

Supplementary Information

Disassembly-driven Signal Turn-on Probes for Bimodal Detection of DNA with ^{19}F NMR and Fluorescence

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1. NMR spectra

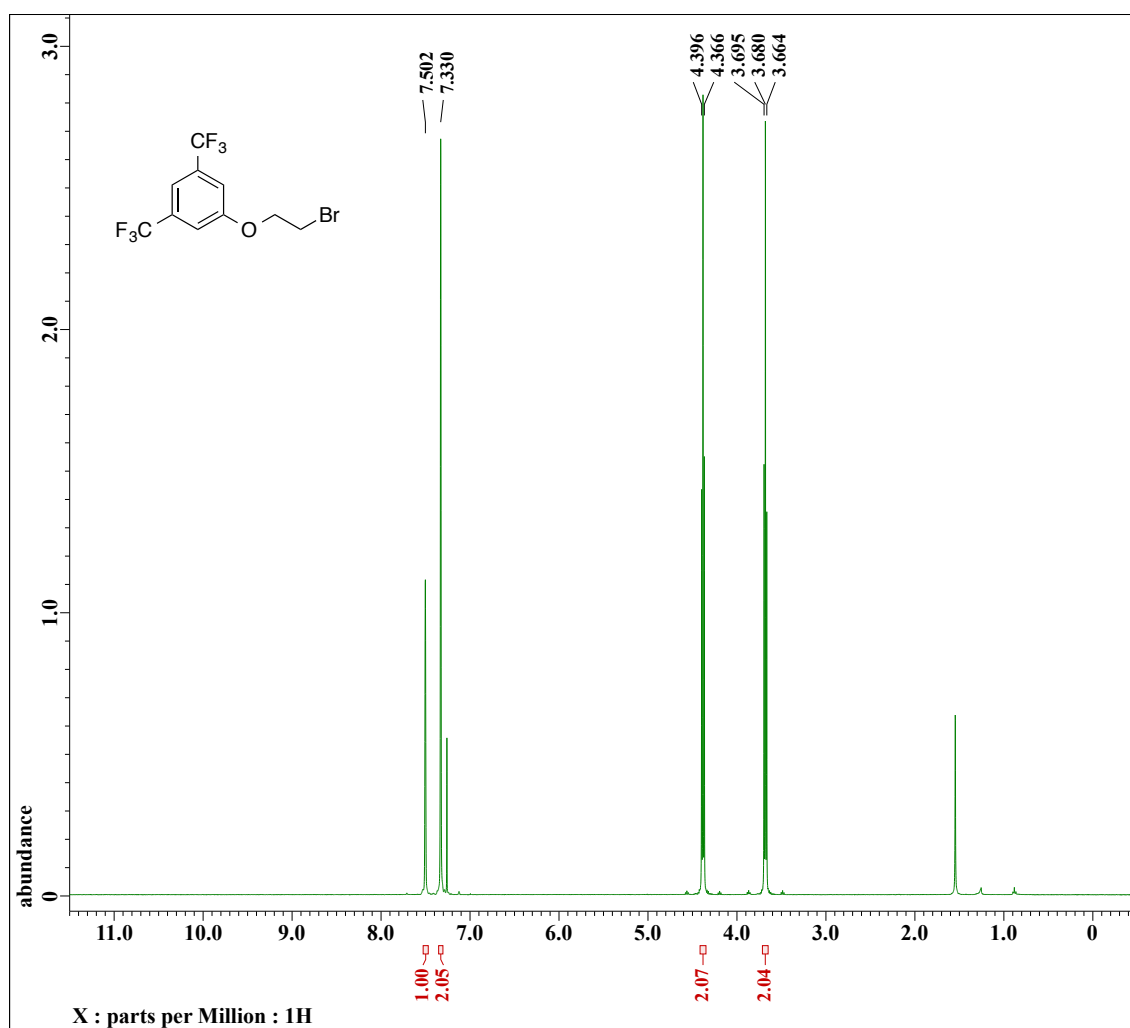


Fig. S1 ^1H NMR spectrum of **1a** (Solvent: CDCl_3)

