A highly selective turn-on fluorescent probe for Al(Ⅲ) based on coumarin and its application *in vivo*

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Supporting Information

Fig. S1 The image of CN (50 μM) in EtOH/Tris-HCl buffer (v/v, 1/9,pH=7.3) solutions upon addition of various metal ions (10 equiv, Li^{+}, Na^{+}, K^{+}, Mg^{2+}, Ca^{2+}, Fe^{3+}, Fe^{2+},Co^{2+}, Ni^{2+}, Al^{3+}, CN, Ga^{3+}, Ag^{+}, Cr^{3+}, Cd^{2+}, Zn^{2+}, Hg^{2+}, Cu^{2+}, Pb^{2+}, Mn^{2+} from left to right) under excitation at 365 nm. Mix means CN with all kinds of metal ions.

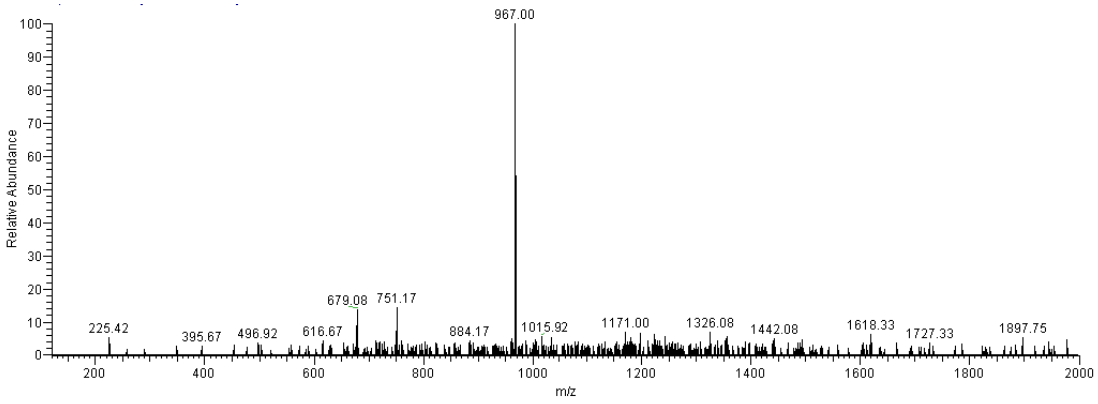


Fig. S2 ESI-MS spectrum (negative mode) of CN-Al^{3+} complexes in CH_3OH.

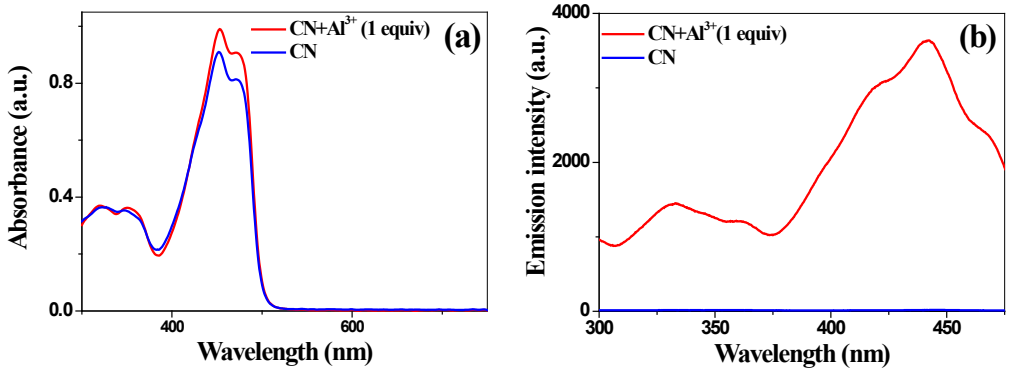


Fig.S3 Absorbance in EtOH/H_2O (v/v=1:1, 5×10^{-5}mol/L) (a) and excitation in EtOH//H_2O (v/v=1:9, 1×10^{-5}mol/L) (b) spectrum of CN in presence and absence of Al^{3+}

