Supplementary data for:

A highly selective fluorescent sensor for Hg(II) ions based on an NTe_2 chelating motif and its application in living cell imaging

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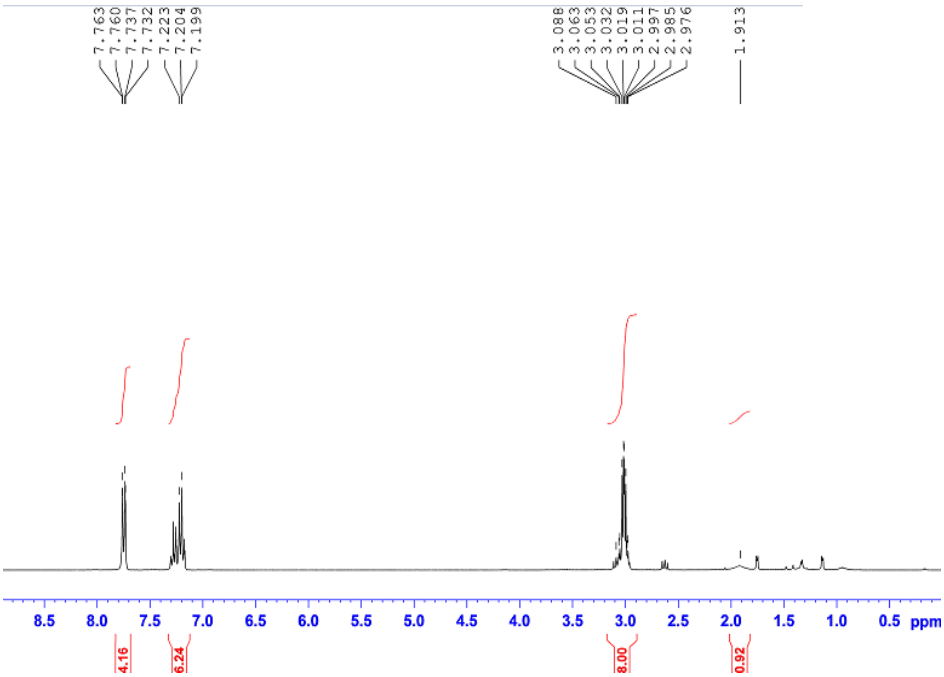

Figure S1. ^{1}H NMR (300 MHz, $CDCl_3$) spectra of bis(2-(phenyltellanyl)ethyl)amine.

