Supporting Information

For

A Cr^{3+} Selective Dual Turn-on Chemosensor And Its Application In Living Cell Imaging

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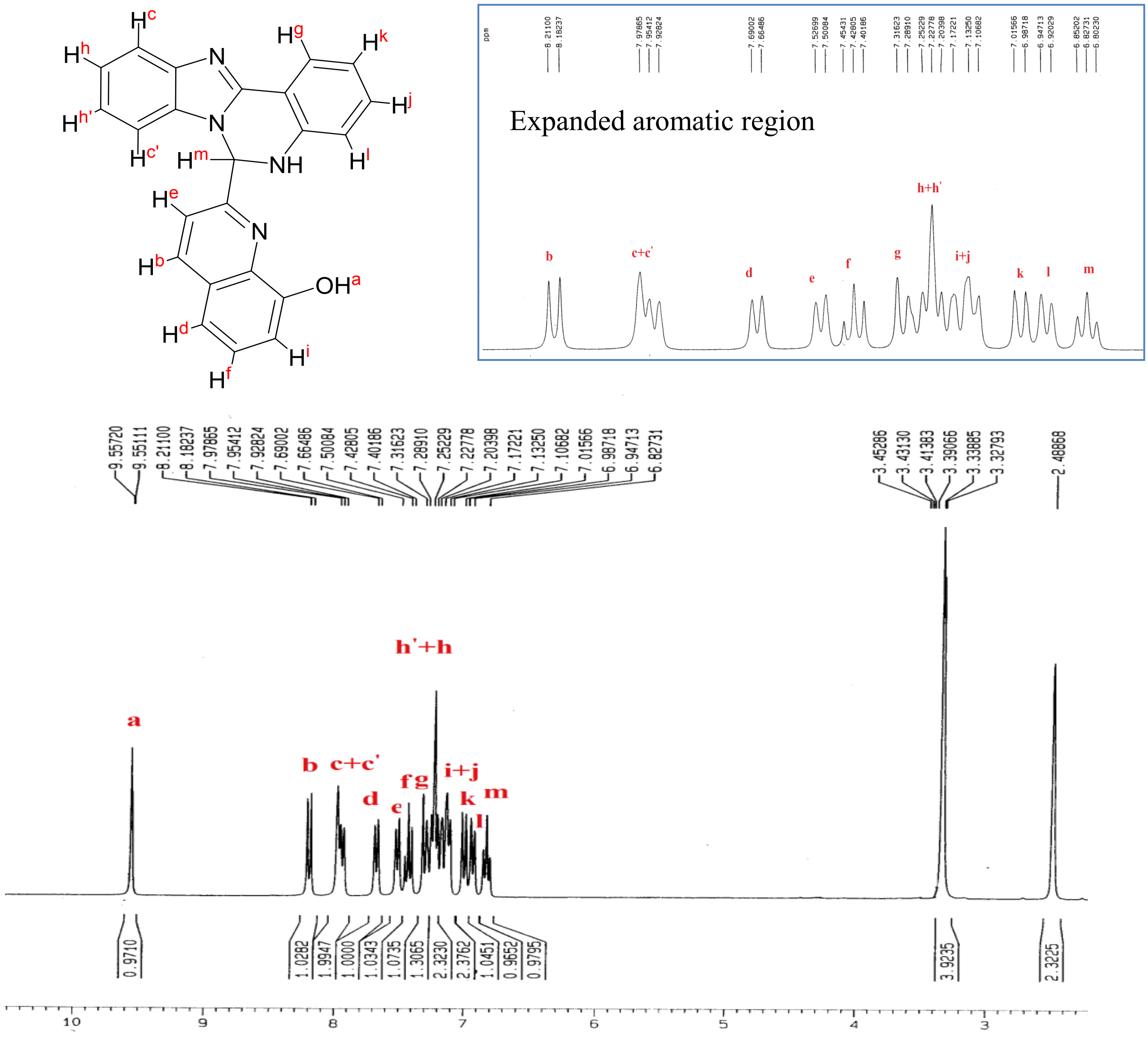

