

## Supplementary Data

# Highly Selective Fluorogenic Anion Chemosensors: Naked-eye Detection of $\text{F}^-$ and $\text{AcO}^-$ ions in Natural Water using a Test Strip

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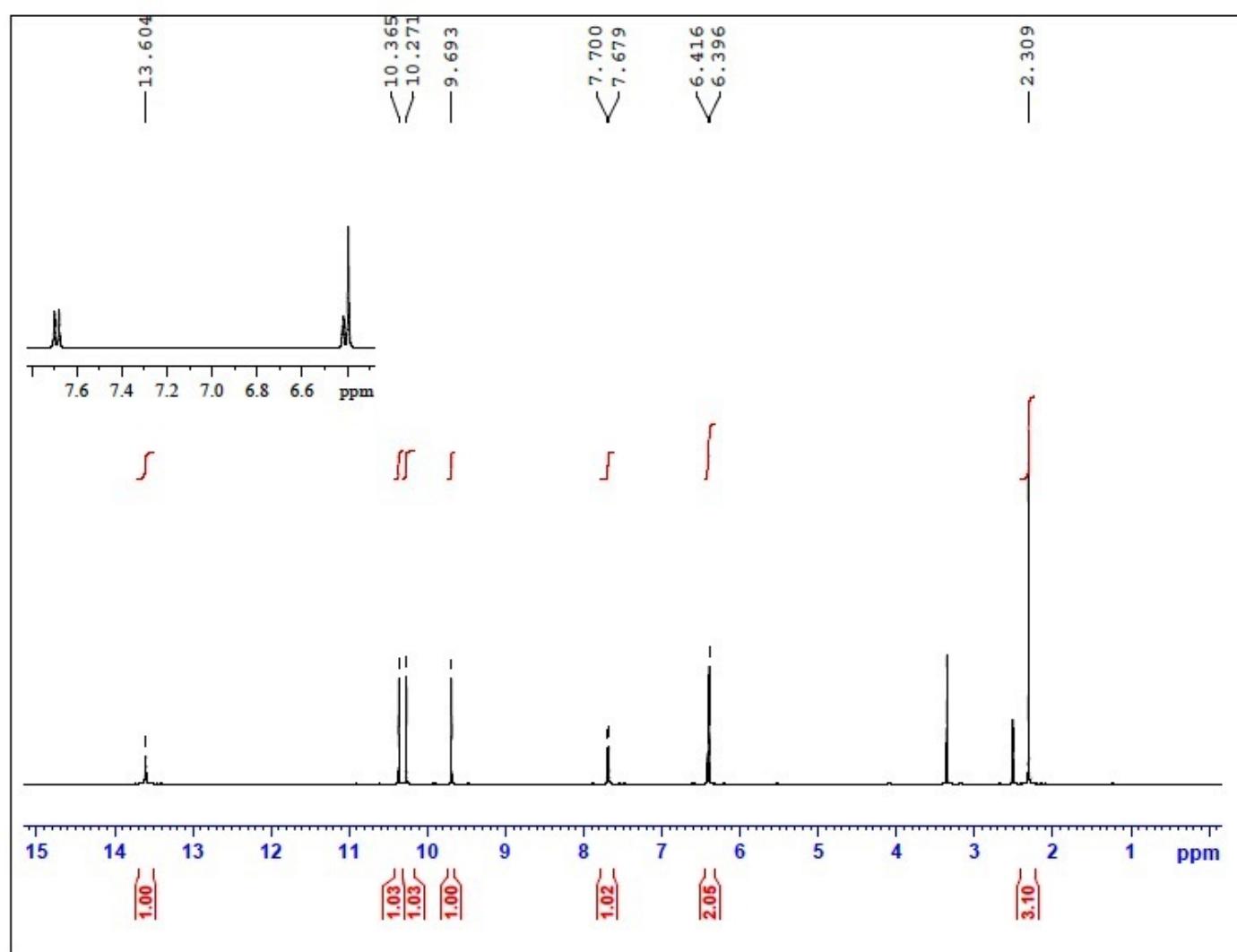