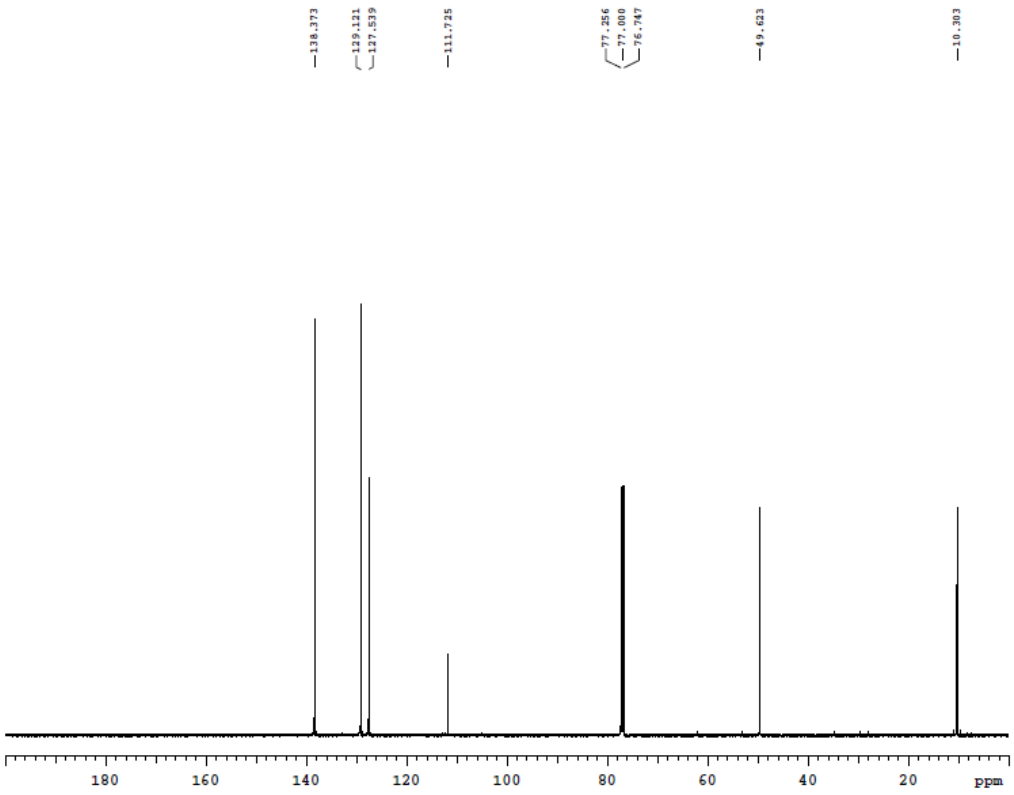

Figure S2. ^{13}C NMR (75 MHz, $CDCl_3$) spectra of bis(2-(phenyltellanyl)ethyl)amine.

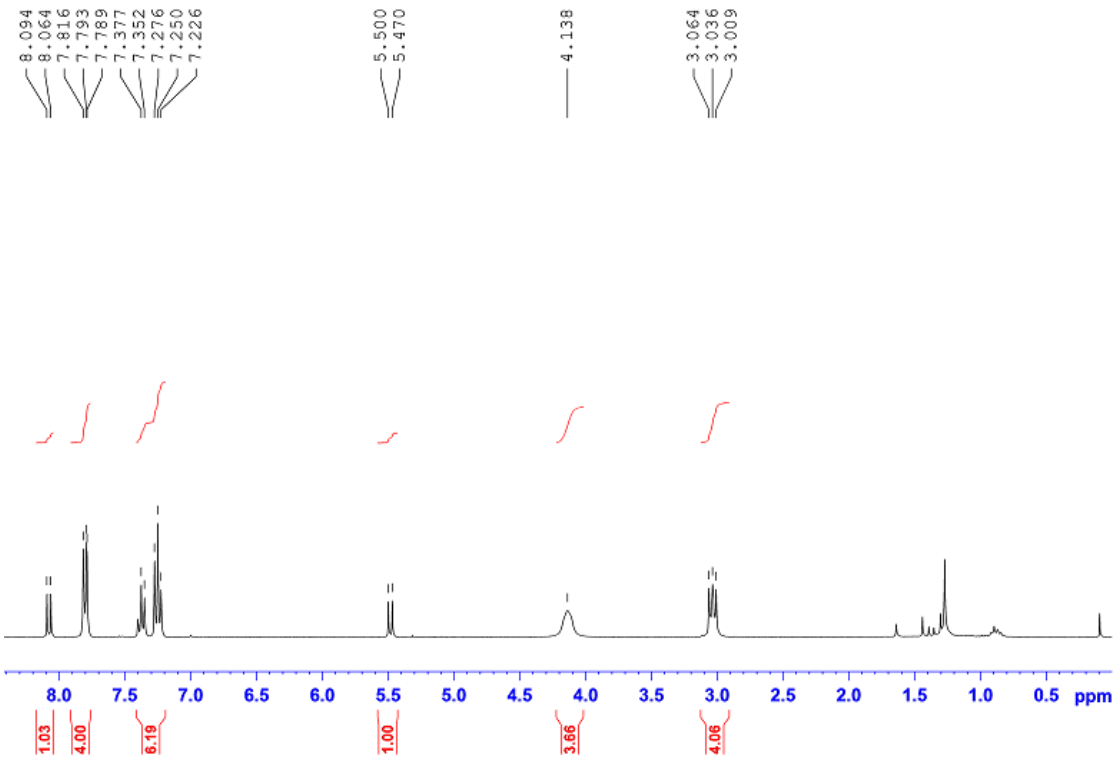

Figure S3. ^{1}H NMR (300 MHz, $CDCl_3$) spectra of chemosensor **NBDTe**.

