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Supporting Information

Barbituric acid-triphenylamine-adduct as AIEE-type molecule and optical probe for mercury(II)

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Figure Captions

Figure S1. ^{1}H NMR spectrum of **M1** (in deuterated DMSO).

Figure S2. ^{13}C NMR spectrum of **M1** (in deuterated DMSO).

Figure S3. HRMS spectrum of **M1.**

Figure S4. Fluorescence spectra of **M1** (5×10^{-5} M) in THF–water mixtures at different pH (buffered by phosphate) (**a-c**) and buffer-free medium (**d**).

Figure S5. Fluorescence of **M1** (5×10^{-5} M) in THF–water mixture: V_{THF}/V_{water} = 3/7 (**a**) and V_{THF}/V_{water} = 2/8 (**b**) with time.

Figure S6. Fluorescence response of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of various anions (using their sodium salts) in THF–water mixture (V_{THF}/V_{water} = 3/7).

Figure S7. The absorption spectra of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of various metal ions in THF–water mixture (V_{THF}/V_{water} = 3/7).

Figure S8. Fluorescence response of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of mercury(II) perchlorate and mercury(II) acetate in THF–water mixtures at different pH (buffered by phosphate) (**a-c**) and without buffer (**d**).

Figure S9. PL intensity alteration of **M1** (5×10^{-5} M) in THF-Water (V_{THF}/V_{water} =3/7) mixture in the presence of incremental water.

Figure S10. The absorption spectra **(a)** and fluorescence response **(b)** of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of mercury(II) ion in THF–water mixture (V_{THF}/V_{water} = 3/7) with reaction time.

Figure S11. Time-resolved fluorescence spectra of **M1** in the absence and presence of 2.0 equivalent of Hg^{2+} in THF-water mixture (V_{THF}/V_{water}= 3/7).

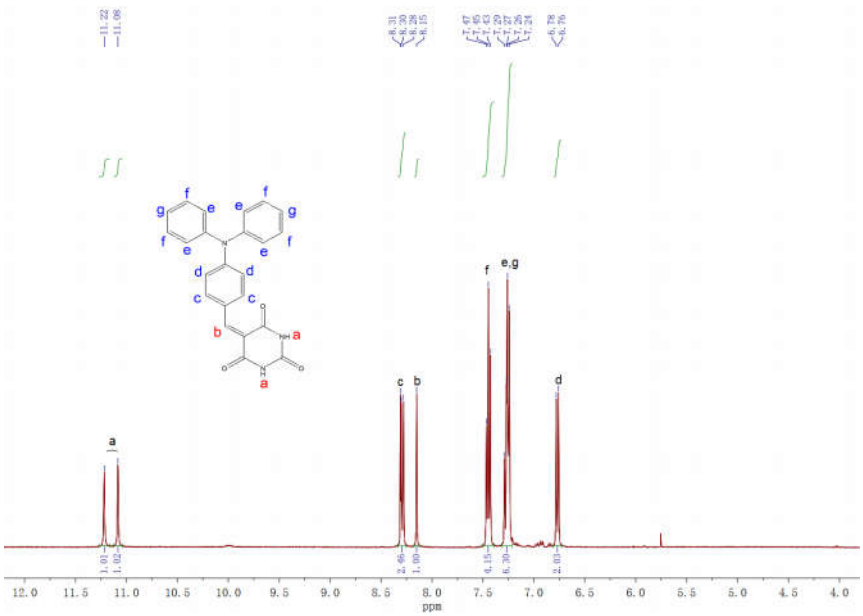


Figure S1. ^{1}H NMR spectrum of **M1** (in deuterated DMSO).