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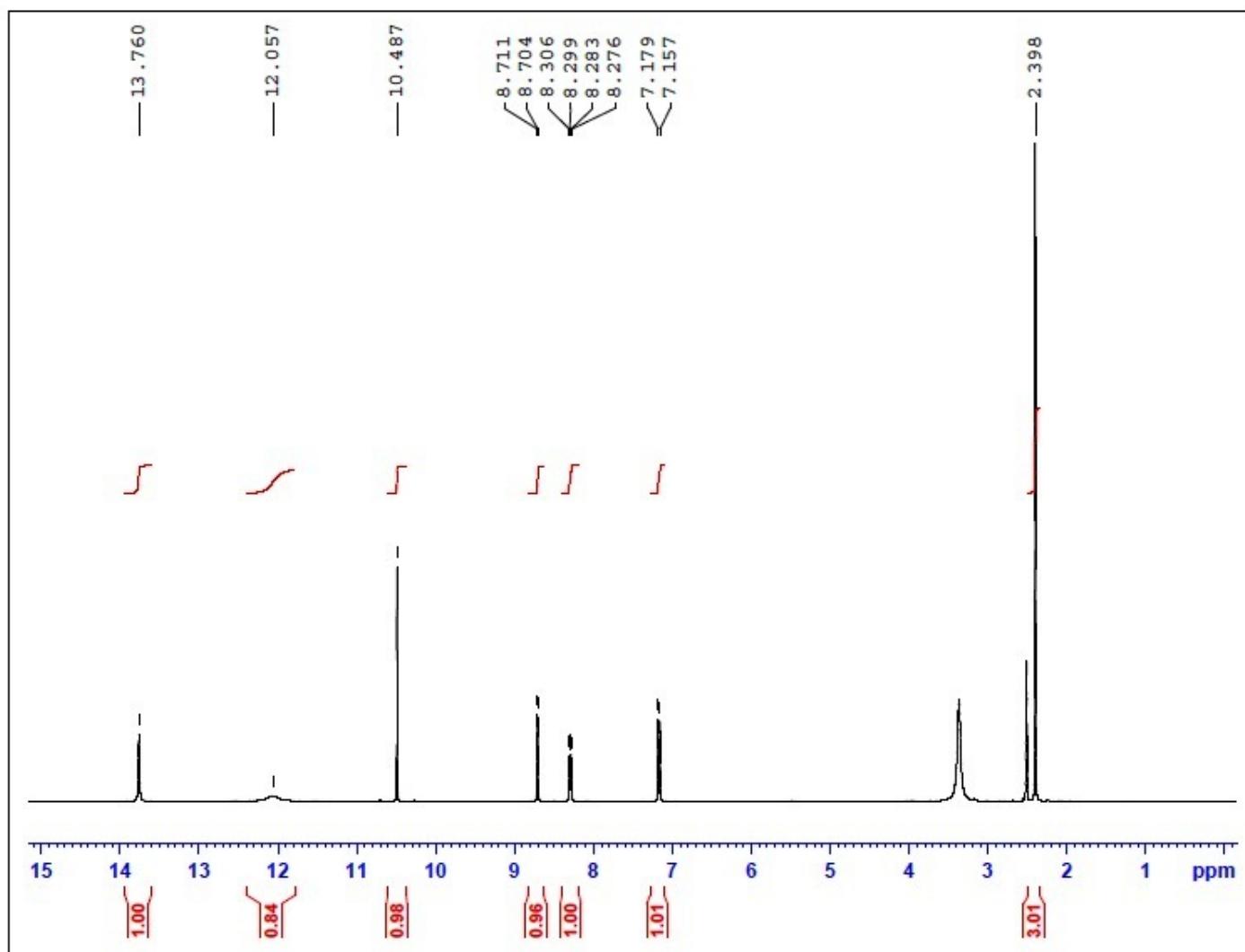
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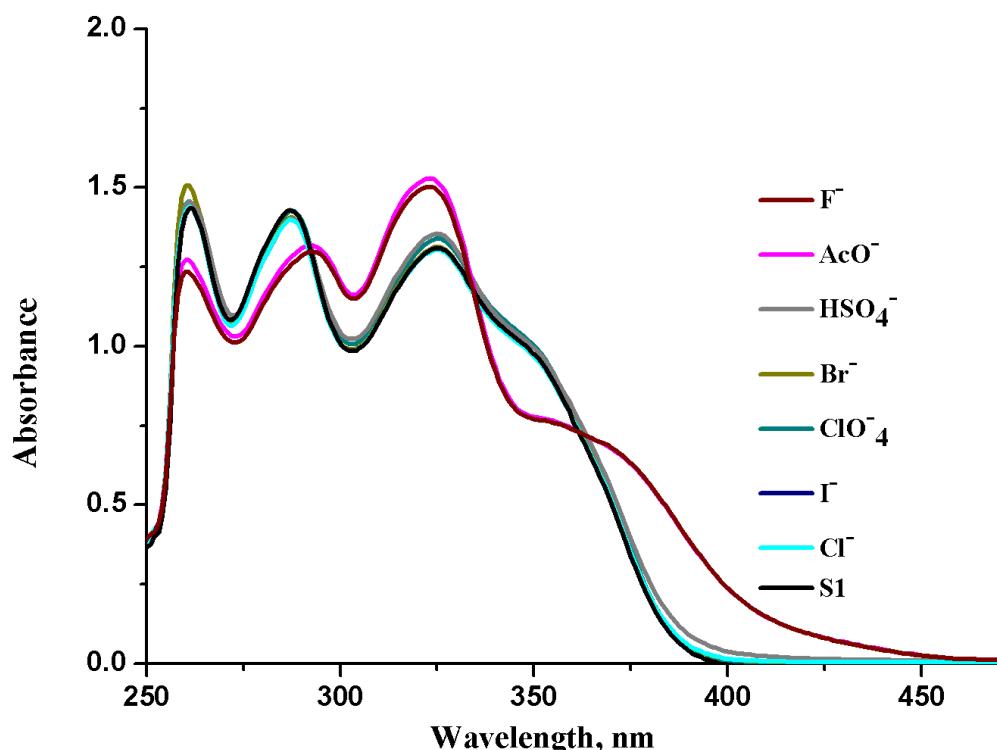