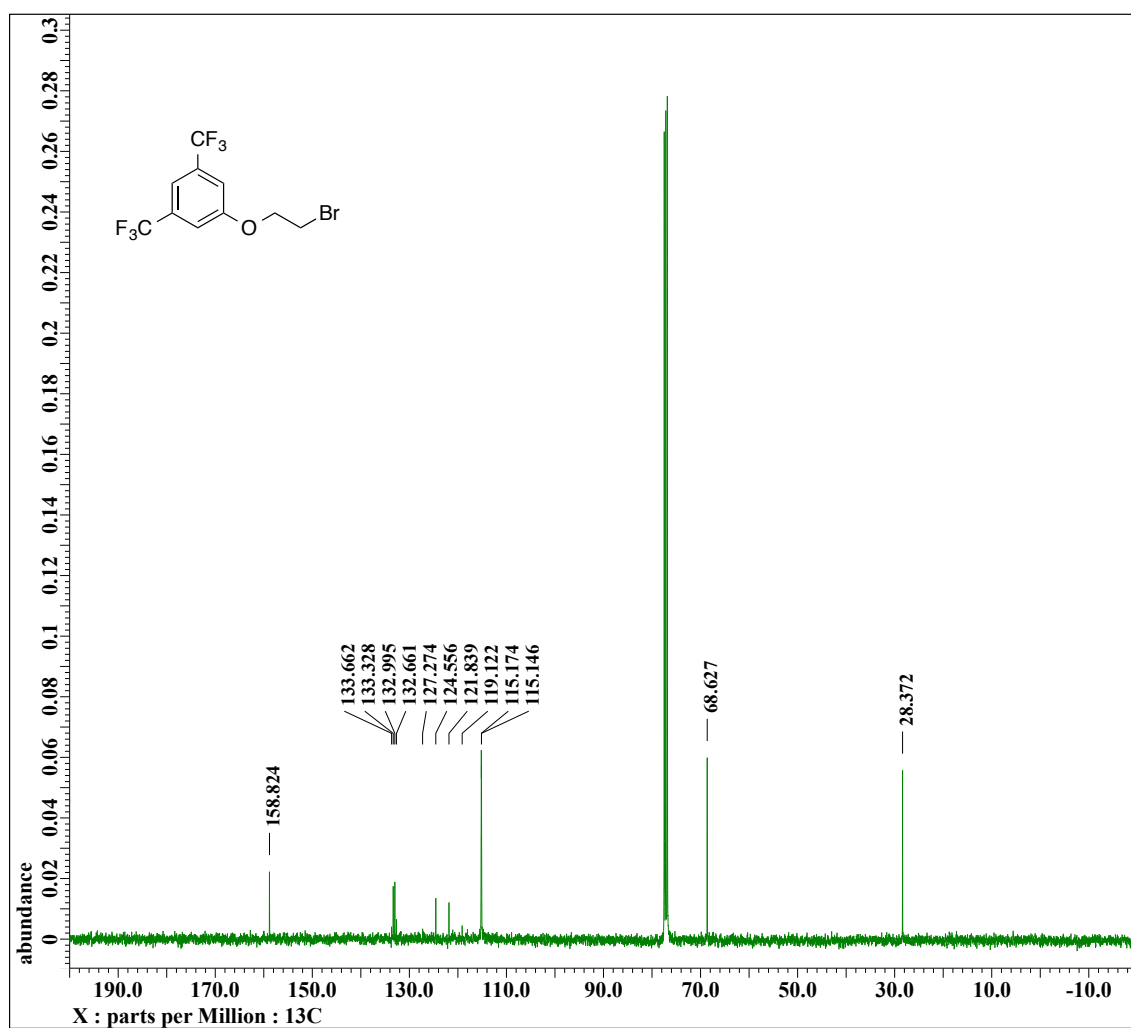


Fig. S2 ¹³C NMR spectrum of **1a** (Solvent: CDCl₃)

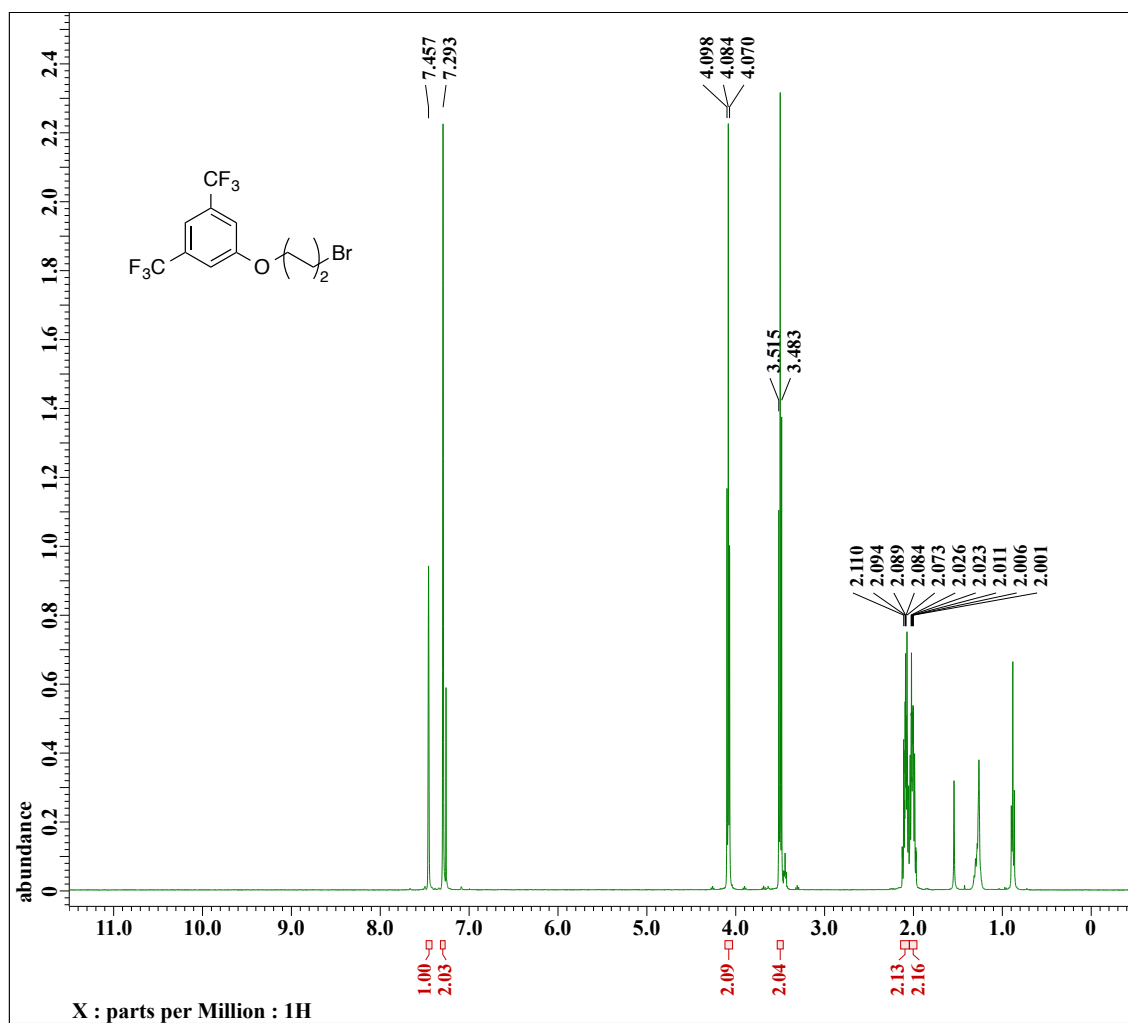


Fig. S3 ¹H NMR spectrum of **1b** (Solvent: CDCl₃)

