Supporting Information for

A turn-on, near-infrared fluorescent probe with rapid response, large stokes shift for selective and sensitive detection of zinc (II) and its application in living cells

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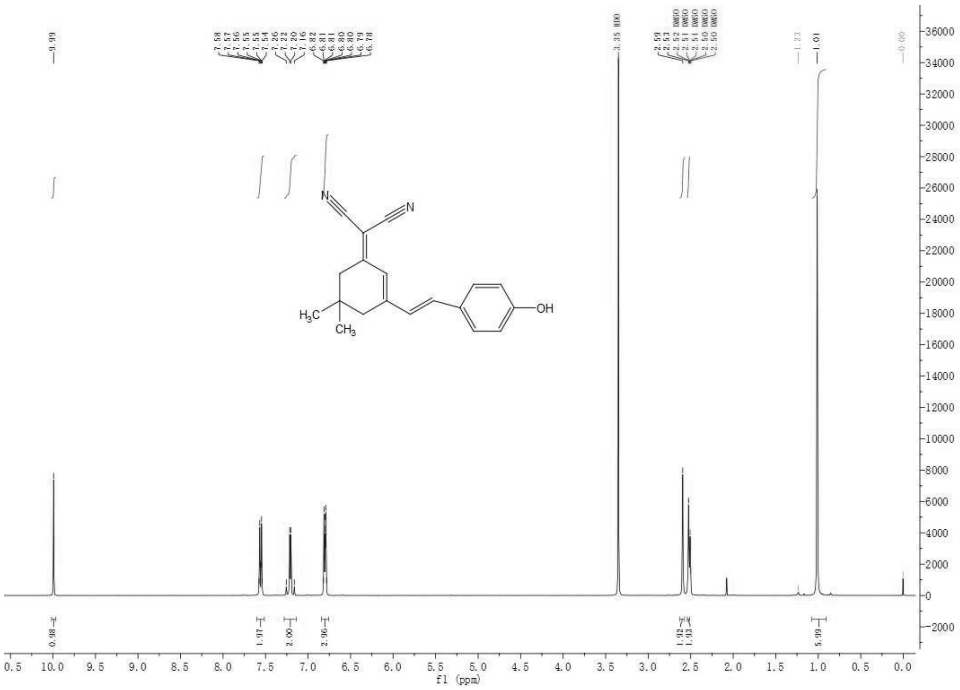
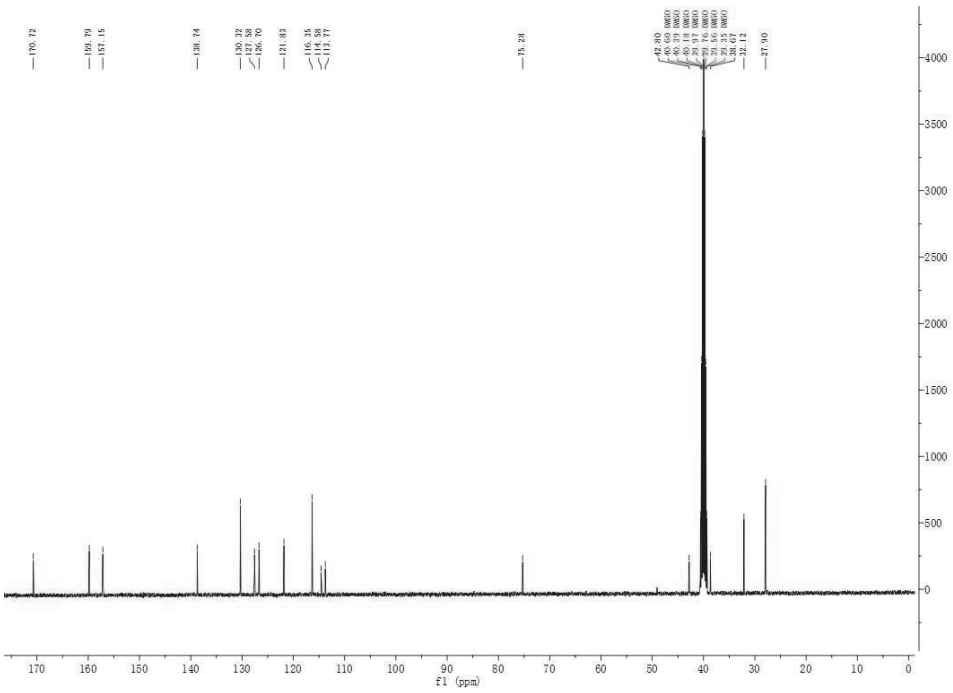
CONTENT TABLE

1. ^{1}H NMR spectrum, ^{13}C NMR spectrum and MS spectrum

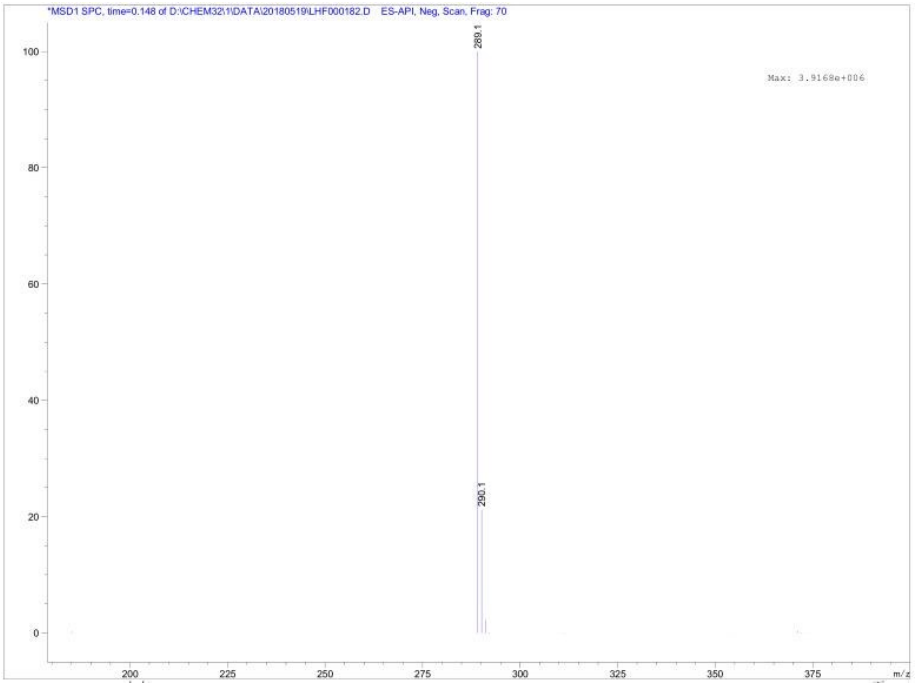
^{1}H NMR spectrum (Fig. S1) of compound 1