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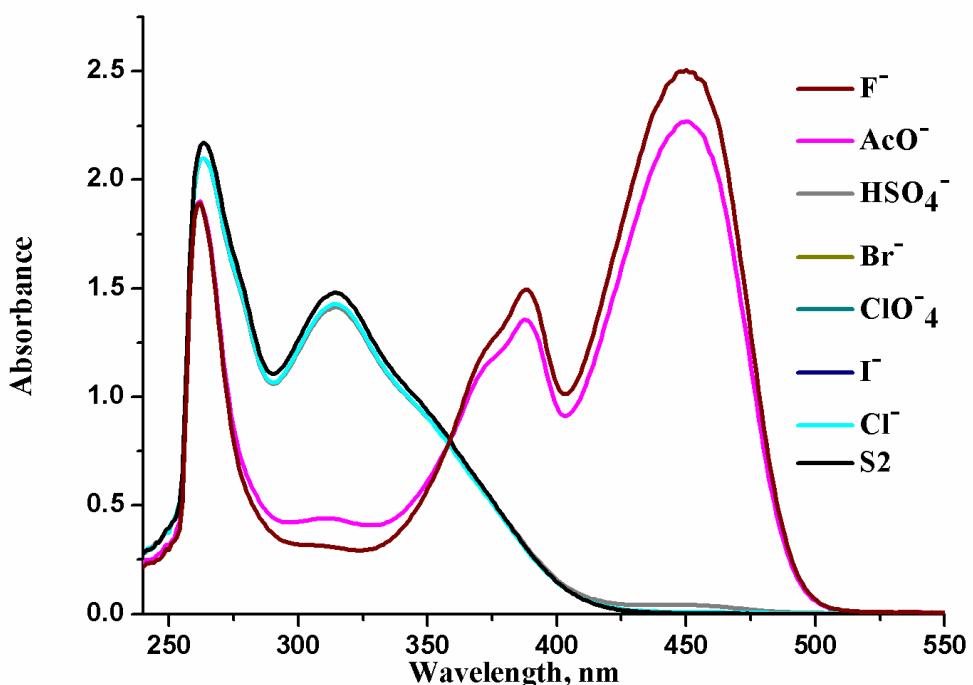
**Fig. S1.** <sup>1</sup>H NMR spectrum of the S1 (400 MHz) in *DMSO-d*<sub>6</sub> solvent. (Inset: Expansion of the aromatic proton region 6.3-7.8 ppm).



