Supporting Information

o,o-Difluorination of aromatic azide yields fast-response fluorescent probe for H_2S detection and for improved bioorthogonal reactions

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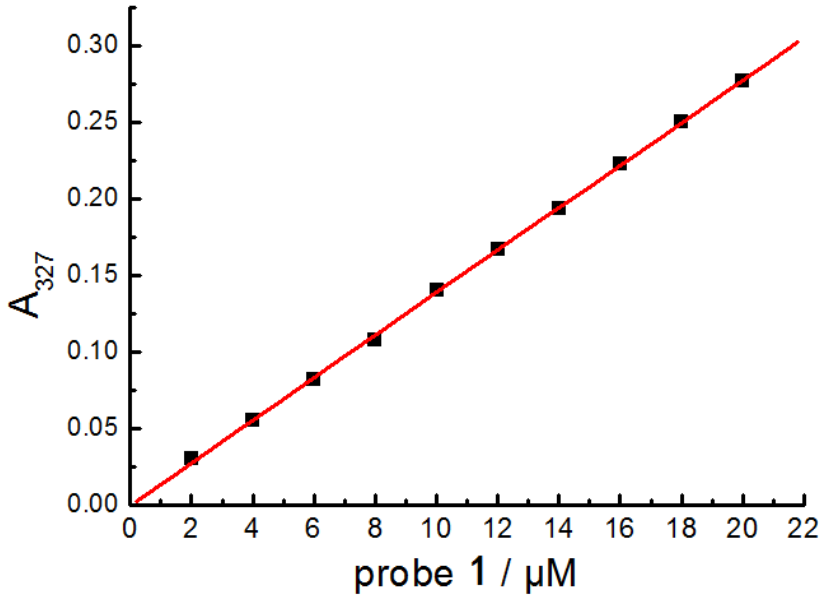


Fig. S1. Linear relationship of absorbance intensity at 327 nm and the concentration of probe **1** in PBS buffer (pH 7.4, containing 2% DMSO). The good linear relationship implied the good solubility of the probe up to at least 20 μM.

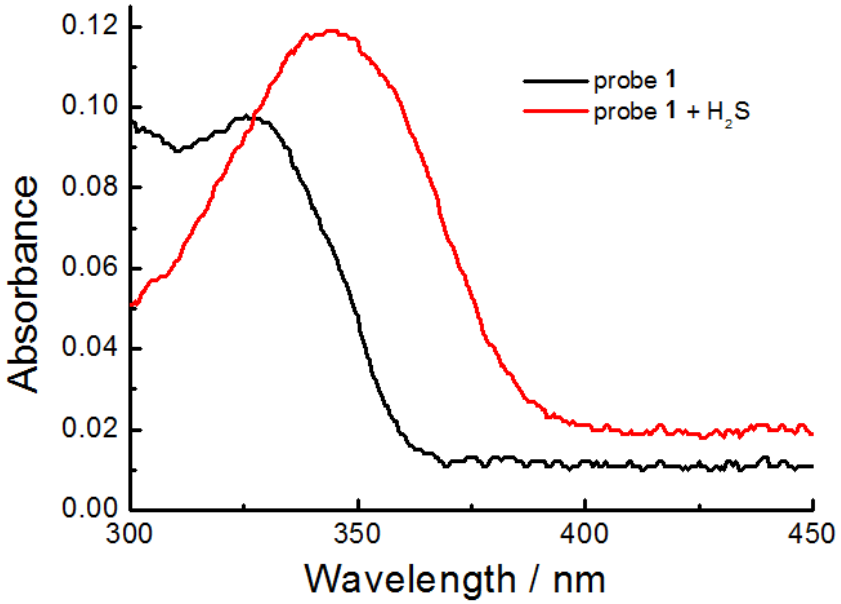


Fig. S2. The absorption spectra of **1** (10 μM) before and after reaction with H_2S (1 mM) for 30 min at room temperature.

