Supporting Information

EFFECT OF DILUENTS ON THE SYNERGISTIC SOLVENT EXTRACTION AND SEPARATION OF TRIVALENT LANTHANOIDS WITH 4-BENZOYL-3-PHENYL-5-ISOXAZOLONE AND TERT-BUTYLCALIX[4]ARENE TETRAKIS(N,N-DIMETHYL ACETAMIDE) AND STUCTURAL STUDY OF Gd(III) SOLID COMPLEX BY IR AND NMR

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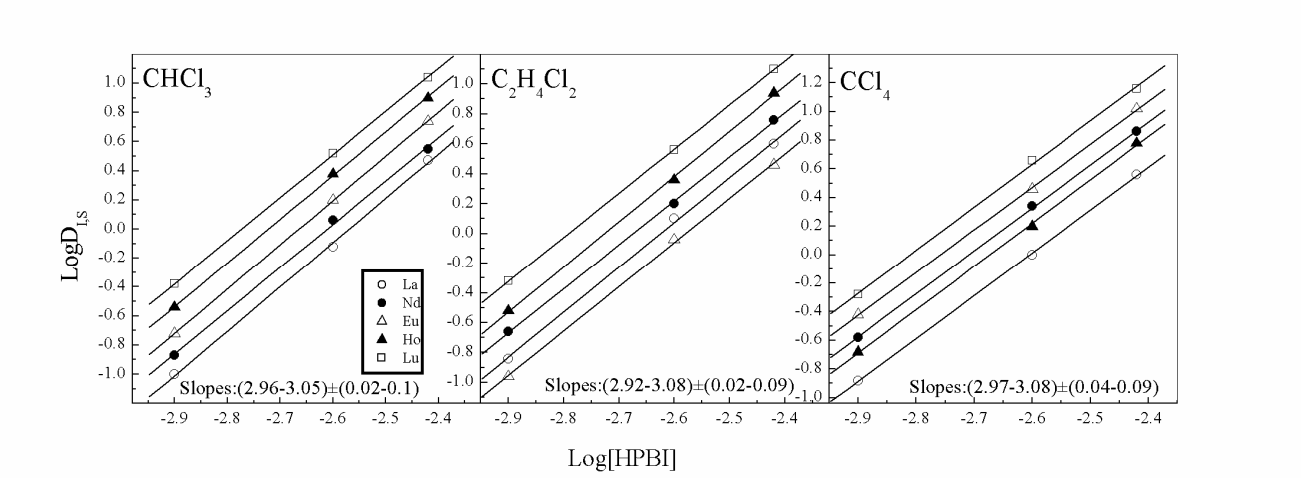

Figure S1. Log$D_{I,S}$ vs. [HPBI] for extraction of lanthanoid elements with HPBI – S mixture at [S] = 1.25×10^{-4} mol/dm^3.

$CHCl_3$: La, pH=2.80; Nd, pH=2.60; Eu, pH=2.45; Ho, pH=2.35; Lu, pH=2.25.

$C_2H_4Cl_2$: La, pH=2.85; Nd, pH=2.65; Eu, pH=2.30; Ho, pH=2.30; Lu, pH=2.25.

CCl_4: La, pH=1.70; Nd, pH=1.65; Eu, pH=1.50; Ho, pH=1.25; Lu, pH=1.25.

