Electronic Supplementary Material (ESI) for Photochemical & Photobiological Sciences

Supporting information *for*

Emission response towards three Anions (F^-, HSO_4^- and AcO^-) by a luminescent europium ternary complex with a 2-arylimidazole–1,10-phenanthroline conjugate

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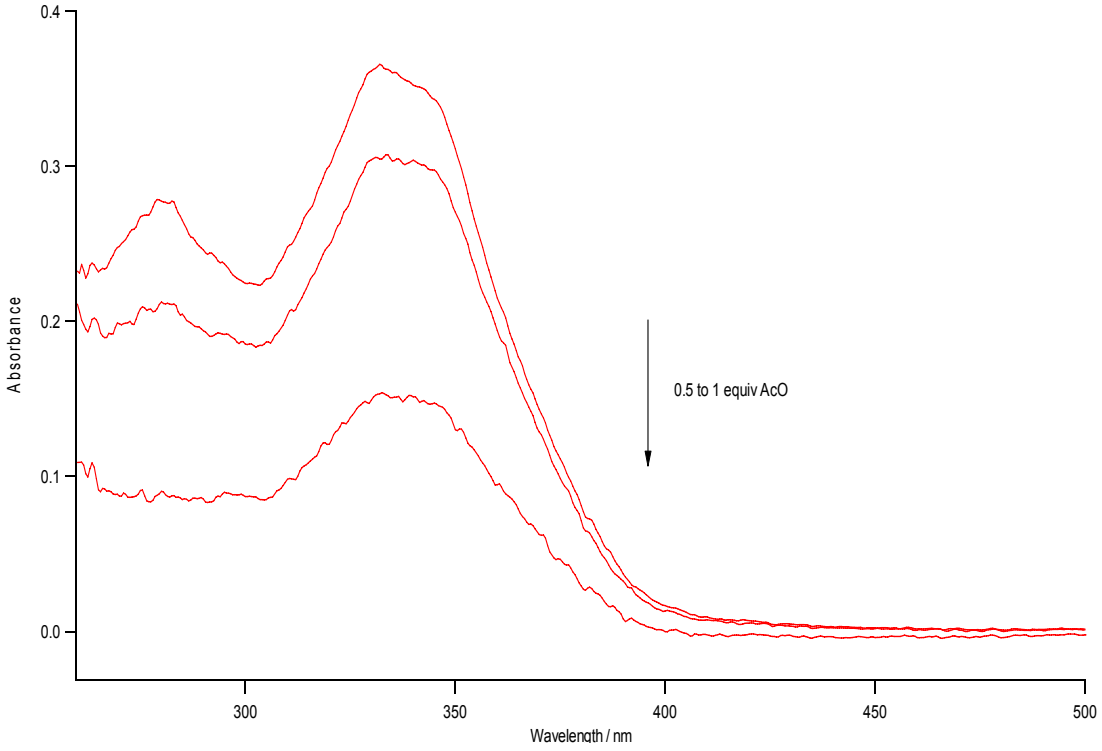


Figure S1 UV-vis spectra of Eu(TTA)$_3$(**1**) (10^{-5} M in DMSO) upon addition of 0.5-1 equiv. of acetate anions.

