

Electronic supplementary information (ESI)

for

Dithiolane Linked Thiorhodamine Dimer for Hg²⁺

Recognition in Living Cells

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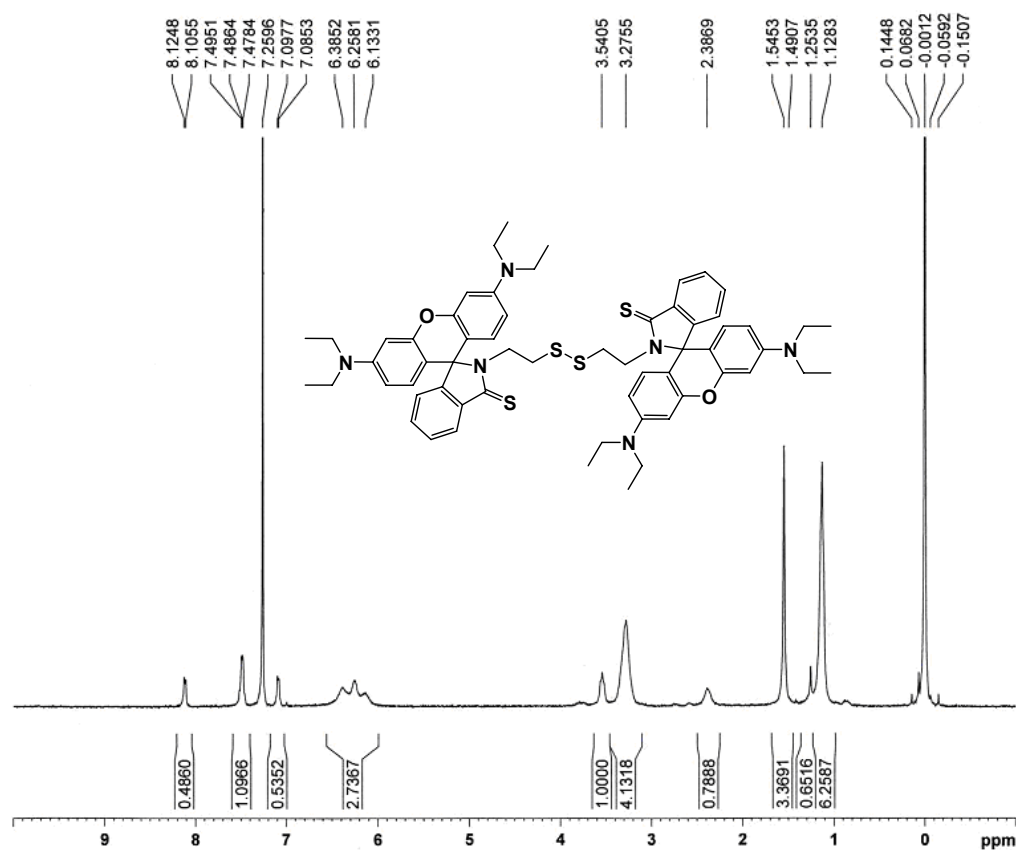
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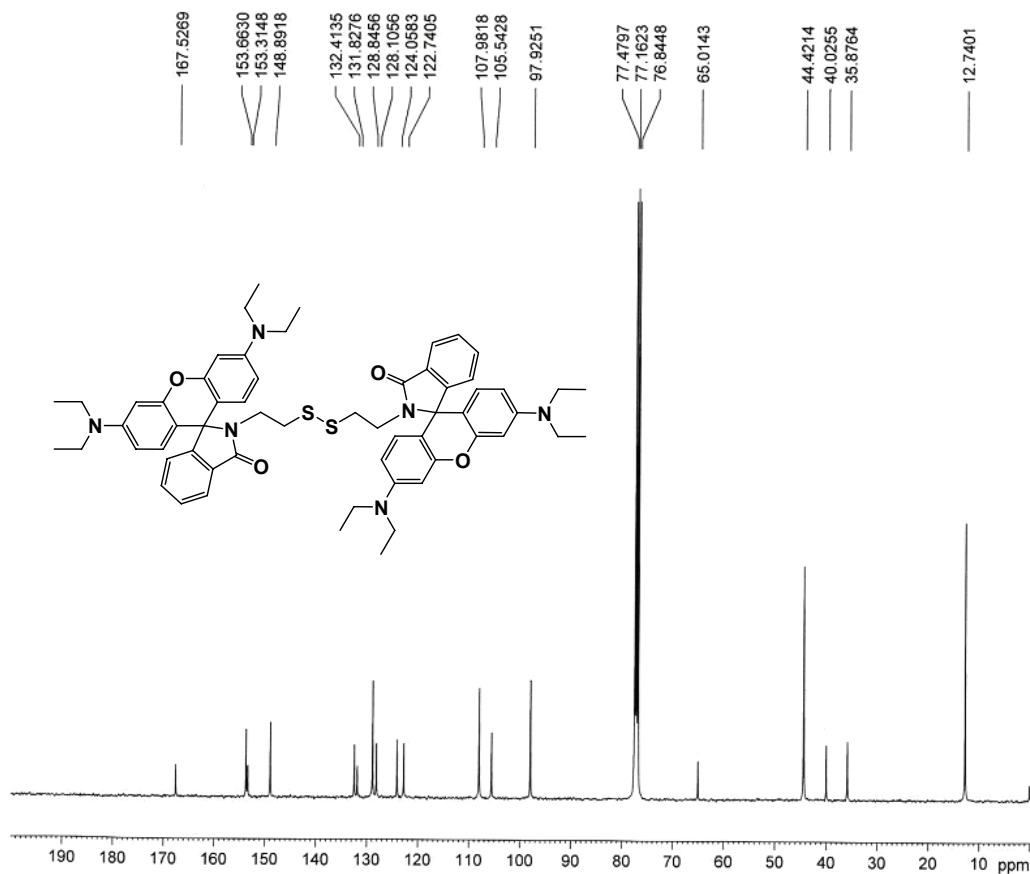