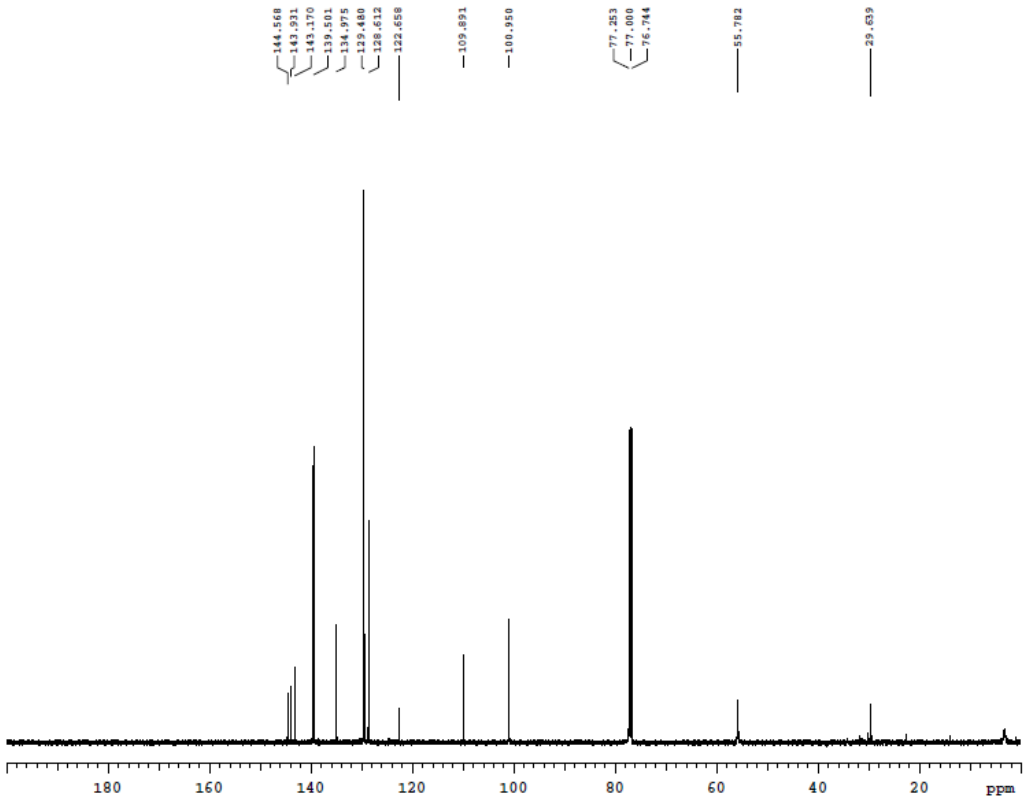

Figure S4. ^{13}C NMR (75 MHz, $CDCl_3$) spectra of chemosensor **NBDTe**.

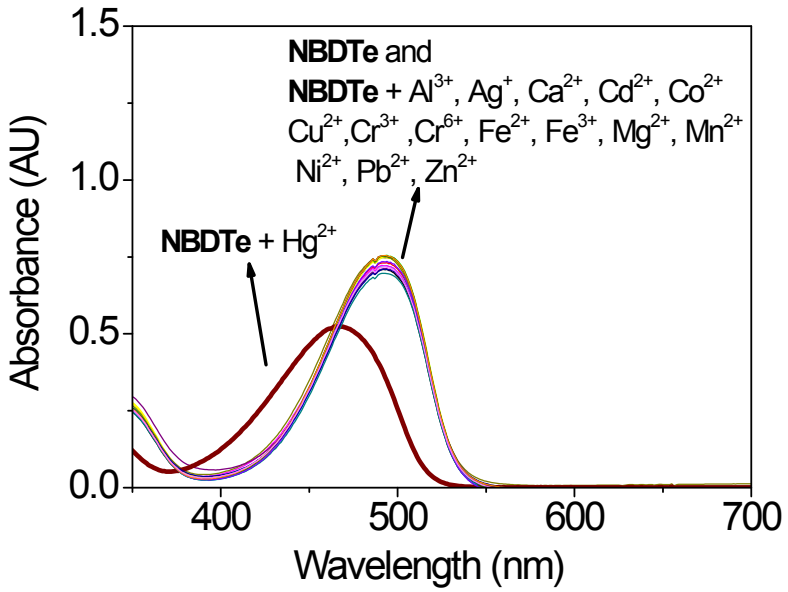

Figure S5. Absorption spectrum of chemosensor **NBDTe** (30 μM) in the presence of Hg^{2+} and other metal ion (150 μM) in acetonitrile-water (v/v = 4:1) solutions.

