

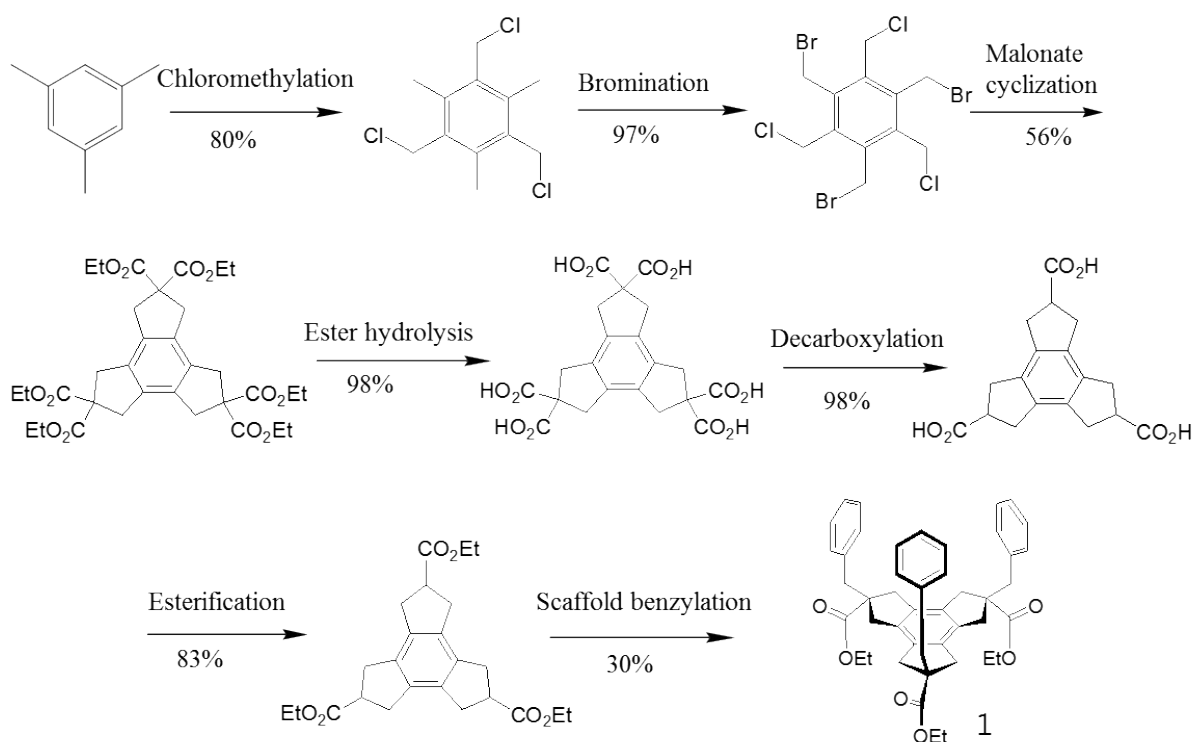
Supplementary data

C_{3v} -Symmetric anion receptors with guanidine recognition motifs for ratiometric sensing of fluoride

Won Kim^a, Suban K Sahoo^{a,b}, Gi-Dong Kim^a, and Heung-Jin Choi^{a*}

^a Department of Applied Chemistry, Kyungpook National University, Daegu, 702-701, South Korea.

^b Department of Applied Chemistry, SV National Institute of Technology, Surat-395007, Gujrat, India.



Scheme S1. Synthesis of trindane tricarboxylic ester scaffold (*reference no. 26 may be referred for reagents used*).