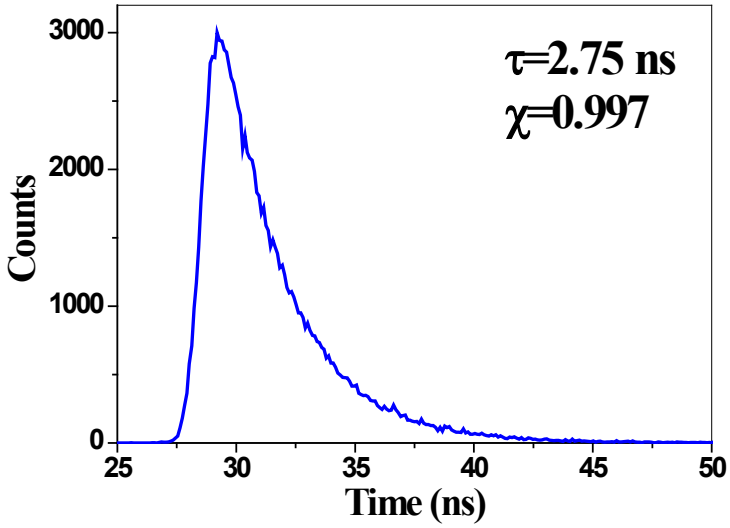
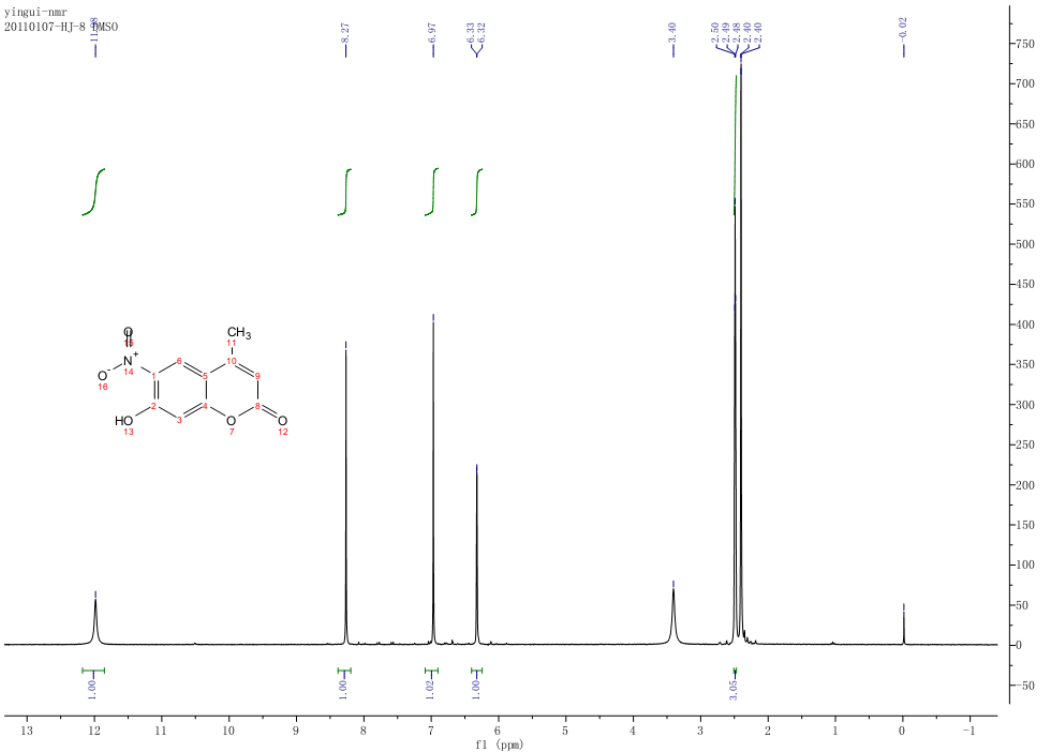
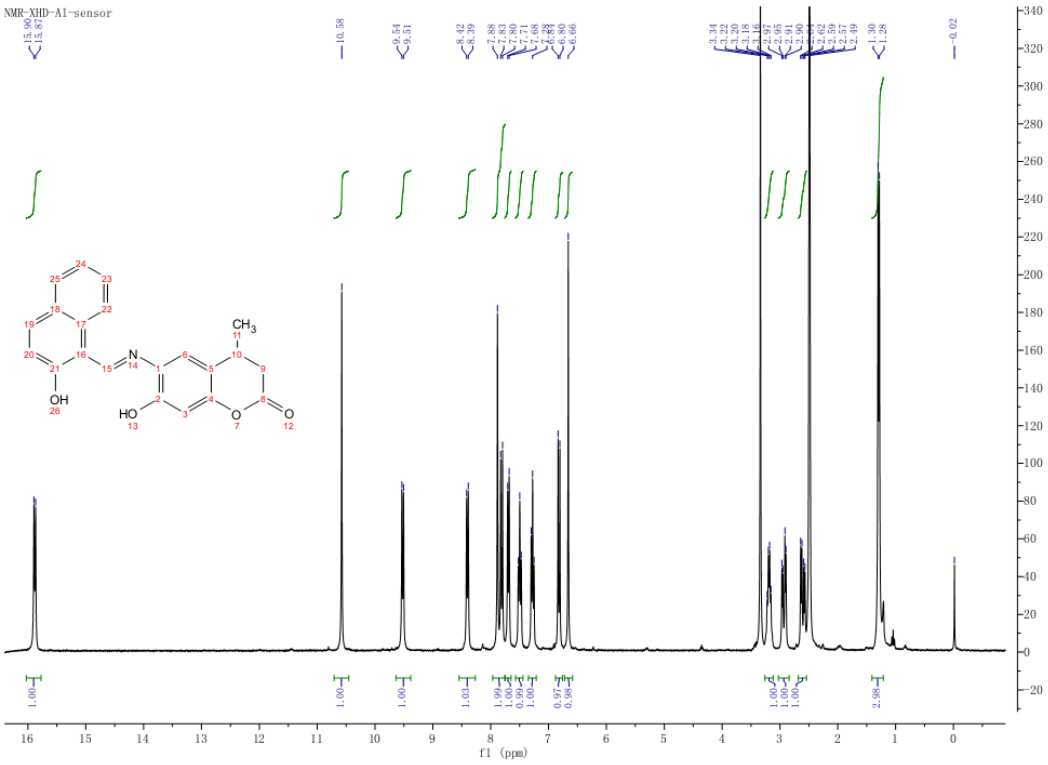