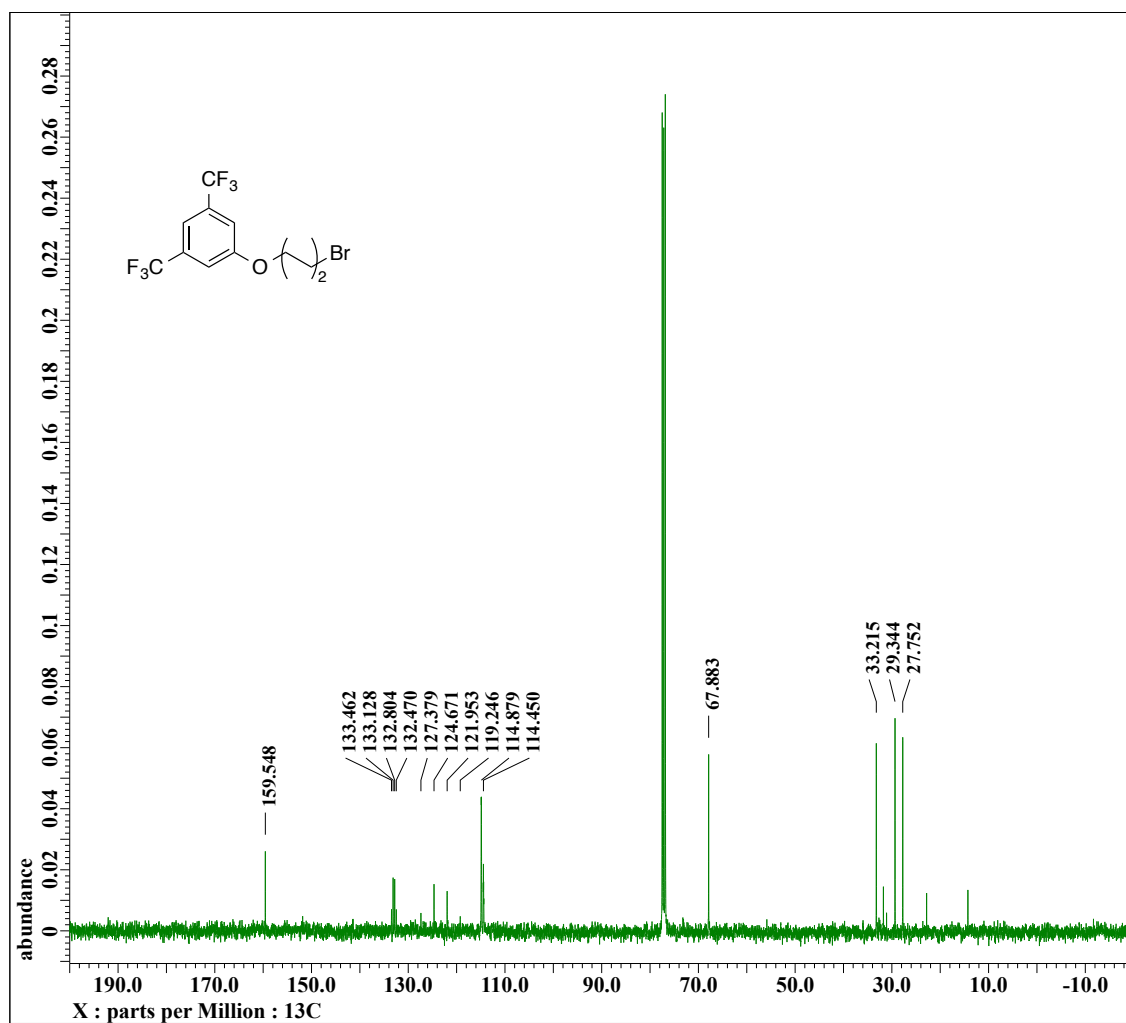


Fig. S4 ¹³C NMR spectrum of **1b** (Solvent: CDCl₃)