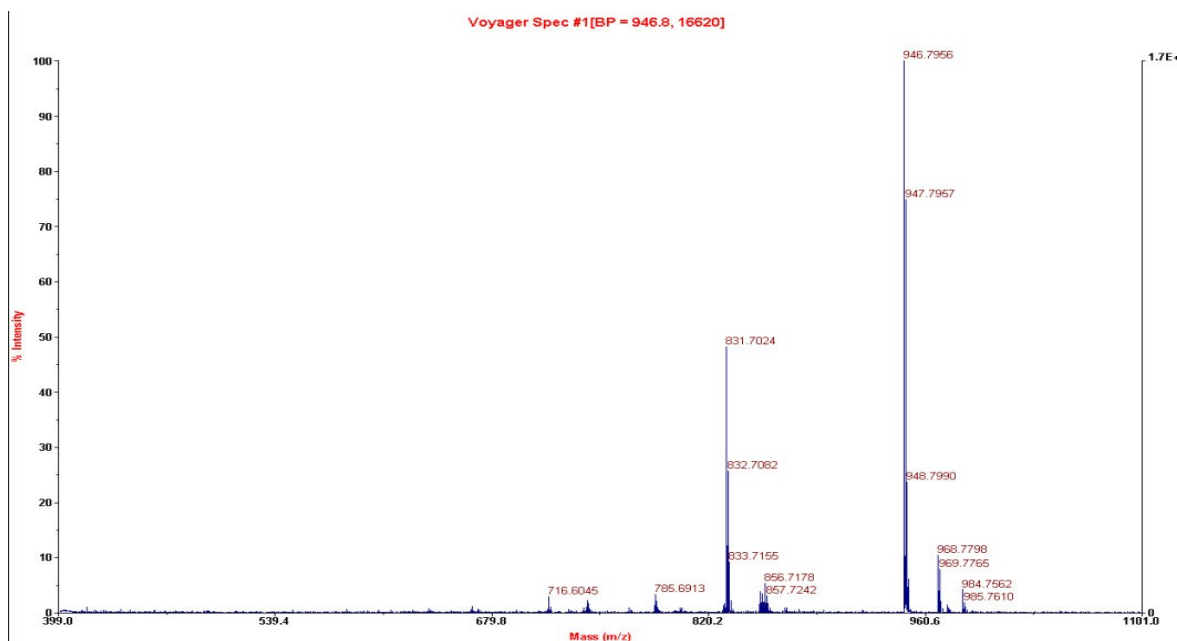


Fig. S1a. MALDI-TOF mass spectrum of **3**.

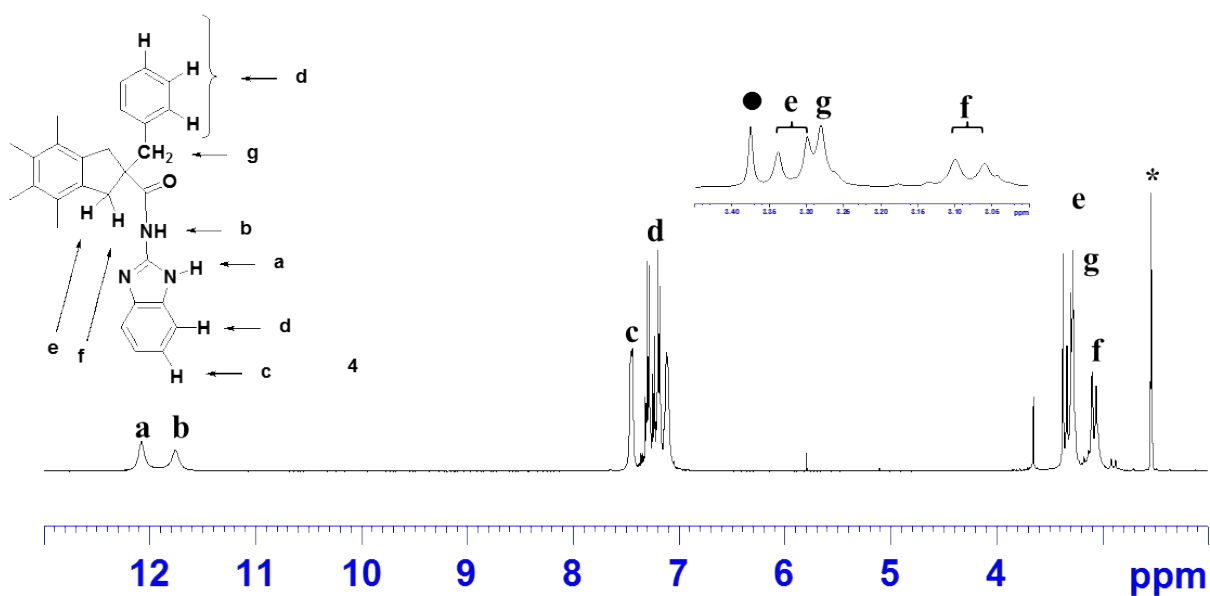


Fig. S1b. ¹H NMR spectrum of receptor **3** in DMSO-*d*₆ (400 MHz, *DMSO, ●H₂O).