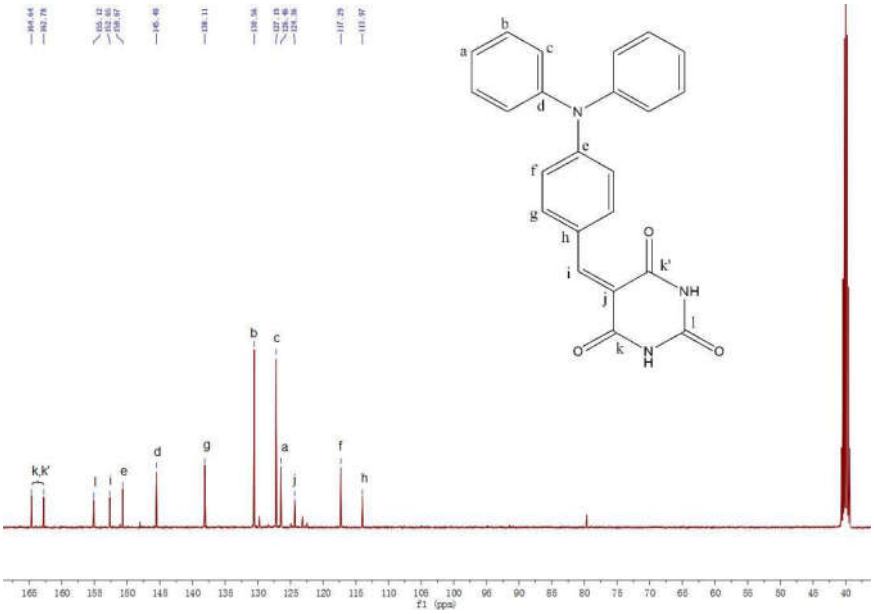


Figure S2. ^{13}C NMR spectrum of **M1** (in deuterated DMSO).

