

A Ratiometric Fluorescent Probe Based on FRET for Cyanide

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Electronic Supplementary Information (ESI†)

Contents

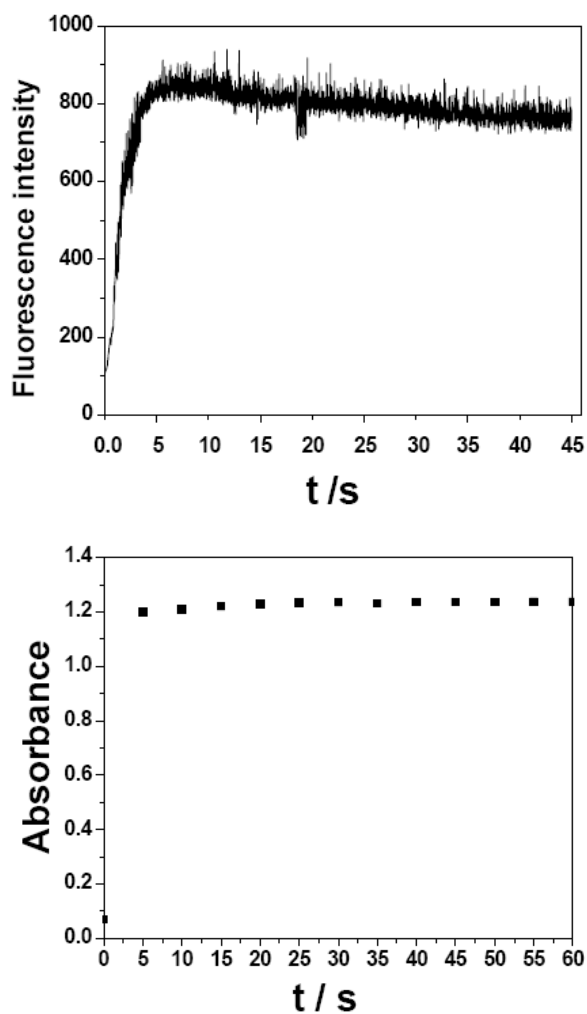


Fig. S1 Time course of the response of **1** [20 μ M in (a) and 5 μ M in (b)] in DMF–H₂O (9:1, v/v) upon addition of 20 equiv CN[−].

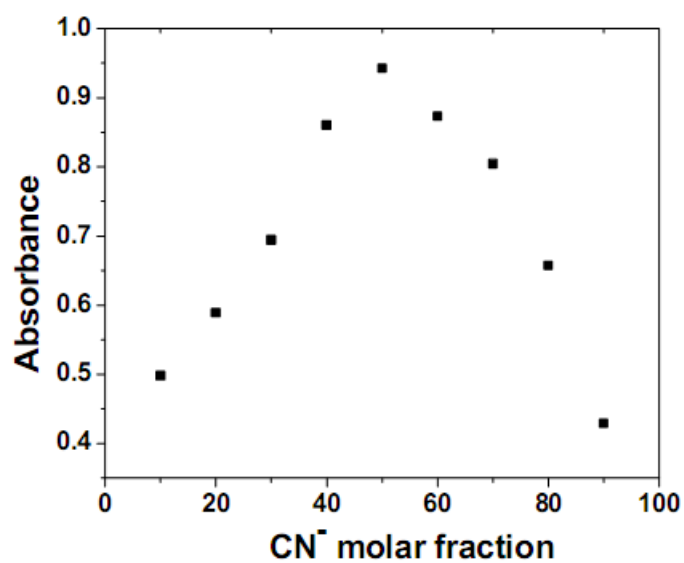


Fig. S2 Job's plots of the complexation between **1** and CN^- . Total concentration of **1** + CN^- was kept constant at 120 μM .