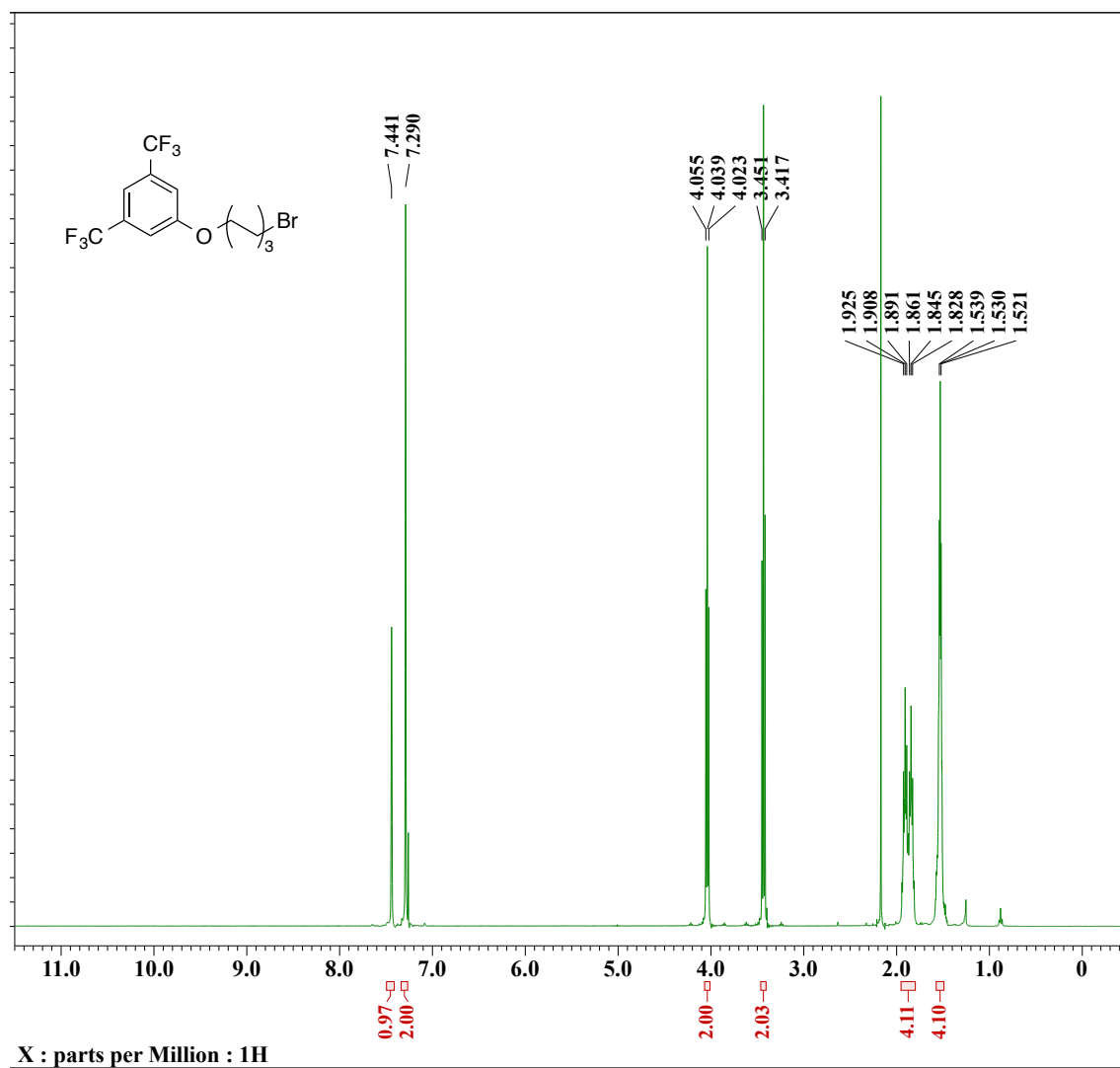


Fig. S5 ¹H NMR spectrum of **1c** (Solvent: CDCl₃)

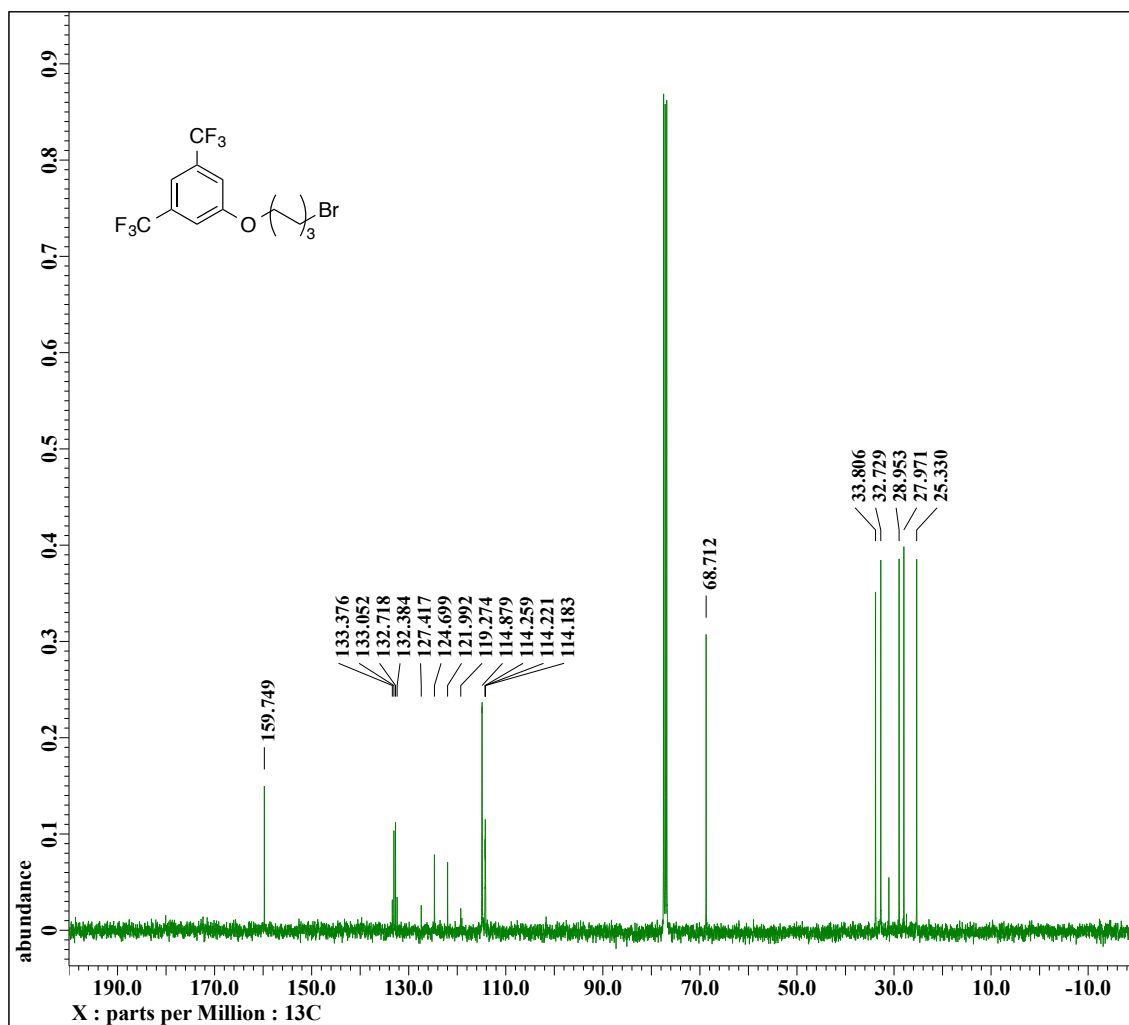


Fig. S6 ¹³C NMR spectrum of **1c** (Solvent: CDCl₃)