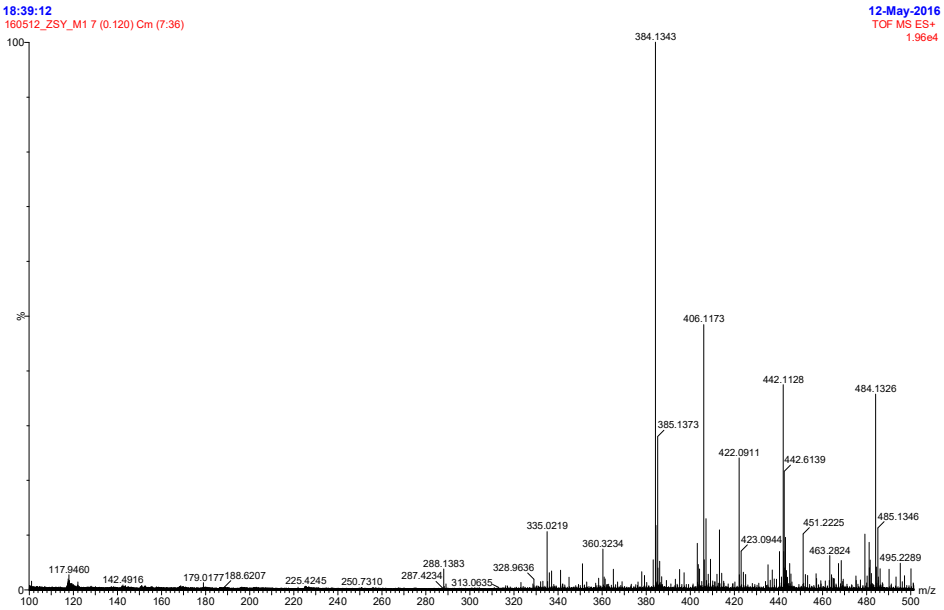


Figure S3. HRMS spectrum of **M1.**

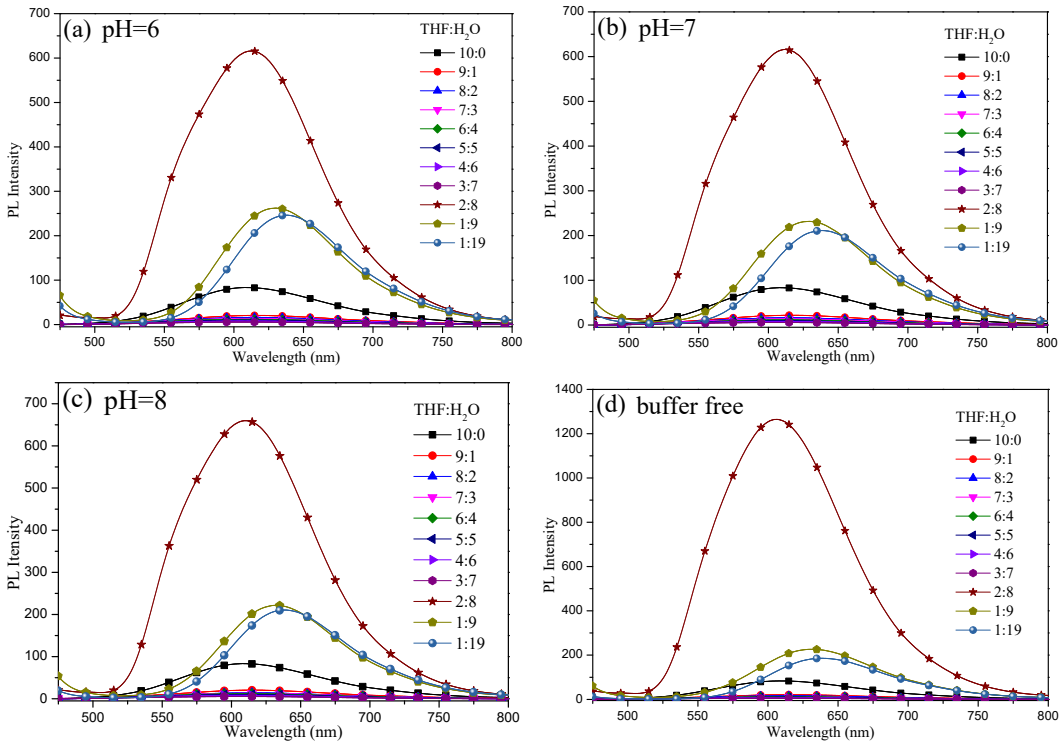


Figure S4. Fluorescence spectra of **M1** (5×10^{-5} M) in THF–water mixtures at different pH (buffered by phosphate) (**a-c**) and buffer-free medium (**d**).

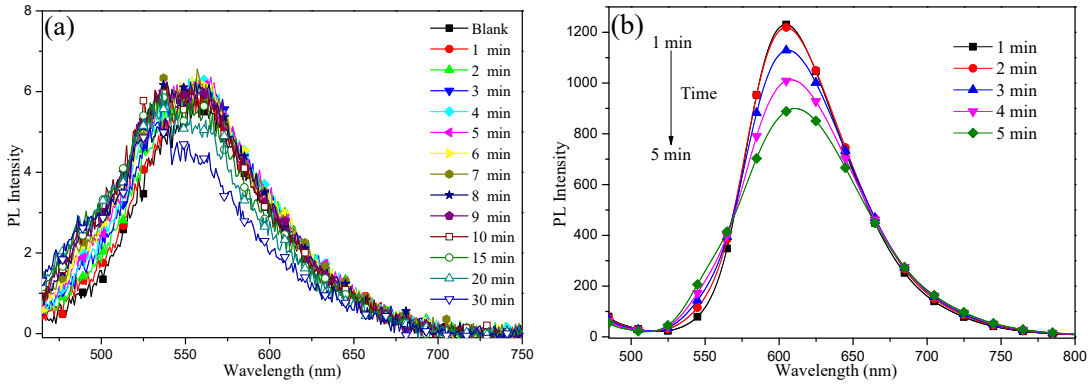


Figure S5. Fluorescence of **M1** (5×10^{-5} M) in THF–water mixture: V_{THF}/V_{water} = 3/7 (**a**) and V_{THF}/V_{water} = 2/8 (**b**) with time.

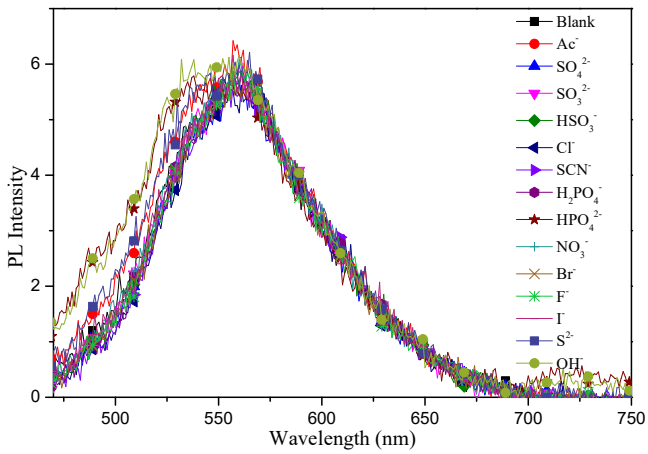


Figure S6. Fluorescence response of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of various anions (using their sodium salts) in THF–water mixture (V_{THF}/V_{water} = 3/7).