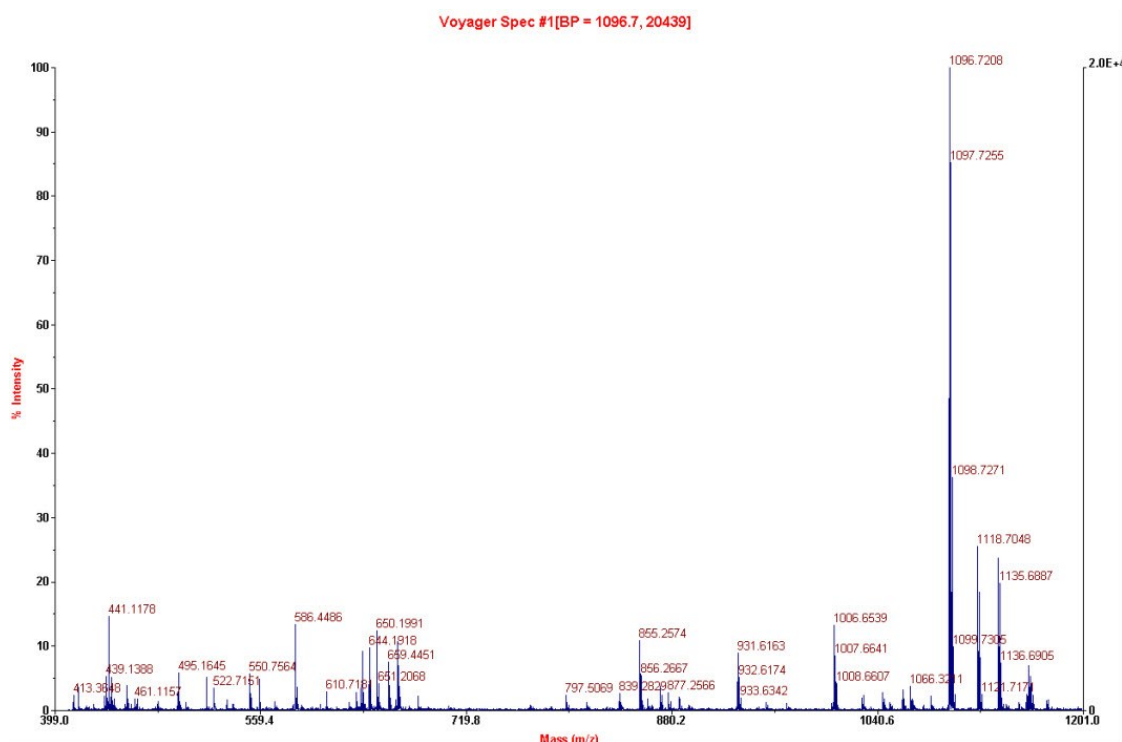


Fig. S2a. MALDI-TOF mass spectrum of **4**.