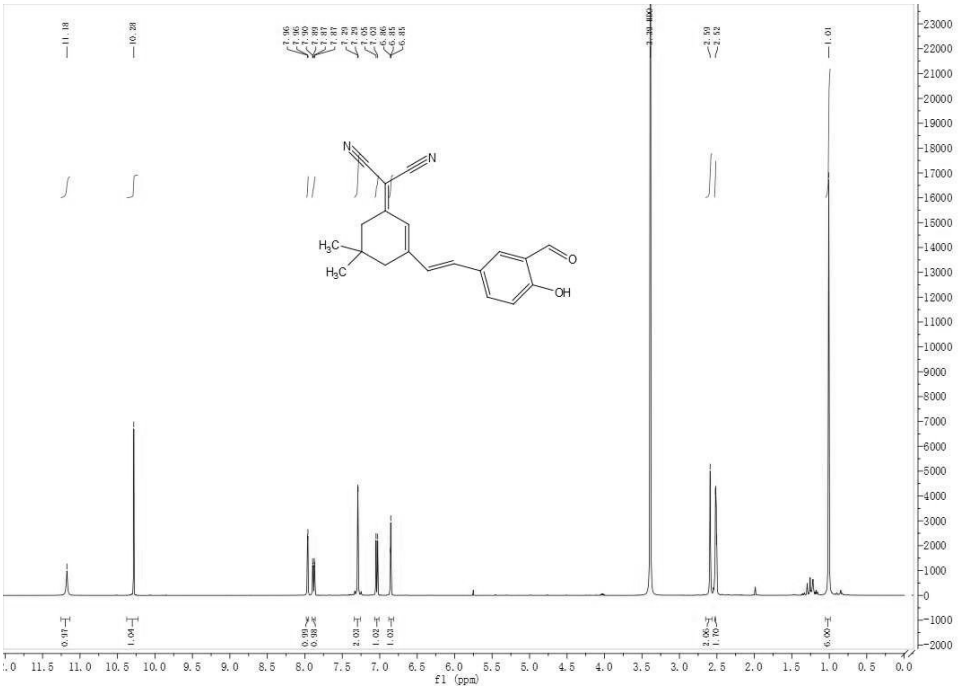
^{13}C NMR spectrum (Fig. S2) of compound 1



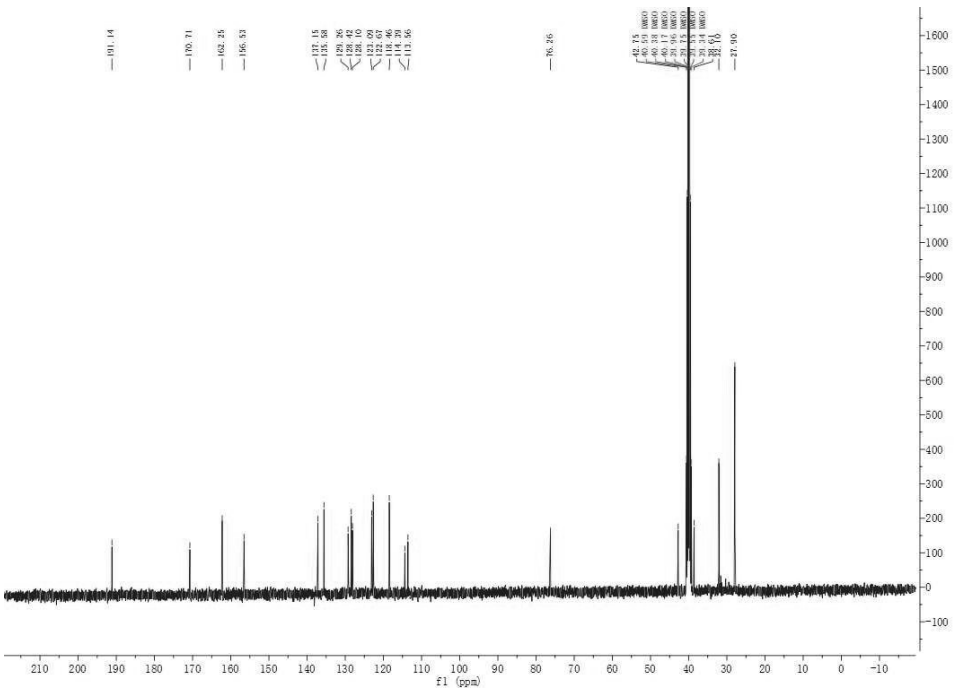
Mass (ES-API) spectrum (Fig. S3) of compound 1:



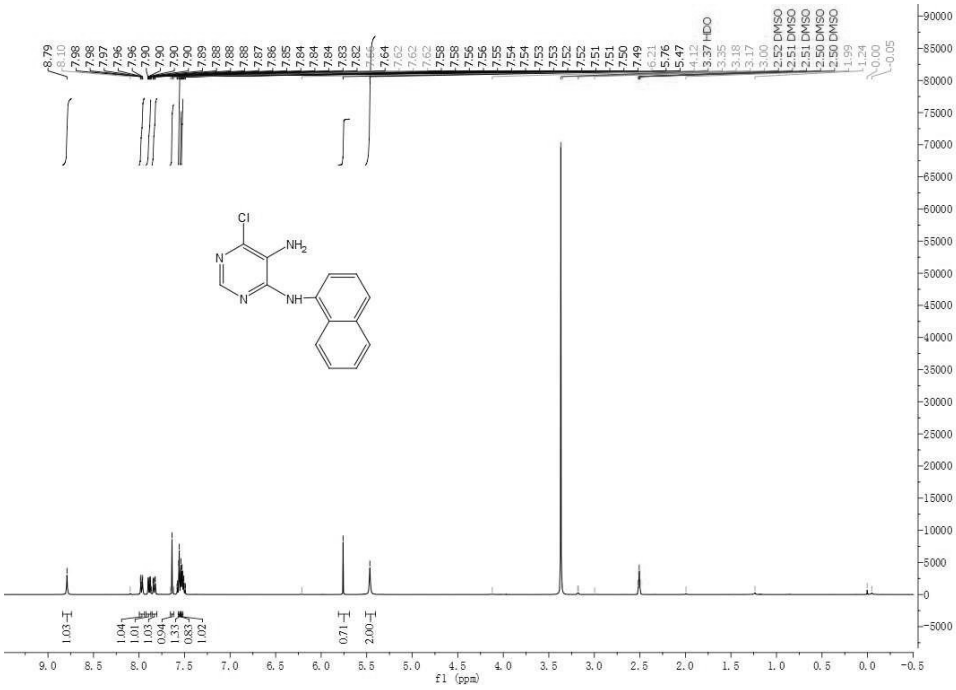
^{1}H NMR spectrum (Fig. S4) of compound 2



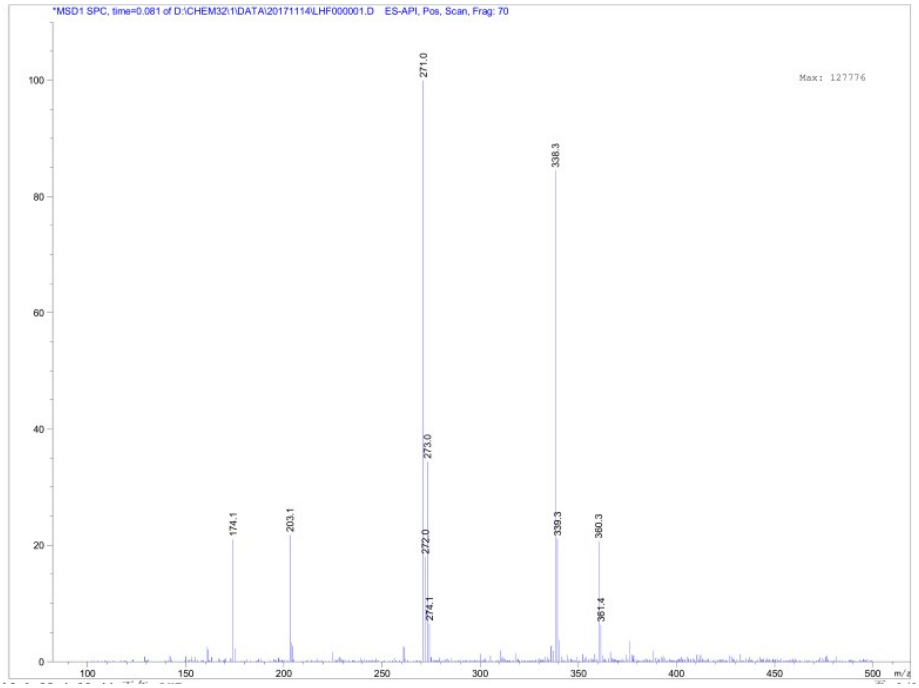
^{13}C NMR spectrum (Fig. S5) of compound 2



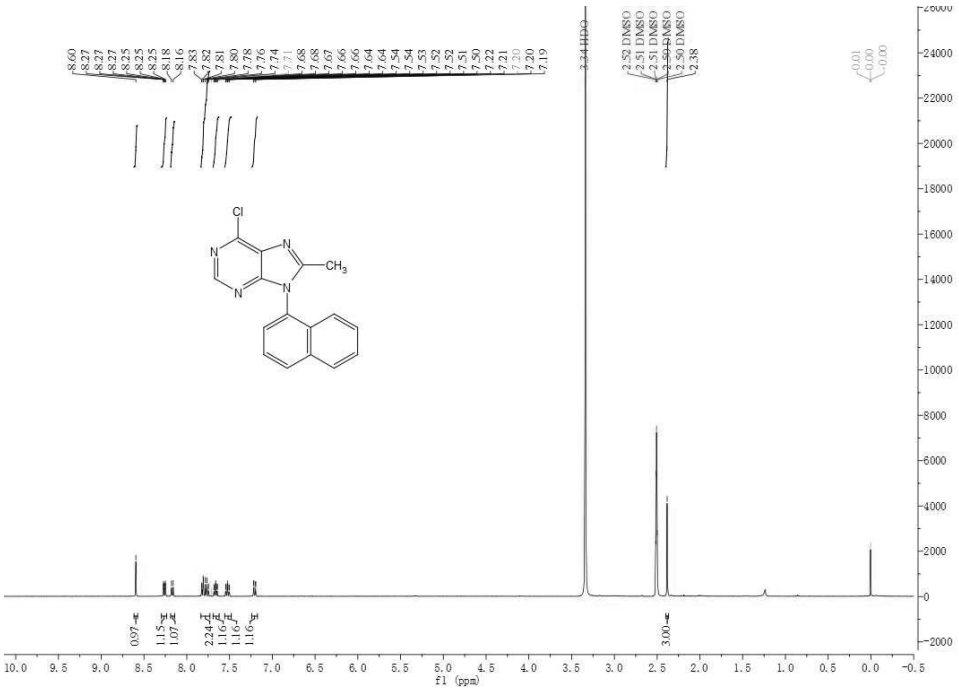
^{1}H NMR spectrum (Fig. S6) of compound 3