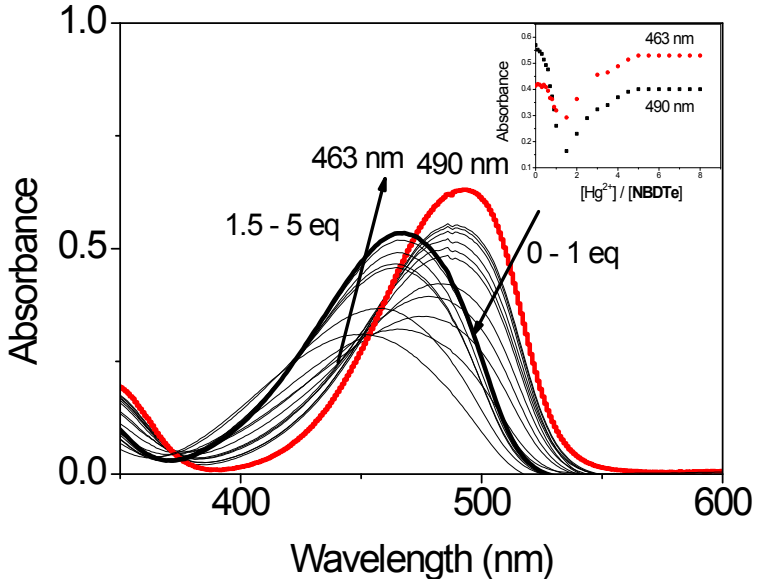

Figure S6. Absorption changes of chemosensor **NBDTe** (30 μM) in the presence of various equivalents of Hg^{2+} in acetonitrile-water (v/v = 4:1) solutions.

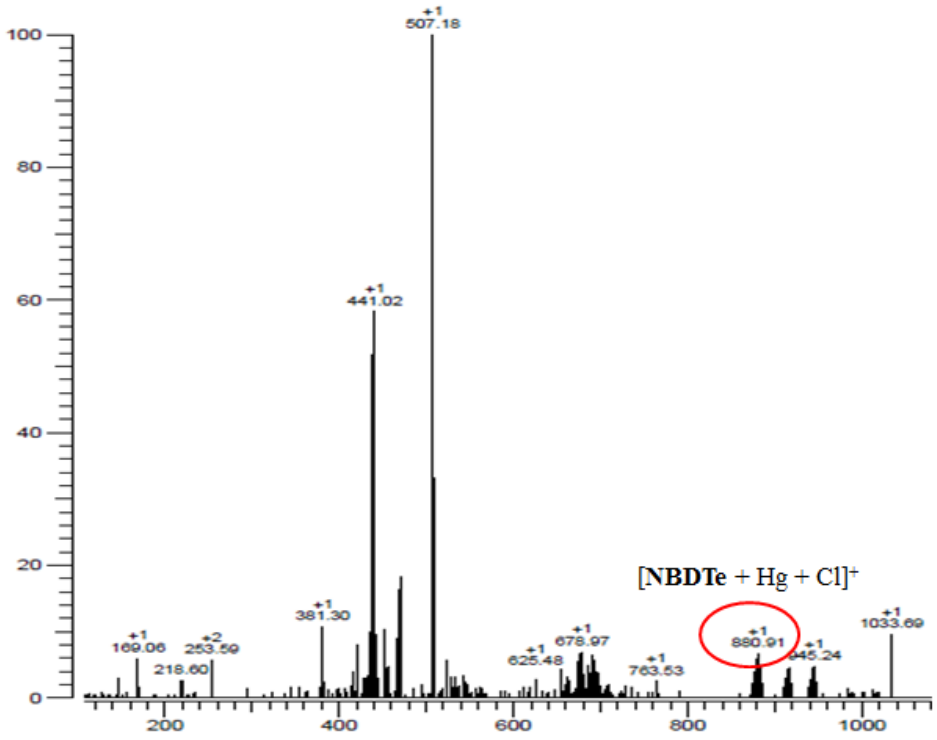

Figure S7. ESI Mass spectra of chemosensor **NBDTe** in the presence of Hg^{2+}.