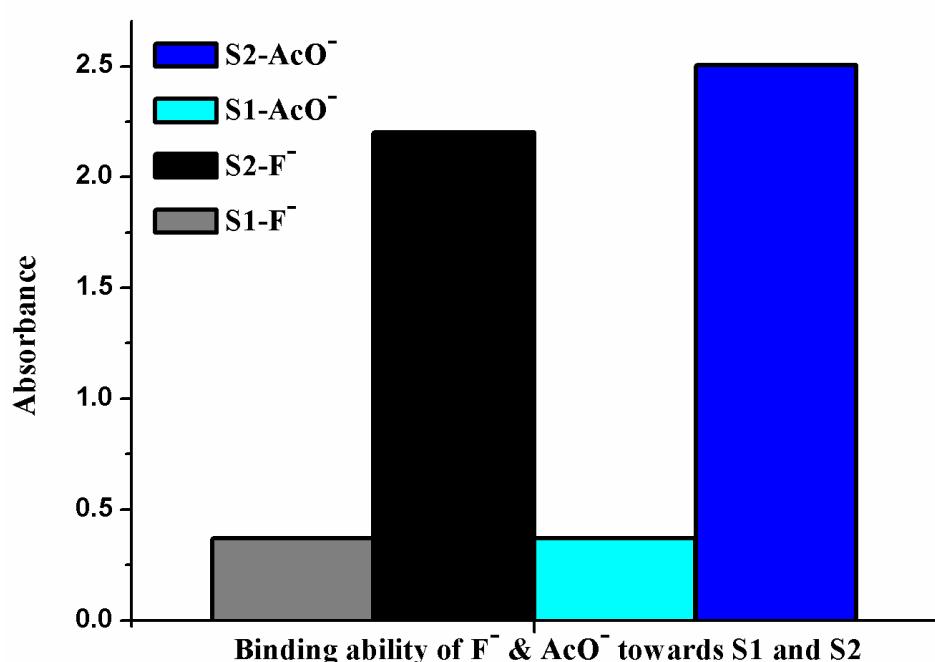
**Fig. S2.**  ${}^1\text{H}$  NMR spectrum of the S2 (400 MHz) in  $\text{DMSO}-d_6$  solvent.



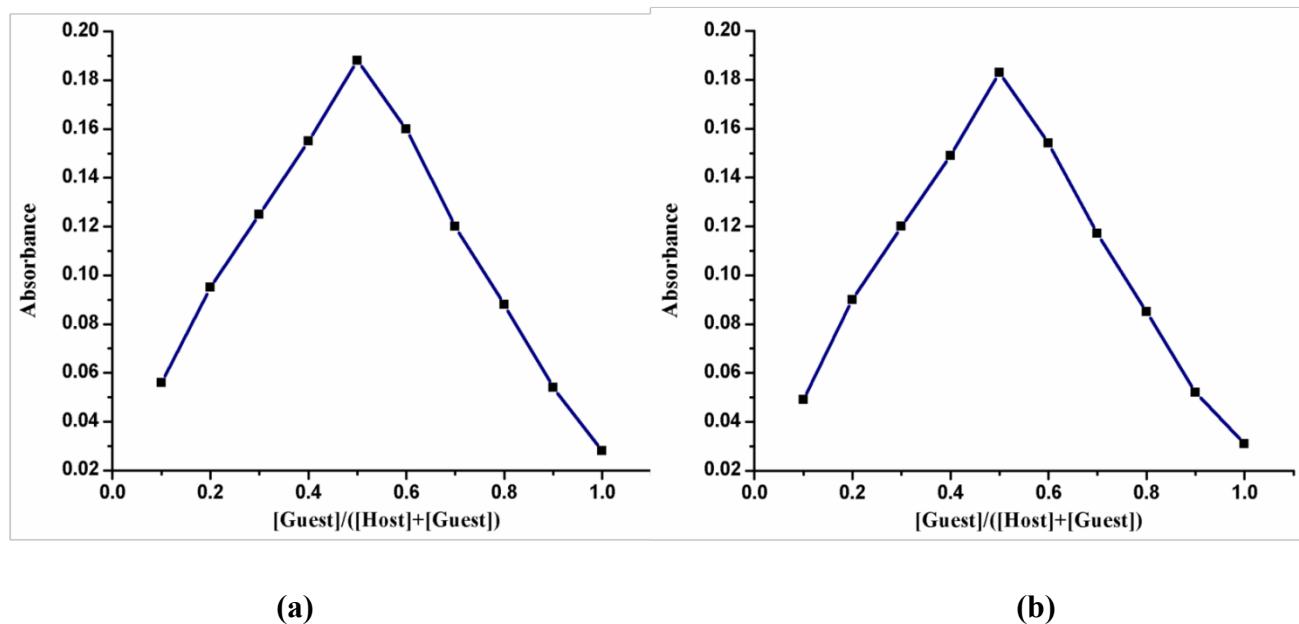
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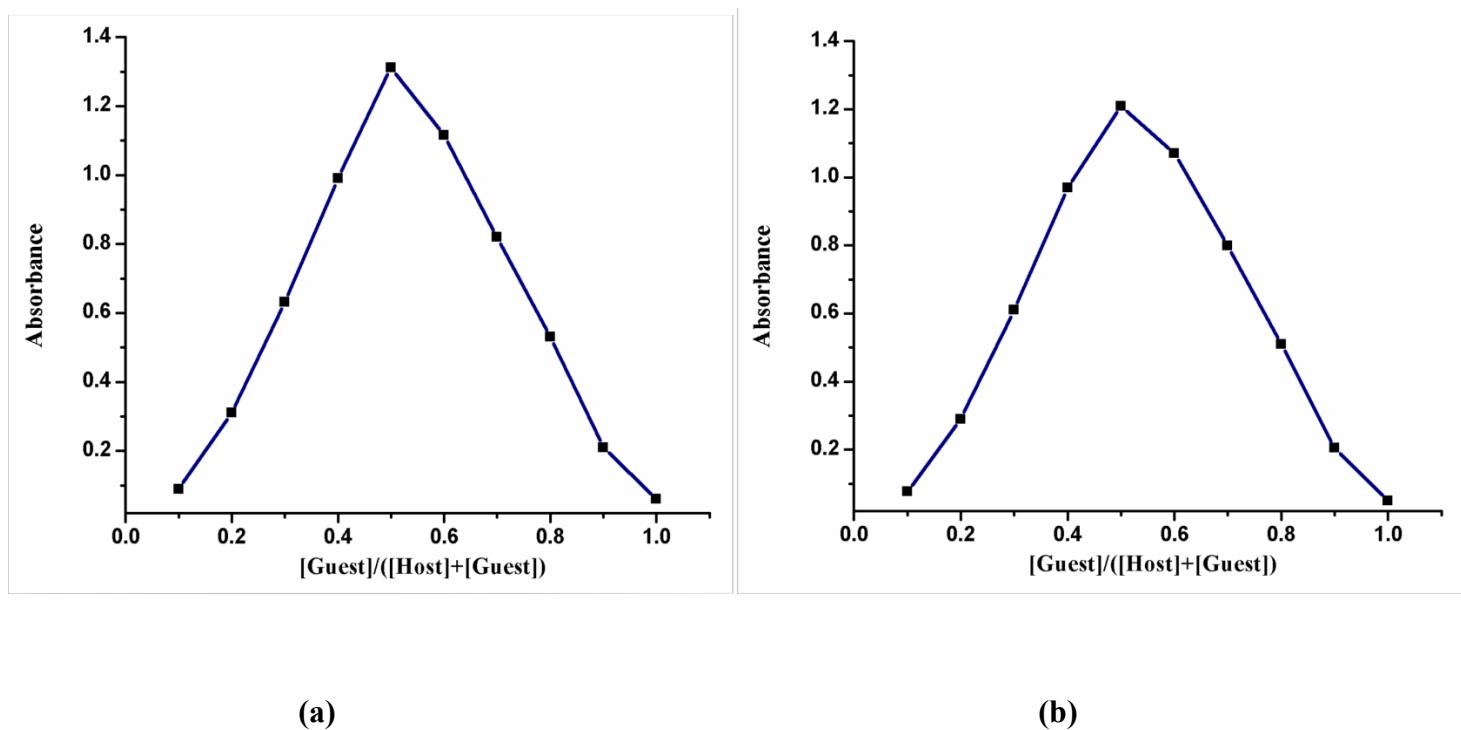