Fig. s1 ^{1}H NMR spectrum of H_2L^1 in DMSO-d6

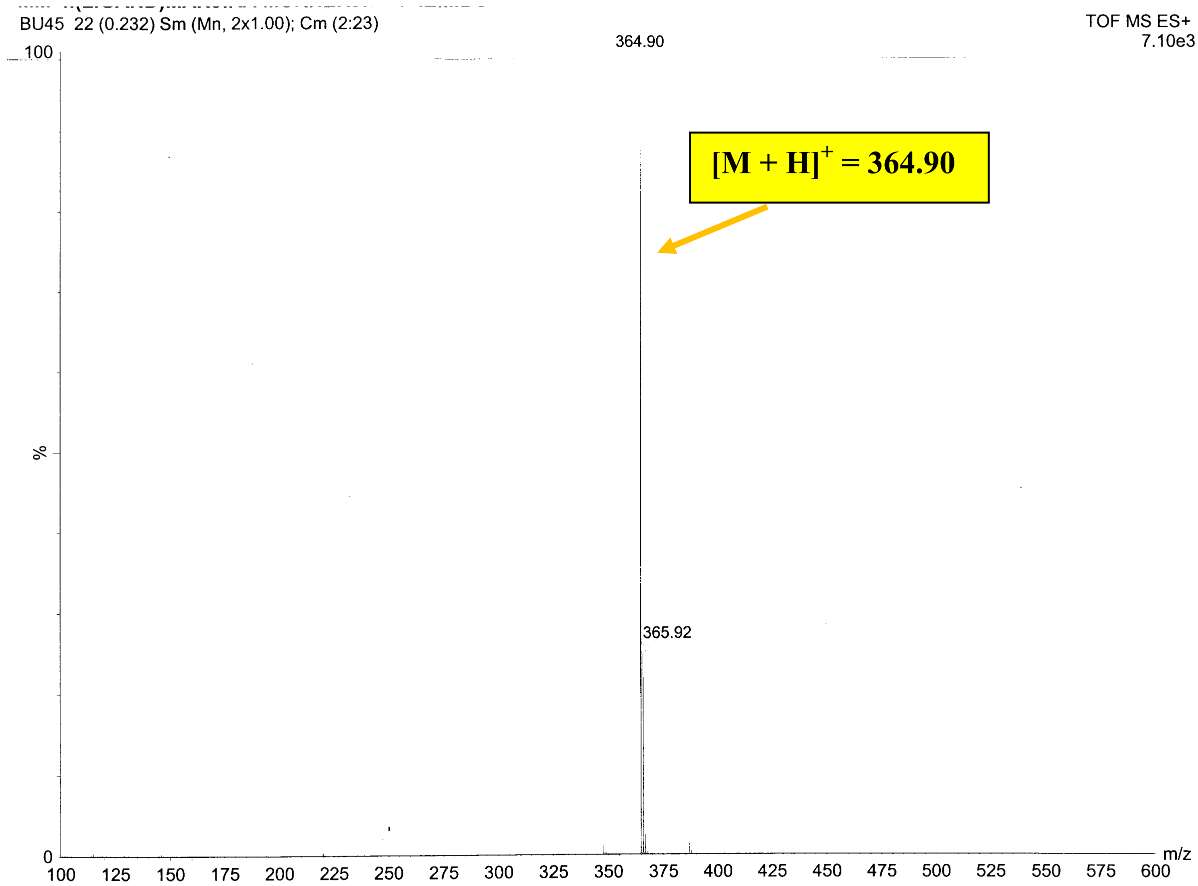

Fig. s2 Mass spectrum of *2-(5,6-dihydro-benzo[4,5]imidazo[1,2-c]quinazolin-6-yl)-quinolin-8-ol* (H_2L^1)