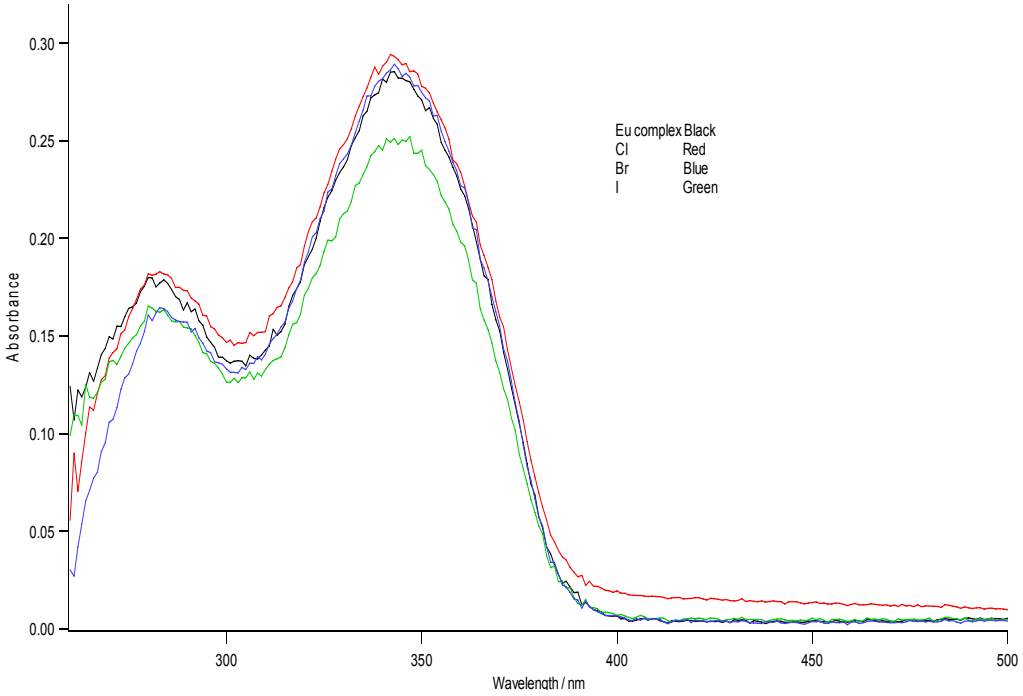


Figure S2 UV-vis spectra of $Eu(TTA)_3$(**1**) (10^{-5} M in DMSO) upon addition of 10 equiv. of Cl, Br and I anions.

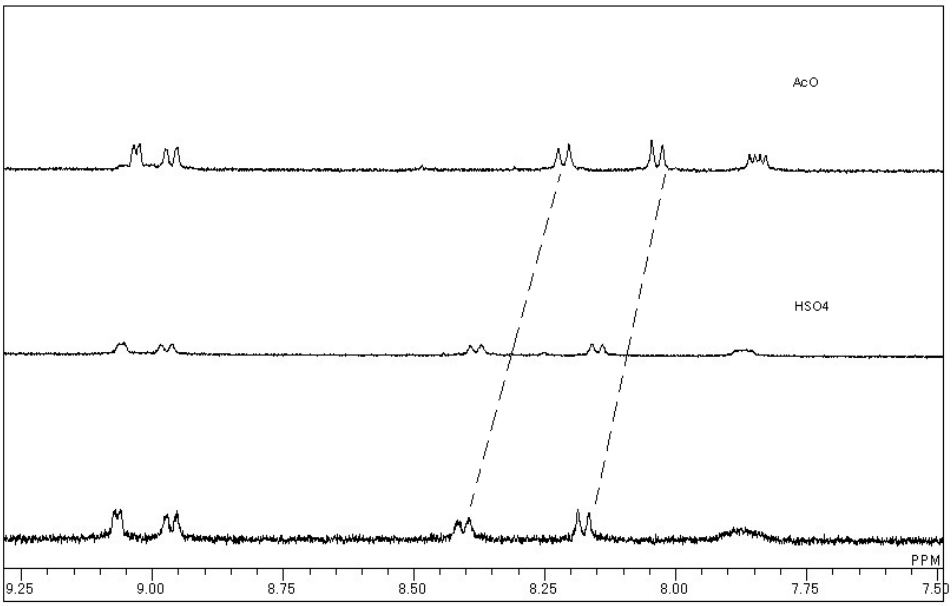


Figure S3 ^{1}H-NMR spectra measured by titration of a DMSO-d_6 solution of pure **1** (1 mM) with 2 equiv. of $[Bu_4N]HSO_4$ or 1 equiv. of . $[Bu_4N]AcO$.

