

## Electronic Supplementary Information (ESI)

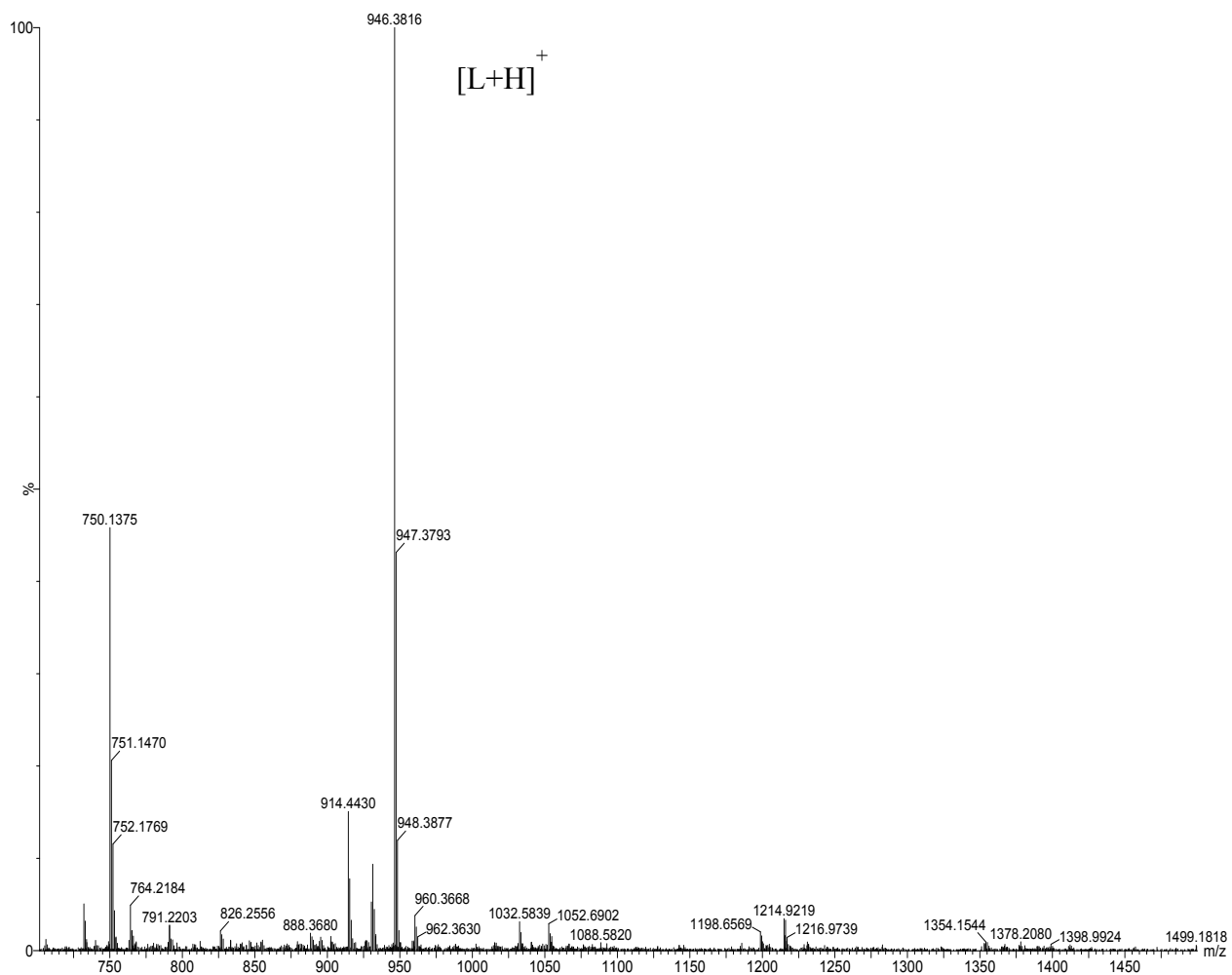
### Detection of NaCN in aqueous media using calixarene-based fluoroionophore containing ruthenium(II)-bipyridine as fluorogenic unit†