2. MALDI-TOF-Mass spectra

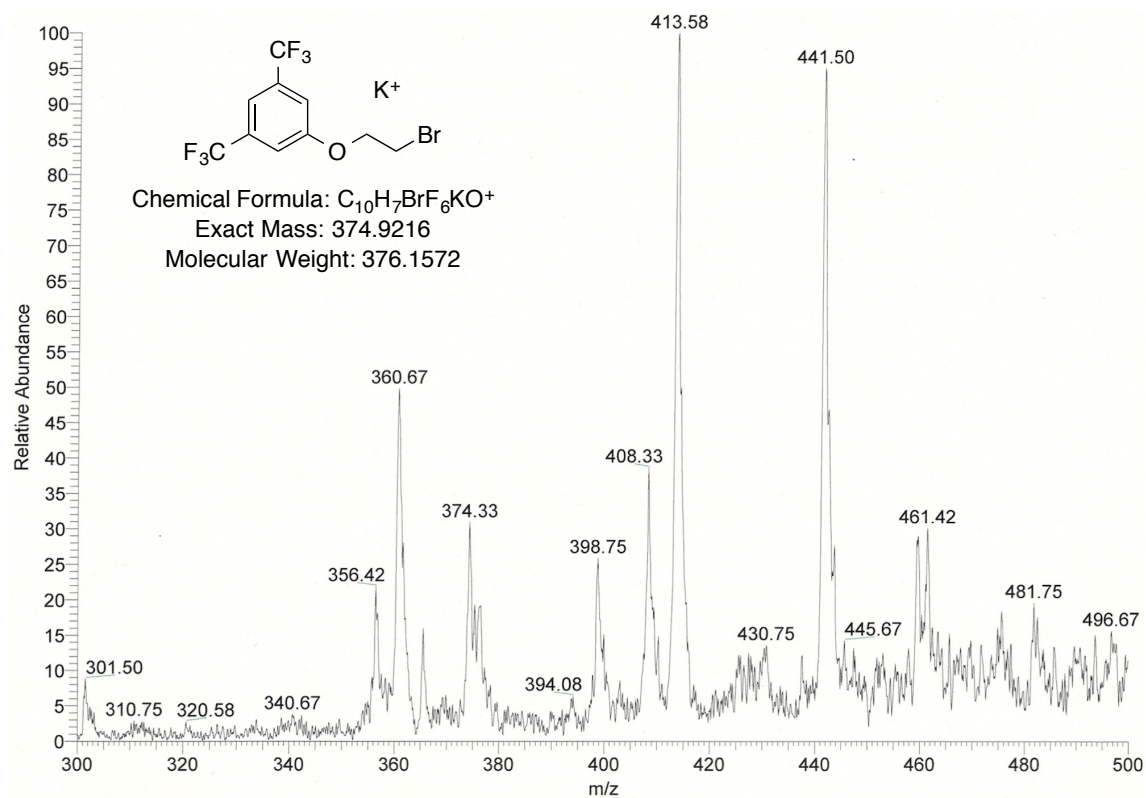


Fig. S7 ESI-Mass spectrum of **1a** (Solvent: MeOH)

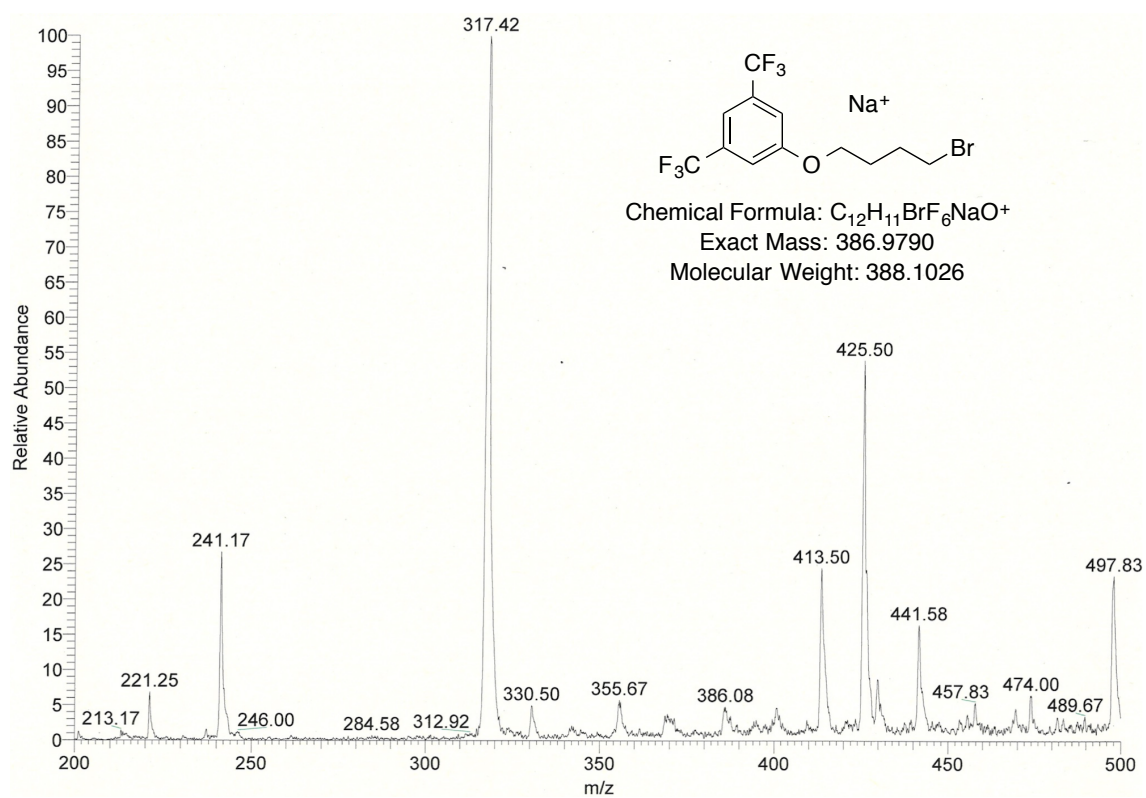


Fig. S8 ESI- Mass spectrum of **1b** (Solvent: MeOH)