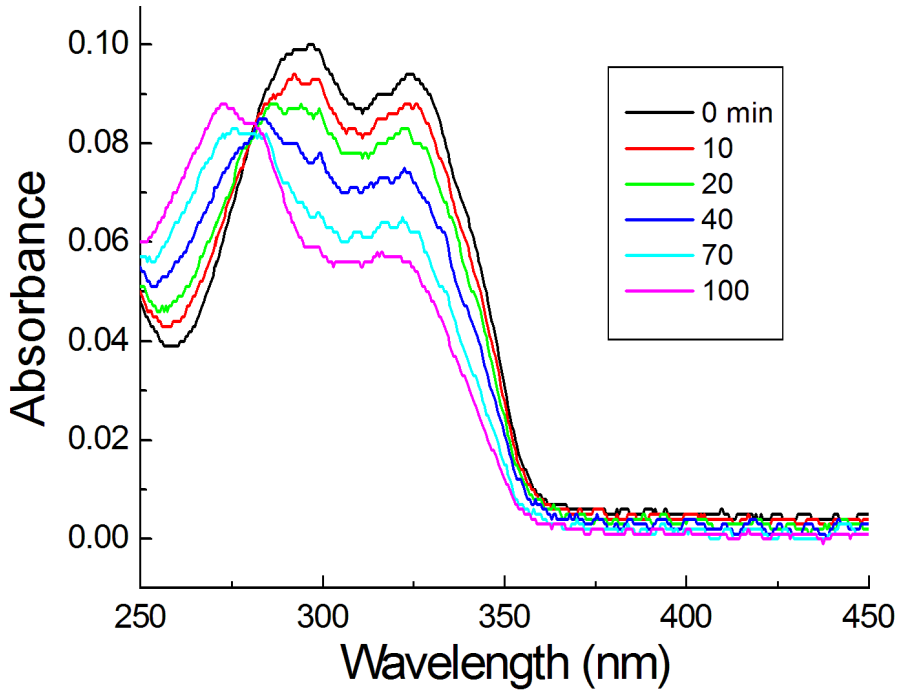


Fig. S3. The time-dependent absorption spectra of the reaction of **1** (10 μM) and **6** (100 μM) in PBS buffer (pH 7.4) containing 50% CH_3CN at room temperature.

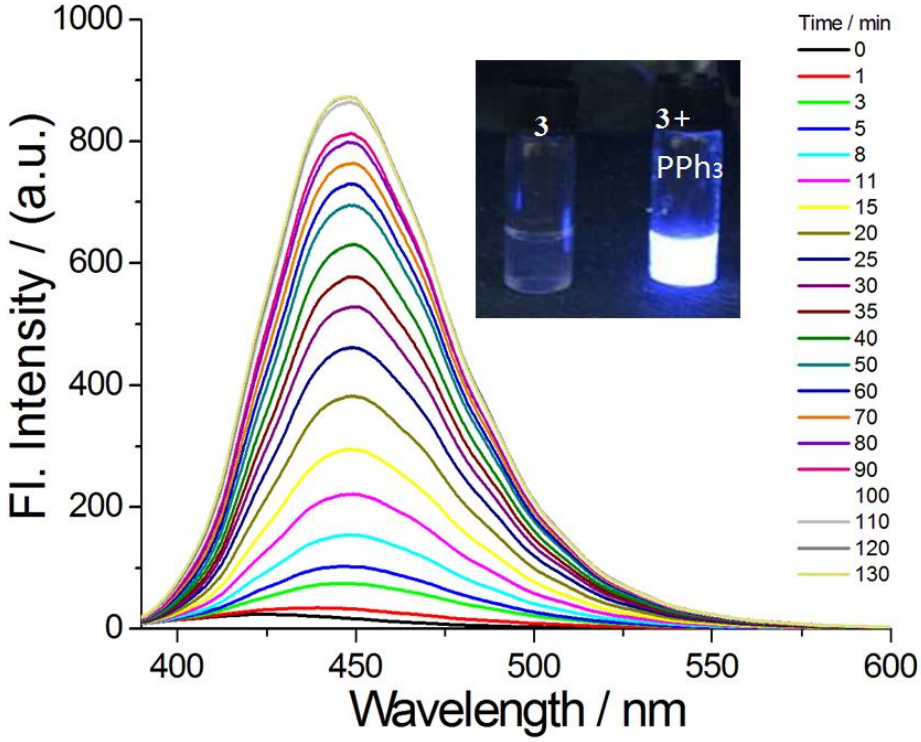


Fig. S4. Emission spectra of **3** (10 μM) in the presence of PPh_3 (200 μM) in PBS (50 mM, pH 7.4) containing 50% CH_3CN at room temperature.