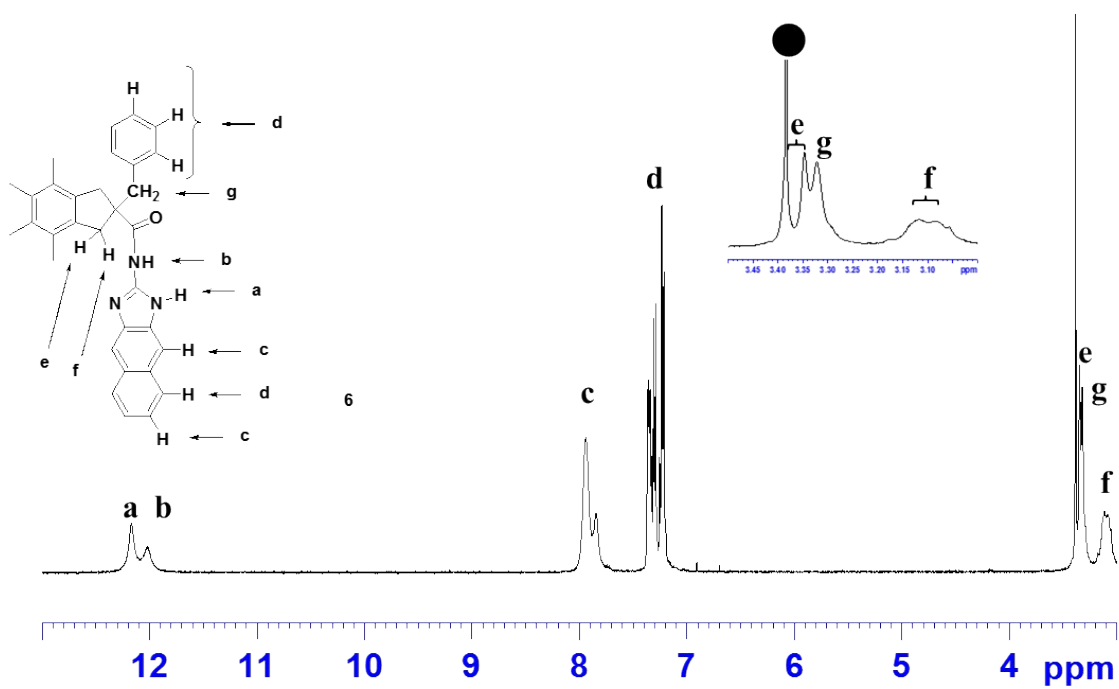


Fig. S2b. ¹H NMR spectrum of receptor **4** in DMSO-*d*₆ (400 MHz, ●H₂O).

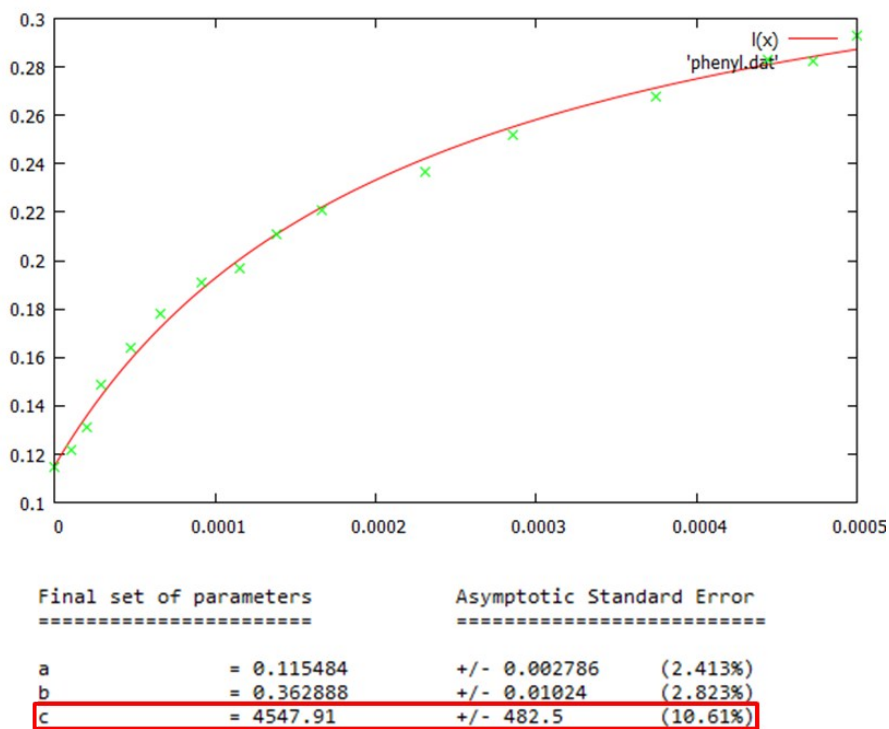


Fig. S3a. Fitting of absorption titration data of **3** during the estimation of binding constant of **3.F**.