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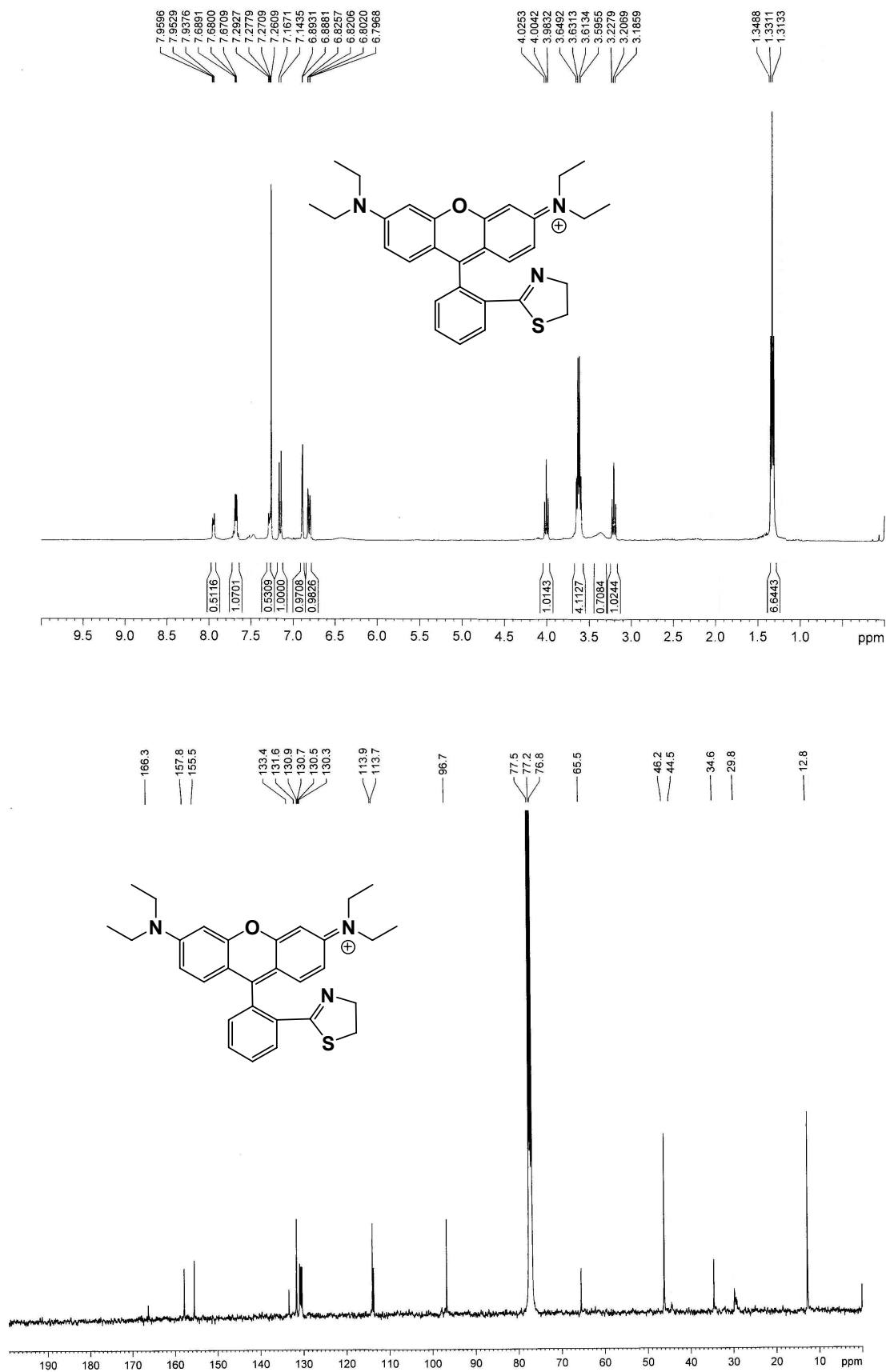
1. NMR spectra of compound **A**
2. NMR spectra of compound **B**
3. NMR spectra of compound **C**
4. Mass spectra of compounds **A**, **B**, and **C**.
5. FT-IR spectra of compounds **A**, **B**, and **C**.
6. Fig. S1
7. Fig. S2
8. Fig. S3
9. Fig. S4