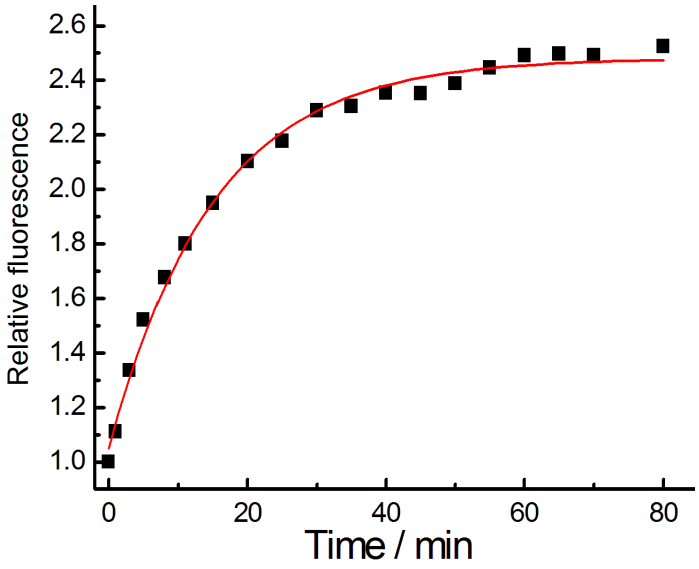


Fig. S5. Reaction kinetics of **1** (10 μM) toward **8** (200 μM) in PBS (50 mM, pH 7.4) containing 50% CH_3CN at room temperature. The fluorescence signal at 445 nm was recorded.

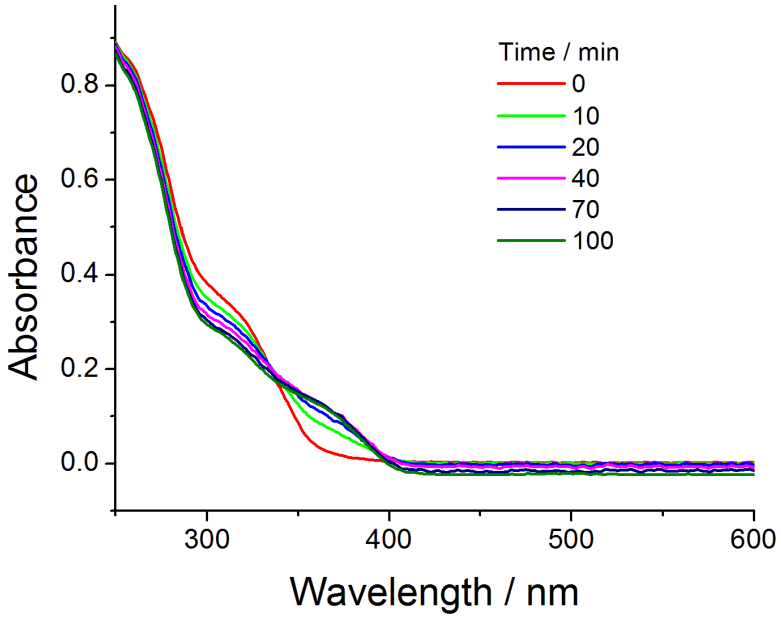


Fig. S6. The time-dependent absorption spectra of the reaction of **1** (10 μM) and **8** (100 μM) in PBS buffer (pH 7.4) containing 50% CH_3CN at room temperature.