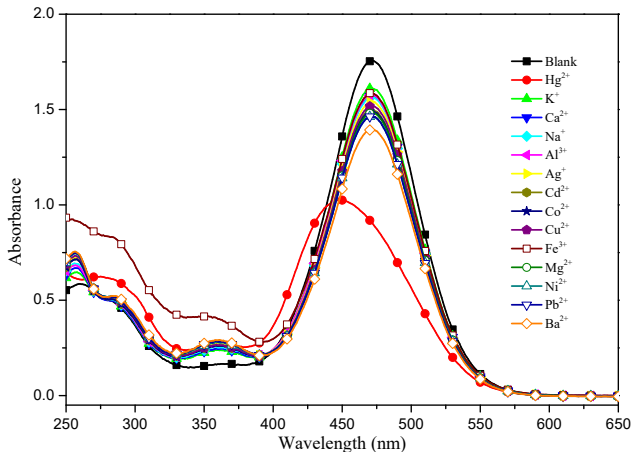


Figure S7. The absorption spectra of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of various metal ions in THF–water mixture (V_{THF}/V_{water} = 3/7).

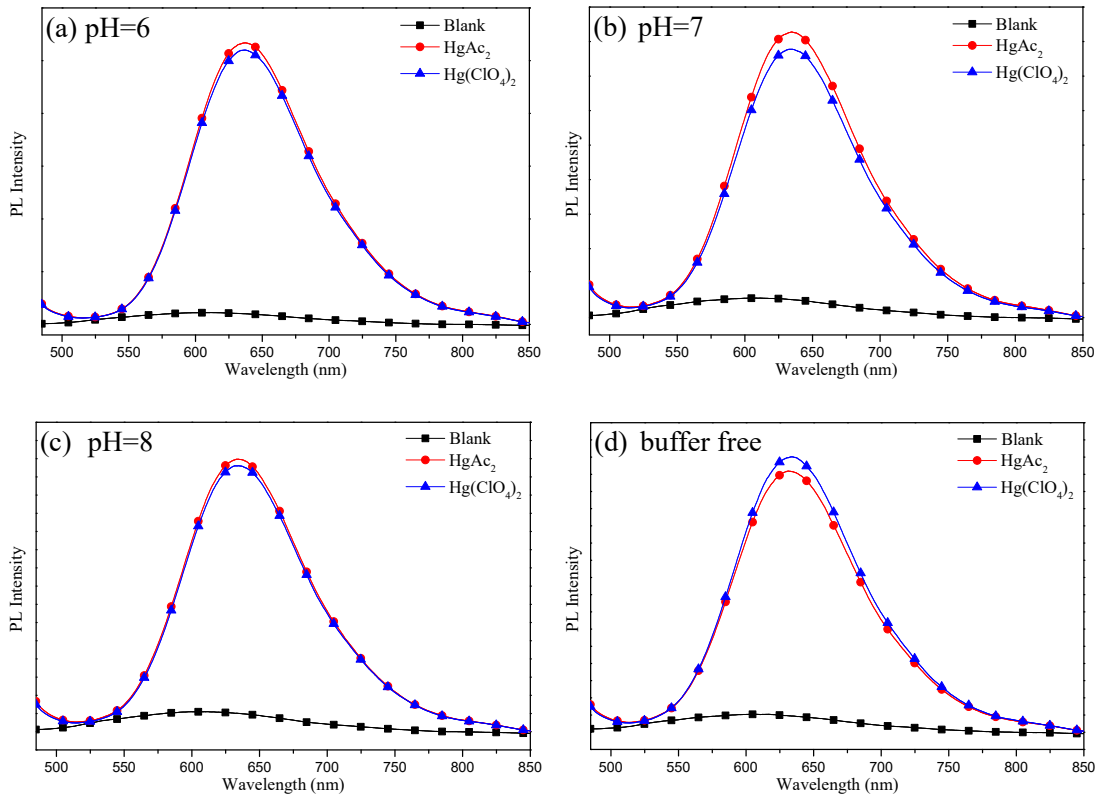
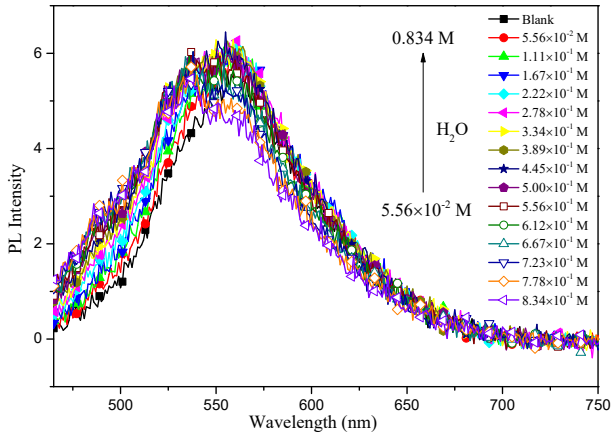