**Fig. S4.** UV-visible spectra of S2 ( $5 \times 10^{-5}$  M) in DMSO solution upon addition of 3 equiv. of different anions as their tetrabutylammonium salt respectively.



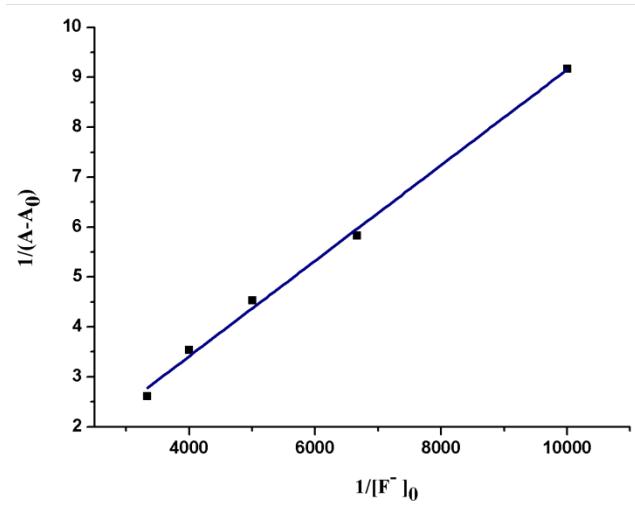
**Fig. S5.** Comparison bargraph of UV-visible spectra of S1 and S2 ( $5 \times 