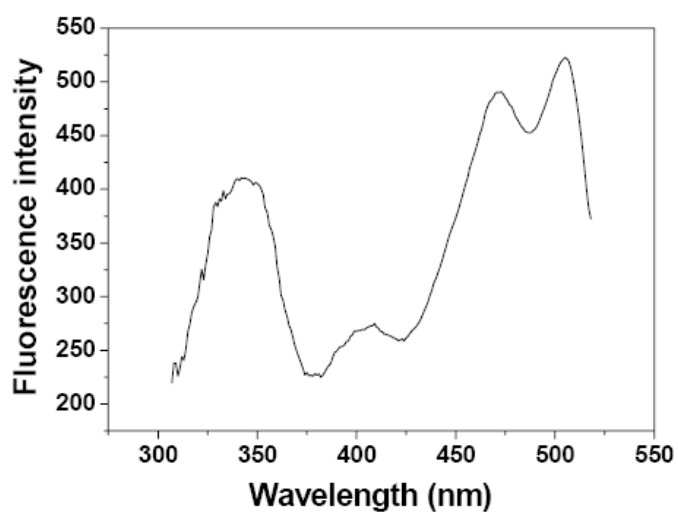


Fig. S3 The excitation spectra obtained by collecting emission data of **1**- CN^- adduct (**1** + 20 equiv CN^-) at 550 nm.

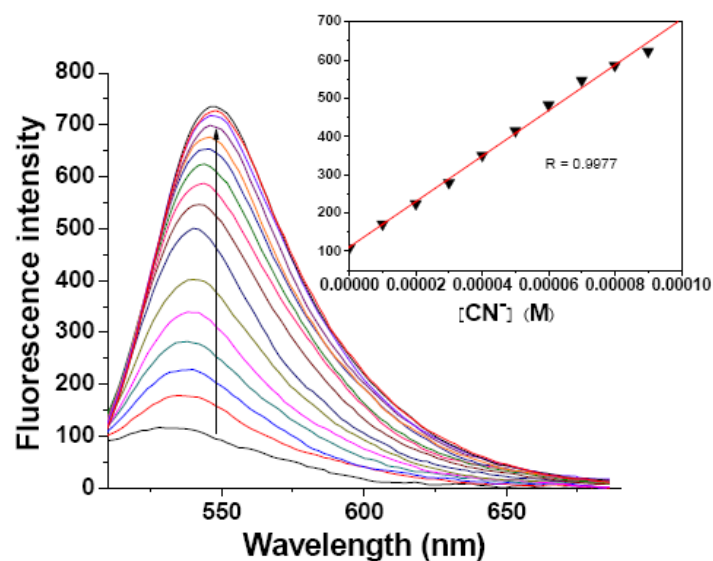


Fig. S4 Fluorescence titration spectra of **1** (5 μ M) in DMF/H₂O (9:1) upon gradual addition of CN⁻. Inset: Fluorescence intensity changes at 550 nm upon gradual addition of CN⁻. λ_{ex} = 350 nm. Slits: 5 nm/5 nm.

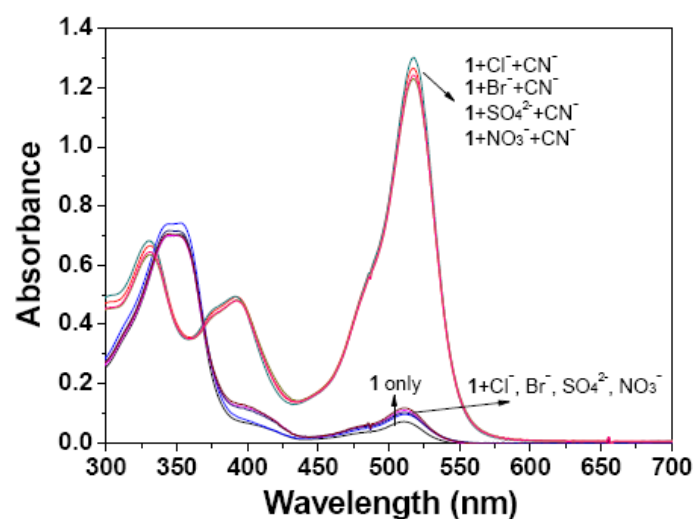


Fig. S5 The absorption spectra changes of **1** (20 μ M) upon addition of 10 mM Cl⁻, Br⁻, SO₄²⁻ and NO₃⁻, and subsequent addition of 20 equiv of CN⁻ in 9:1 (v/v) DMF-H₂O.