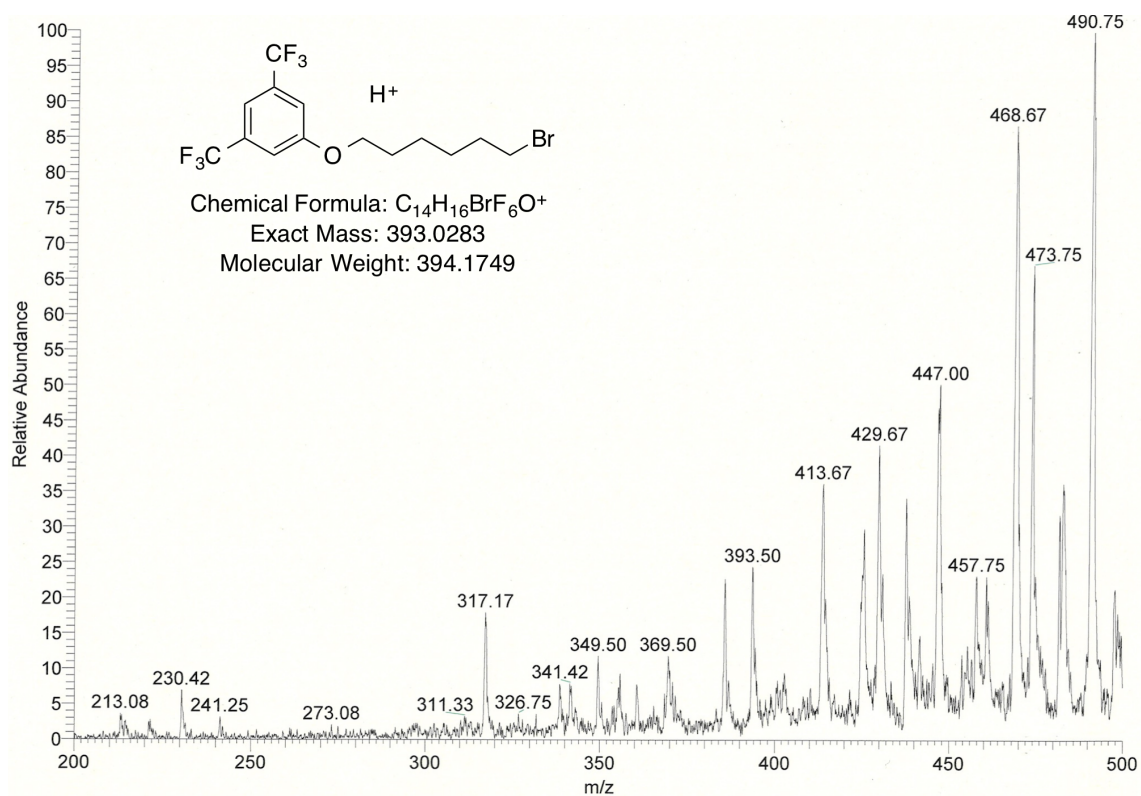


Fig. S9 ESI- Mass spectrum of **1c** (Solvent: MeOH)

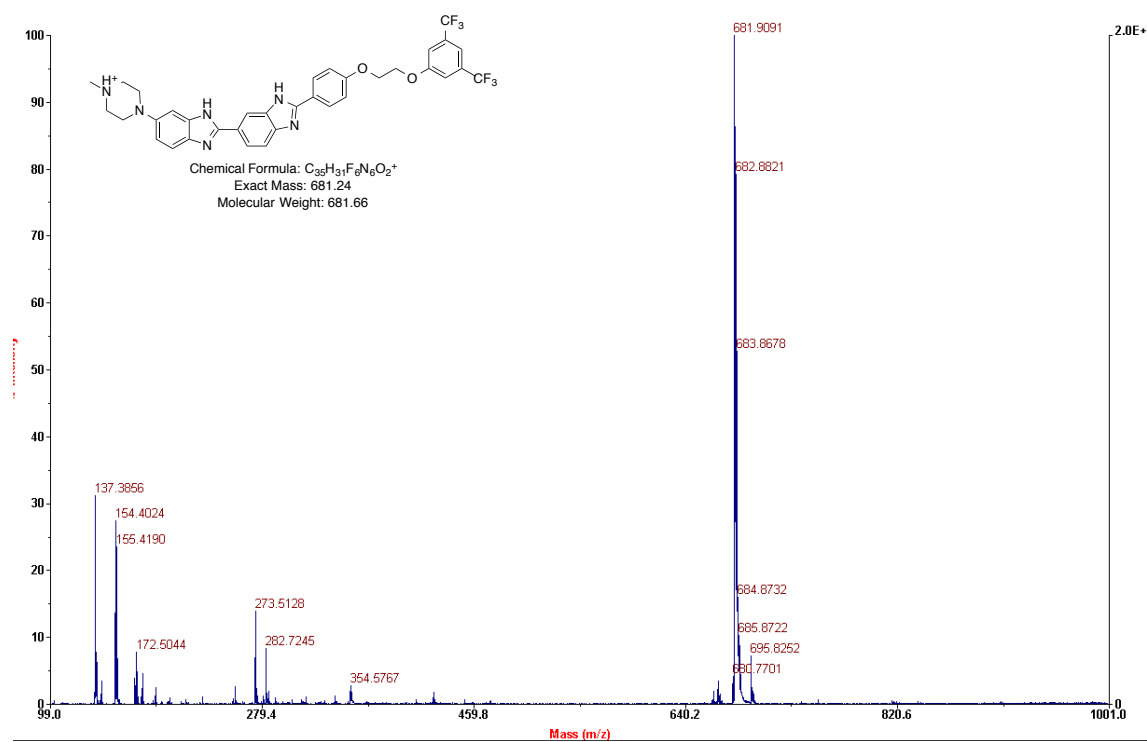


Fig. S10 MALDI-TOF-Mass spectrum of **2a** (Matrix: 2,5-Dihydroxybenzoic acid)