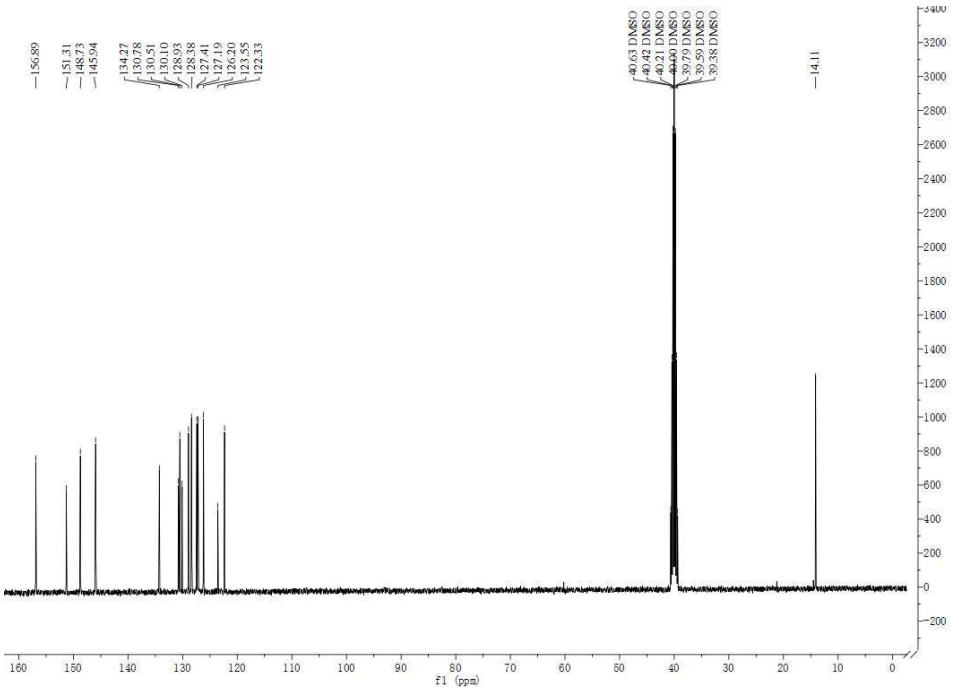
Mass (ES-API) spectrum (Fig. S7) of compound 3



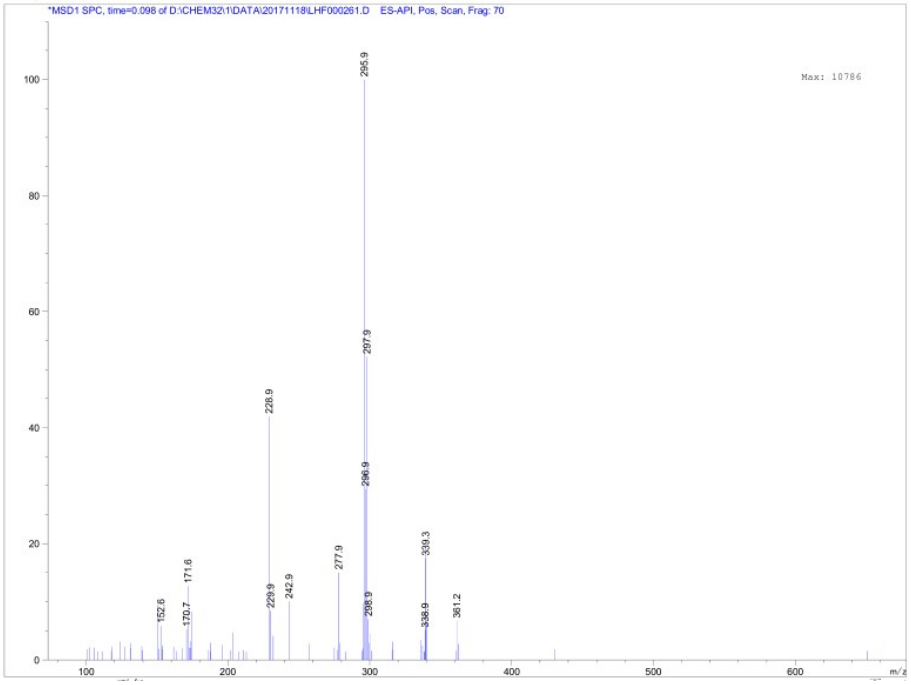
^{1}H NMR spectrum (Fig. S8) of compound 4