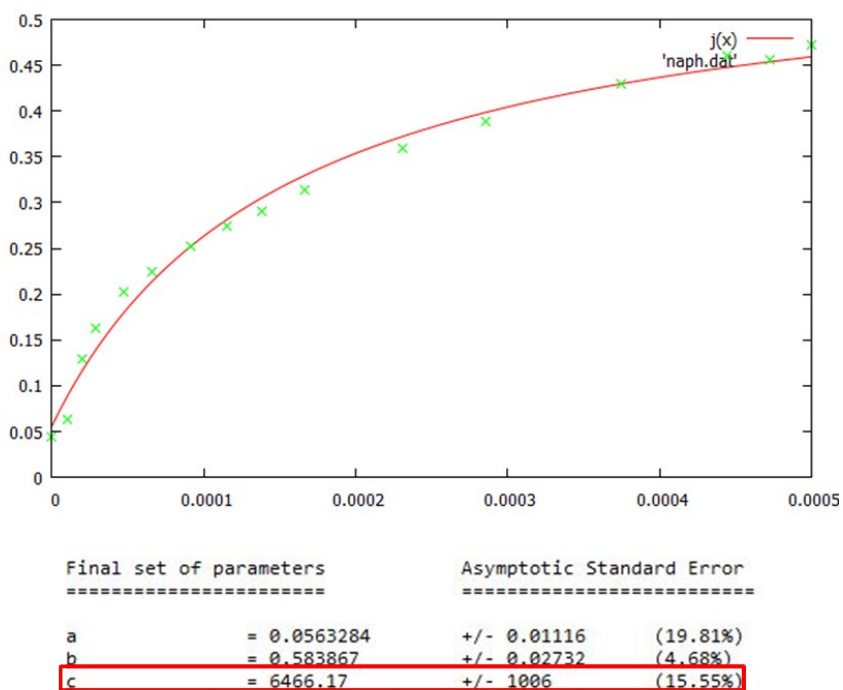


Fig. S3b. Fitting of absorption titration data of **4** during the estimation of binding constant of **4.F**.

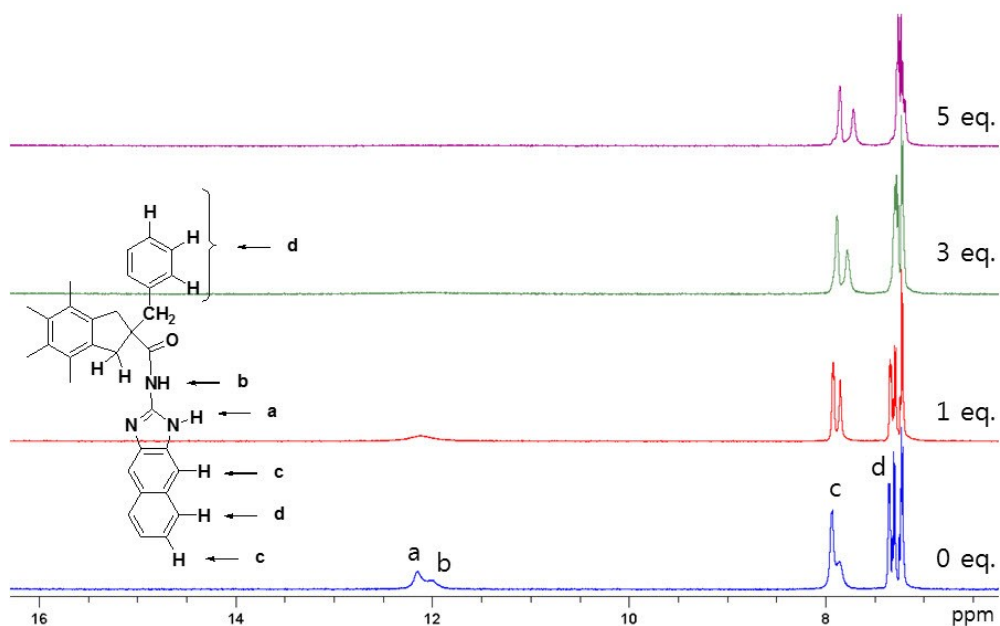


Fig. S4. Partial ^1H NMR spectral changes of a $\text{DMSO-}d_6$ solution of **4** (4 mM) upon addition of TBAF.