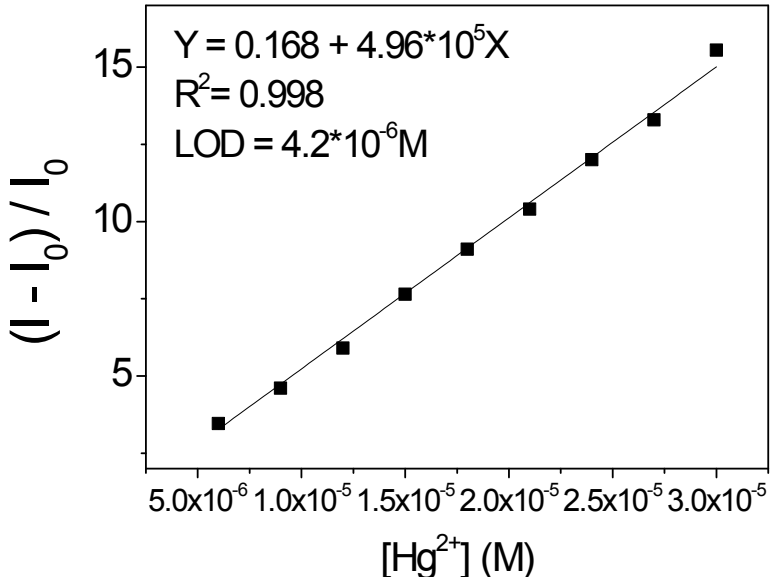

Figure S8. Calibration curve of **NBDTe** -Hg^{2+} in CH_3CN/H_2O (v/v = 4:1). The excitation wavelength was 463 nm and observed wavelength was 532 nm. The limit of detection was 4.2 μM of **NBDTe** for binding Hg^{2+} based on $3 \times \delta_{blank}/k$ (where δ_{blank} is the standard deviation of the blank solution and k is the slope of calibration plot). LOD = $3 \times 0.738 / (4.98 \times 10^5) = 4.2$ μM.

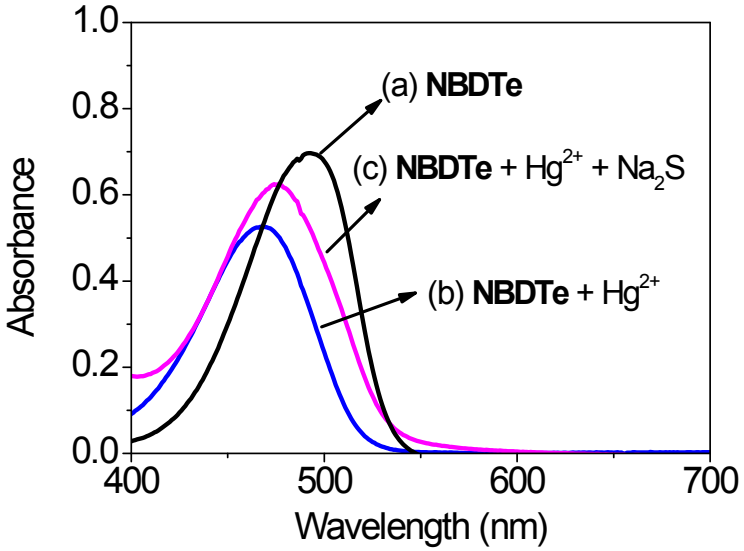

Figure S9. Reversible binding of Hg^{2+} to **NBDTe**. Uv-vis spectra of (a) **NBDTe**, (b) **NBDTe** in the presence of Hg^{2+}(90 μM), and (c) **NBDTe** in the presence of Hg^{2+} (90 μM) upon addition of Na_2S (360 μM).

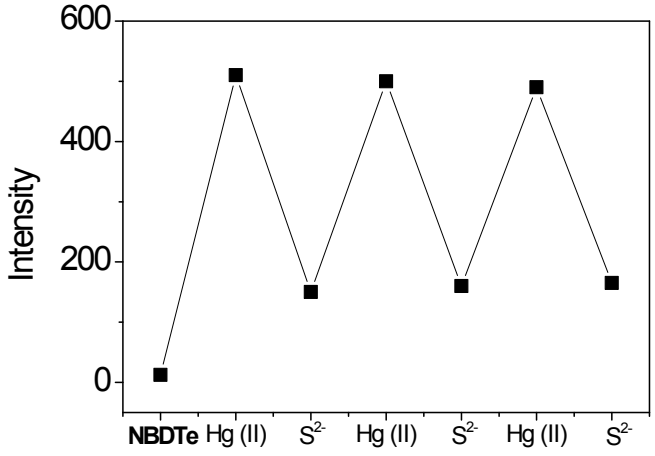

Figure S10. Reversible binding of Hg^{+} to **NBDTe**. Hg^{2+} (90 μM) were added to the **NBDTe** solutions, resulting **NBDTe**-Hg^{2+} complex. Na_2S (270 μM) was added to remove Hg^{2+}. The Na_2S -based regeneration process was repeated by three times.