1. ^1H NMR (top) and ^{13}C NMR (bottom) spectra of A in CDCl_3 .

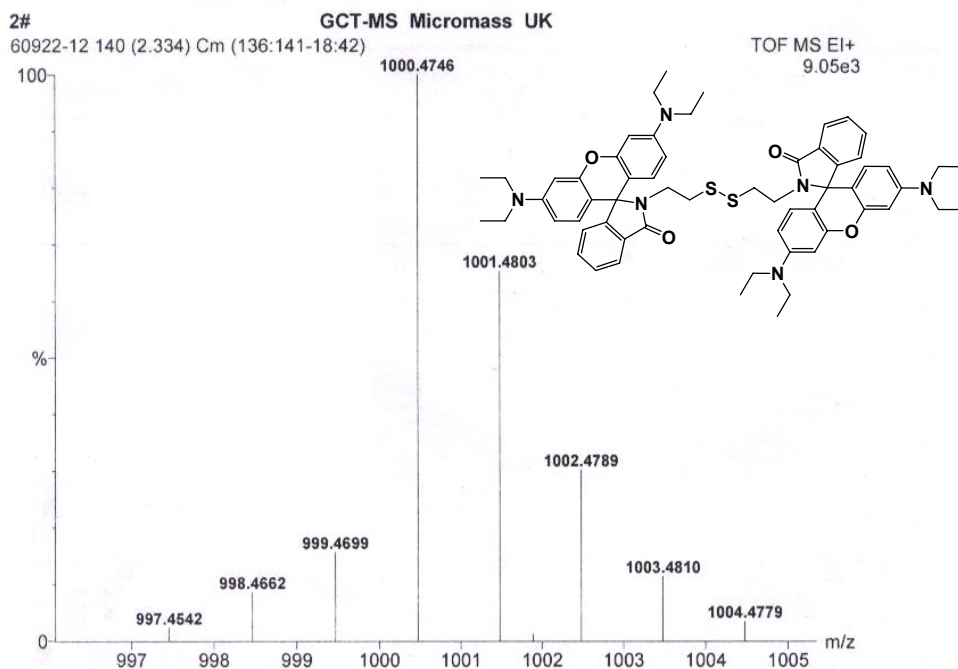
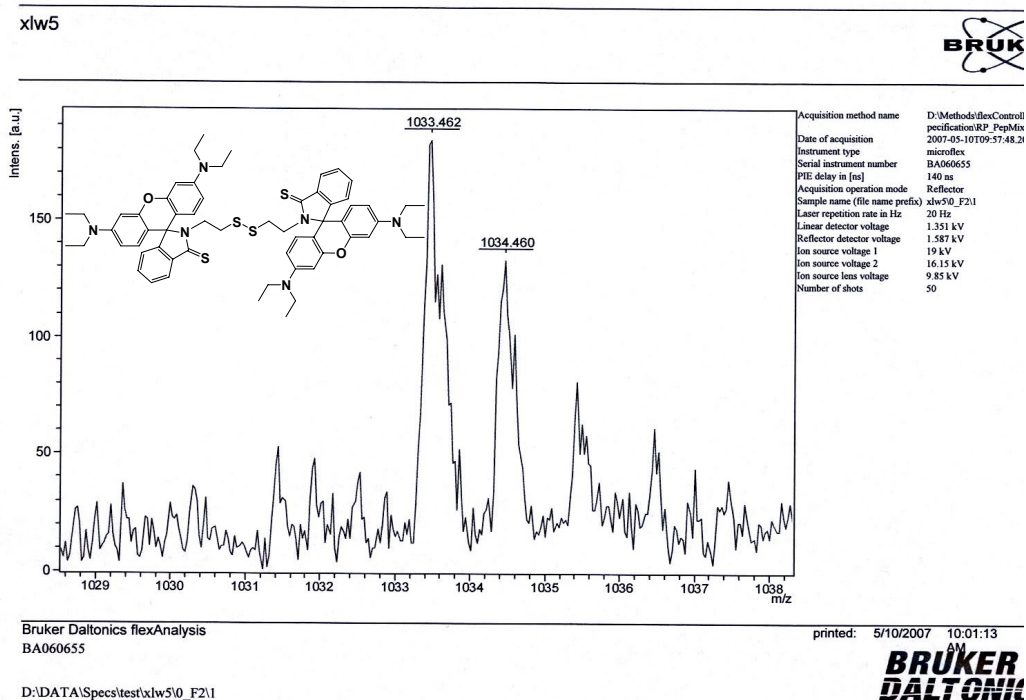