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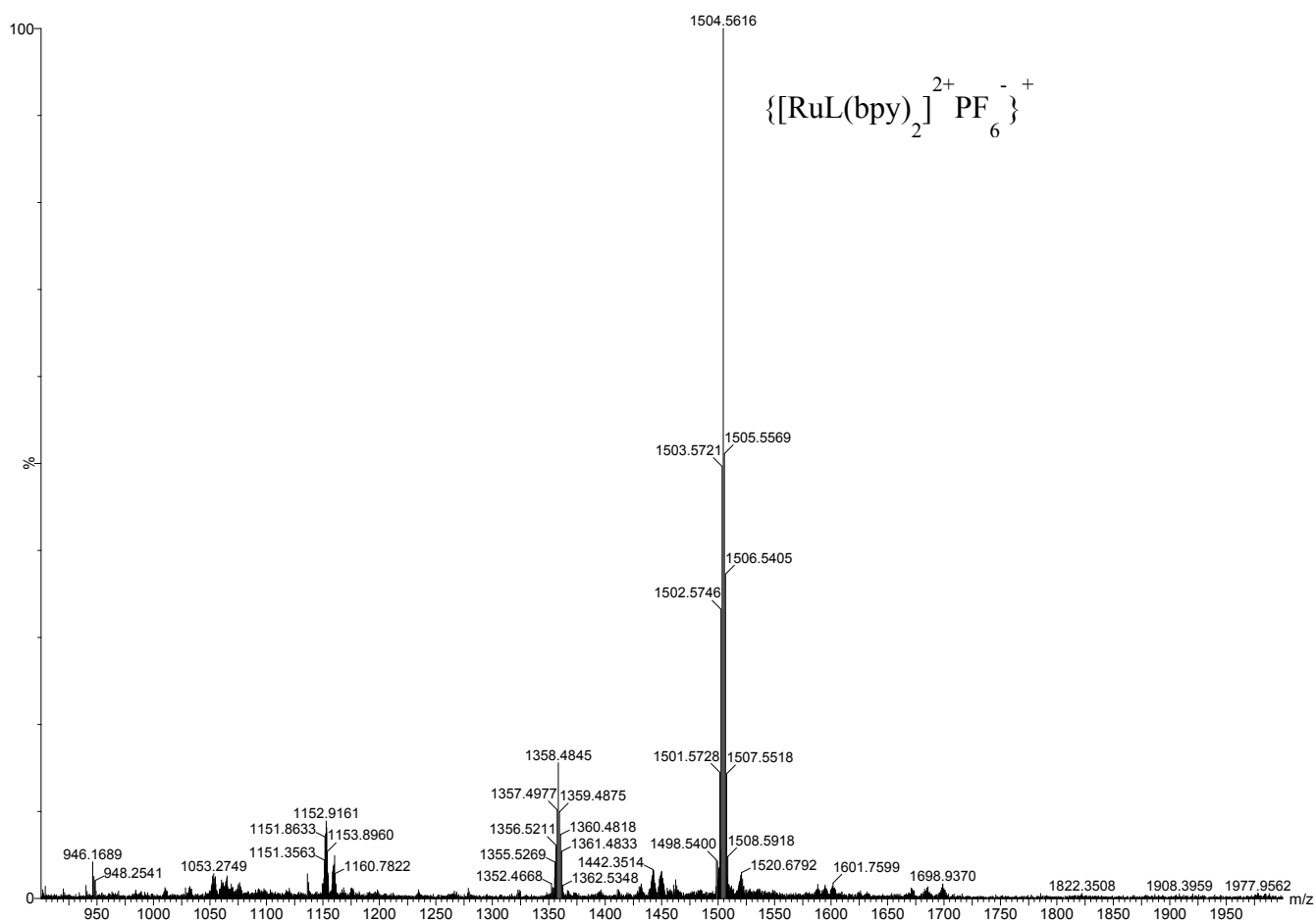
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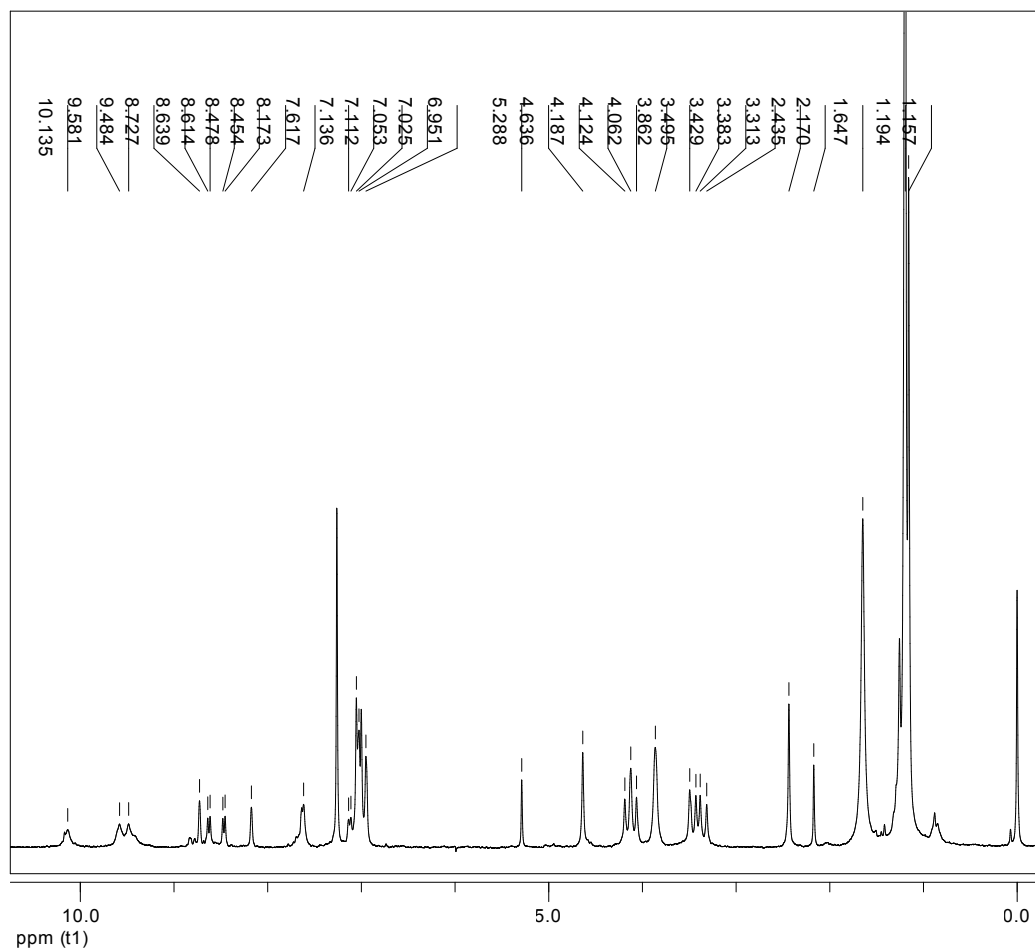