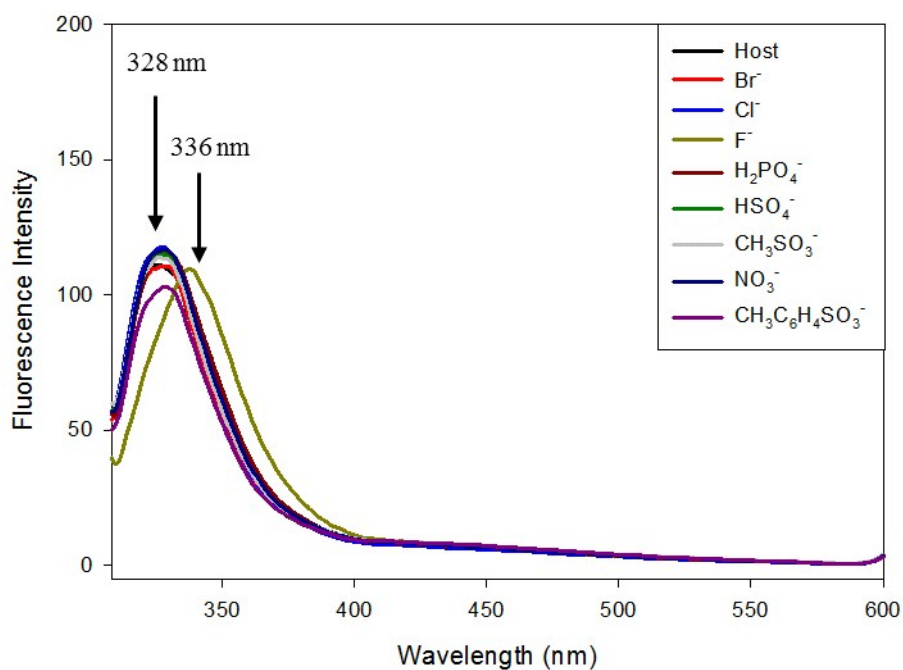


Fig. S5. Fluorescence intensity of receptor **3** (10 μM) with various TBA anion salts (1000 μM) in DMSO ($\lambda_{\text{ex}}=299$ nm).

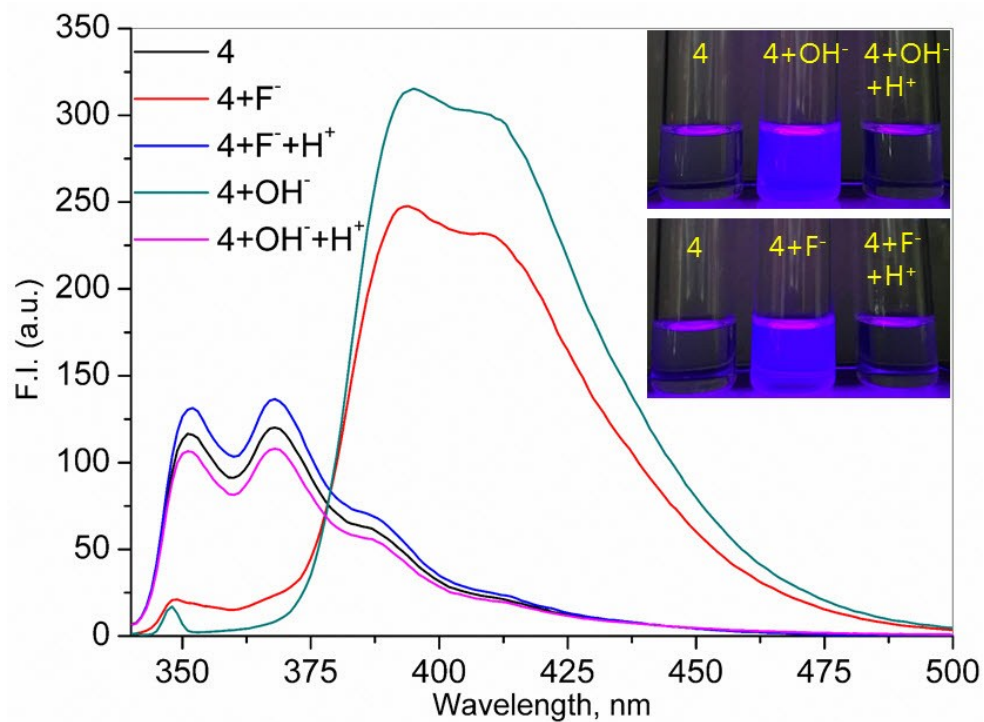


Fig. S6. Reversibility test of **4**: fluorescence turn-on at 410 nm in presence of TBAF and NaOH, and reversed back upon addition of HCl.