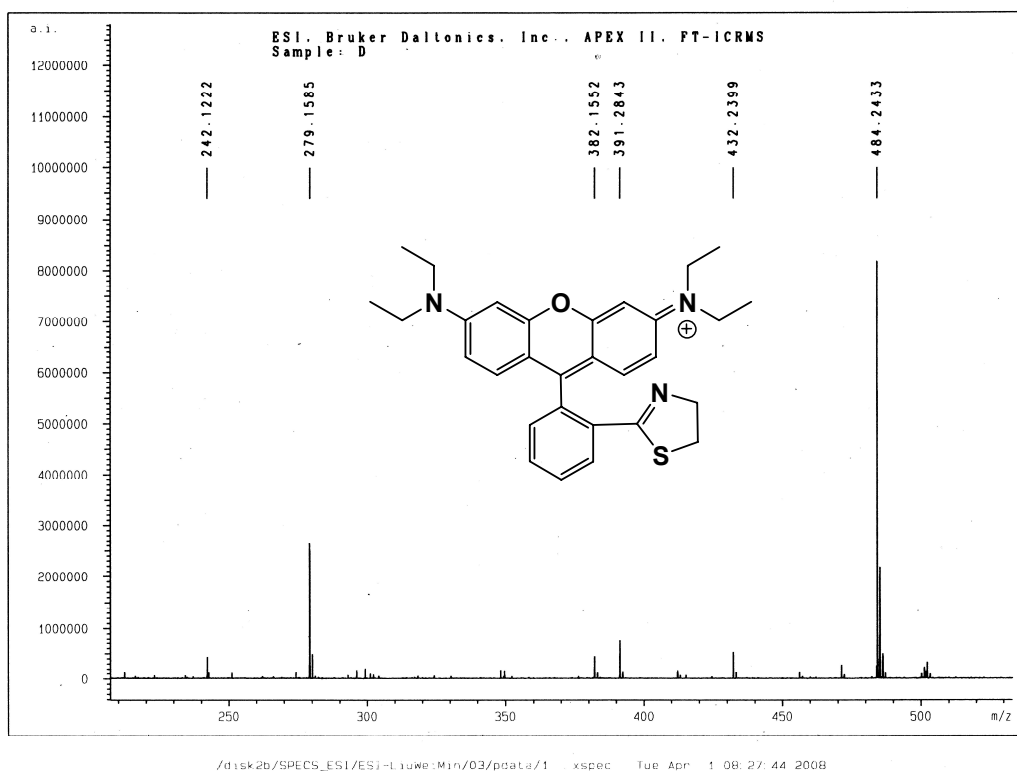


3. ^1H NMR (top) and ^{13}C NMR (bottom) spectra of **C** in CDCl_3 .

