Supporting information:

Luminescent iridium complexes for detection of molybdate.

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Figures are numbered as in the paper

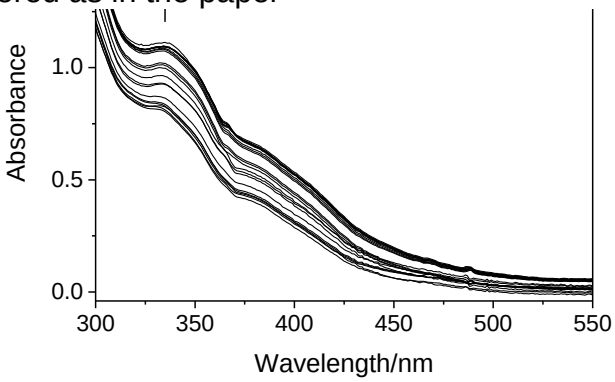

Figure 3(i) Absorption spectra recorded between pH 0.8 and 11.2 during the titration of an acidic solution (0.041 mM) of **[H_2-3c]$^+$** in aqueous acetonitrile (5% water) with [Me_4N]OH.

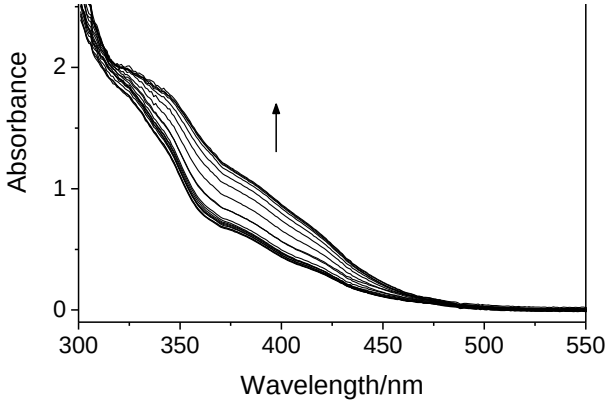

Figure 3(ii). Absorption spectra recorded between pH 0.2 and 10.7 during the titration of an acidic solution (0.083 mM) of **[H_2-3d]+** in aqueous acetonitrile (5% water) with [Me_4N]OH.

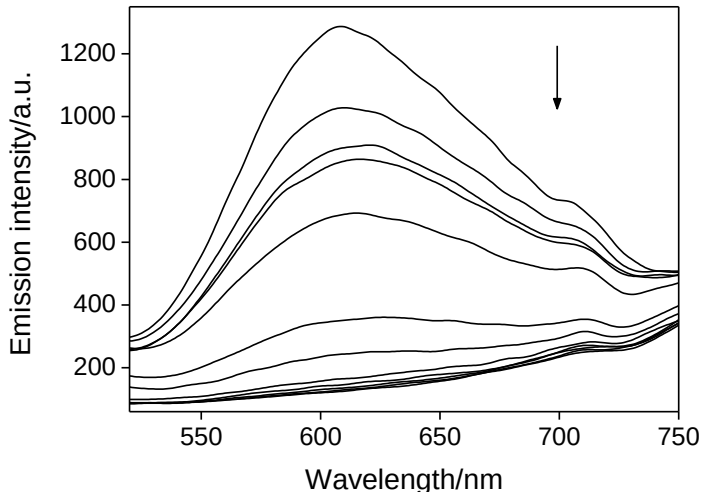

Figure 4(i) Selected emission spectra (λ_{exc} = 330 nm, 350 nm filter) recorded between pH 3.3 and 11.2 during the titration of an acidic solution (0.041 mM) of **[H_2-3c]$^+$** in aqueous acetonitrile (5% water) with [Me_4N]OH.

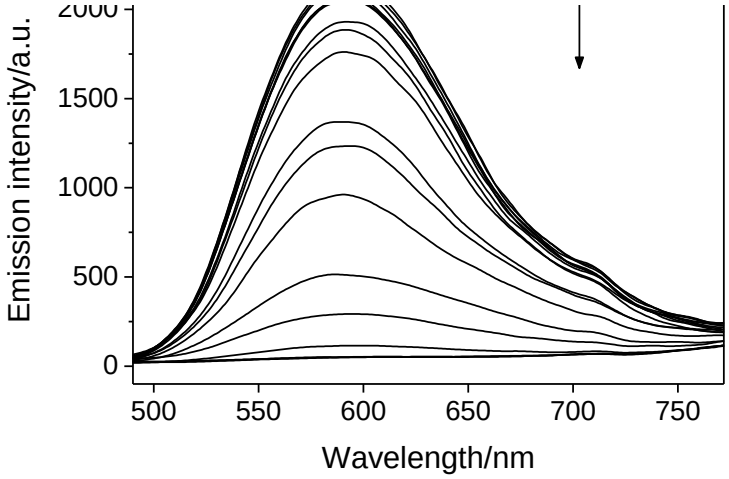

Figure 4(ii) Selected emission spectra (λ_{exc} = 400 nm) recorded between pH 0.2 and 10.6 during the titration of an acidic solution (0.083 mM) of **[H_2-3d]$^+$** in aqueous acetonitrile (5% water) with [Me_4N]OH.