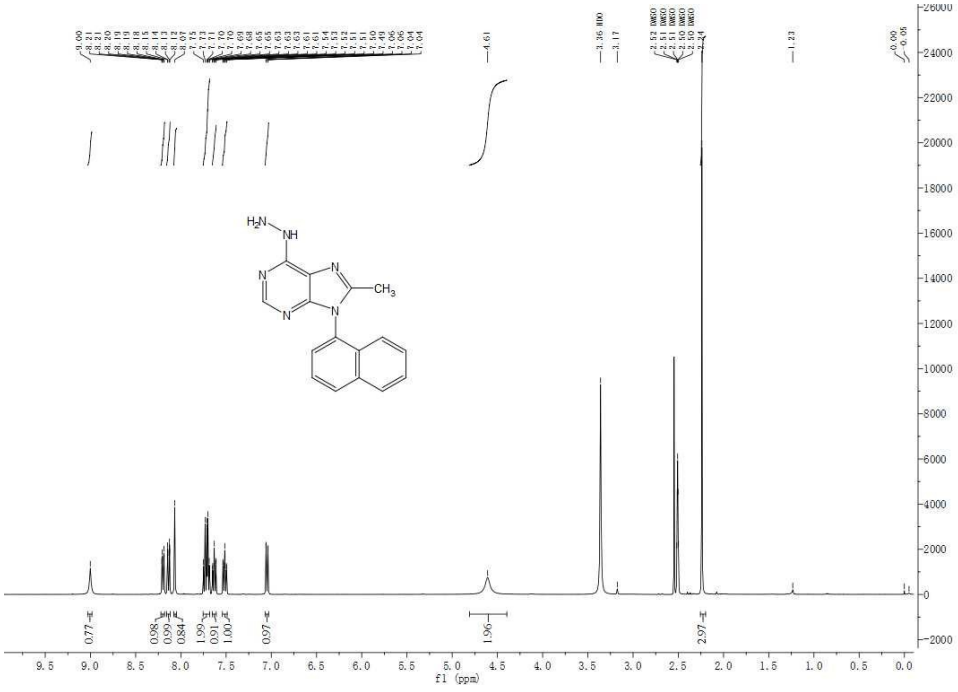
^{13}C NMR spectrum (Fig. S9) of compound 4



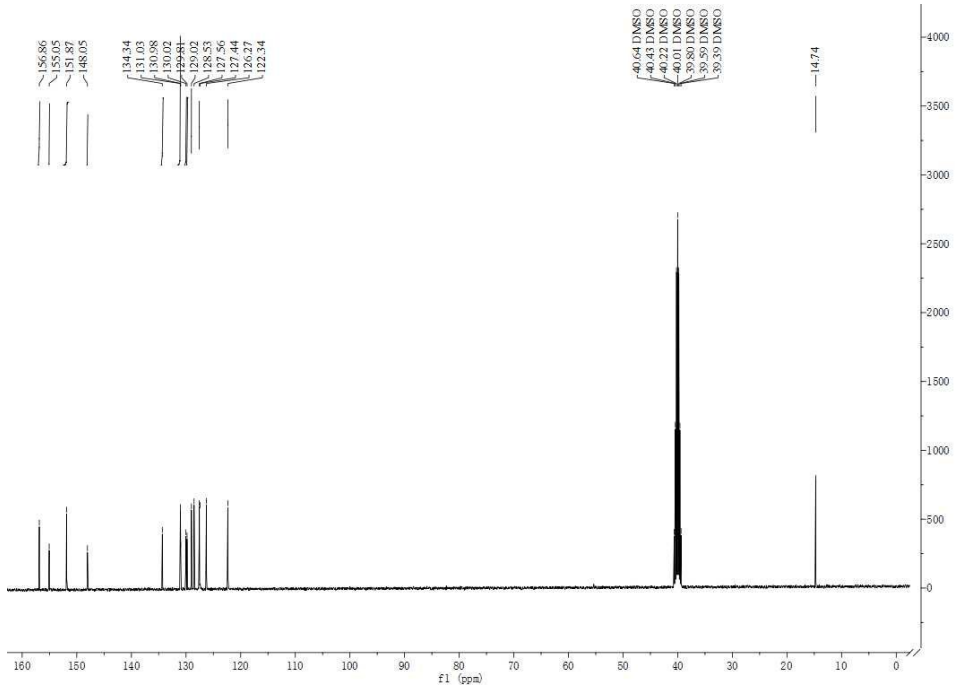
Mass (ES-API) spectrum (Fig. S10) of compound 4



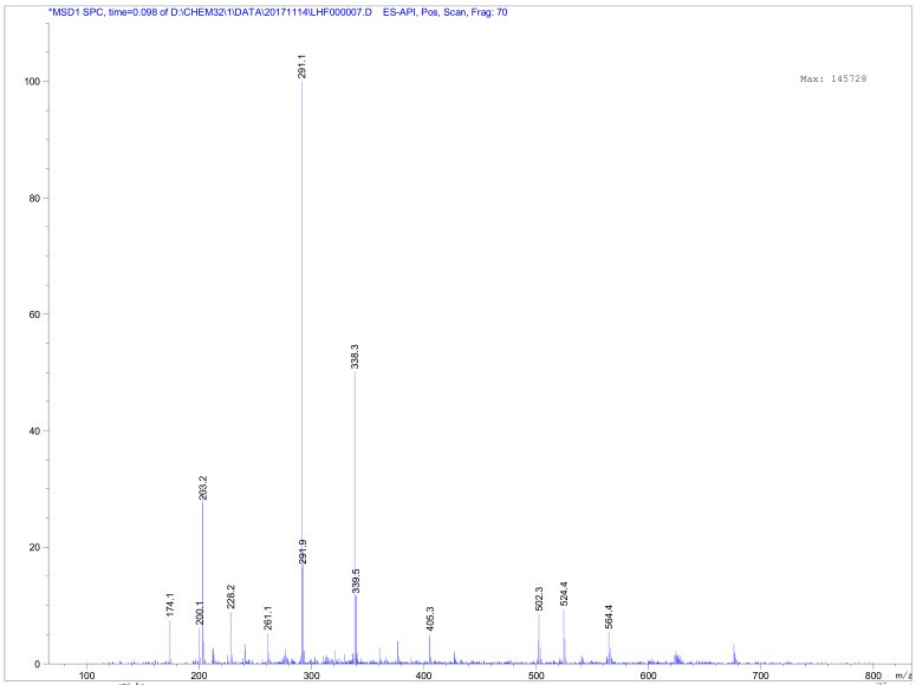
^{1}H NMR spectrum (Fig. S11) of compound 5