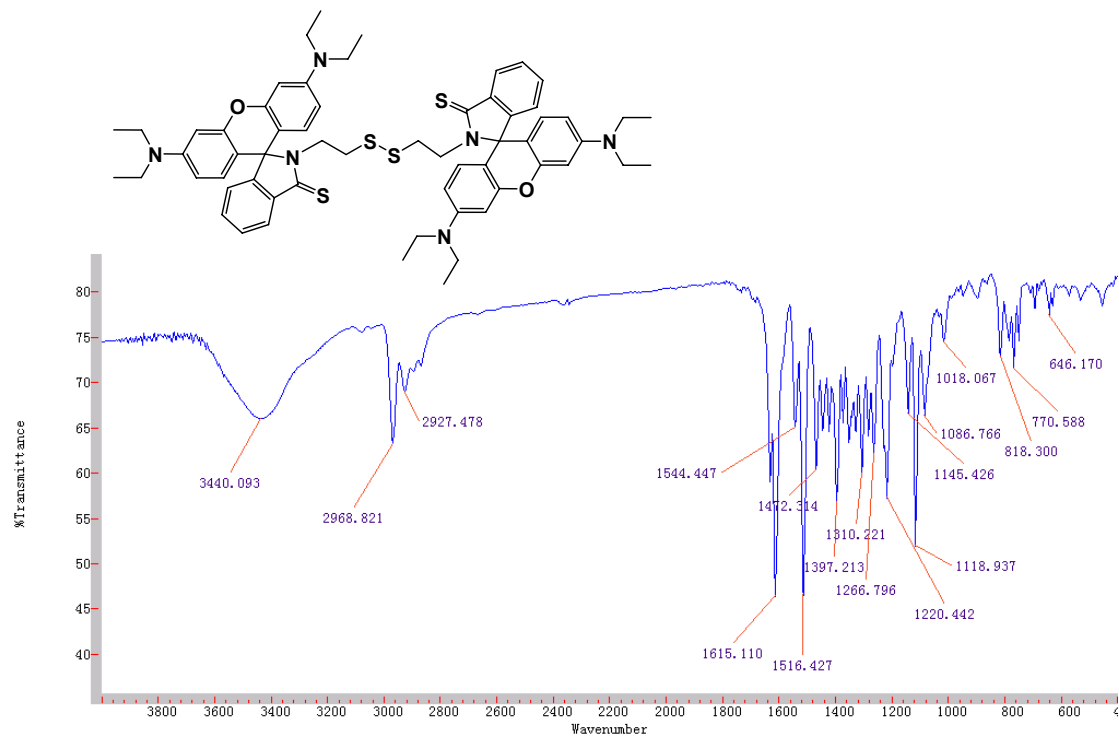


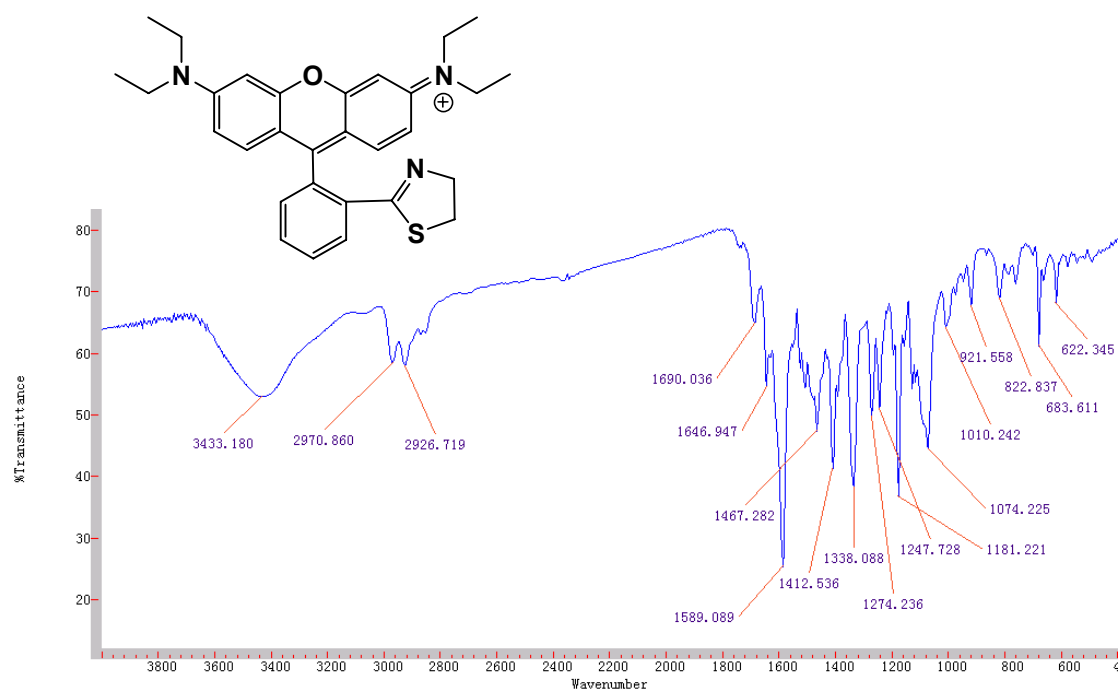