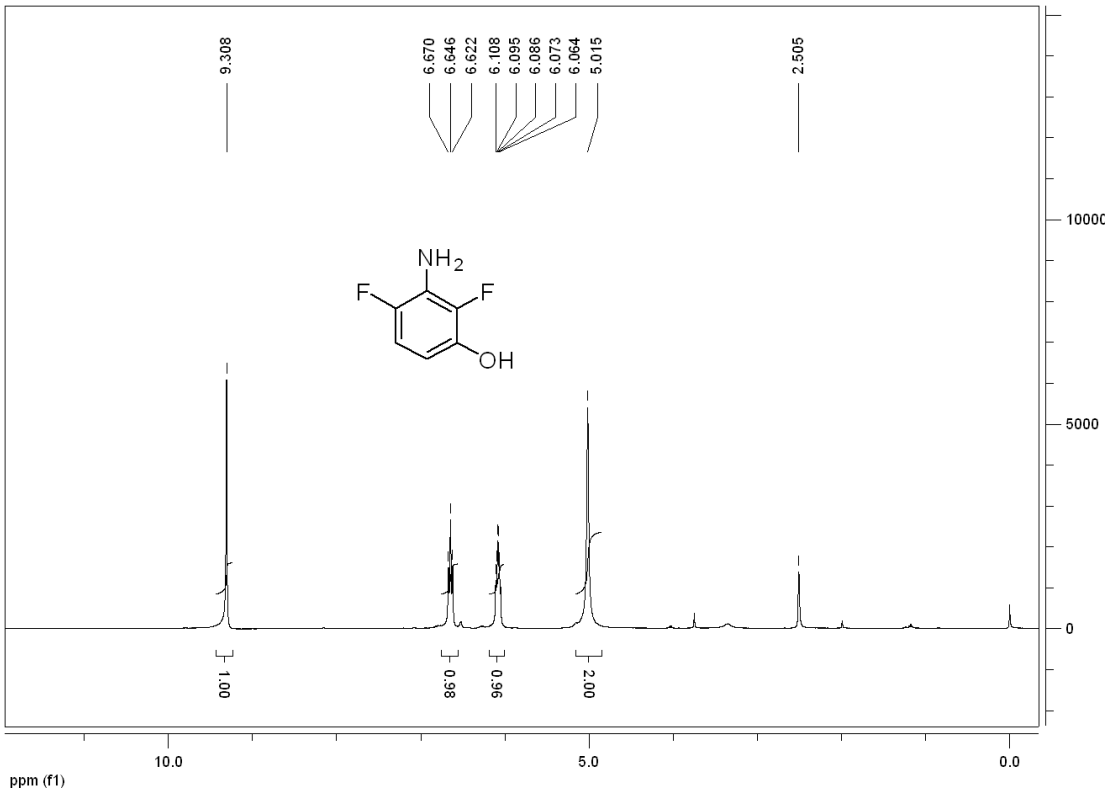
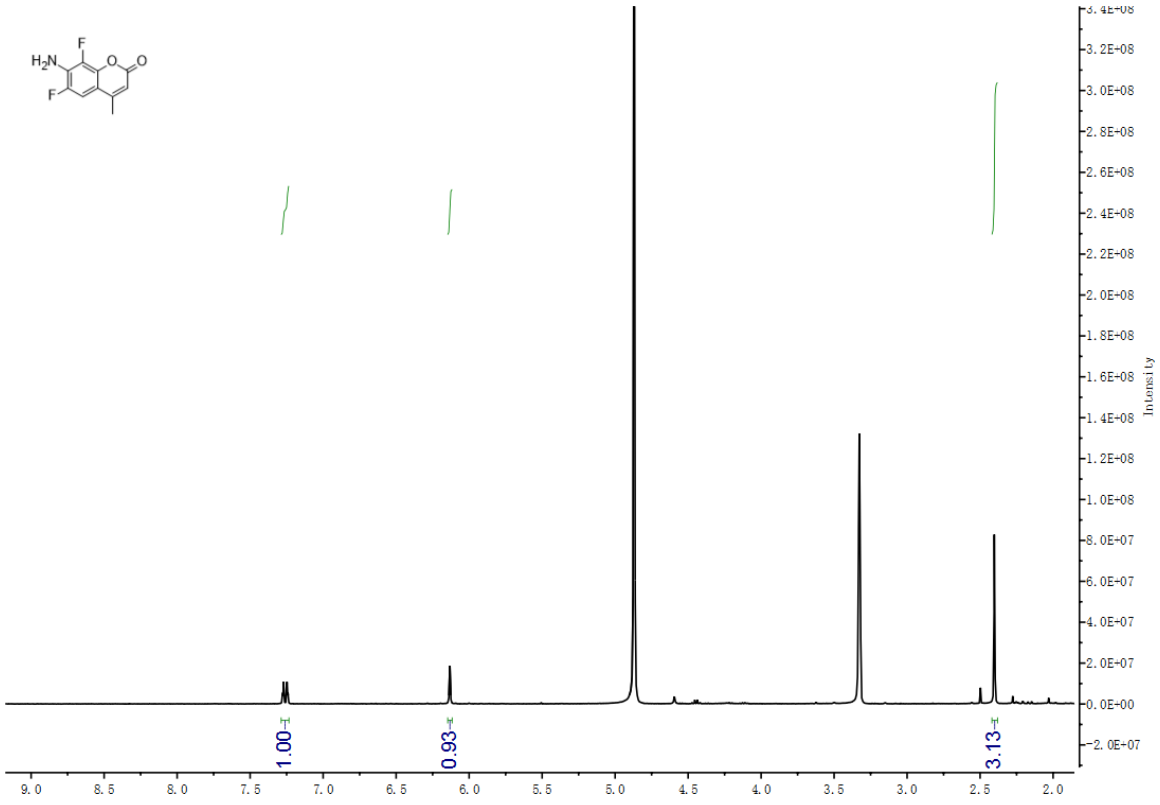


Fig. S7. The ^{1}H NMR spectrum of **5**.