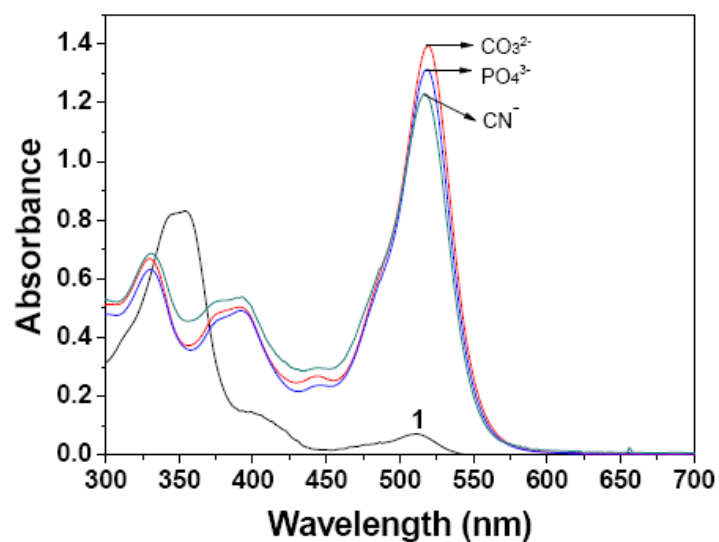


Fig. S6 The absorption changes of **1** (20 μM) upon the addition of CN^- and basic anions (CO_3^{2-} and PO_4^{3-} , 20 equiv).

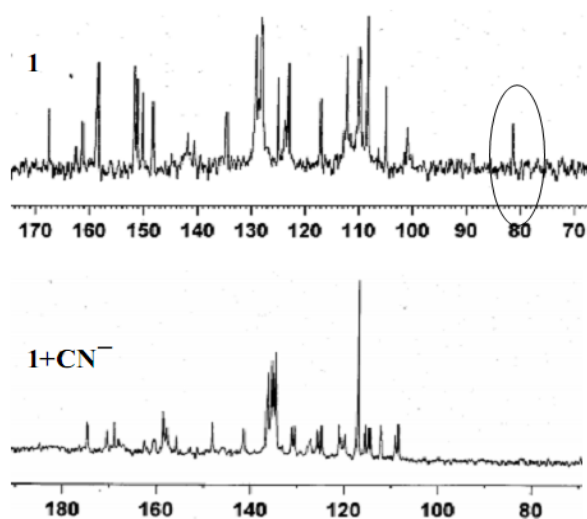


Fig. S7 ^{13}C NMR-titration of **TFA-RF1** with CN^- in $\text{DMSO-}d_6$.

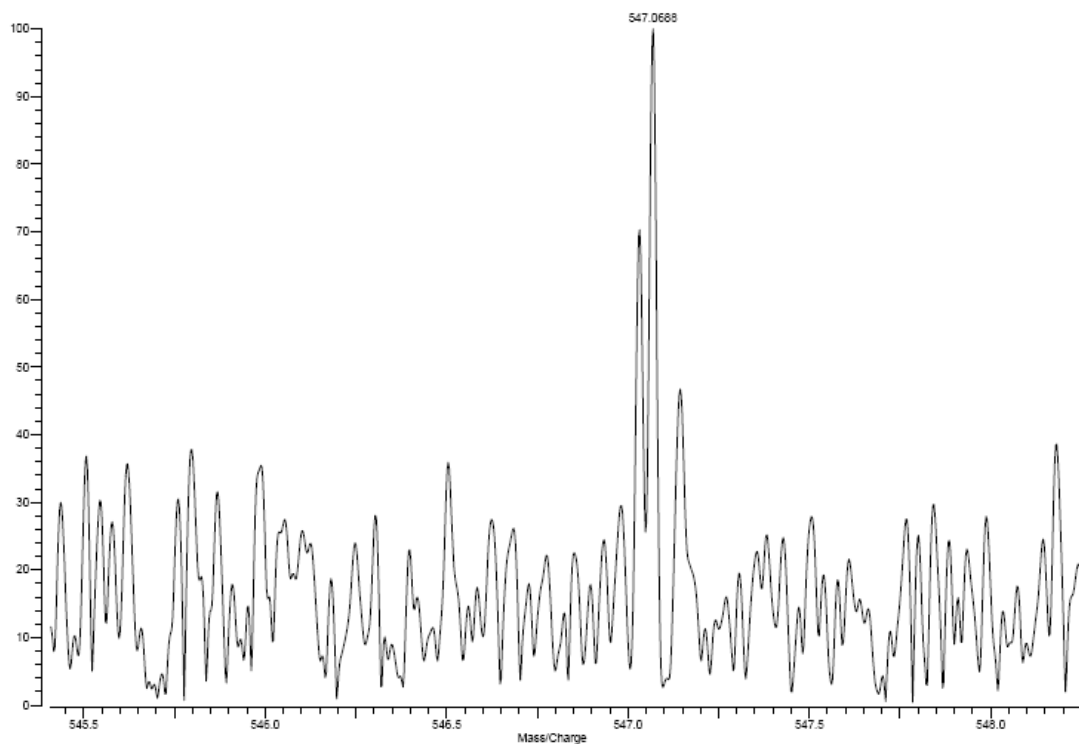


Fig. S8 The HRMS for 1-CN⁻ adduct.