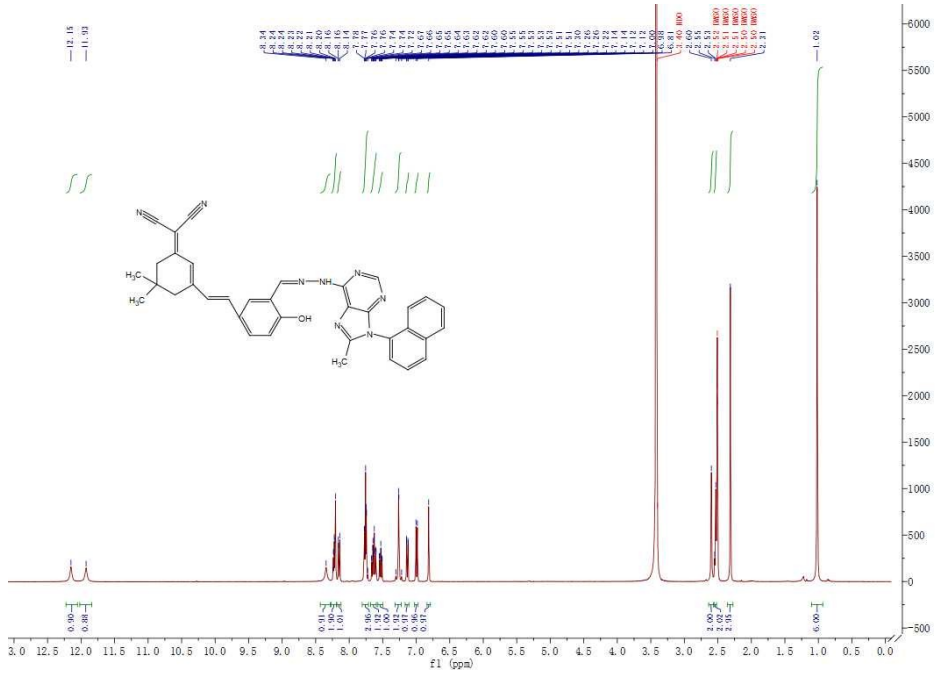
^{13}C NMR spectrum (Fig. S12) of Compound 5



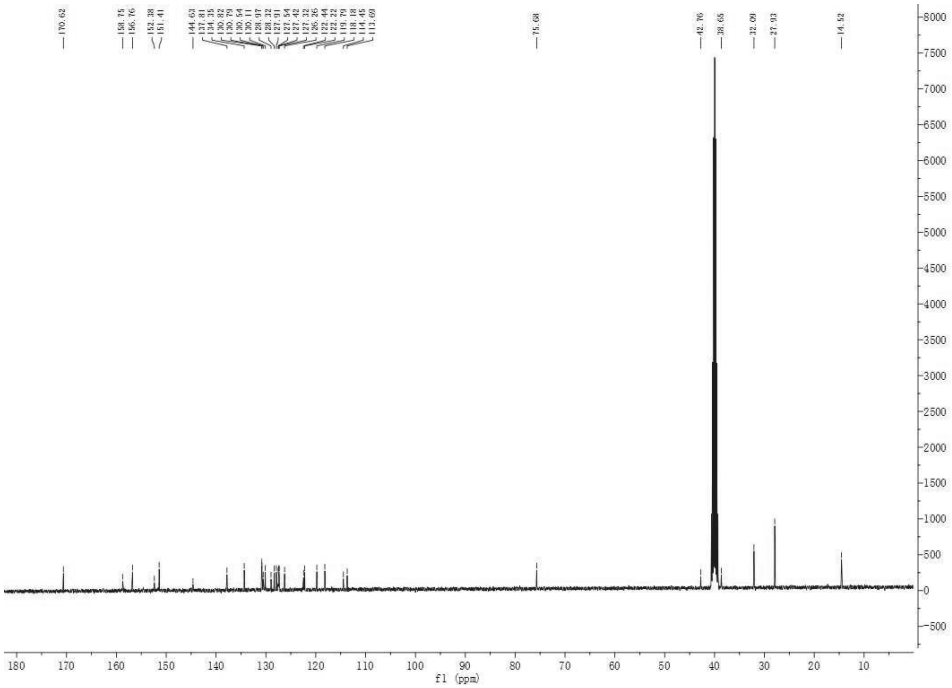
Mass (ES-API) spectrum (Fig. S13) of compound 5



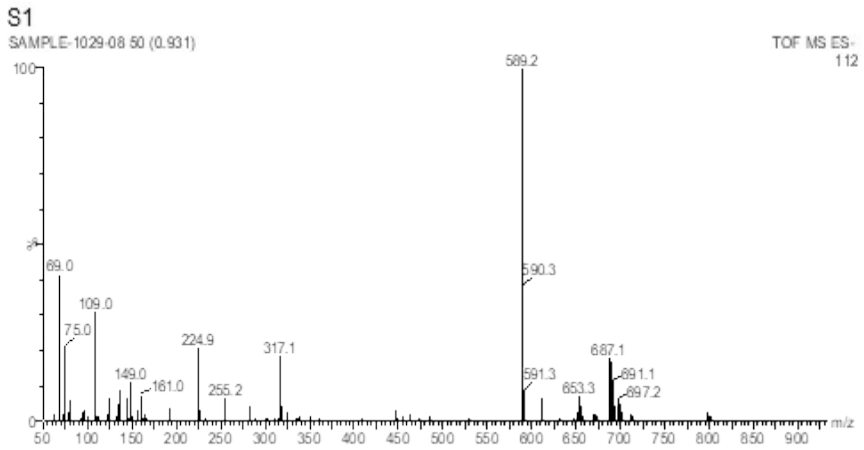
^{1}H NMR spectrum (Fig. S14) of compound YPT



