

## Electronic Supplementary Information

# A novel near-infrared colorimetric probe for fluoride anions based on a heptamethine dye

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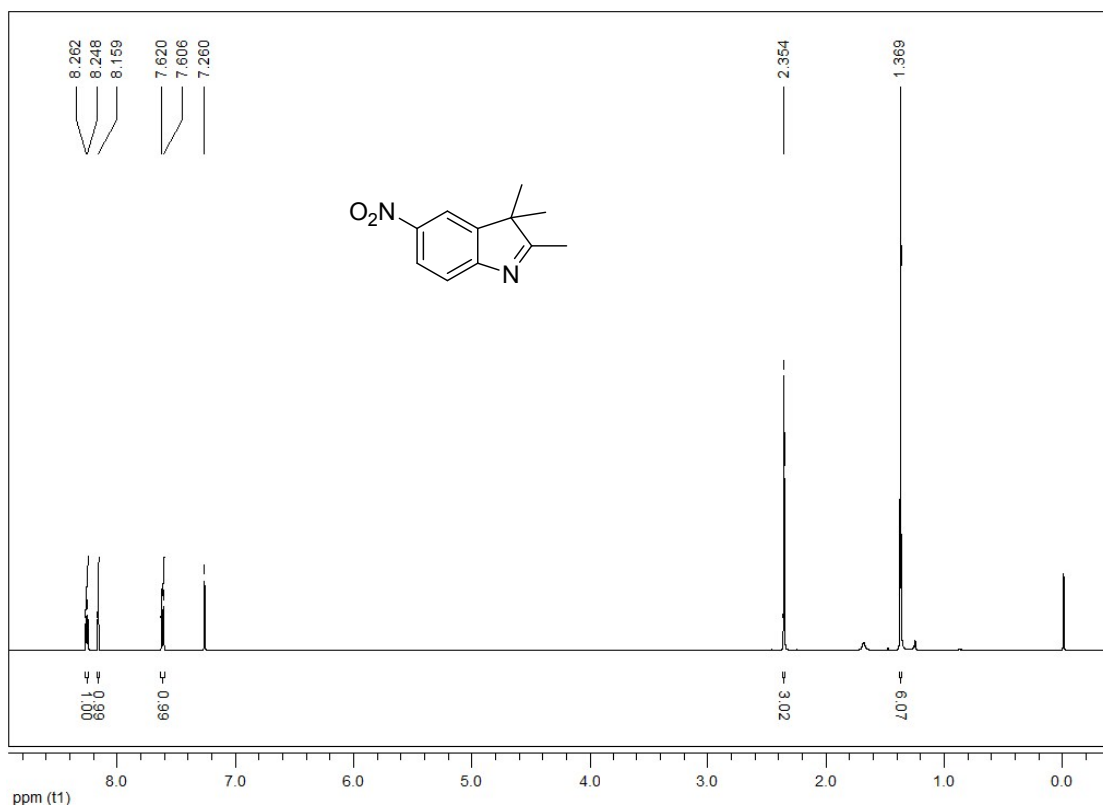


Fig. S1 <sup>1</sup>H NMR spectrum of compound 1 in CDCl<sub>3</sub>.