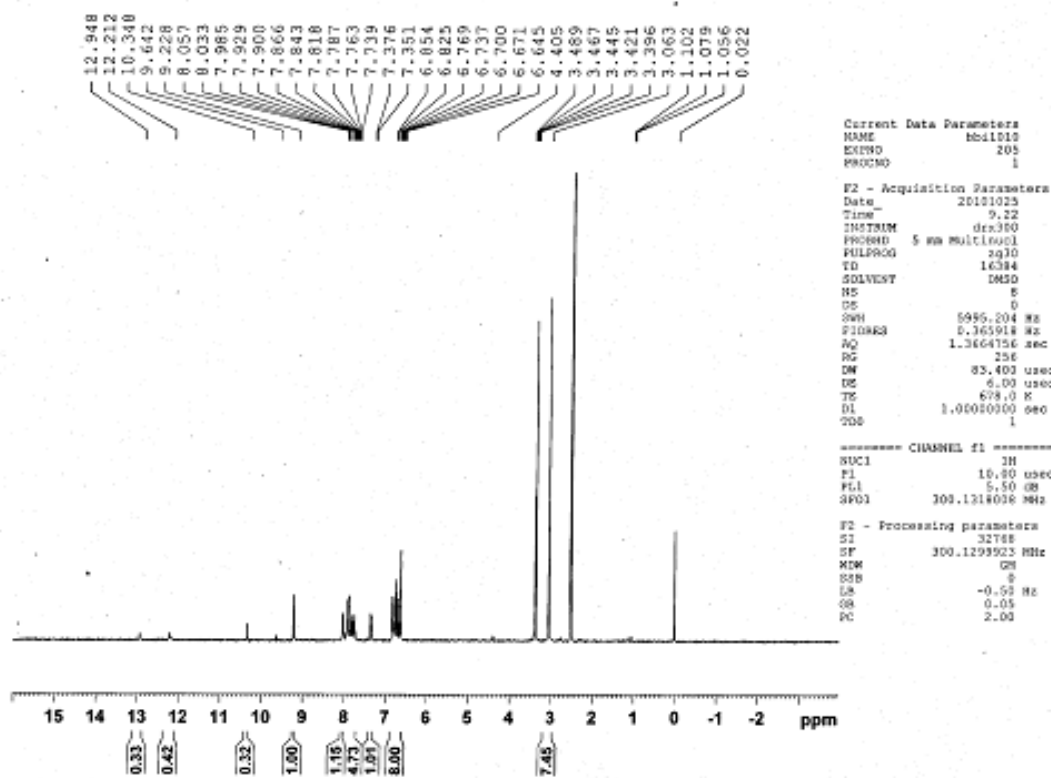


Fig. S9 ¹H NMR chart of 1 (DMSO-*d*₆).