^{13}C NMR spectrum (Fig. S15) of compound YPT



Mass (ES-API) spectrum (Fig. S16) of compound YPT



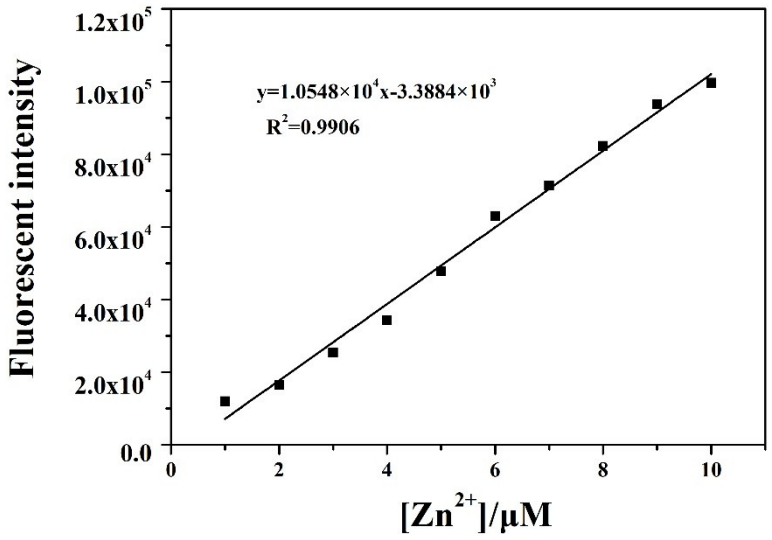


Fig. S17 Determination of the detection limit of YPT (10 μM) for Zn^{2+} based on change of fluorescent intensity at 670 nm.

2. Determination of the detection limit of YPT

3. Benesi-Hildebrand plot of YPT

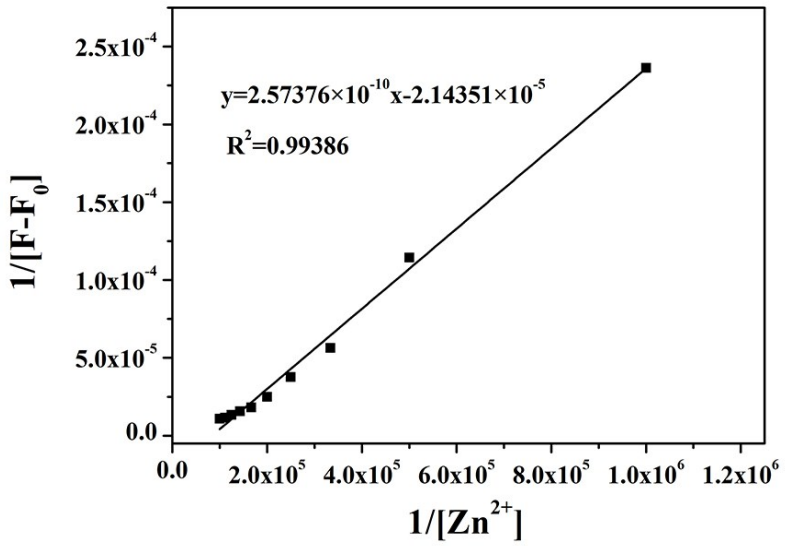


Fig. S18 Benesi-Hildebrand plot of YPT (10 μM) at 670nm, assuming 1:1 stoichiometry for association between YPT and Zn^{2+}.

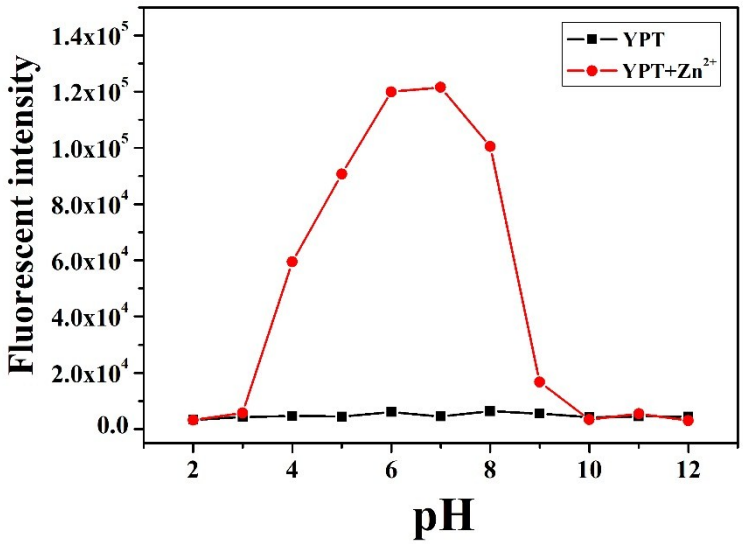
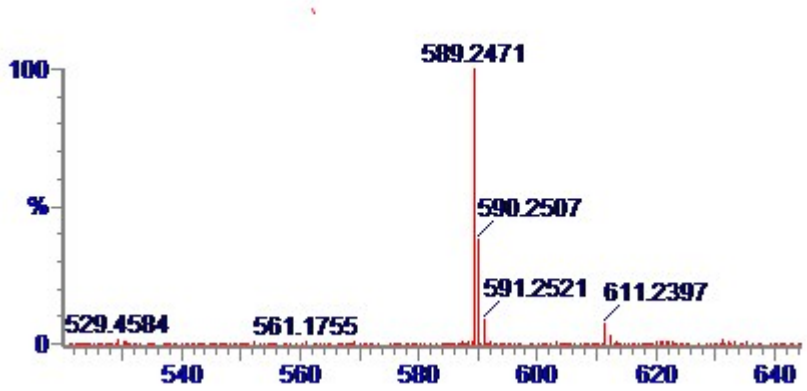


Fig. S19 Fluorescence intensity of YPT (10 μM) in the absence and presence with 5.0 equiv. of Zn^{2+} at 670 nm in DMSO-H_2O (3:2 v/v, pH 7.4 HEPES buffer, 0.5 nm).