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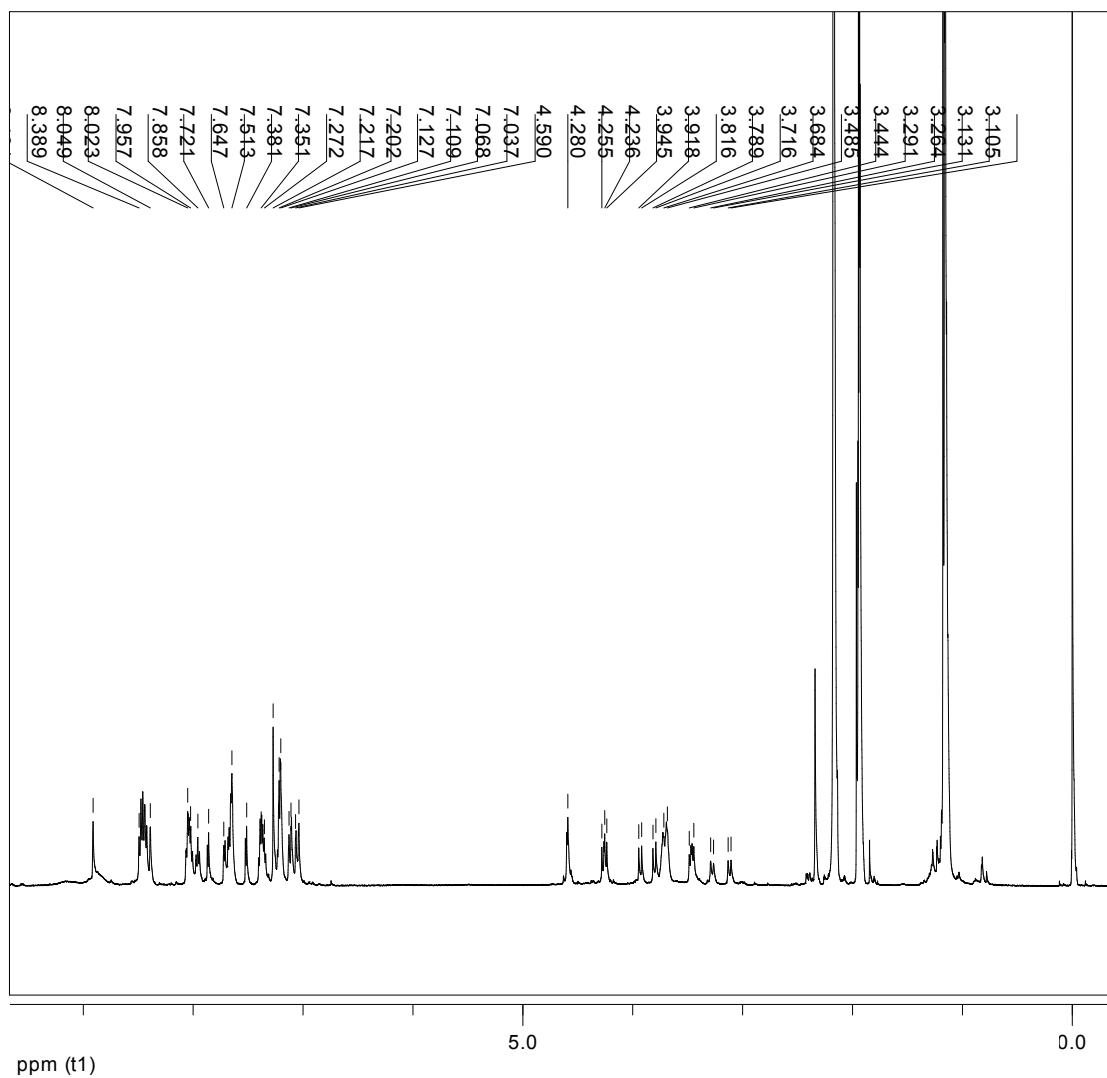
**Fig.S1.** ES-MS (m/z) of the compound L recorded in CH<sub>3</sub>CN.