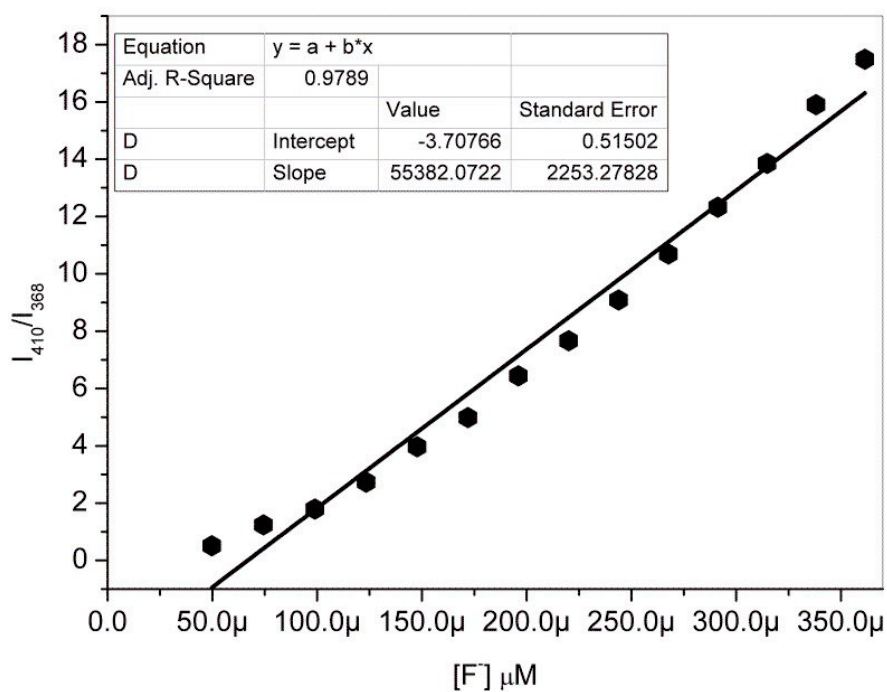


Fig. S7. Calibration curve for the determination of F⁻ detection limit of **4**.

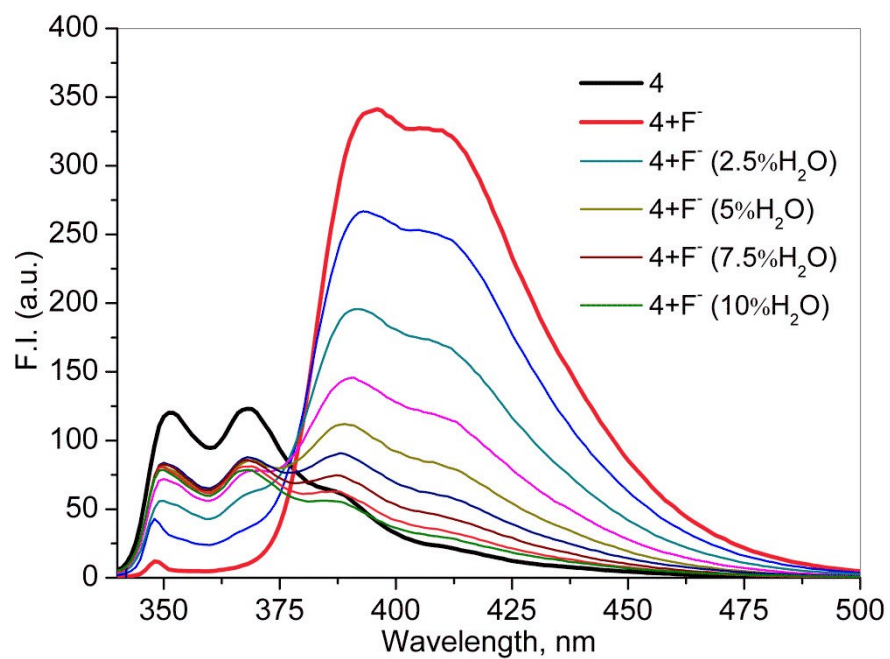


Fig. S8. Water tolerance of **4** (5 μM) containing 50 equivalents of TBAF.
