Supplementary Material (ESI) for New Journal of Chemistry

Supporting Information

Crystal structure and near-infrared luminescence properties of novel binuclear erbium and erbium-ytterbium cocrystalline complexes

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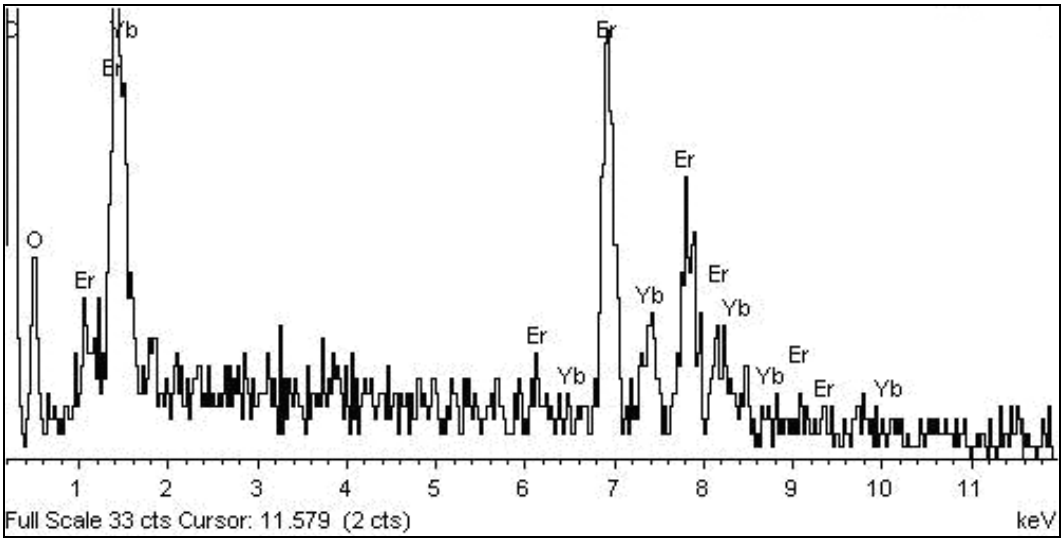

Figure S1 X-ray energy dispersive spectrum from the complex $Er_{1.4}Yb_{0.6}(Ba)_6(Phen)_2$.

Table S1 EDS analysis results for the complex $Er_{1.4}Yb_{0.6}(Ba)_6(Phen)_2$.

Elenment	Weight%	Atomic%
C K	17.16	62.47
O K	6.50	17.77
Er M	53.47	13.98
Yb M	22.86	5.78
Totals	100.00	

Spectrum processing : No peaks omitted; Processing option : All elements analyzed (Normalised); Number of iterations = 1.

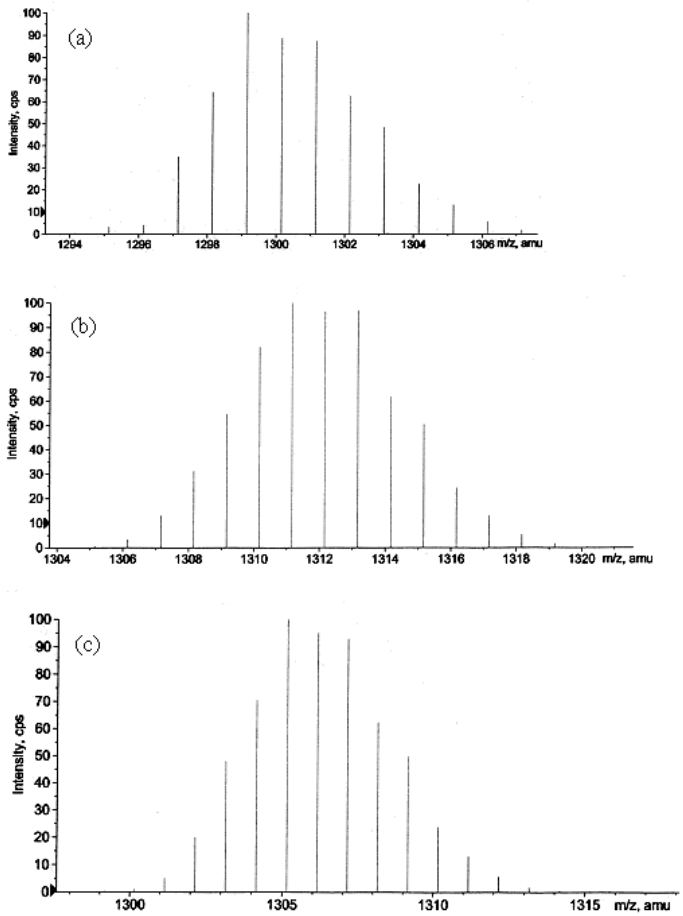

Figure S2 Calculated isotope patterns of $[Ln_2(Ba)_5(Phen)_2]^+$. (a) is calculated isotope patterns of $[Er_2(Ba)_5(Phen)_2]^+$; (b) is calculated isotope patterns of $[Yb_2(Ba)_5(Phen)_2]^+$; (c) is calculated isotope patterns of $[ErYb(Ba)_5(Phen)_2]^+$.