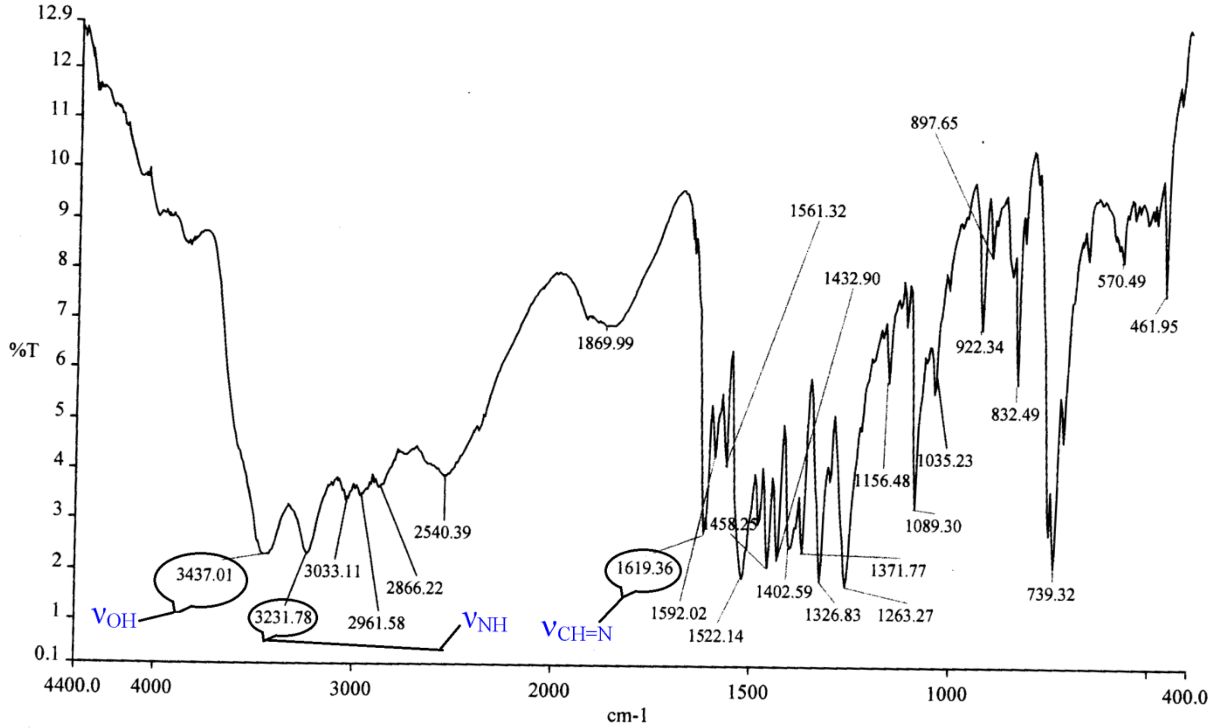

Fig. s3 IR spectrum of H_2L^1

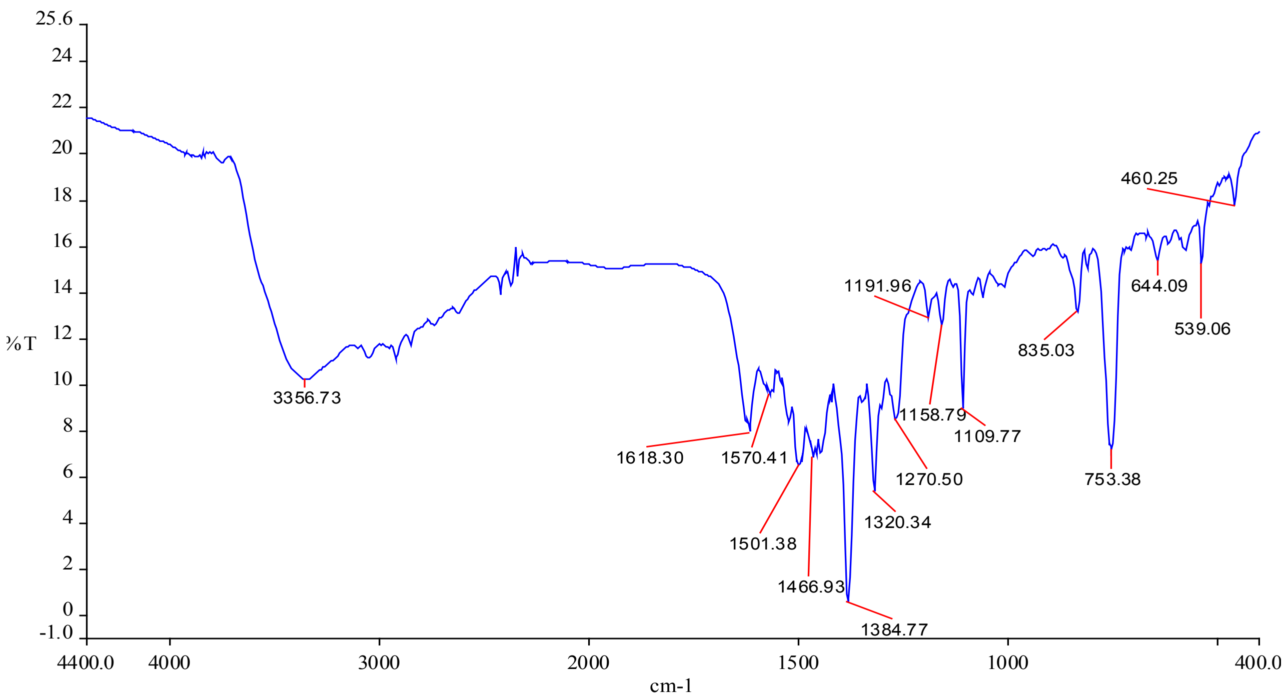

Fig. s4 IR spectrum of the chromium(III) complex, $[Cr(L)(NO_3)(H_2O)]$

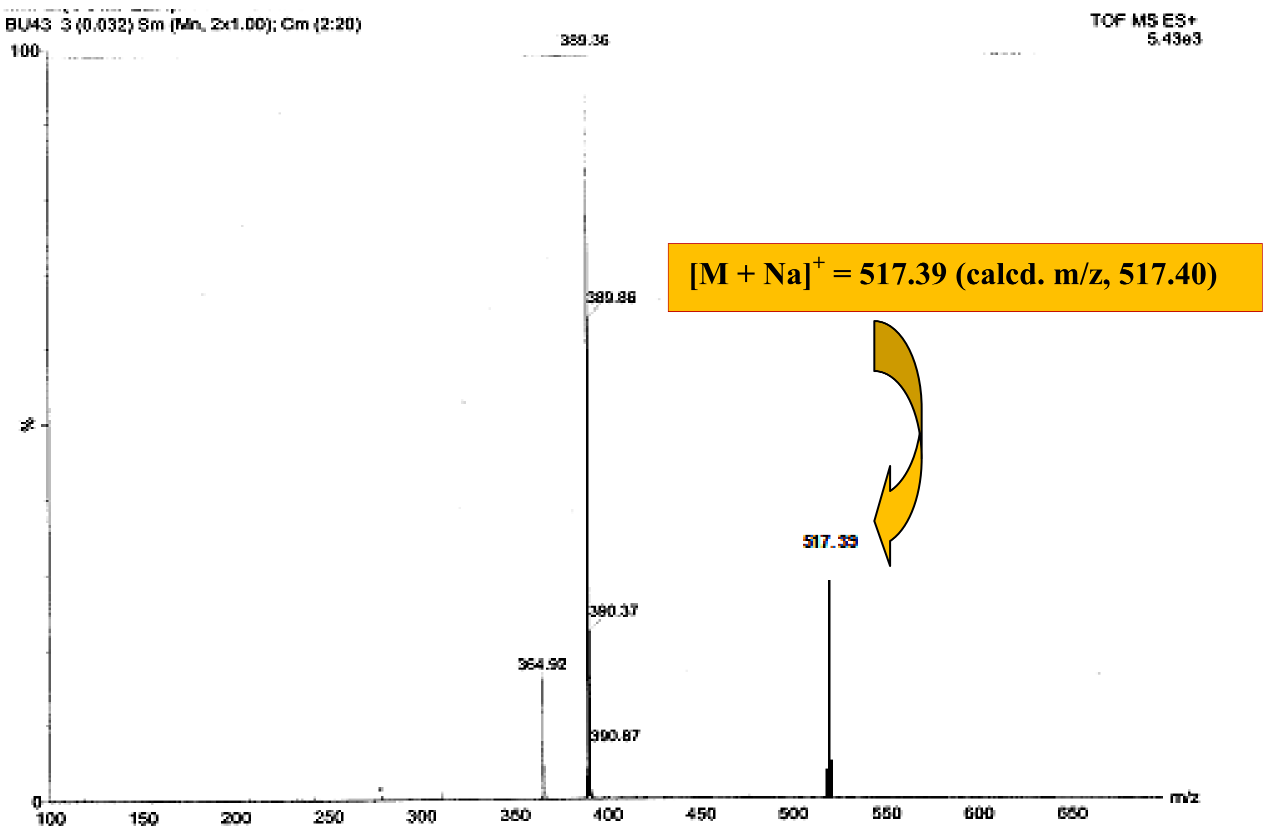

Fig. s5 Mass spectrum of the chromium(III) complex, $[Cr(L)(NO_3)(H_2O)]$