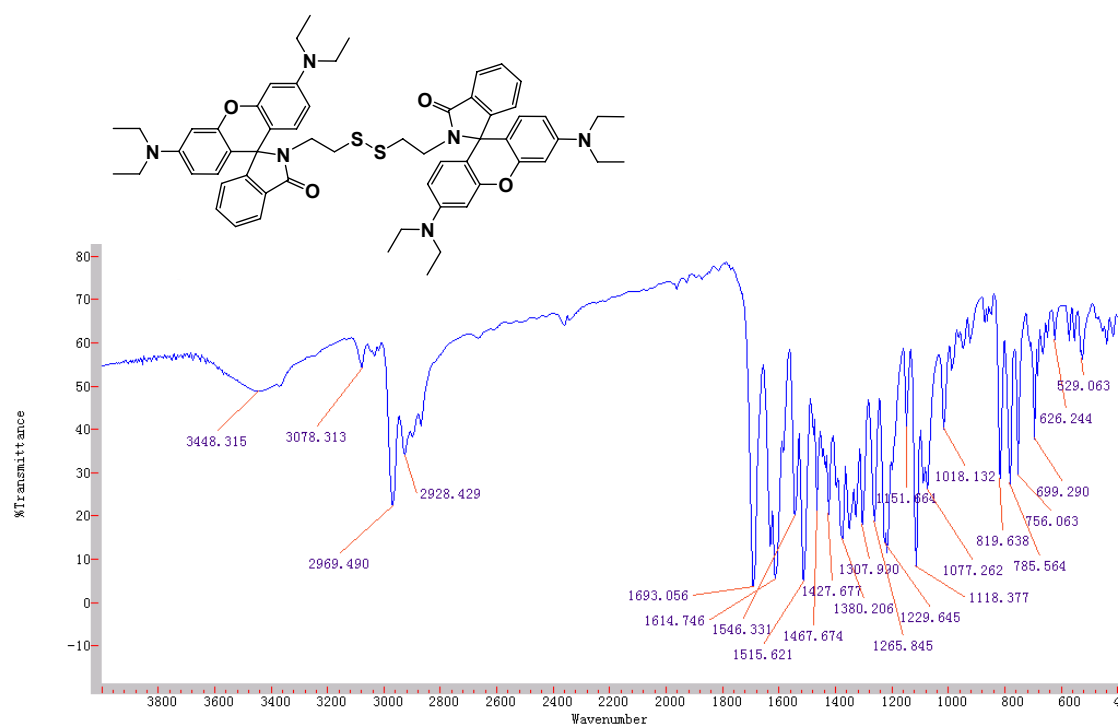
4. Mass spectra of compounds A, B, and C.