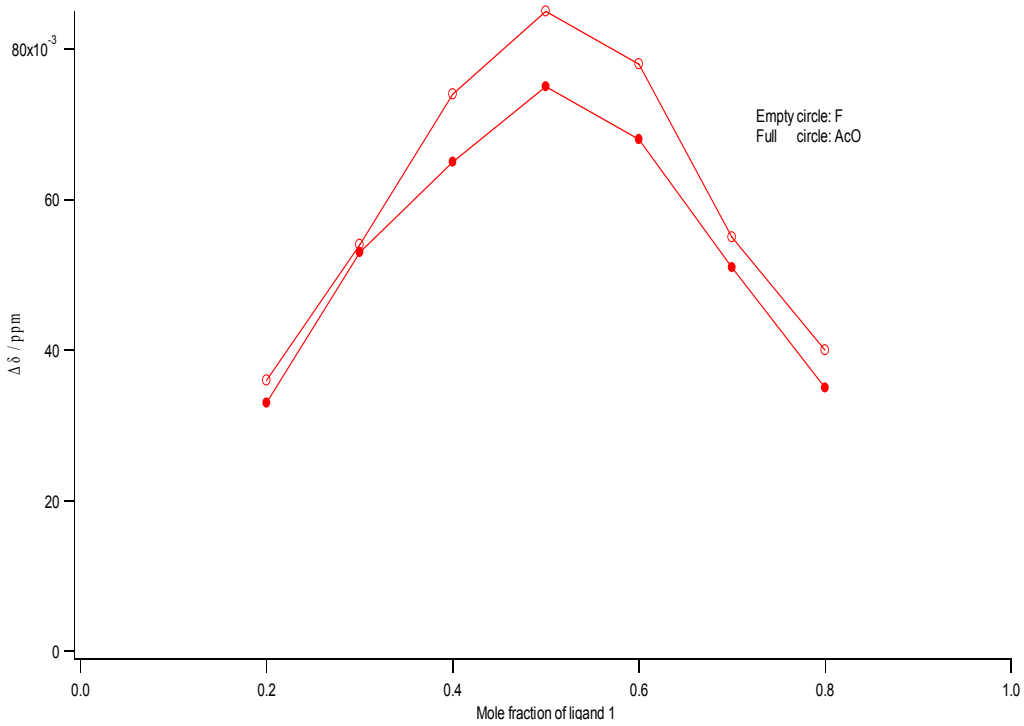


Figure S4 Job's plots of host **1** and $[Bu_4N]F$ or $[Bu_4N]AcO$ in DMSO-d_6 with the total concentration of 2 x 10^{-3} M. $\Delta\delta = \delta$ (without $[Bu_4N]F$) — δ (with $[Bu_4N]F$).

