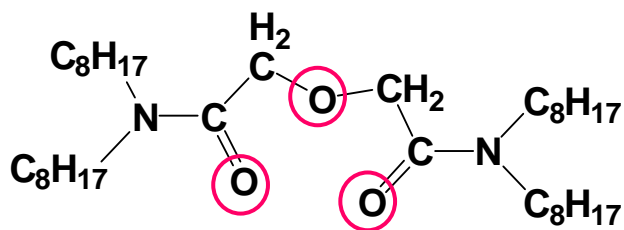
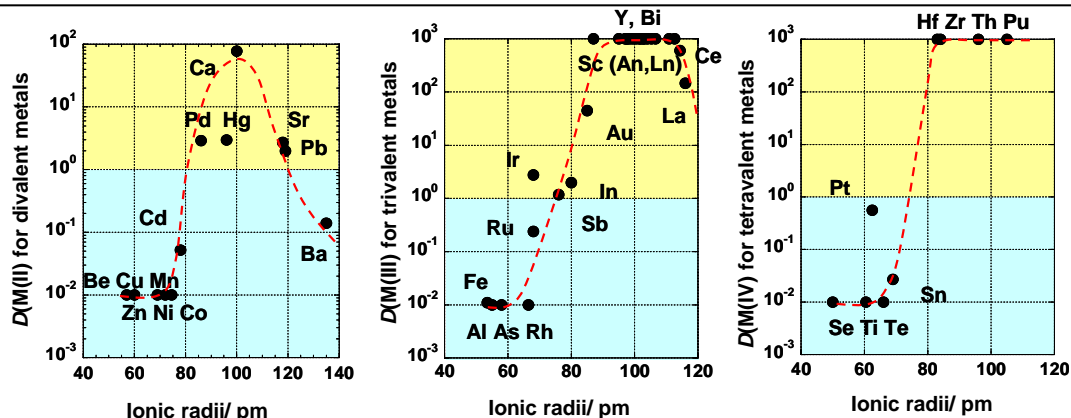


Purpose of this work: we have developed the novel extractants to recover the long-lived minor actinides (MA).

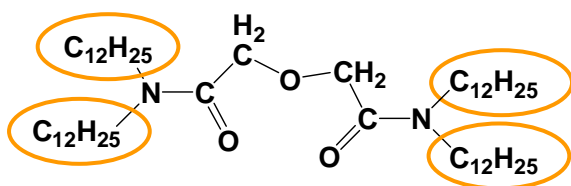


***N,N,N',N'*-tetraoctyl-diglycolamide (TODGA)**

DGA compound has three oxygen donor atoms in the central frame, which is the source of the strong extractability. **DGA shows the high distribution ratio of MA from nitric acid to *n*-dodecane.**

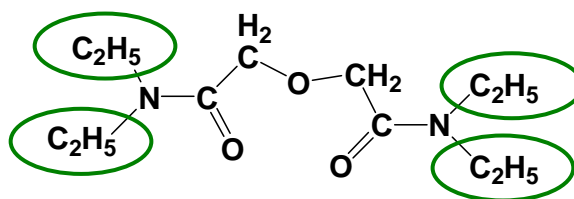


TODGA has size selectivity for the metal extraction. TODGA has high *D* for the di-, tri-, tetravalent metals with 80-120 pm ionic radii



***N,N,N',N'*-tetradodecyl-diglycolamide (TDdDGA)**

DGA having the long alkyl chains is very stable in *n*-dodecane. Such a DGA (e.g., TDdDGA) has **high extraction capacity and resistivity to form the third phase.**



***N,N,N',N'*-tetraethyl-diglycolamide (TEDGA)**

DGA having the short alkyl chain is well-dissolved in water. Such a DGA (e.g., TEDGA) can strip MA from the organic phase. **TEDGA can be used in the reverse-extraction of Ca, Sr, Y, lanthanides, Zr, Hf, Bi and actinides.**

	C/O ratio	Extraction capacity (mM)
TODGA	12	6.4
TDdDGA	17.3	32.5