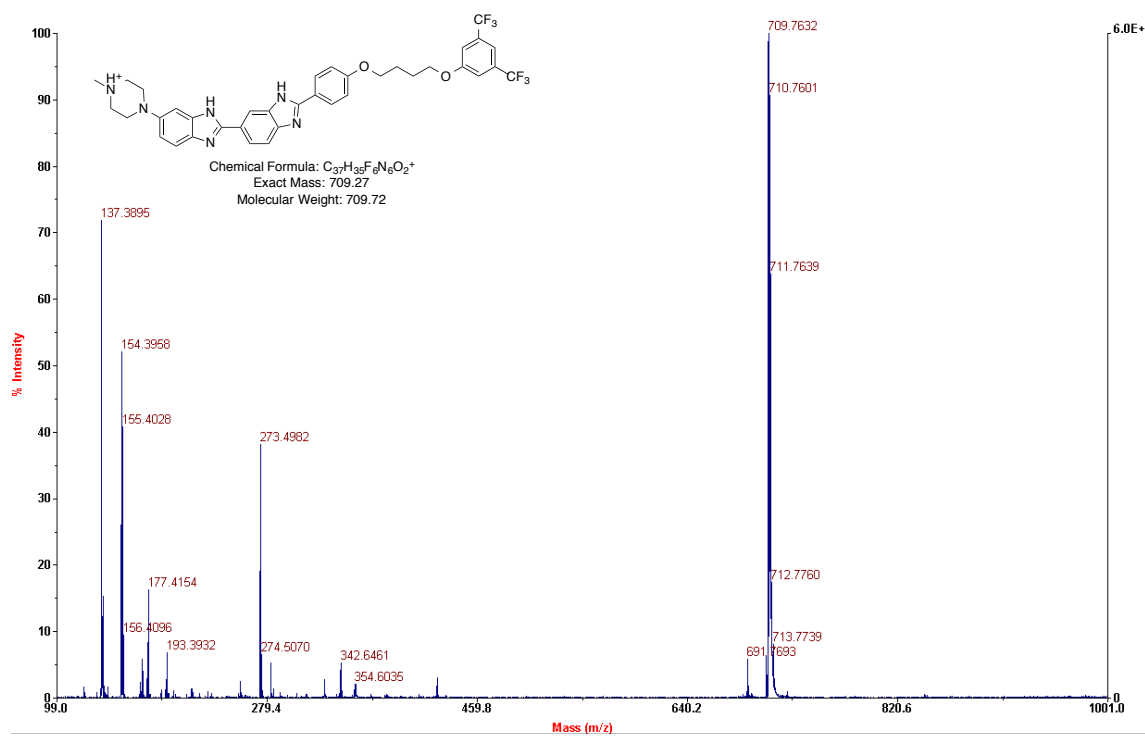


Fig. S11 MALDI-TOF-Mass spectrum of **2b** (Matrix: 2,5-Dihydroxybenzoic acid)

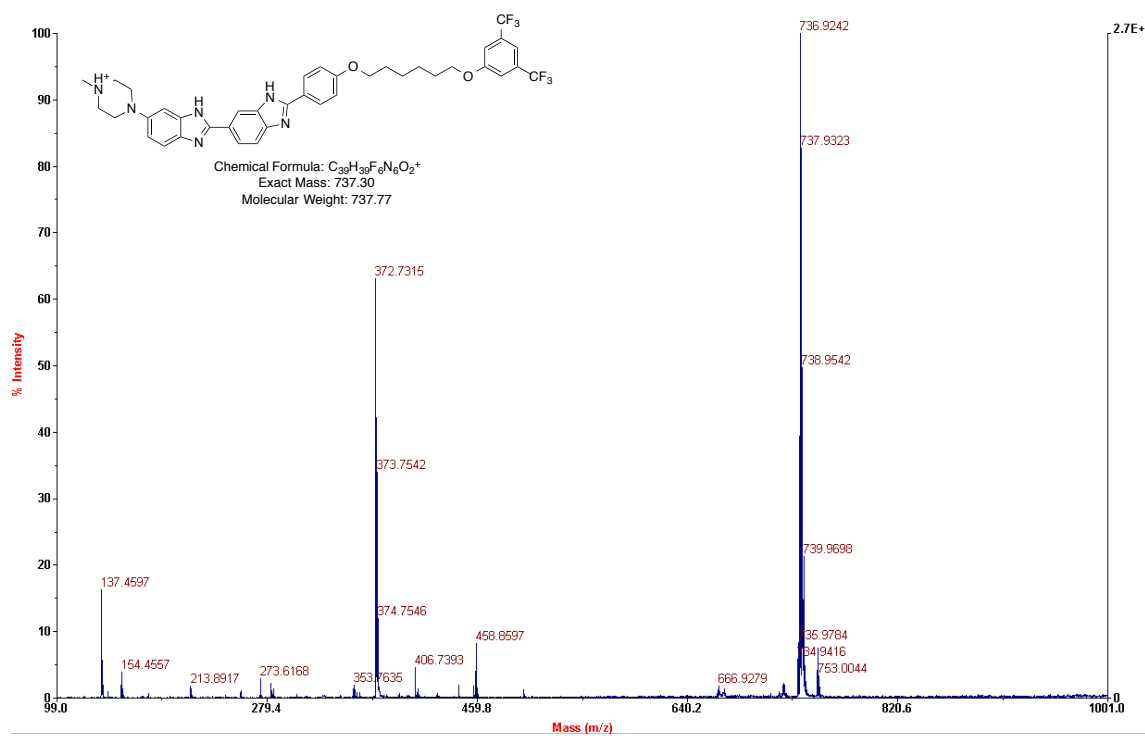


Fig. S12 MALDI-TOF-Mass spectrum of **2c** (Matrix: 2,5-Dihydroxybenzoic acid)

