

Lanthanide Extraction Selectivity of a Tripodal Carbamoylmethylphosphine Oxide Ligand System

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Supplemental Information

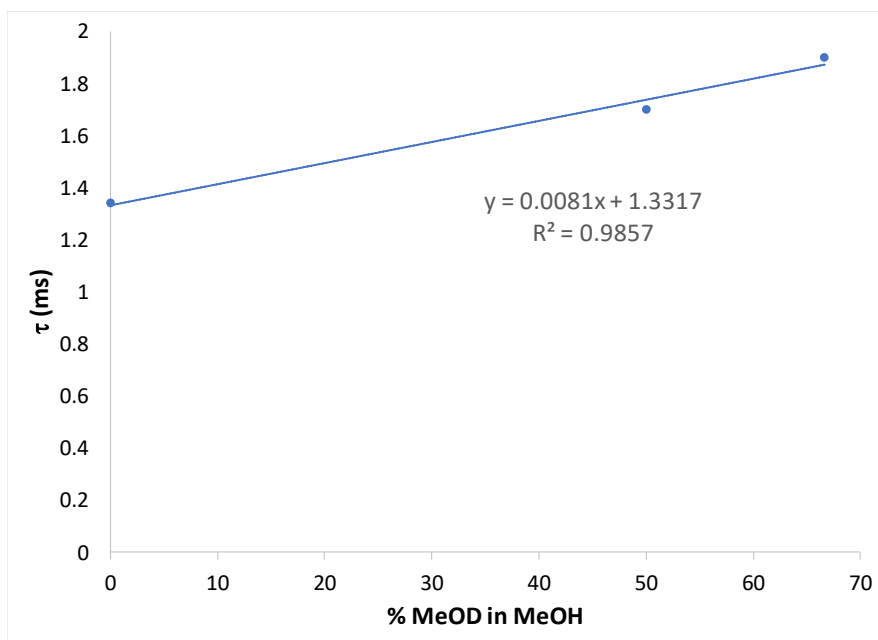


Figure S1. Representative plot of three luminescence decay lifetime measurements of MeOH/MeOD solutions of Tb-3 (2×10^{-3} M) used to determine the extrapolated lifetime value in pure MeOD.

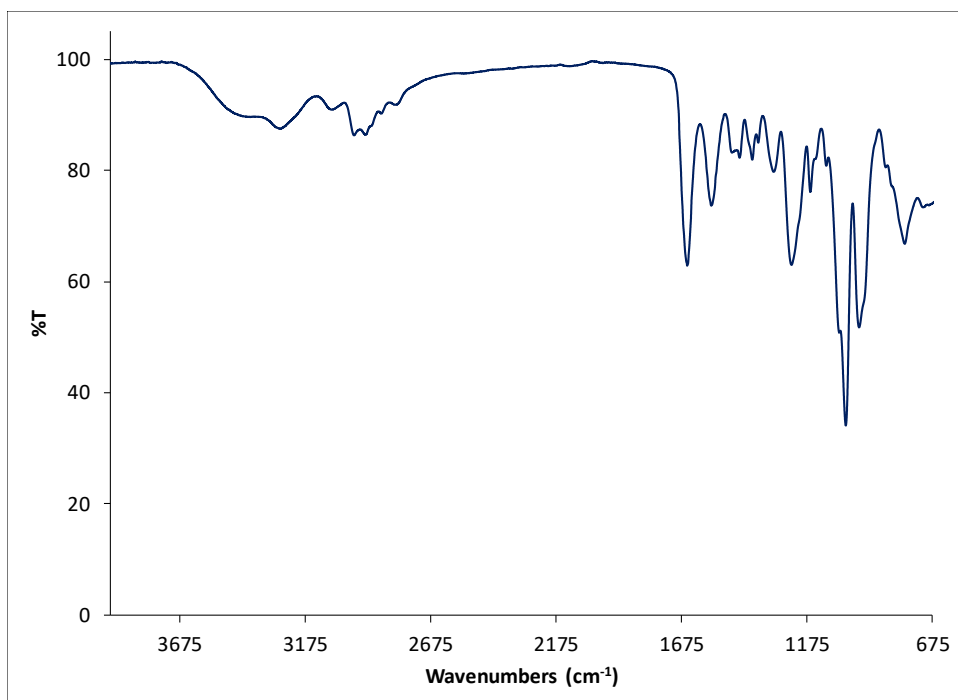


Figure S2. FT-IR spectrum of TRPN-CMPO-OEt (**3**).