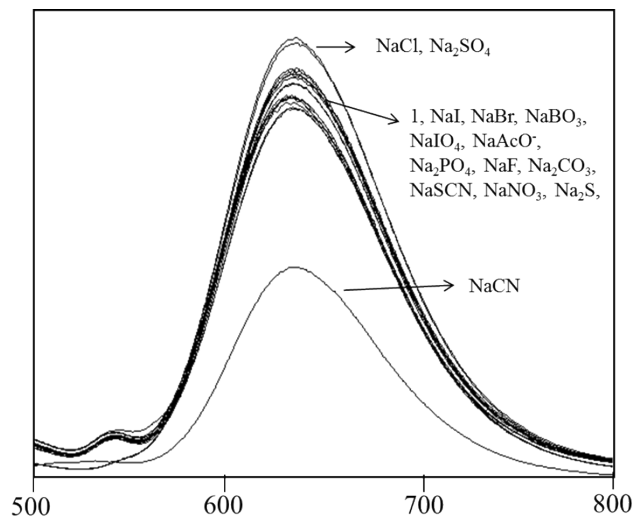
**Fig.S2.** ES-MS (m/z) of the complex 1 recorded in CH<sub>3</sub>CN.



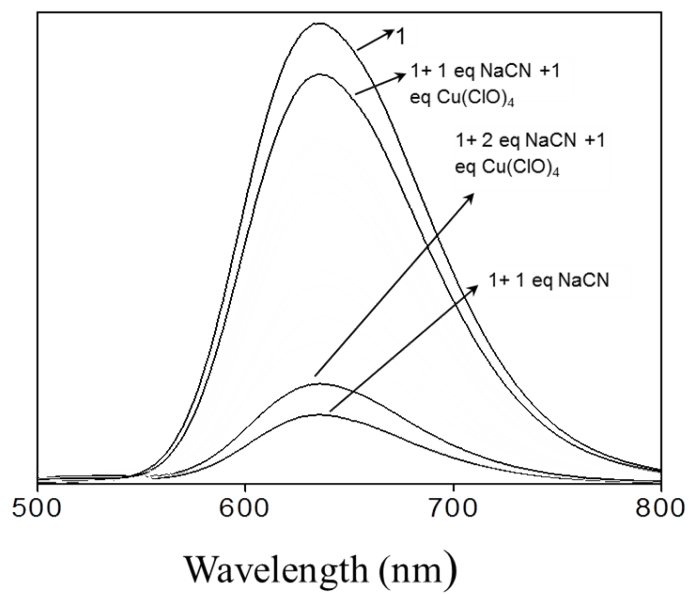
**Fig.S3.** <sup>1</sup>H NMR spectrum of the compound L recorded in CDCl<sub>3</sub>.