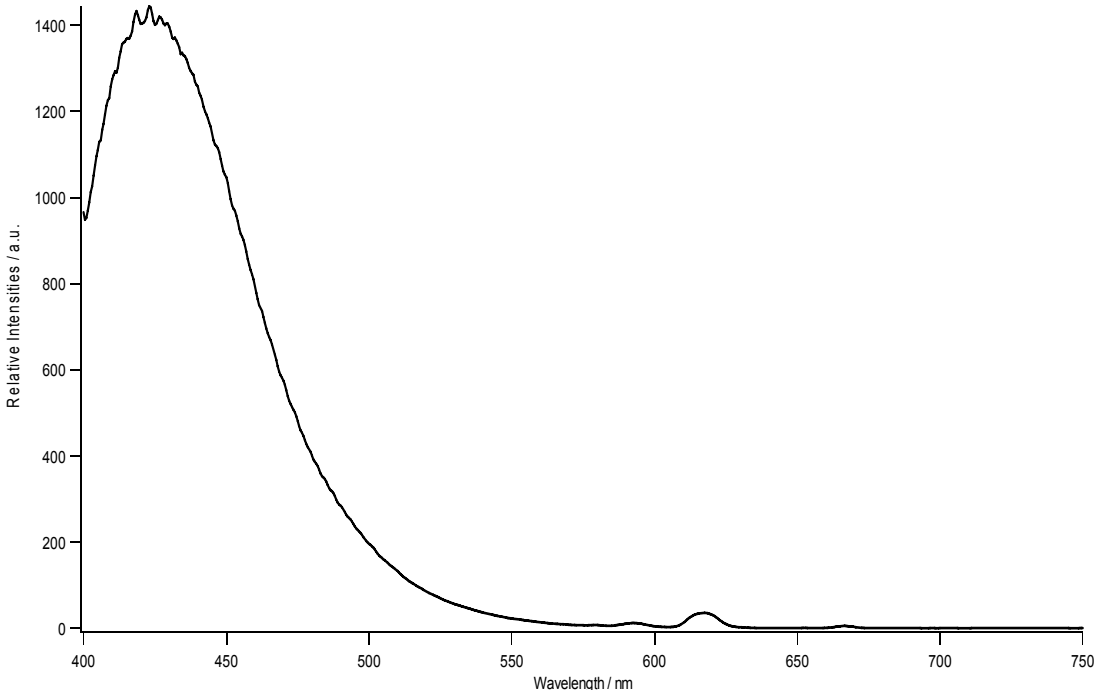


Figure S5 Emission spectra of $Eu(TTA)_3$(**1**) (10^{-6} M in DMSO) excited at 350 nm upon

addition of 1equiv. of $[Bu_4N]HSO_4$.

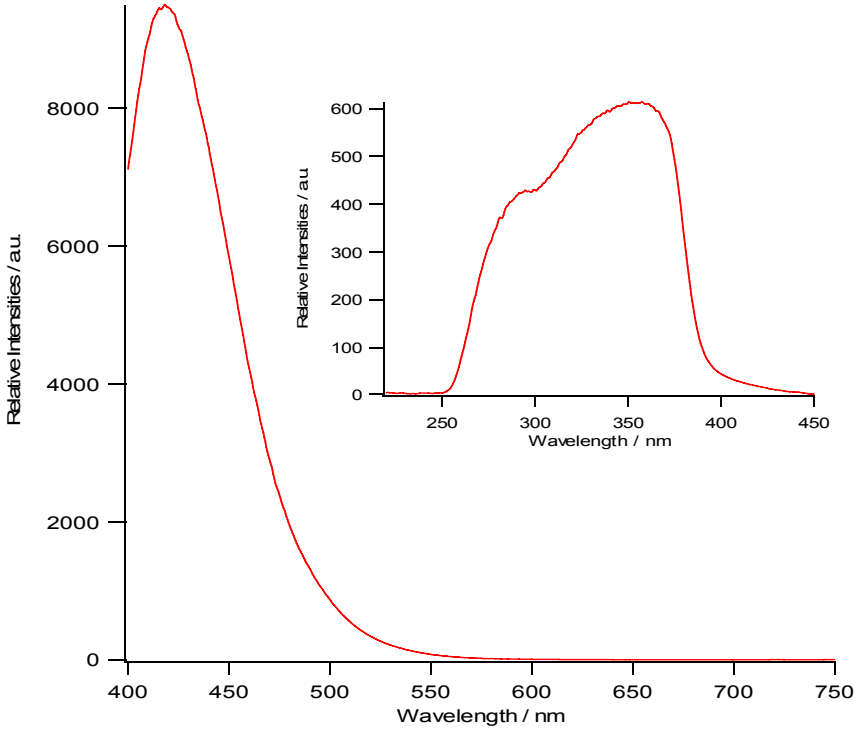


Figure S6 Emission (Ex = 350 nm) and excitation spectra (inset, Em = 420 nm) of **1** (DMSO, 10^{-6} M).

