

Extraction behavior of lanthanides using a diglycolamide derivative TODGA in ionic liquids

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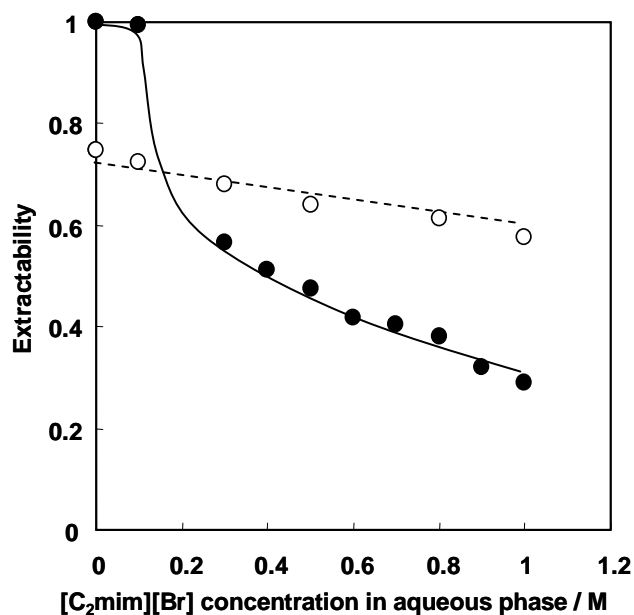


Fig. S1 Effect of aqueous-phase C₂mim⁺ concentration on extractability of La³⁺ using TODGA in [C₂mim][Tf₂N] (closed circles and solid line) or in isooctane (open circles and broken line). [La³⁺] = 0.1 mM, [HNO₃] = 0.01 M, and [TODGA] = 1 mM when using [C₂mim][Tf₂N] or [HNO₃] = 1 M and [TODGA] = 100 mM when using isooctane.

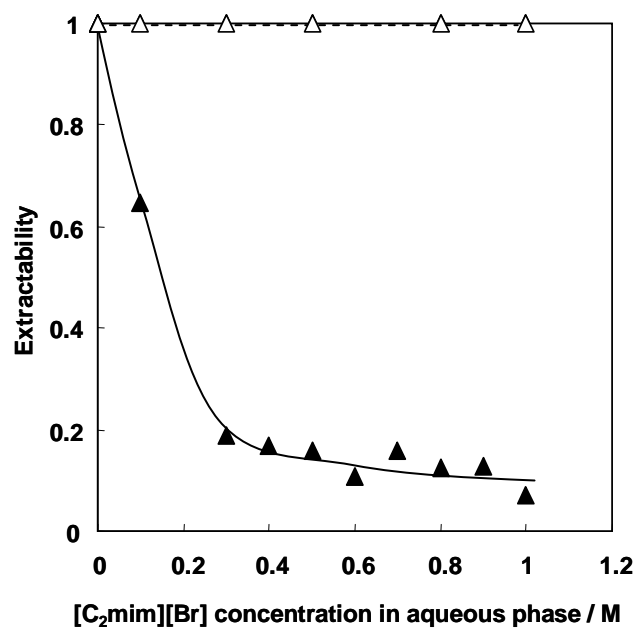


Fig. S2 Effect of aqueous-phase C_2mim^+ concentration on extractability of Lu^{3+} using TODGA in $[C_2mim][Tf_2N]$ (closed triangles and solid line) or in isooctane (open triangles and broken line). $[Lu^{3+}] = 0.1$ mM, $[HNO_3] = 0.01$ M, and $[TODGA] = 1$ mM when using $[C_2mim][Tf_2N]$ or $[HNO_3] = 1$ M and $[TODGA] = 100$ mM when using isooctane.

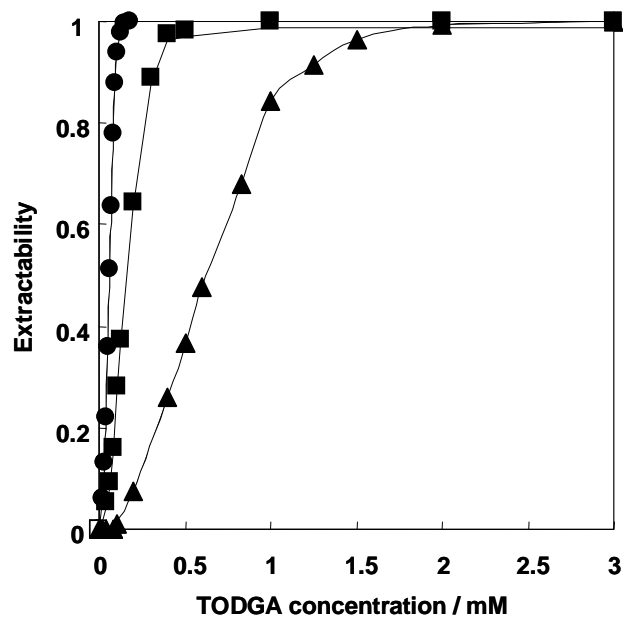


Fig. S3 Extraction behavior of La^{3+} using TODGA into $[C_nmim][Tf_2N]$ ($n = 2$ (closed circles), $n = 4$ (closed squares), $n = 6$ (closed triangles)). $[La^{3+}] = 0.01$ mM, $[HNO_3] = 0.01$ M.

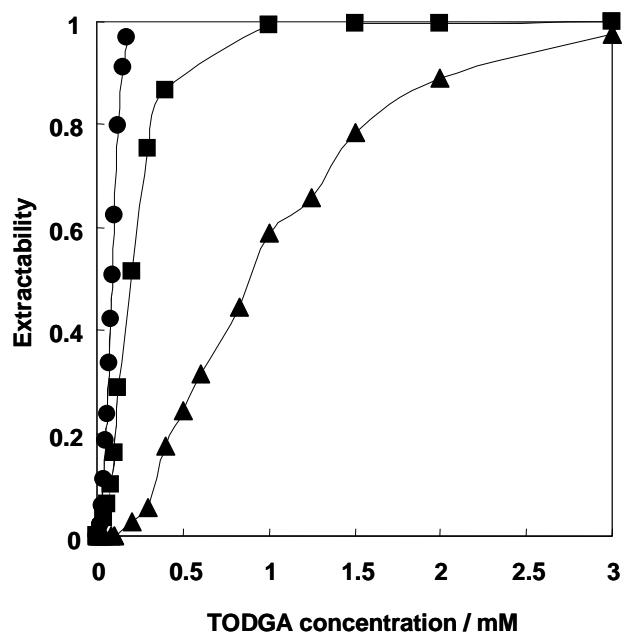


Fig. S4 Extraction behavior of Lu^{3+} using TODGA into $[\text{C}_n\text{mim}][\text{Tf}_2\text{N}]$ ($n = 2$ (closed circles), $n = 4$ (closed squares), $n = 6$ (closed triangles)). $[\text{Lu}^{3+}] = 0.01 \text{ mM}$, $[\text{HNO}_3] = 0.01 \text{ M}$.