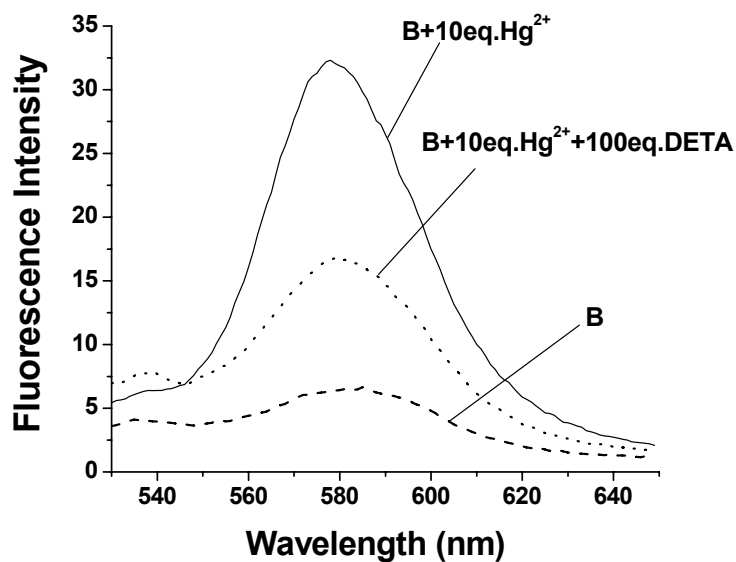


5. FT-IR spectra of compounds A, B, and C.

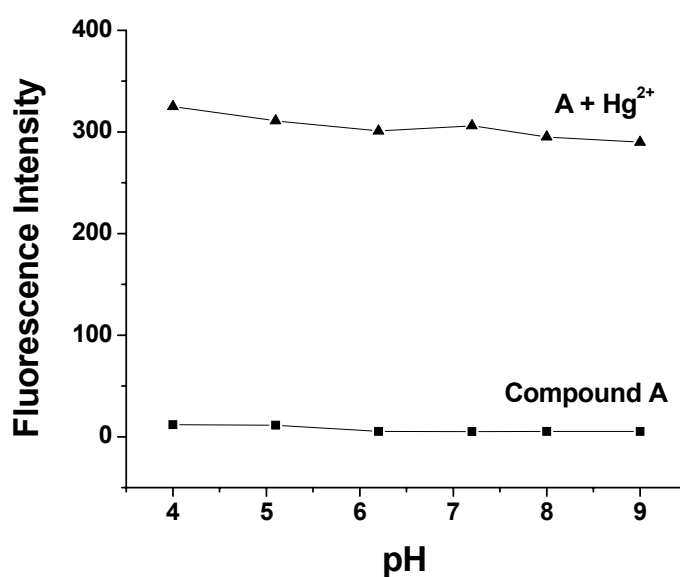




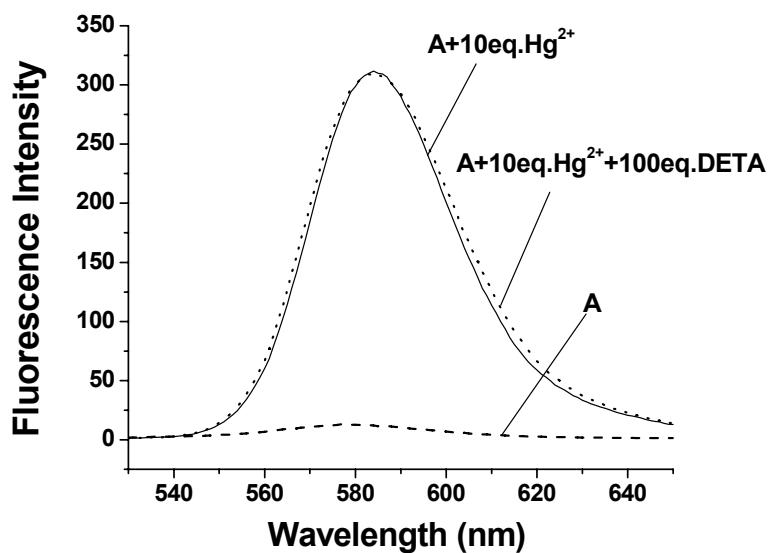
6. **Fig. S1** The fluorescence spectra of compound **B** (10 μM) in ethanol-water (80/20, v/v) solution before and after the addition of Hg^{2+} and the addition of DETA (diethylenetriamine).



7. **Fig. S2** The variation of fluorescence intensity of **A** (5 μM) and **A+Hg²⁺** (5 equiv) in ethanol-water (80/20, v/v) solution over a pH range from 4 to 9 at room temperature.



8. **Fig. S3** The fluorescence spectra of compound **A** (5 μM) in ethanol-water (80/20, v/v) solution before and after the addition of Hg^{2+} and the addition of DETA (diethylenetriamine).



9. **Fig. S4** The intracellular Hg^{2+} was imaged in living cells at 37 °C using confocal microscopy. (a) HK-2 cells incubated with 10 μM of compound **A** buffer solution for 30 min. (b) Bright field image of living HK-2 cells in (a).