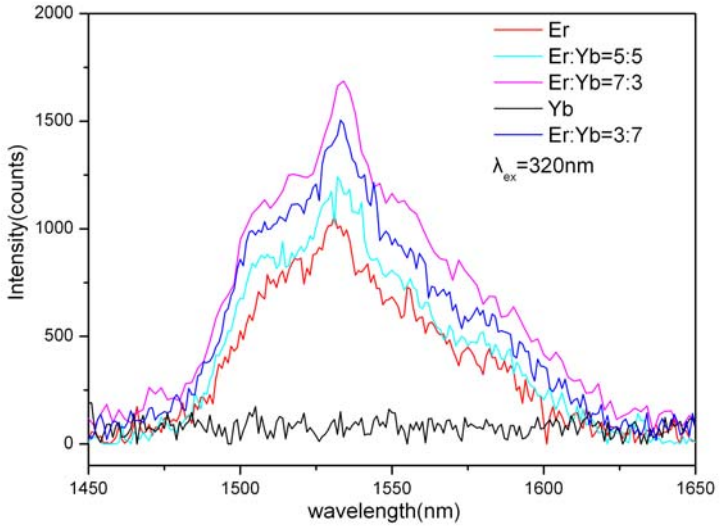

Figure S3 NIR PL spectra of bulk microcrystalline powders of complexes $Er_{2-x}Yb_x(Ba)_6(Phen)_2$ (x=0, 0.6, 1.0, 1.4, 2.0) around 1535 nm excited at 320 nm at room temperature.

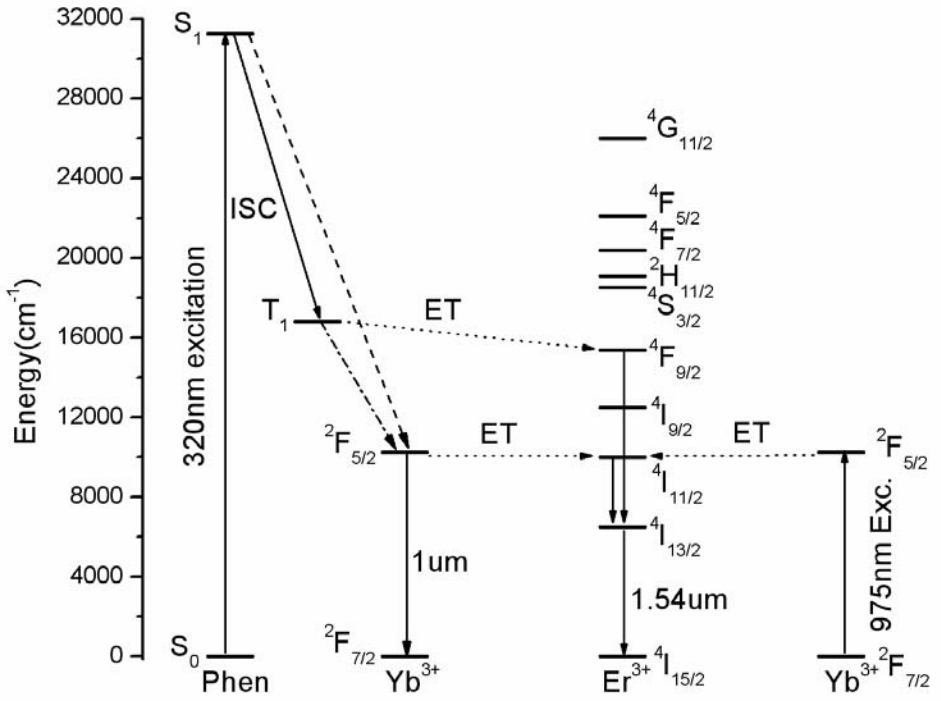

Figure S4 Schematic drawing for the sensitization process of Er^{3+} and Yb^{3+}.