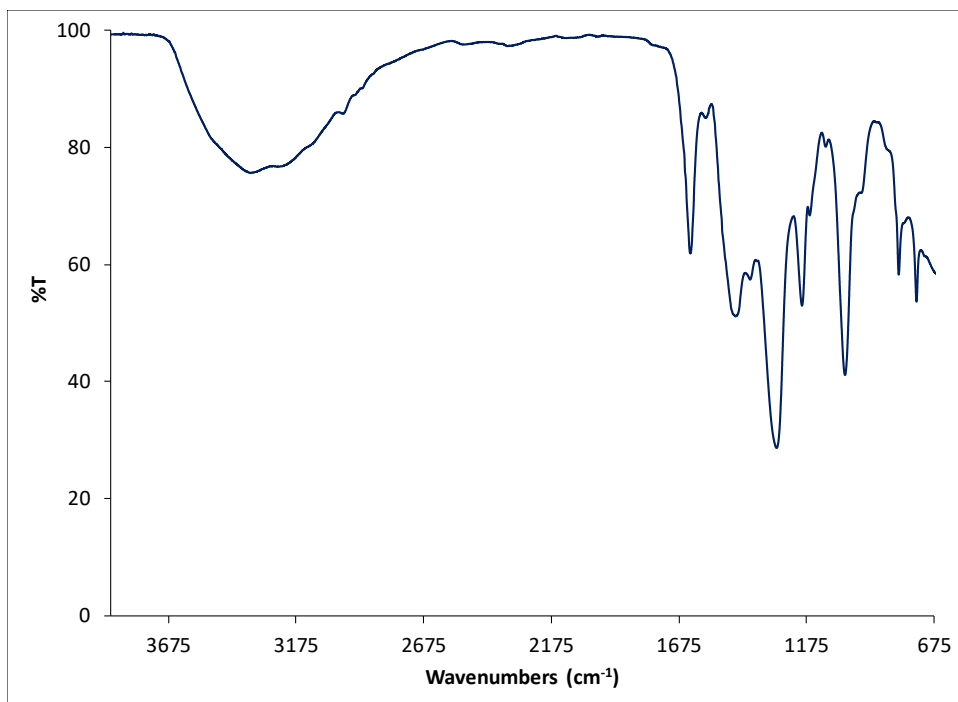


Figure S3. FT-IR spectrum of Tb-TRPN-CMPO-OEt (Tb-**3**).

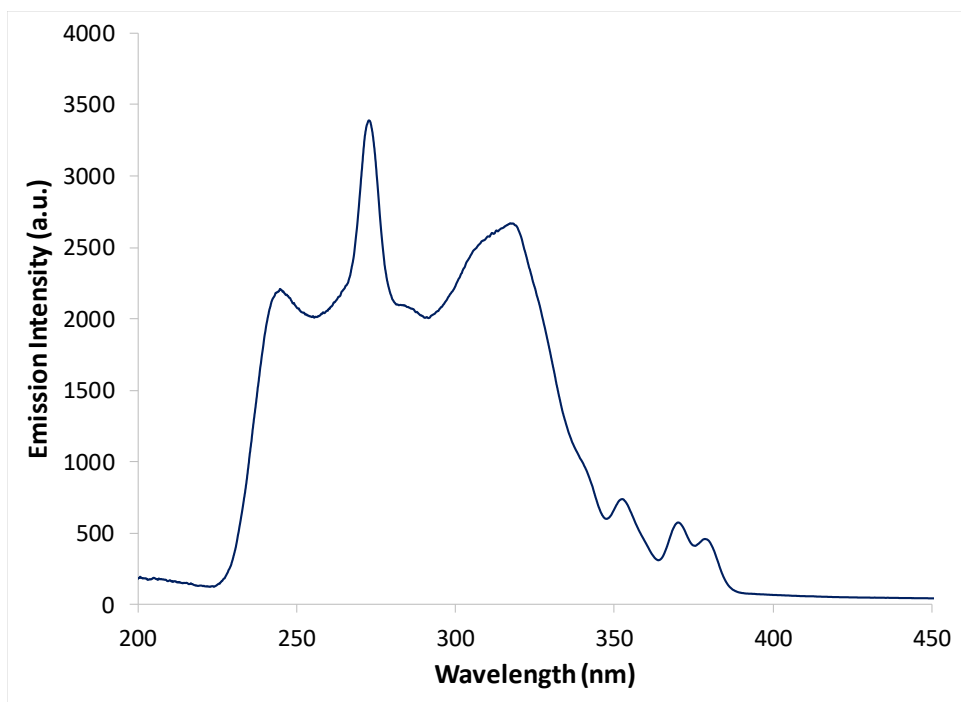


Figure S4. Room temperature excitation spectrum of Tb-TRPN-CMPO-OEt (Tb-3) in methanol ($[\text{Tb-3}] = 2.0 \times 10^{-3} \text{ M}$, $\lambda_{\text{em}} = 545 \text{ nm}$, SW (ex/em) = 5 nm).

Table S1. Percent extraction values with standard deviations for extraction of selected Lns with TREN-CMPO-Ph (**4**), 100:1 ligand to metal ratio.

Ln	%E
La ³⁺	41 ± 1
Pr ³⁺	31.2 ± 0.3
Sm ³⁺	20 ± 2
Tb ³⁺	11 ± 3
Er ³⁺	4.9 ± 0.5
Lu ³⁺	3.7 ± 0.2