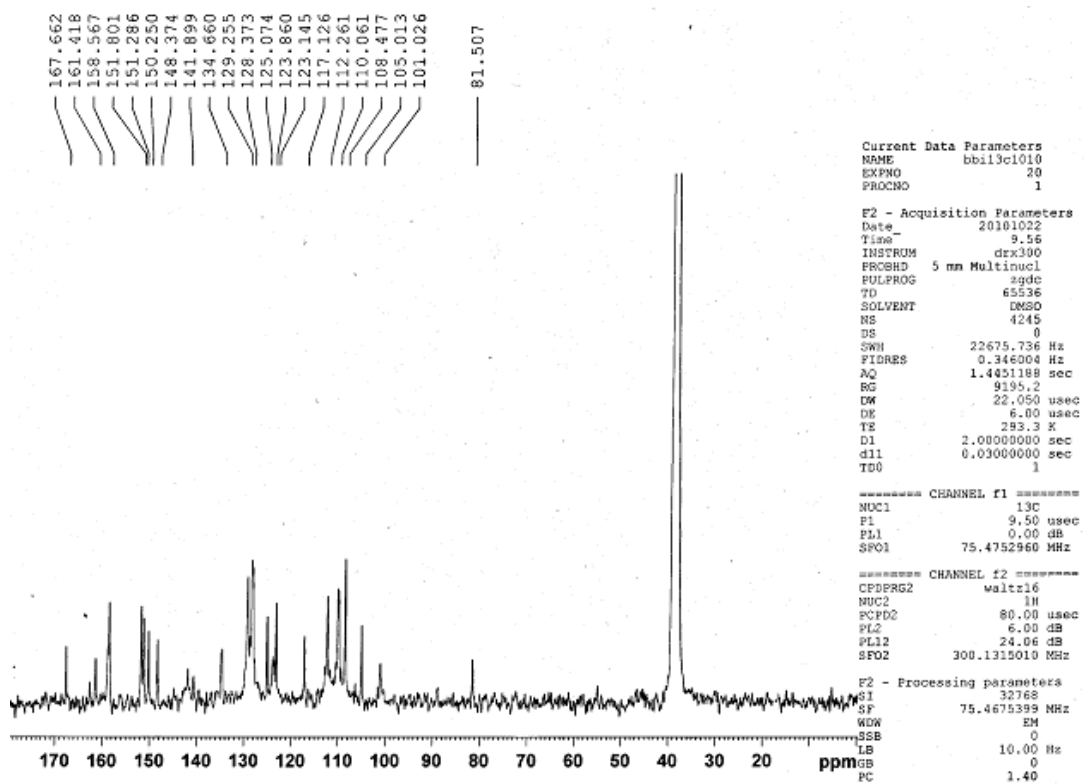


Fig. S10 ^{13}C NMR chart of **1** ($\text{DMSO-}d_6$).

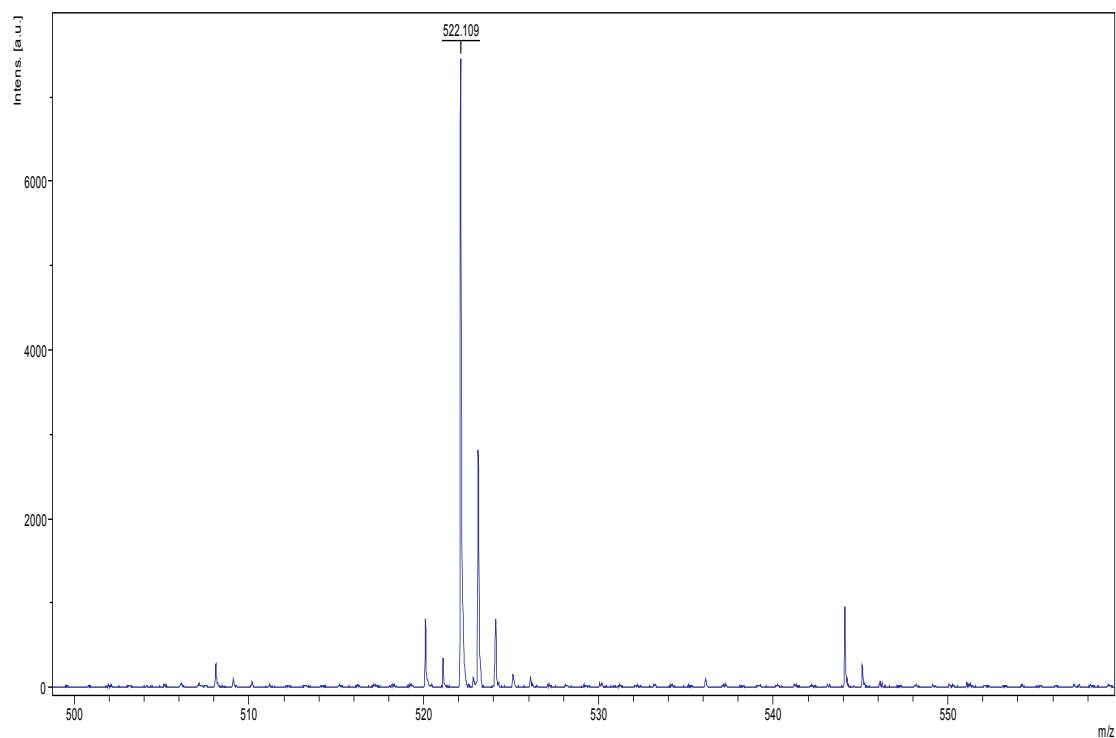


Fig. S11 MALDI-TOF chart of **1**.