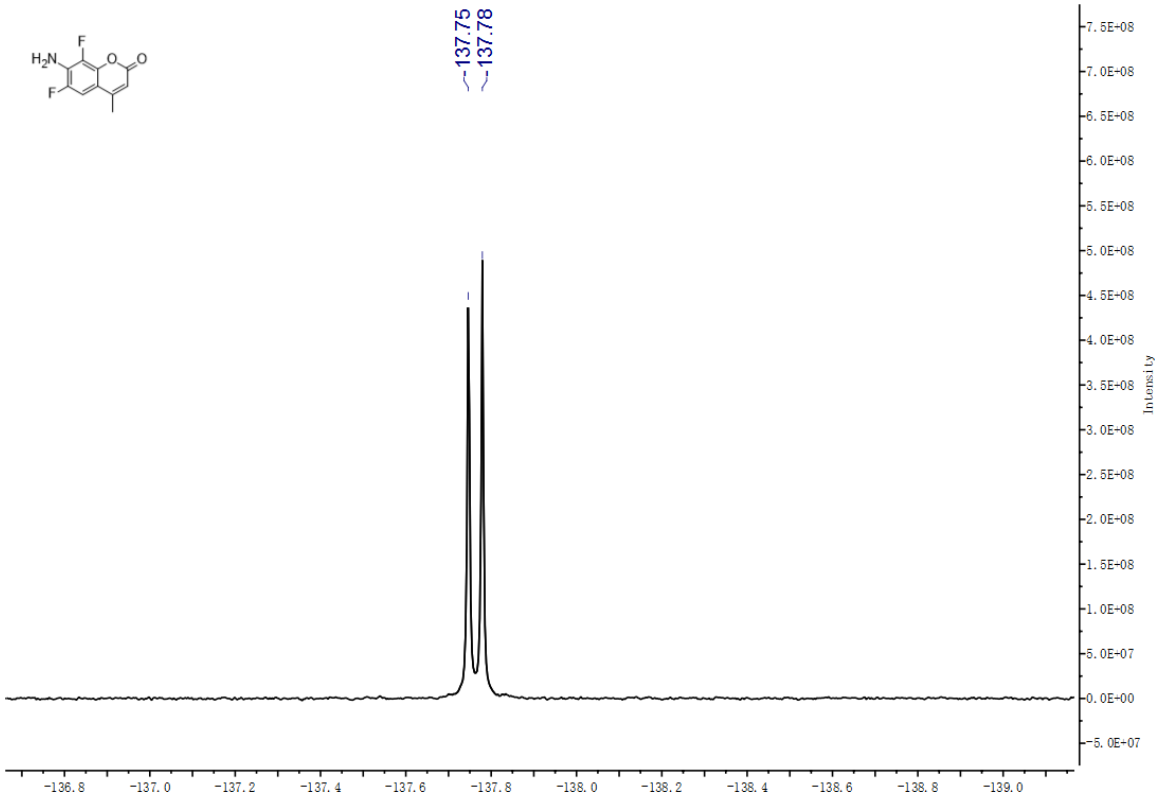
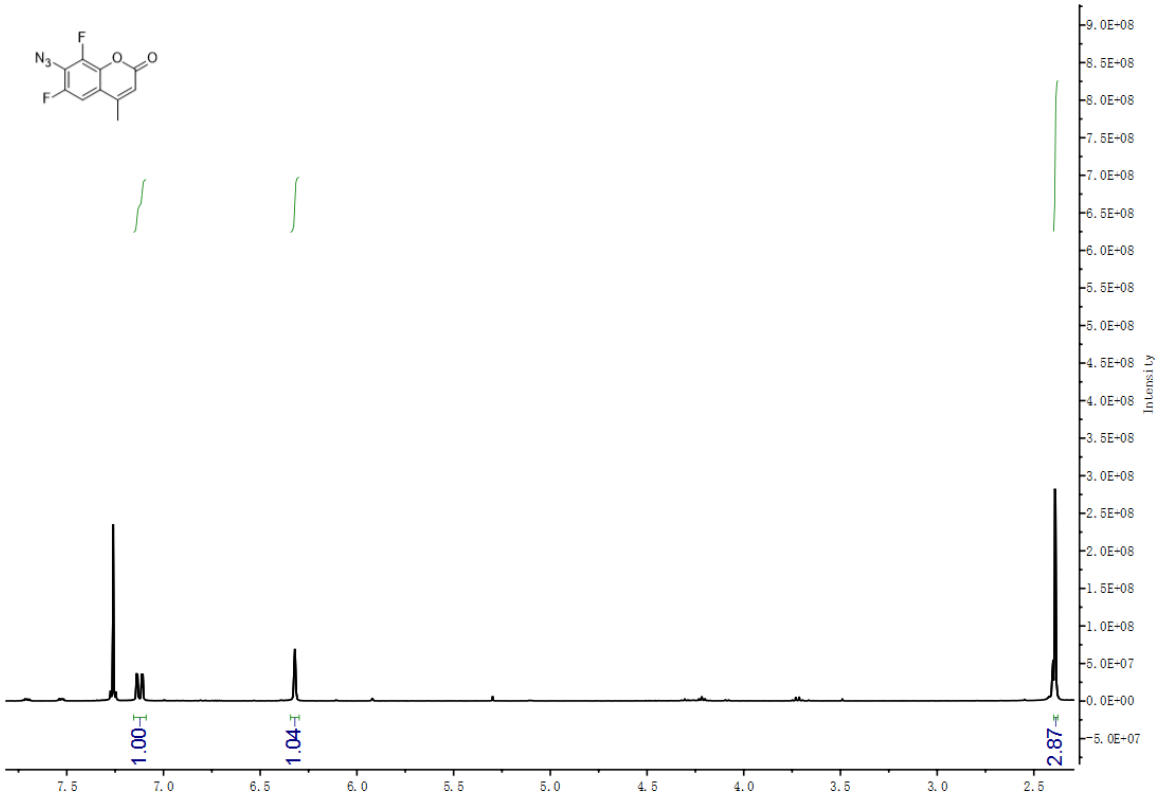


Fig. S8. The ^{1}H NMR and ^{19}F NMR spectrum of **4**.