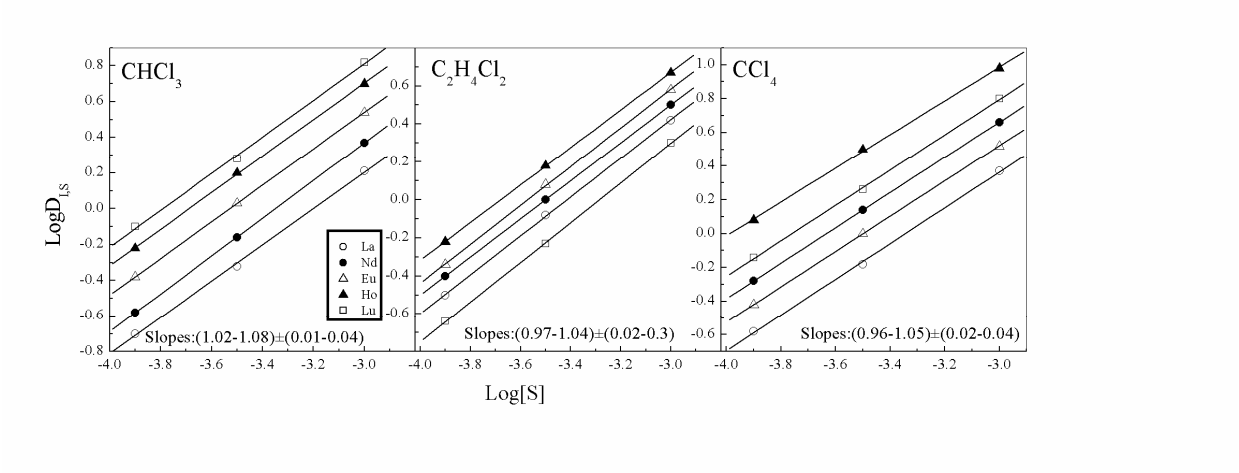

Figure S2. Log$D_{I,S}$ vs. [S] for the extraction of lanthanoid elements with HPBI – S mixture at [HPBI]=1.25×10^{-3} mol/dm^3.

$CHCl_3$: La, pH=2.90; Nd, pH=2.70; Eu, pH=2.55; Ho, pH=2.45; Lu, pH=2.35.

$C_2H_4Cl_2$: La, pH=2.95; Nd, pH=2.75; Eu, pH=2.50; Ho, pH=2.40; Lu, pH=2.15.

CCl_4: La, pH=1.80; Nd, pH=1.80; Eu, pH=1.50; Ho, pH=1.50; Lu, pH=1.30.

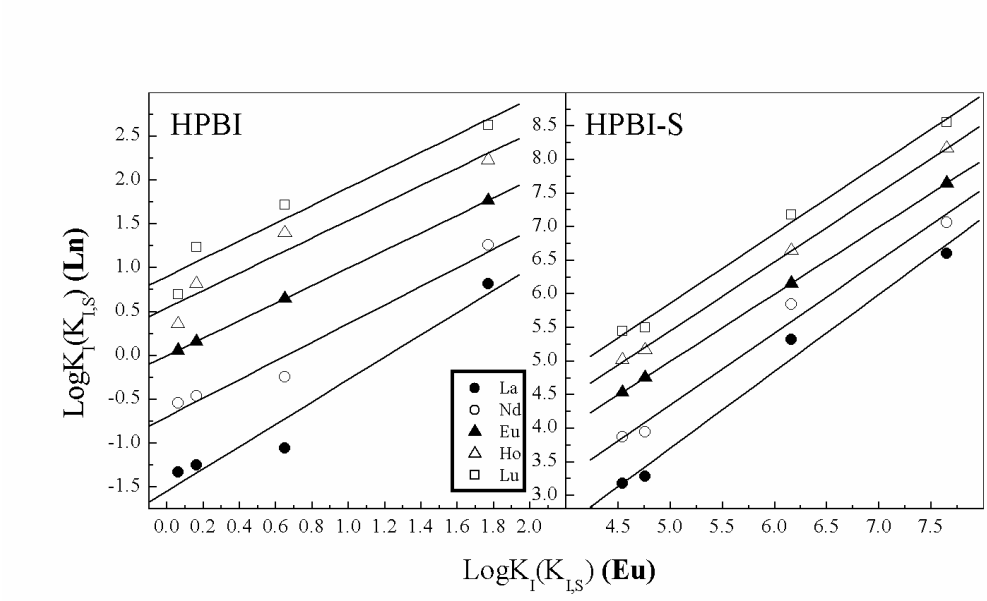

Figure S3. Comparison of log$K$ of La, Nd, Eu, Ho and Lu to log$K$ of Eu.