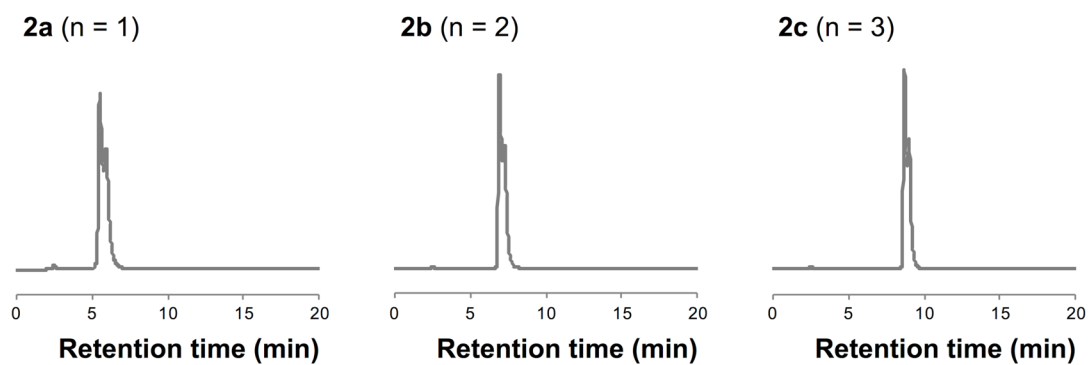


Fig. S13 Reversed-phase HPLC chromatograms of **2**. Conditions for HPLC analysis; Column: COSMOSIL 5C18 AR-II column (Nacalai, 5 μ m, 4.6 $\times$ 150 mm); Gradient: 40–80%/20 min (MeCN/H₂O with 0.1% TFA); Flow rate: 1.0 mL/min; Detection: absorbance unit at 340 nm.

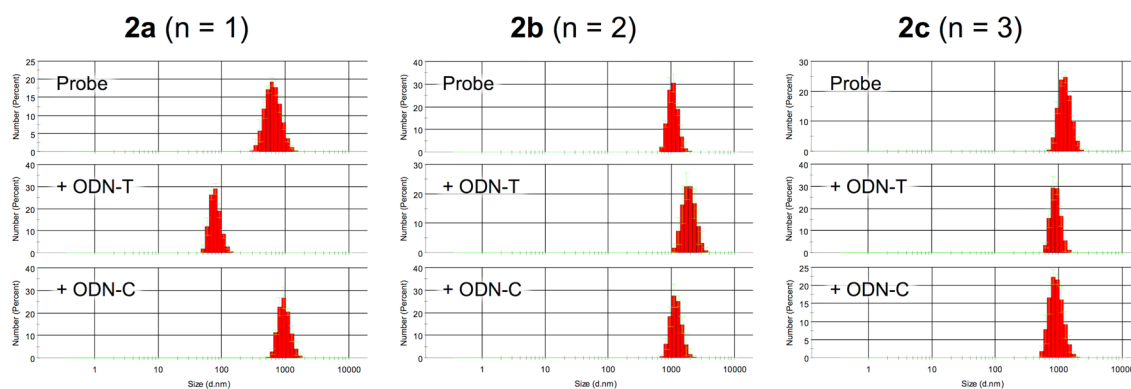


Fig. S14 Histograms of DLS analyses of **2a**, **2b** and **2c** in the presence of ODN-T or ODN-C.

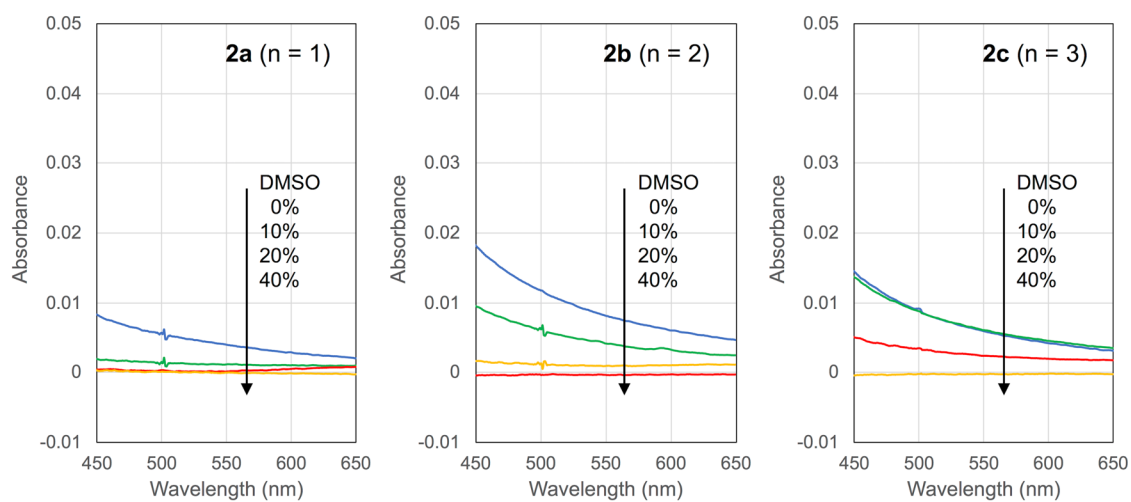


Fig. S15 UV-Vis spectra of aqueous buffer solution of **2** containing various amounts of DMSO. [**2**] = 10 μ M in 50 mM Tris-HCl (pH7.6), 100 mM NaCl with 0 to 40%(v/v) DMSO.