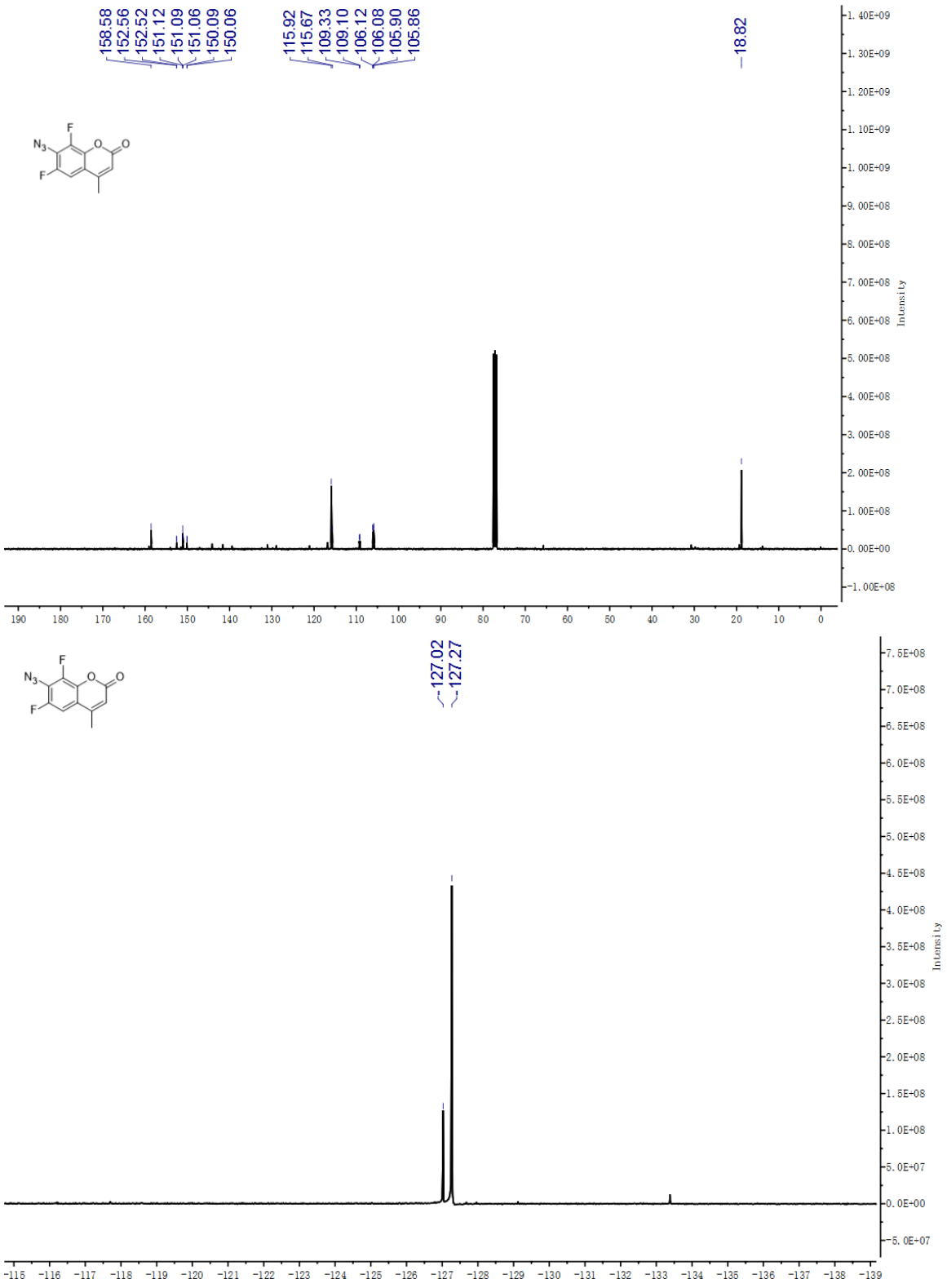


Fig. S9. The ^{1}H NMR, ^{13}C NMR and ^{19}F NMR spectrum of **1**.