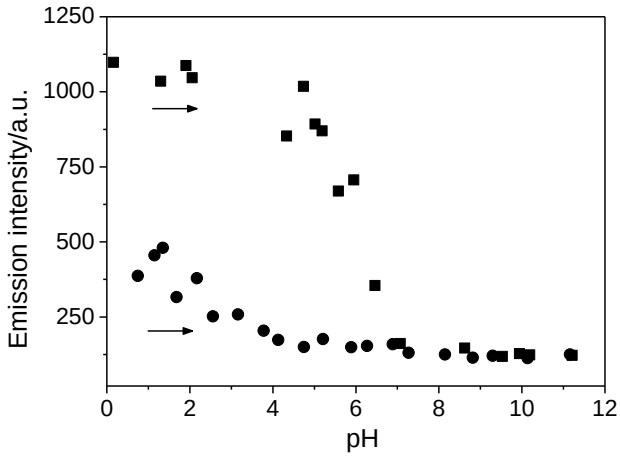

Figure 5(i) Emission intensity at 610 nm as a function of pH for **$[H_2$-3c$]^+$** (squares) and **$[H_2$-3c$]^+$** + 0.5 equiv. molybdate (circles) (0.041 mM solutions in aqueous acetonitrile).

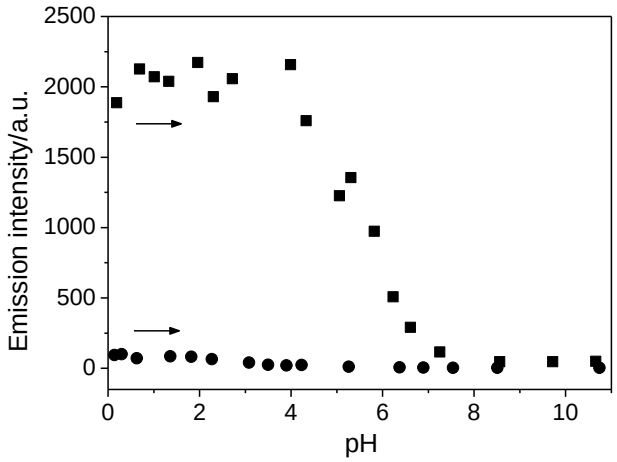

Figure 5(ii) Emission intensity at 588 nm as a function of pH for **$[H_2$-3d$]^+$** (squares) and **$[H_2$-3d$]^+$** + 0.5 equiv. molybdate (circles) (0.083 mM solutions in aqueous acetonitrile).

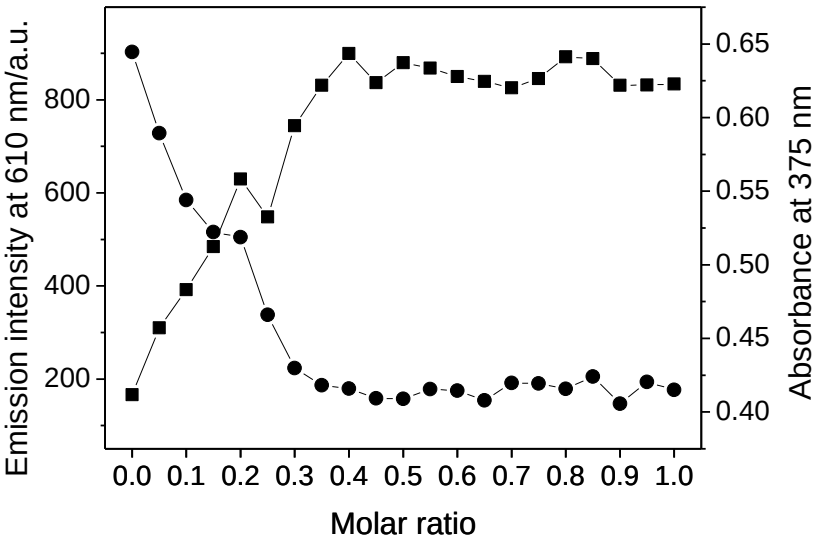

Figure 6(i) Emission intensity at 610 nm (circles) and absorbance at 375 nm (squares) of a 0.042 mM solution of **3c** in aqueous acetonitrile at pH 4.7 as a function of molar MoO_4^{2-} fractions.

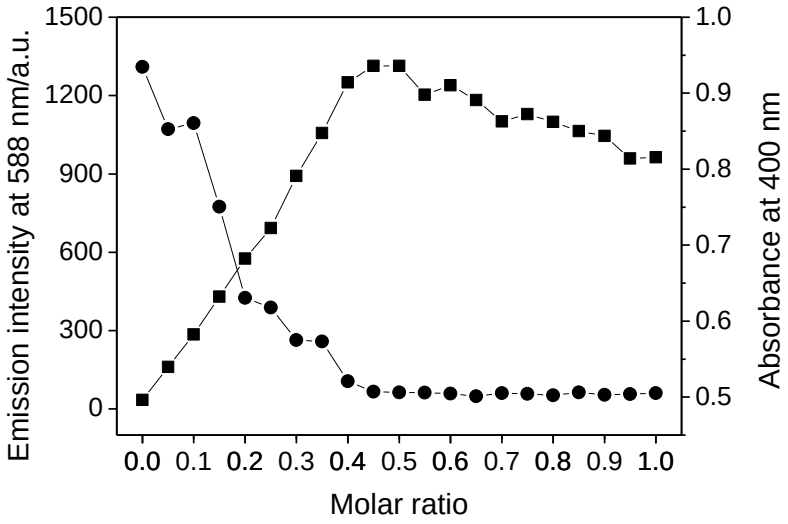

Figure 6(ii) Emission intensity at 588 nm (circles) and absorbance at 400 nm (squares) of a 0.083 mM solution of **3d** in aqueous acetonitrile at pH 4.1 as a function of molar MoO_4^{2-} fractions.