

Electronic Supplementary Material

Extraction Performance of Eu^{3+} by Using Heterocyclic N-Donor Ligands with Different Structure in Ionic Liquid: An Experimental and Theoretical Study

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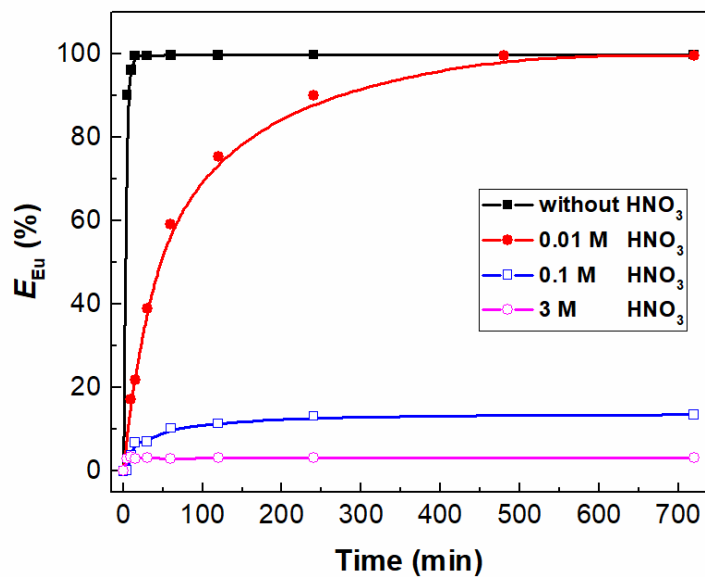


Fig. S1 Influence of extraction time and nitric acid concentration on E_{Eu} of CA-BTP/[C₂mim][NTf₂] system.

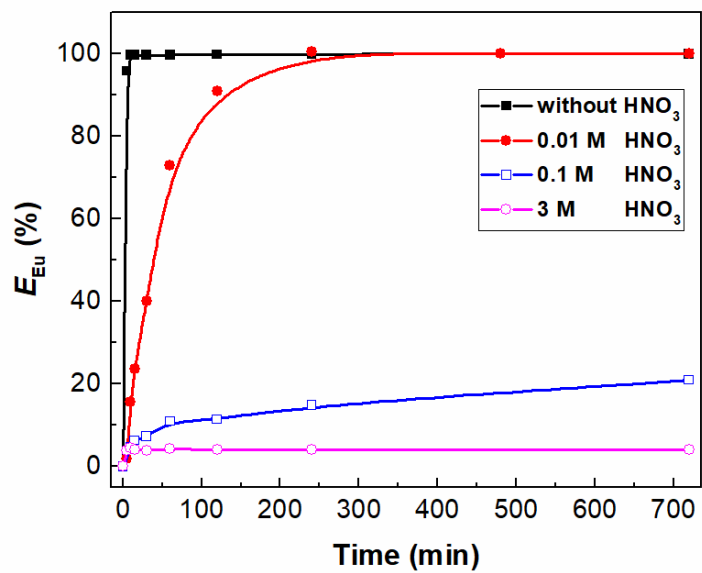


Fig. S2 Influence of extraction time and nitric acid concentration on E_{Eu} of CA-BTPhen/[C₂mim][NTf₂] system.

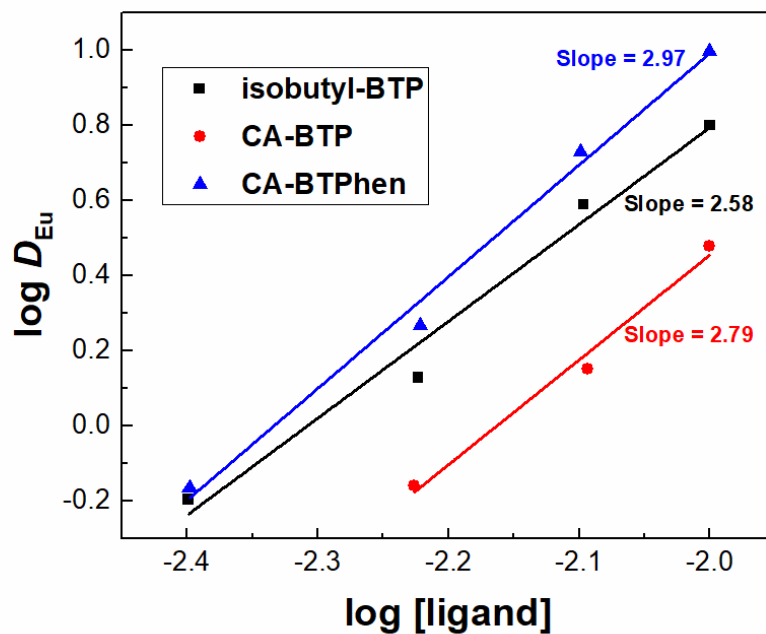


Fig. S3 Variations in $\log D_{Eu}$ as a function of $\log [\text{ligand}]$ in $[\text{C}_2\text{mim}][\text{NTf}_2]$ ($[\text{HNO}_3] = 0.01 \text{ M}$)

Coordination in aqueous phase (ΔG_{aq} , 298.15 K, $\text{kJ}\cdot\text{mol}^{-1}$)

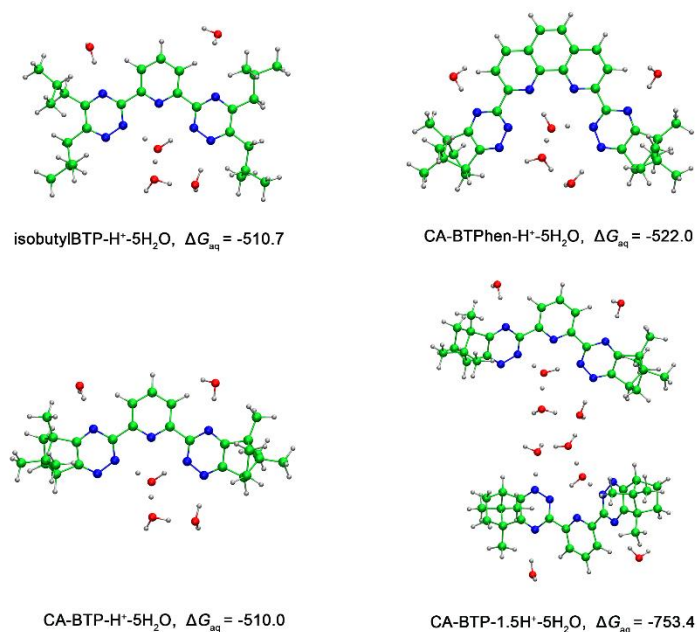


Fig. S4 Optimized structures of isobutyl-BTP- H^+ - $5\text{H}_2\text{O}$, CA-BTPhen- H^+ - $5\text{H}_2\text{O}$, CA-BTP- H^+ - $5\text{H}_2\text{O}$ and CA-BTP- 1.5H^+ - $5\text{H}_2\text{O}$. Green, white, red, blue spheres represent C, H, O and N, respectively.