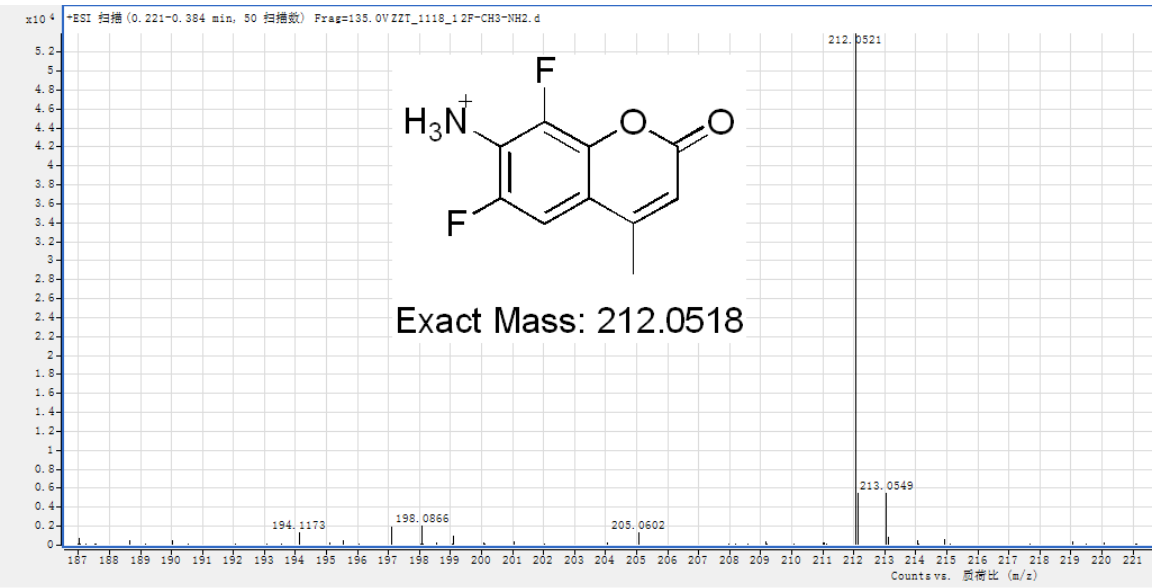


Fig. S10. The HRMS spectrum of **5**.

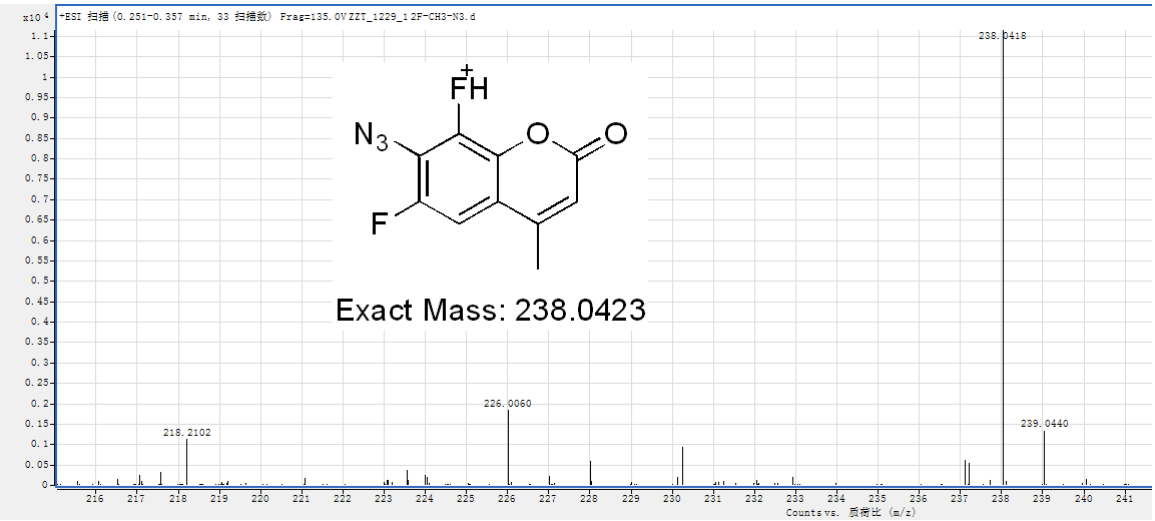


Fig. S11. The HRMS spectrum of **1**.