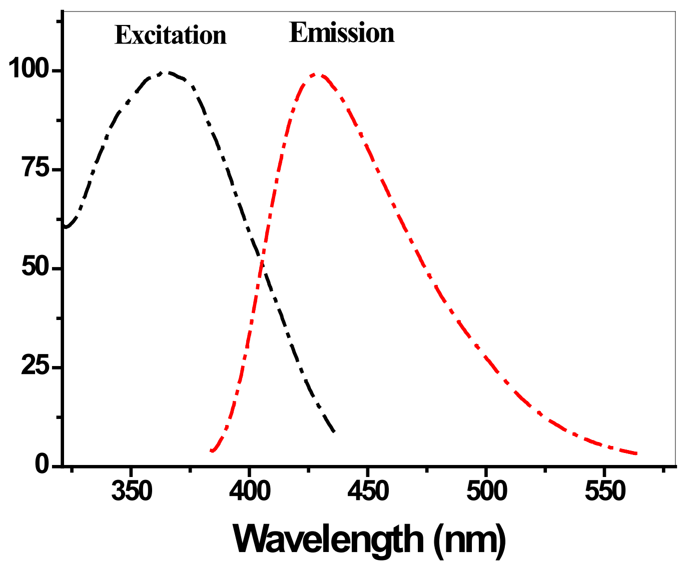

Fig.s6 Absorption and emission spectra of 12.5 µM of the probe in 100 mM HEPES buffer (ethanol/water 1:5, v/v) at 25°C

Fig. s7 Fluorescence colour of the probe in absence (**1**) and presence (**2**) of Cr^{3+} ion

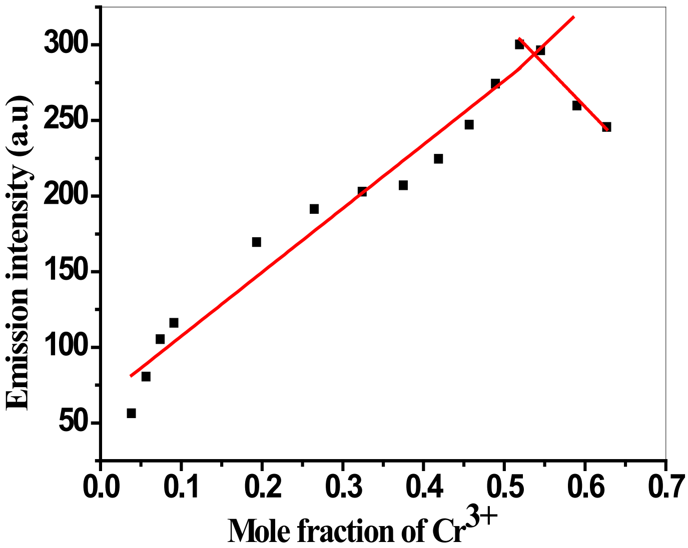

Fig.s8 Job's plot analysis showing maximum emission at 1:1 ratio [H_2L: Cr^{3+}]

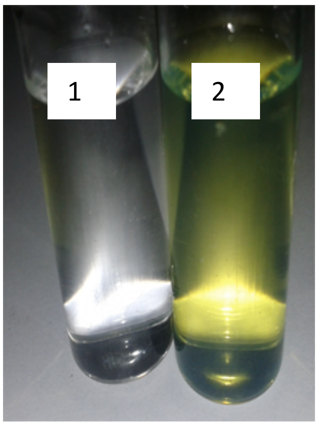

Fig. s9 Visual colour change of the probe due to the addition of Cr^{3+} ion: colour of the probe in absence (**1**) and presence (**2**) of Cr^{3+} ion

