# A Highly Selective Fluorescent Sensor for Fluoride through ESPT Signaling Transduction

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### **Supporting information**

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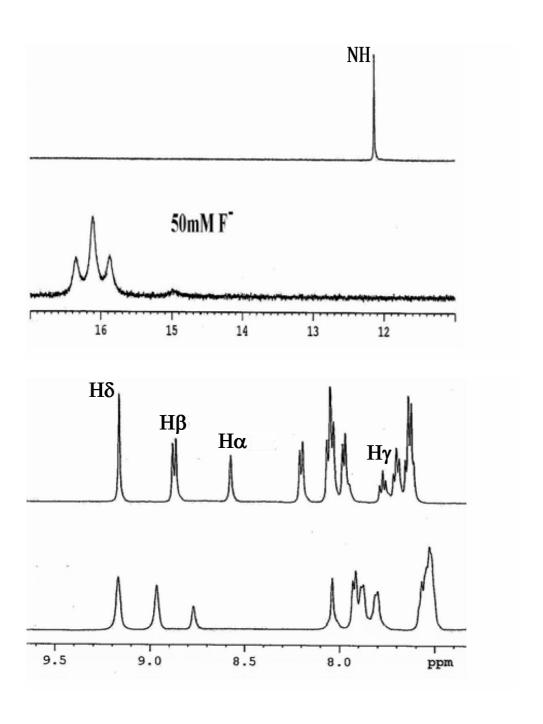
- 1. Color changes seen for compound H-NP2 upon the addition of anions.
- **2.** <sup>1</sup>H NMR titrations of H-NP4 in DMSO- $d_6$  (5 × 10<sup>-3</sup> M) with F<sup>-</sup>.
- 3. UV-vis spectra of H-NP3 in DMSO ( $5 \times 10^{-5}$ M) upon addition of F<sup>-</sup>.
- **4.** Emission spectra changes of H-NP4 (5  $\times$  10<sup>-5</sup> M) upon addition of F<sup>-</sup>.

#### 1. Color changes seen for compound H-NP2 upon the addition of anions.



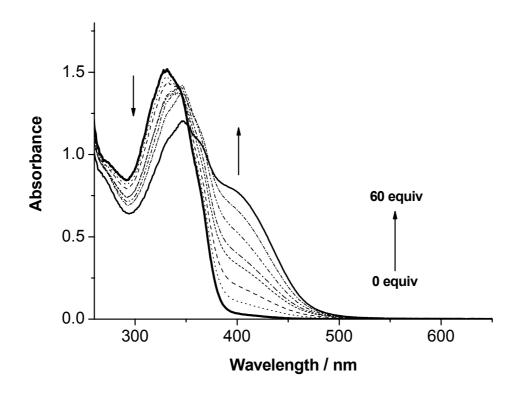
**Figure S1.** Color changes seen for DMSO solutions of compound H-NP2 upon the addition of anions as TBA salts: left, free; middle, with 1 eq  $F^-$ ; right, with 1 eq  $H_2PO_4^-$ .

# **2.** $^{1}$ H NMR titrations of H-NP**4** in DMSO- $d_{6}$ (5 × 10<sup>-3</sup> M) with F<sup>-</sup>.



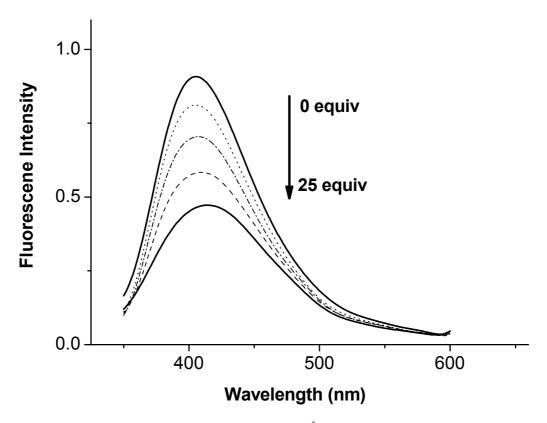
**Figure S2.** <sup>1</sup>H NMR titration H-NP4 in DMSO- $d_6$  (5 × 10<sup>-3</sup> M) with F<sup>-</sup>.

## **3.** UV–vis spectra of H-NP**3** in DMSO (5 ×10<sup>-5</sup>M) upon addition of F<sup>-</sup>.



**Figure S3.** UV–*vis* spectra of H-NP**3** in DMSO  $(5 \times 10^{-5} \text{M})$  upon addition of F<sup>-</sup>.

**4.** Emission spectra changes of H-NP4 (5  $\times$  10<sup>-5</sup> M) upon addition of F<sup>-</sup>.



**Figure S4.** Emission spectra changes of H-NP4 ( $5 \times 10^{-5}$  M) upon addition of F<sup>-</sup> in DMSO, excited at 362nm.