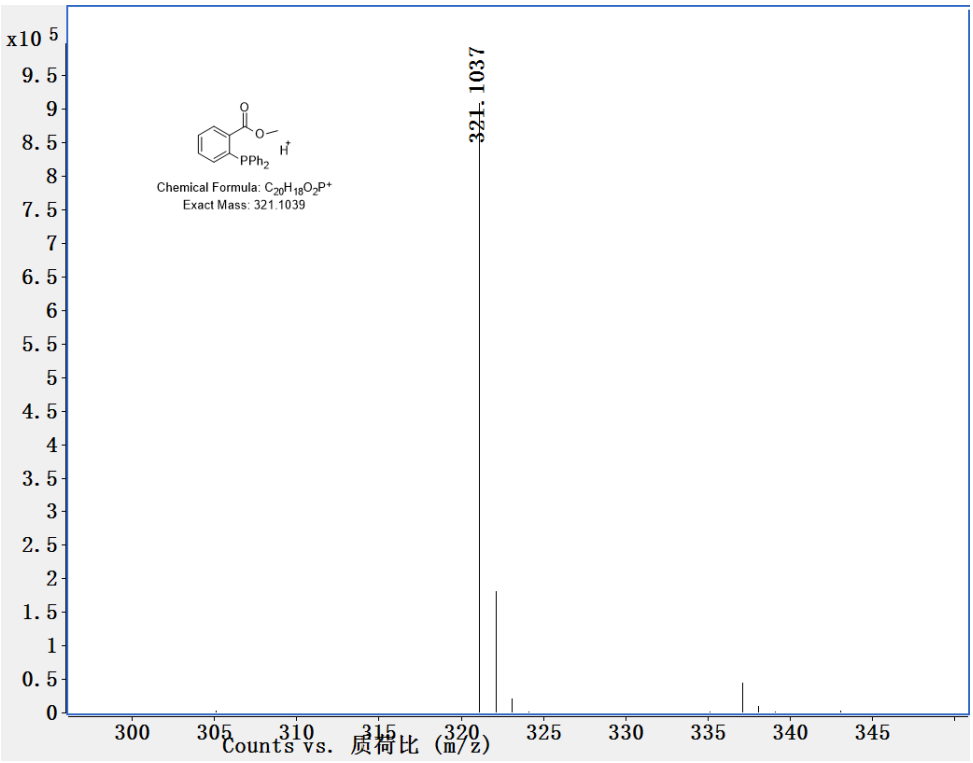


Fig. S12. The HRMS spectrum of **8**.

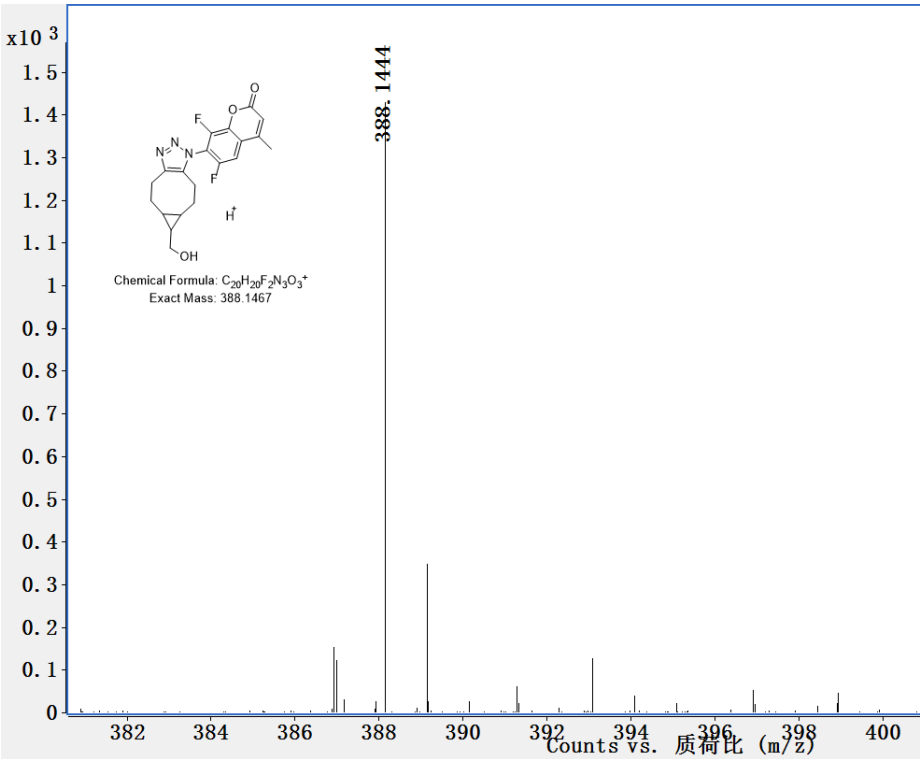


Fig. S13. The HRMS spectrum of the product of probe **1** (1 mM) treated with **6** (10 mM) in PBS (50 mM, pH 7.4) containing 70% CH_3CN at room temperature for 3 h. The reaction mixture was submitted into ESI-MS without purification.