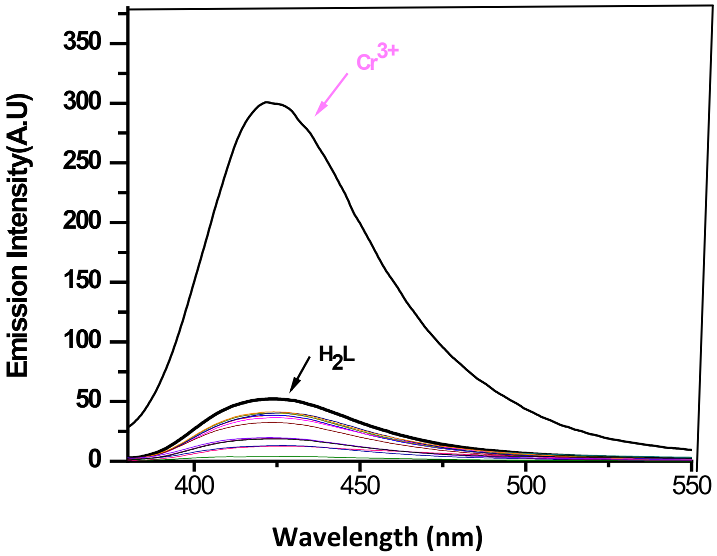

Fig.s10 Fluorescence spectra of H_2L^1 (10 μM), H_2L^1 + Cr^{3+} (10 μM) and H_2L^1 (10 μM) + M (200 μM), where M = Na^+, K^+, Ca^{2+}, Mg^{2+}, Ag^+, Mn^{2+}, Hg^{2+}, Fe^{3+}, Co^{2+}, Ni^{2+}, Cu^{2+}, Zn^{2+}, Cd^{2+} and Pb^{2+} (λem: 426 nm, λex: 370 nm, in ethanol-HEPES buffer (1:5).

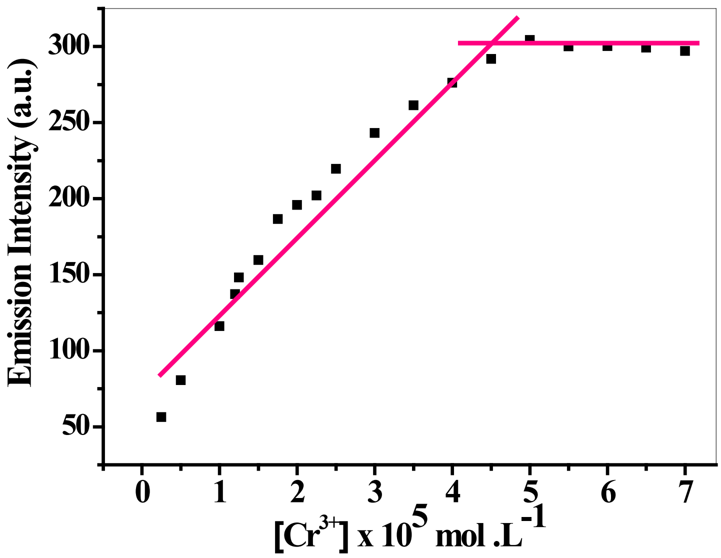

Fig. s11 Linearity range: 3.6 x 10^{-7} to 4.5 x 10^{-5} mol.L^{-1}

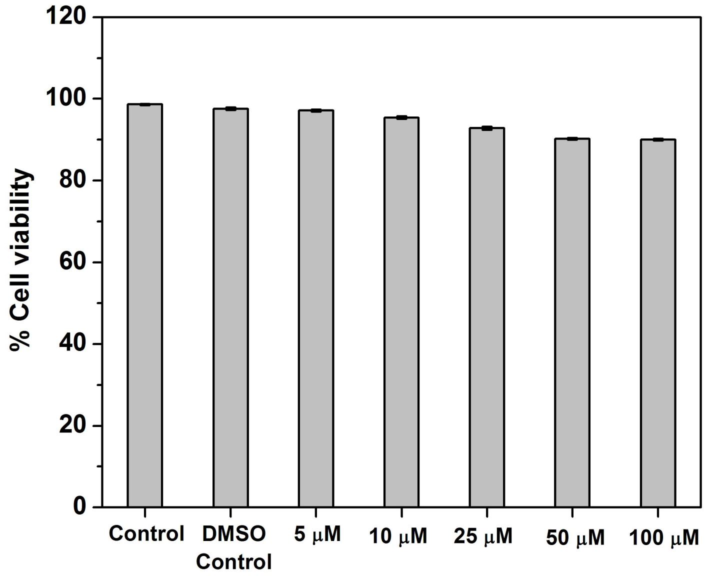

Fig. s12 Cytotoxic effect of H_2L^1 (5, 10, 25, 50 and 100 μM) in HeLa cells incubated for 8 h

Table s1 The resulting data of time-resolved fluorescence lifetime measurements

System	**τ_1 (ns)**	**B_1**	**τ_2 (ns)**	**B_2**	**τ_{av} (ns)***	**χ^2**
H_2L^1	0.107	78.49	5.231	21.51	1.209	1.001
$H_2L^1 + Cr^{3+}$ (0.5eq)	0.086	28.54	6.554	71.46	4.708	1.006
$H_2L^1 + Cr^{3+}$ (1eq)	0.118	12.43	6.264	87.57	5.500	1.011

*$\tau_{av} = [(\tau_1 x B_1) + \tau_2 x B_2)]/100$