SUPPORTING INFORMATION

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

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S1. UV-Vis Spectrophotometric studies

![Absorption spectra](image)

**Fig. S1** Absorption spectra of ligands $L_{I-III}$ 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

![Luminescence spectra](image)
Fig. S2 Changes in the emission profile on gradual addition of ligands \( L_{\text{I-III}} \) in Eu\(^{3+} \).
Fig. S3 Changes in the asymmetry factor upon titration of Eu$^{3+}$ by ligands $L_{\text{I-III}}$. 
S3. Characterization of ligands
Fig. S4 $^1$H NMR spectra of ligands L$_{I-III}$. 
Fig. S5HR-MS spectra of ligands L_{I-III}.
S4. Solvent extraction studies

**Fig. S6** Kinetics for the extraction of Am$^{3+}$ by L$_{I-III}$ at 3 M HNO$_3$. [L]: 1.0 mmole/L / 5%-iso-decanol/n-dodecane.