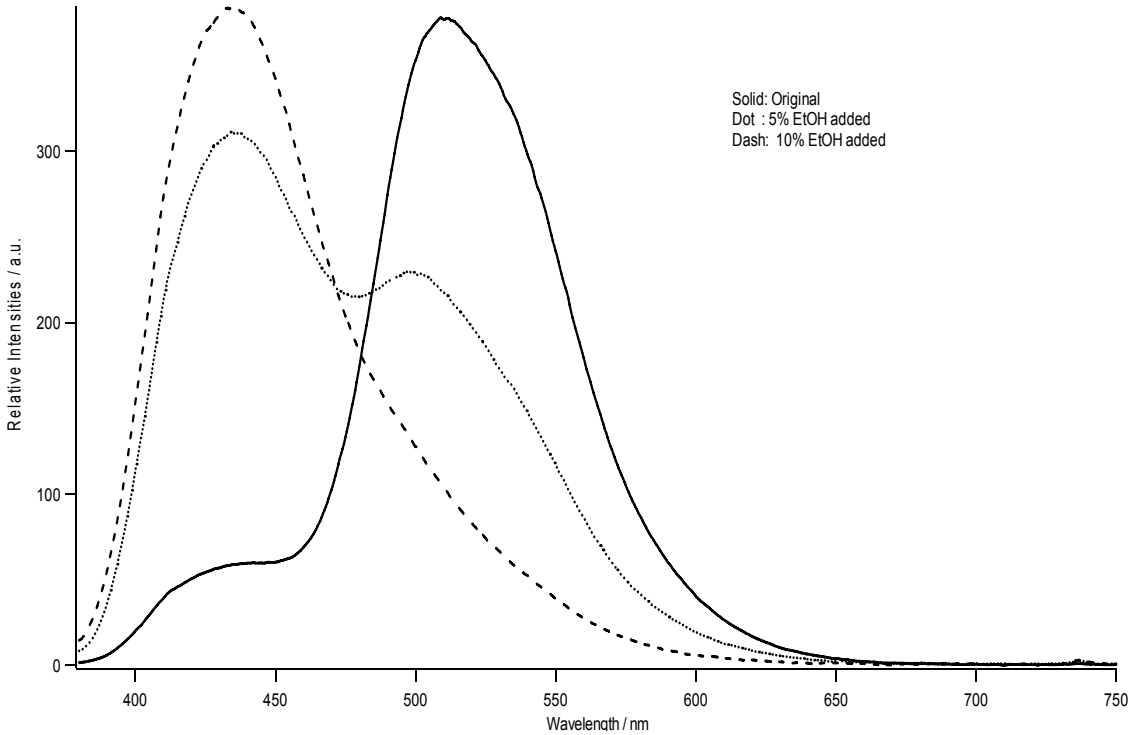
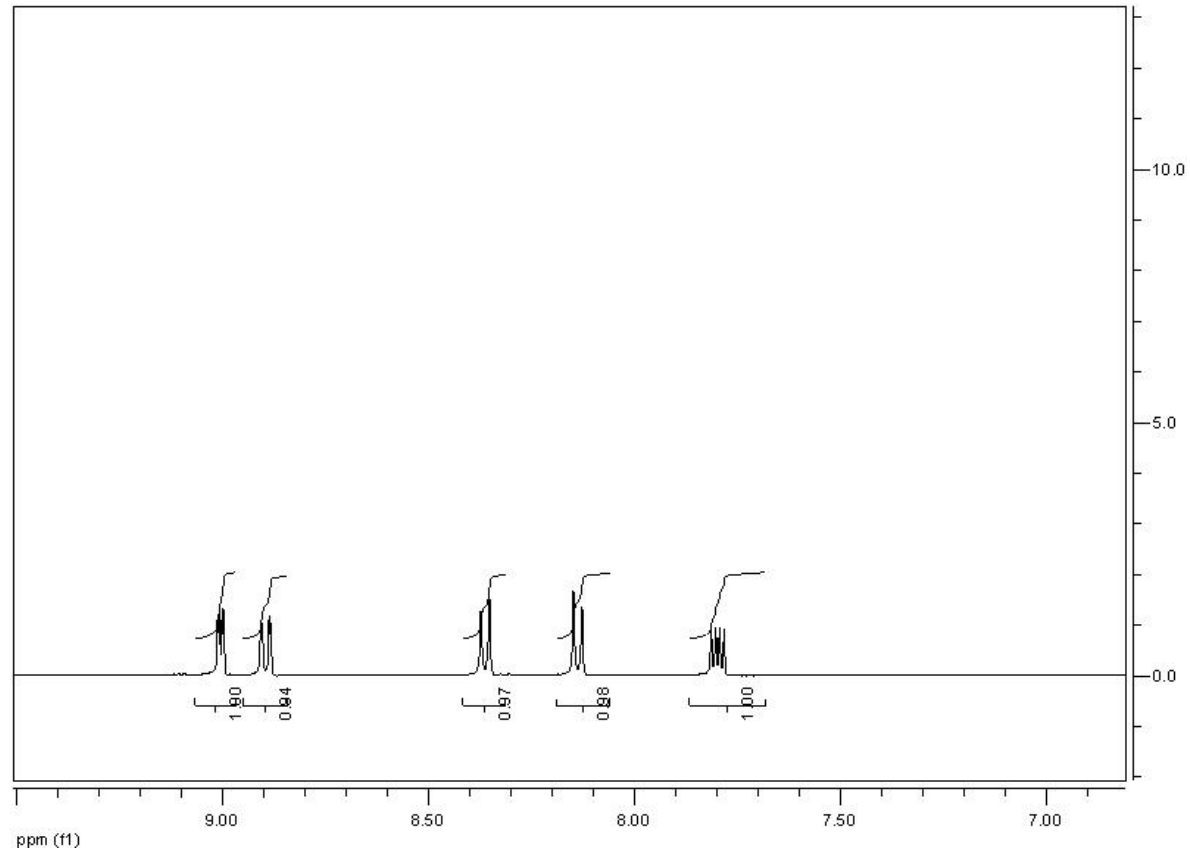