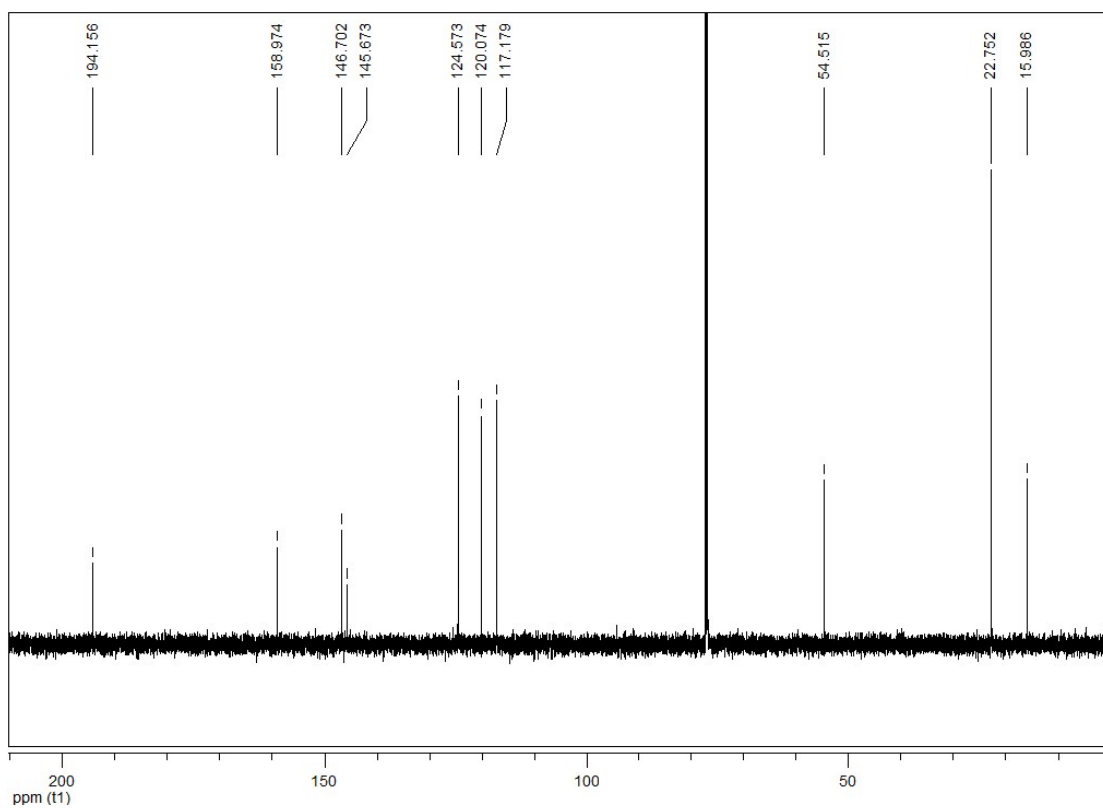


Fig. S2 <sup>13</sup>C NMR spectrum of compound 1 in CDCl<sub>3</sub>.

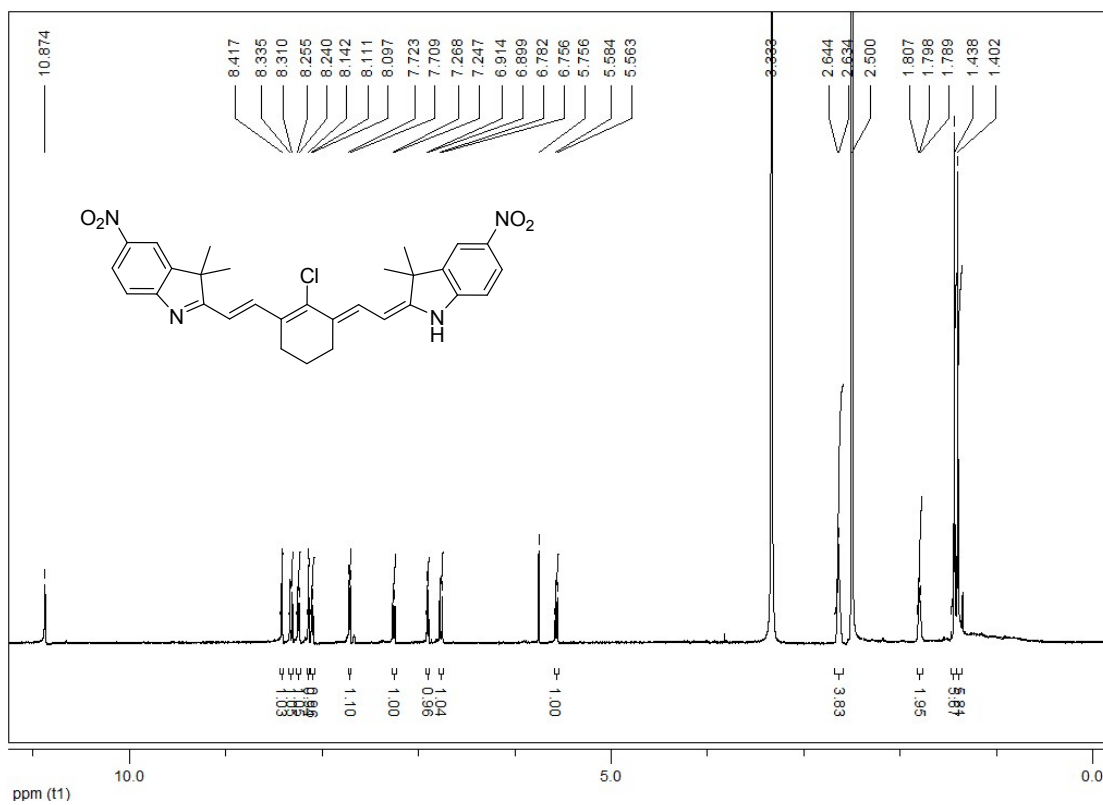


Fig. S3  $^1\text{H}$  NMR spectrum of the target compound 3 in DMSO.