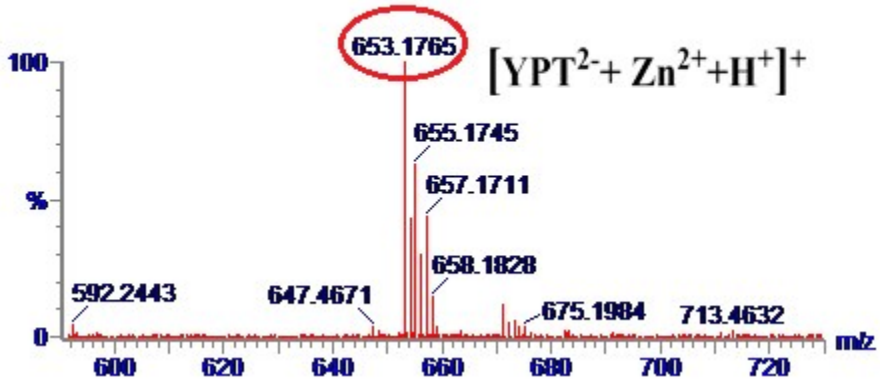
4. Effect of pH on sensing Zn^{2+}

5. HR-MS spectrum of compound YPT and YPT-Zn^{2+}

HR-MS spectrum (Fig. S20) of compound YPT



HR-MS spectrum (Fig. S21) of compound YPT-Zn^{2+}



6. ^{1}H NMR titrations

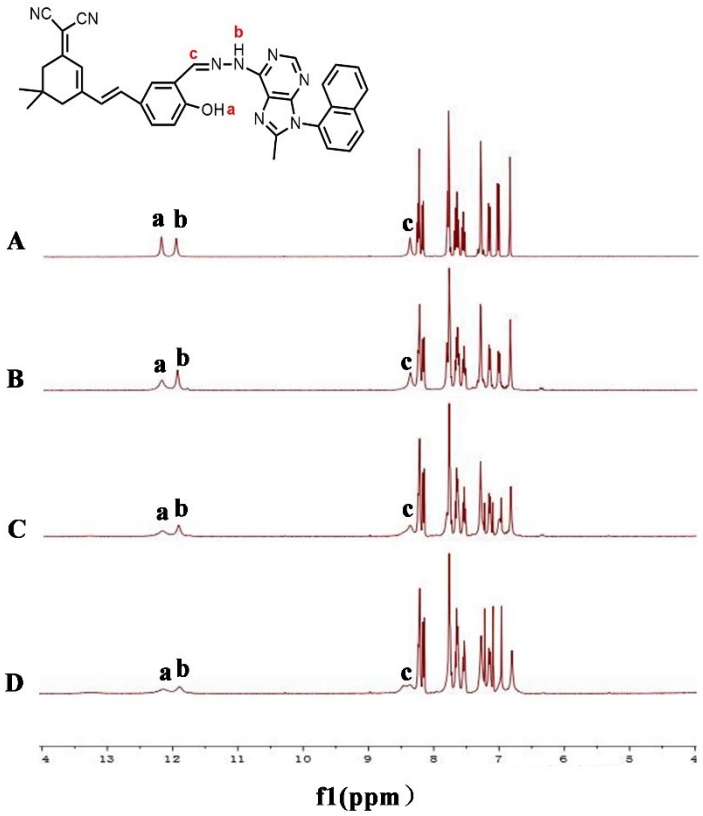


Fig. S22 ^{1}H NMR titrations of TPT with $ZnCl_2$ in DMSO: (A) only YPT (B) YPT with 0.5 equiv. of Zn^{2+} (C) YPT with 2 equiv. of Zn^{2+} (D) YPT with 5 equiv. of Zn^{2+}

7. Cytotoxicity test

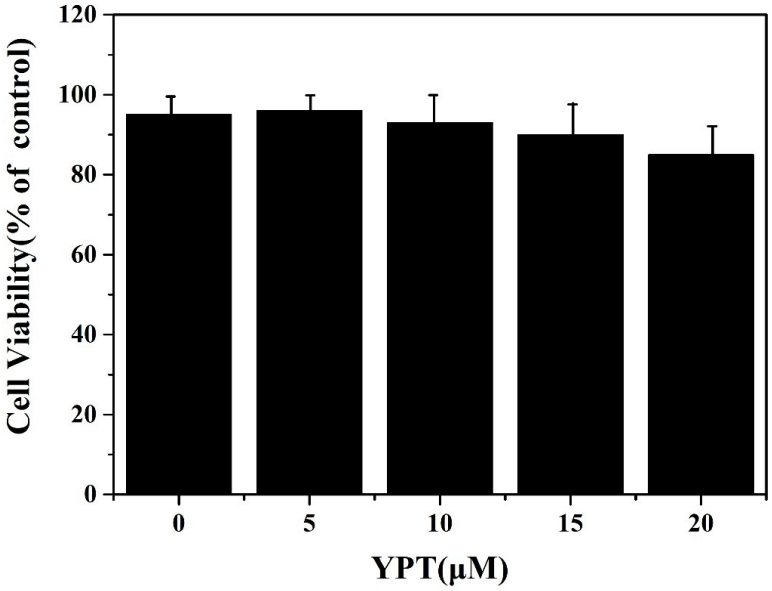


Fig. S23 Cytotoxicity of YPT in Hela Cells