

Supporting Information

Pyrazine-functionalized calix[4]arenes: synthesis by palladium-catalyzed cross-coupling with phosphorus pronucleophiles and metal ion extraction properties

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Solubility data of several pyrazine-based ligands, Am(III) extraction by ligand **14** at varying concentrations of aqueous phase acidity plot and ¹H and ¹³C NMR spectra for compounds **8**, **9**, **10**, **11**, **12**, **14**, **15**, **17**, and **20**.

Table S-1 Solubility data of several pyrazine-based ligands.

Diluent	Ligand	Remarks
Nitrobenzene	8	Freely soluble
Nitrobenzene	14	Freely soluble
Nitrobenzene	15	Freely soluble
Nitrobenzene	17	Freely soluble
Chloroform	17	Freely soluble
PTMS	17	Sparingly soluble
1-Decanol	17	Sparingly soluble
30% <i>i</i> -decanol / <i>n</i> -dodecane	17	Soluble after 30 min of ultrasonication
<i>n</i> -dodecane	17	Insoluble
NPOE	17	Soluble

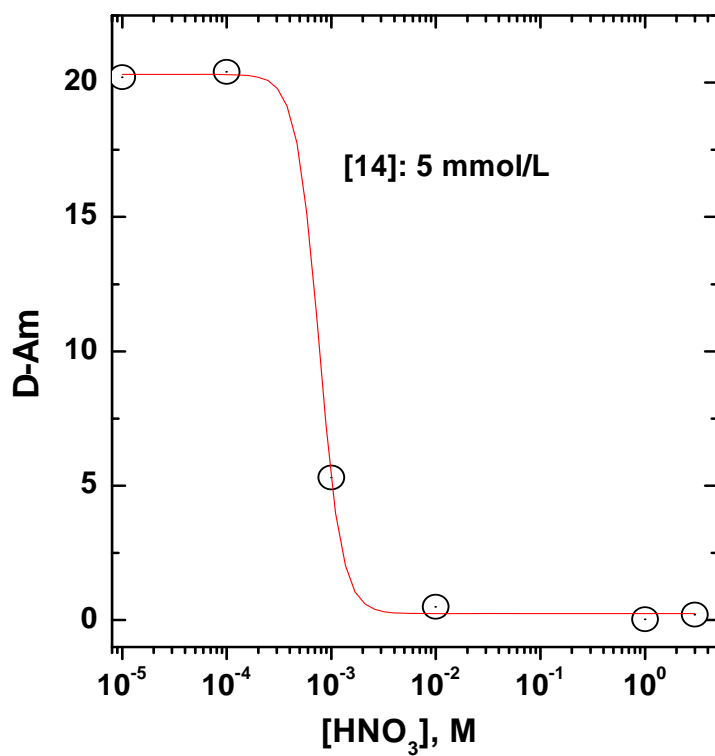


Fig. S-1: Extraction of Am(III) by ligand **14** at varying concentrations of aqueous phase acidity.