Figure S7 Emission spectra of $Eu(TTA)_3$(**1**) with 1 equiv. of fluoride upon addition of 0 (solid), 5 (dotted) and 10 % ethanol (dashed).

Figure S8 $Eu(TTA)_3$(**1**) in DMSO (10^{-6} M) excited by UV light at 365 nm with 1 equiv. of $[Bu_4N]AcO$.



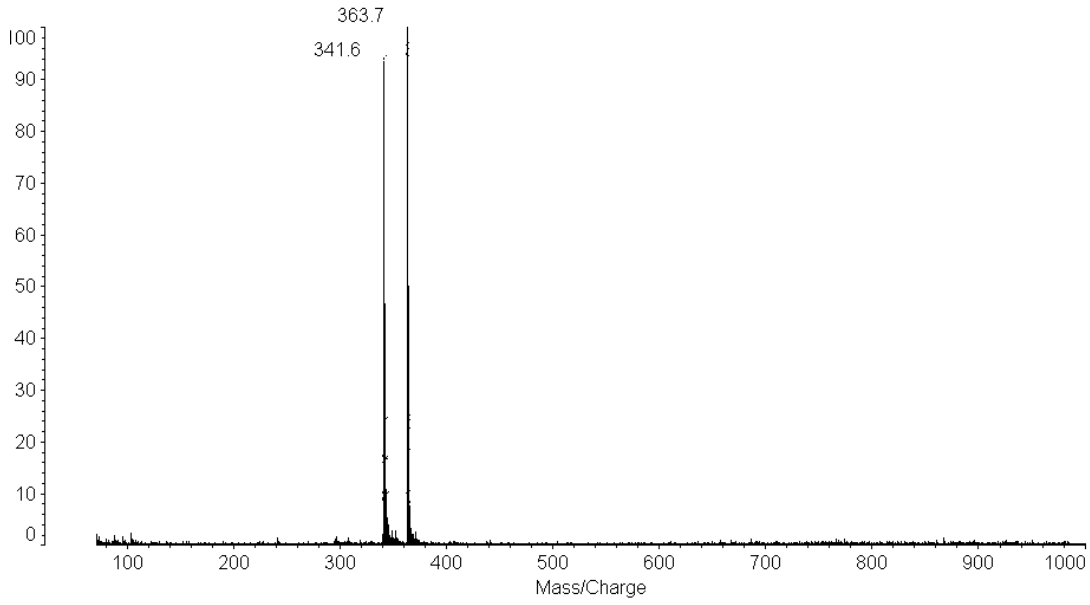


Figure S9 ^{1}H-NMR (upper) and mass spectra of **1** (lower).