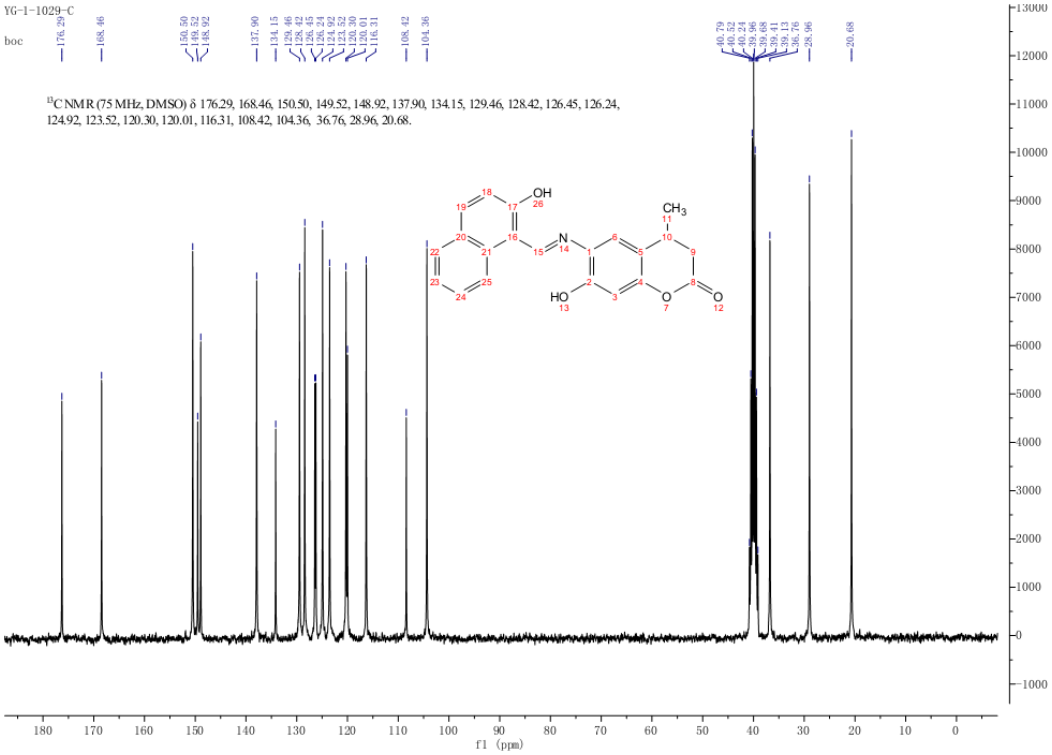
Fig.S4 Transient fluorescence spectroscopy of CN+Al^{3+}



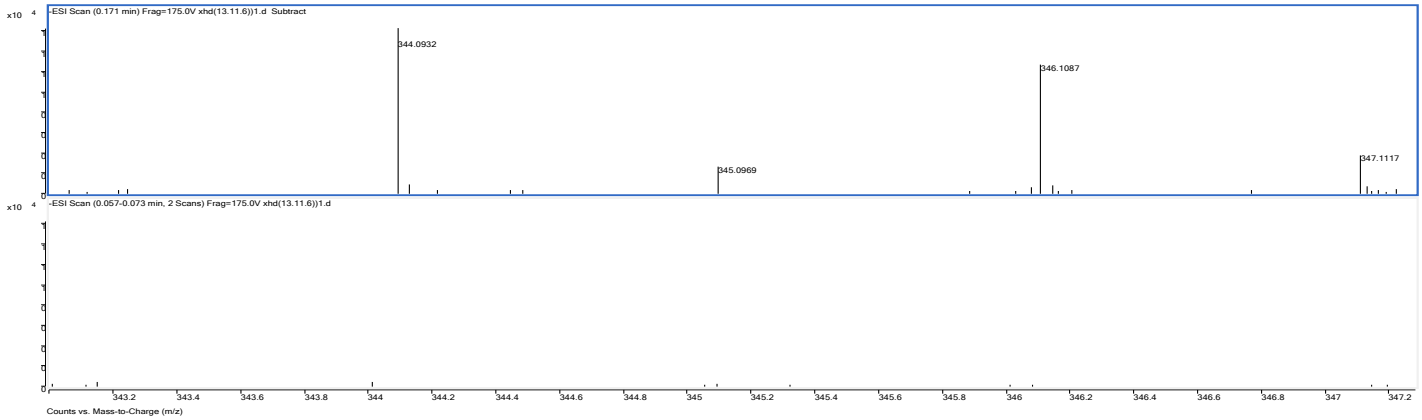
^{1}H NMR spectrum of 7-hydroxy-4-methyl-6-nitro-2H-chromen-2-one



^{1}H NMR spectrum of probe CN



^{13}C NMR spectrum of probe CN



ESI-HRMS spectrum of probe CN