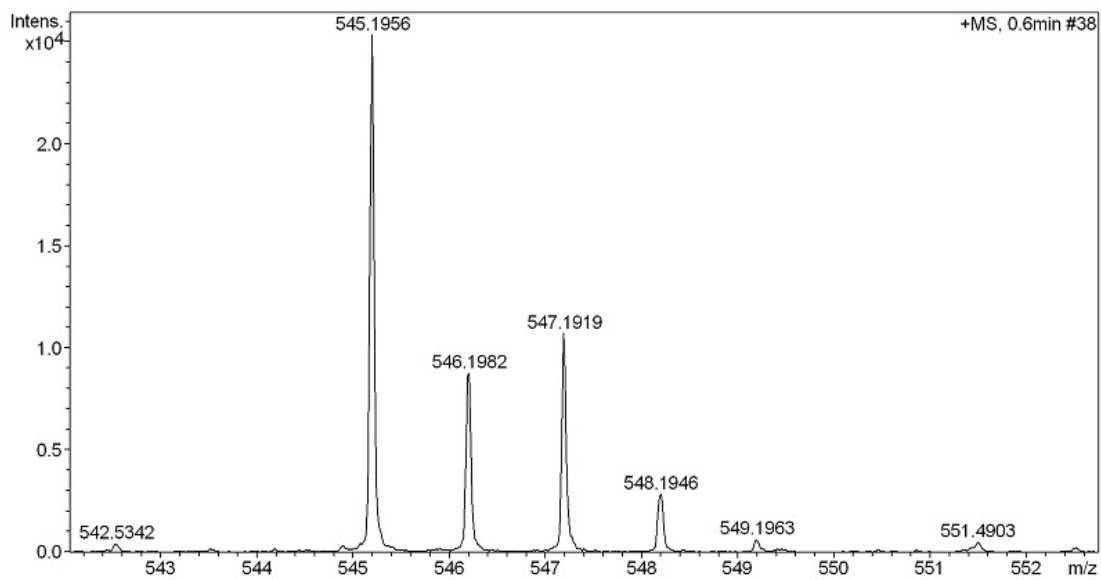


Fig. S4 HR-MS spectrum of the target compound.

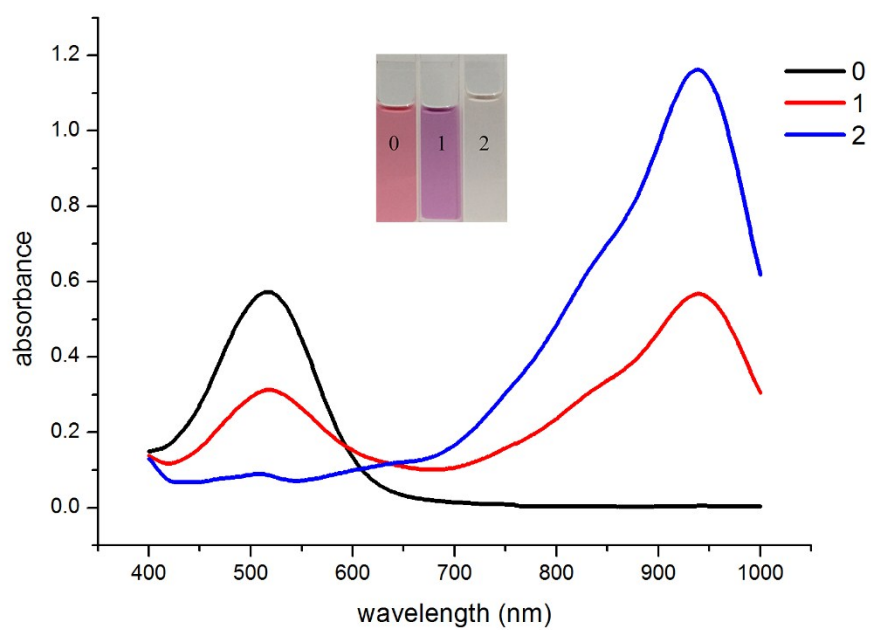


Fig. S5 Absorption spectral changes of probe 3 ( $1.0 \times 10^{-5}$  M) in DCM upon addition of (1) 10 equiv.  $\text{AcO}^-$ , (2) 10 equiv.  $\text{AcO}^-$  and 10 equiv.  $\text{F}^-$ , (3) 10 equiv.  $\text{AcO}^-$  and 20 equiv.  $\text{F}^-$ .