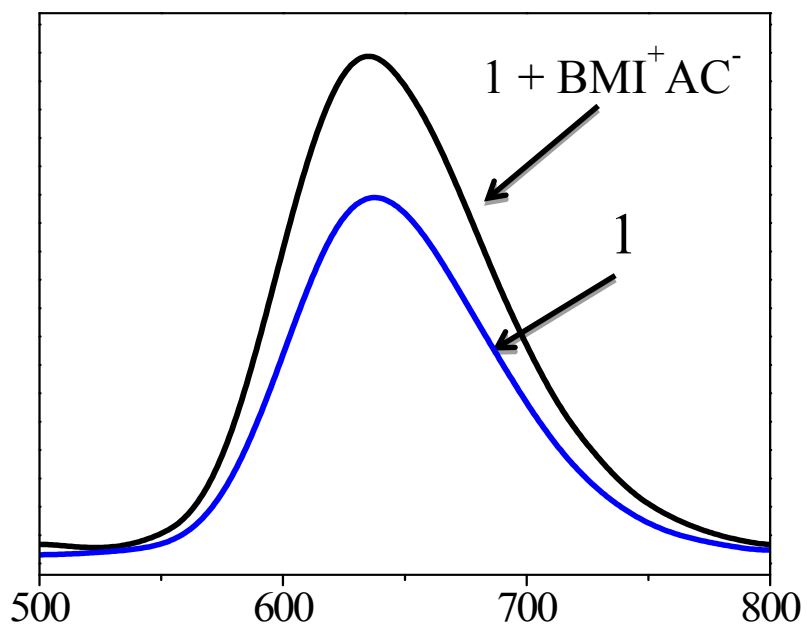
**Fig.S4.**  $^1\text{H}$  NMR spectrum of the complex1 recorded in  $\text{CD}_3\text{CN}$ .