Figure S8. Fluorescence response of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of mercury(II) perchlorate and mercury(II) acetate in THF–water mixtures at different pH (buffered by phosphate) (**a-c**) and without buffer (**d**).



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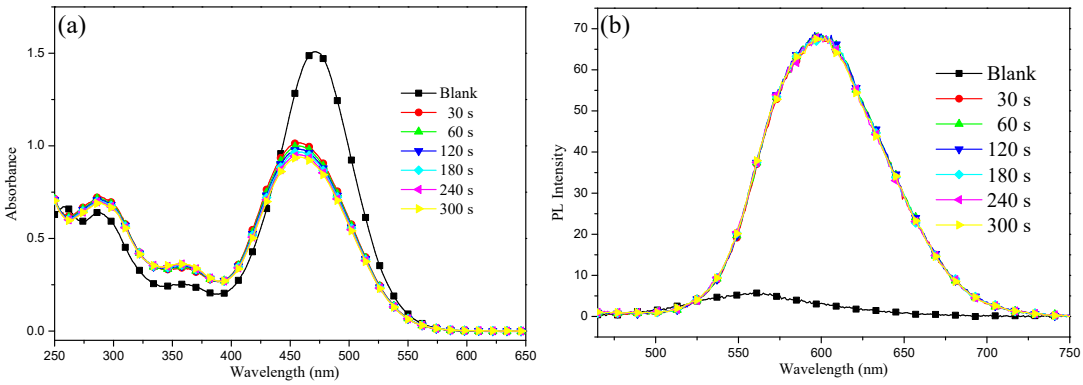

Figure S10. The absorption spectra **(a)** and fluorescence response **(b)** of **M1** (5×10^{-5} M) in the presence of 2.0 equivalent of mercury(II) ion in THF–water mixture (V_{THF}/V_{water} = 3/7) with reaction time.

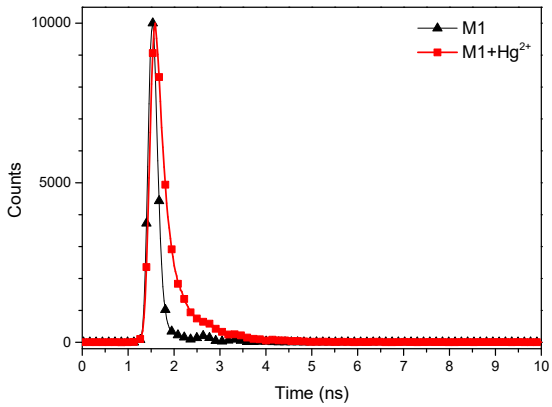

Figure S11. Time-resolved fluorescence spectra of **M1** in the absence and presence of 2.0 equivalent of Hg^{2+} in THF-water mixture (V_{THF}/V_{water}= 3/7).