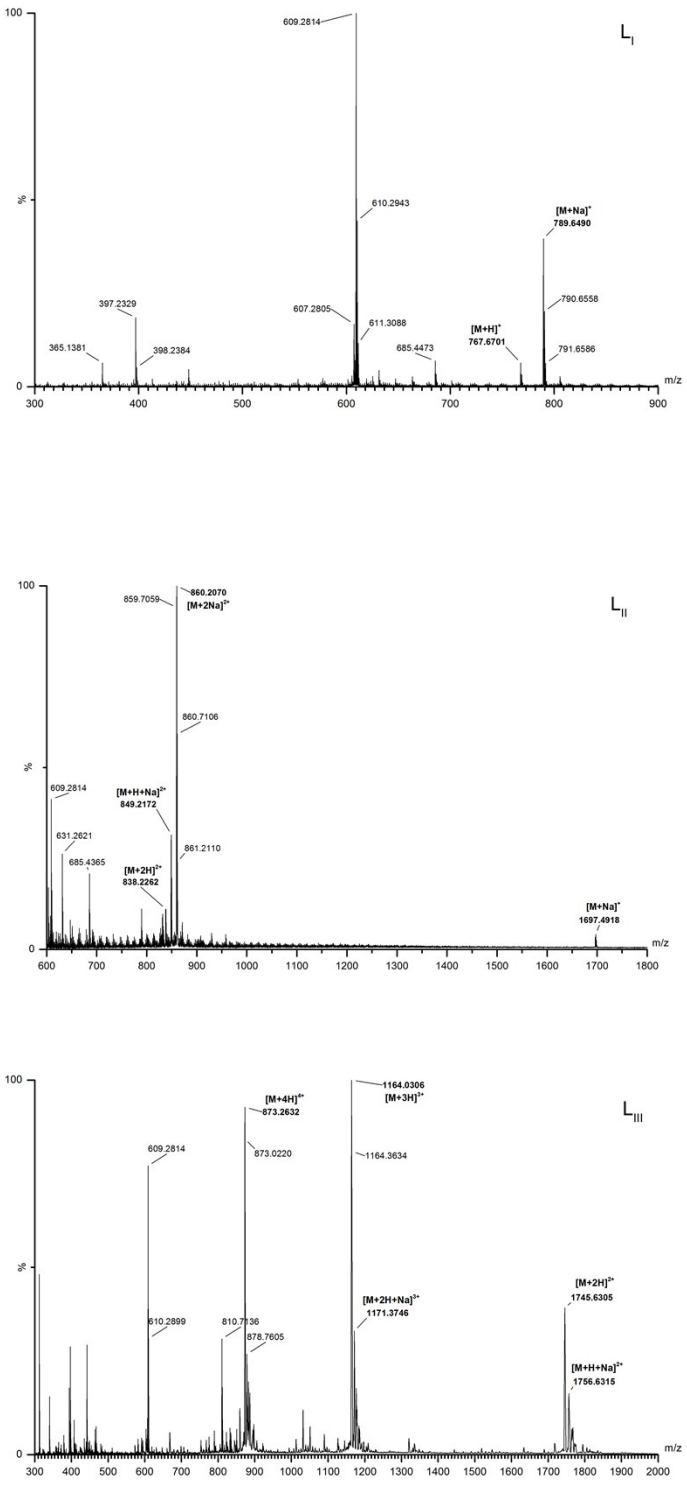


Fig. S5HR-MS spectra of ligands $\mathbf{L_{I\text{-}III}}$.

S4. Solvent extraction studies

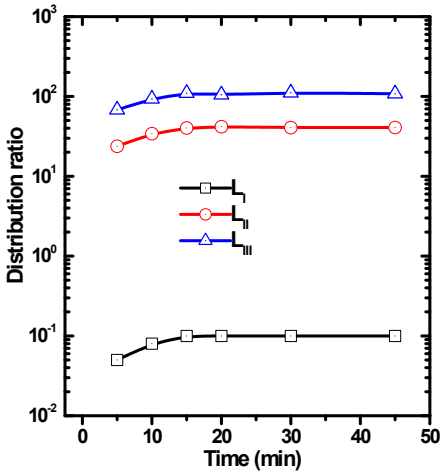


Fig. S6 Kinetics for the extraction of $Am^{3+}$by $\mathbf{L_{I\text{-}III}}$ at 3 M HNO_3. [L]: 1.0 mmole/L / 5%-*iso*-decanol/*n*-dodecane.