**Fig. S5.** Emission spectral change of 1 with all sodium salts

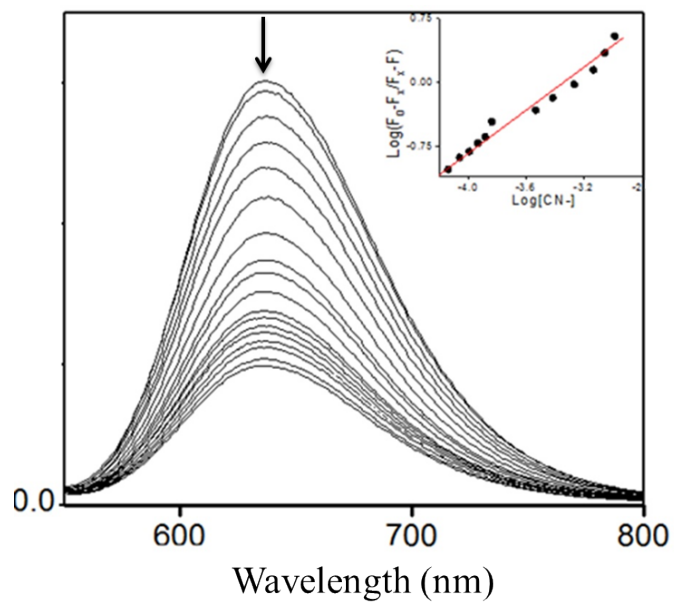


**Fig.S6.** reversible study of complex 1 with addition of NaCN and Cu(ClO<sub>4</sub>)<sub>2</sub>

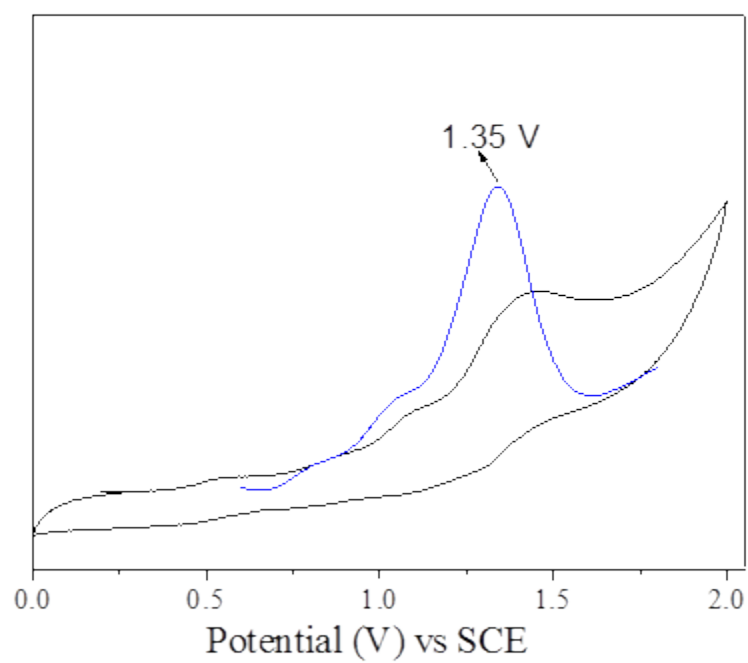


**Fig. S7.** Emission spectral change for **1** ( $1 \times 10^{-6}$  M) upon addition of 1-butyl-3-methylimidazolium acetate ( $\text{BMI}^+\text{Ac}^-$ ,  $1 \times 10^{-4}$  M).

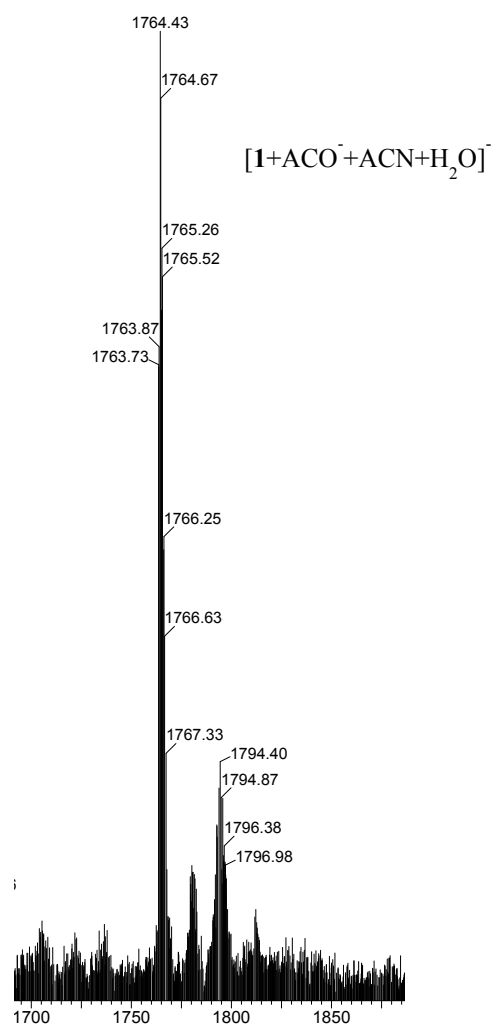




**Fig. S8** Emission spectral changes for 1 ( $1.5 \times 10^{-6}$  M) upon addition of increasing amount of TBACN<sup>-</sup> in H<sub>2</sub>O-CH<sub>3</sub>CN (95:5). Excitation wavelength: 458 nm. Inset: linear regression fit (double-logarithmic plot) of the titration data as a function of concentration of CN<sup>-</sup>.



**Fig. S9** Cyclic voltammogram (black line) and differential pulse voltammogram (DPV, blue line) of the complex **1**



**Fig. S10** Relevant portion of the mass spectra for 1 in presence of  $AcO^-$  (10 equivalents) recorded in  $CH_3CN$