10^{-5}$  M) in DMSO solution towards F<sup>-</sup> and AcO<sup>-</sup> (3 equiv) anions, respectively.



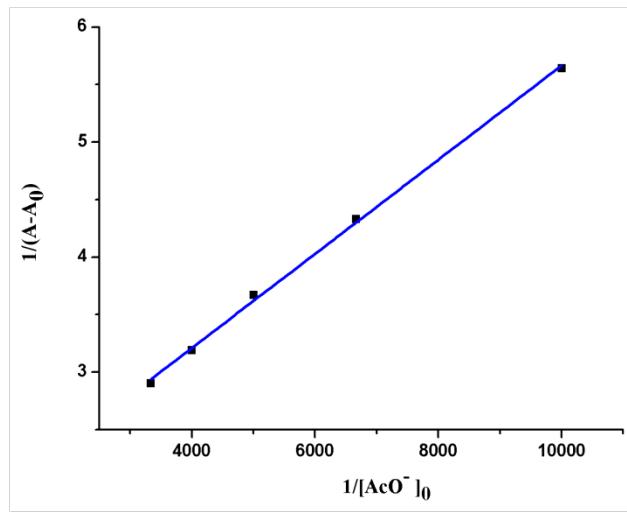
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**Fig. S7.** Job plots for complexation of S2 with (a) fluoride & (b) acetate anions.

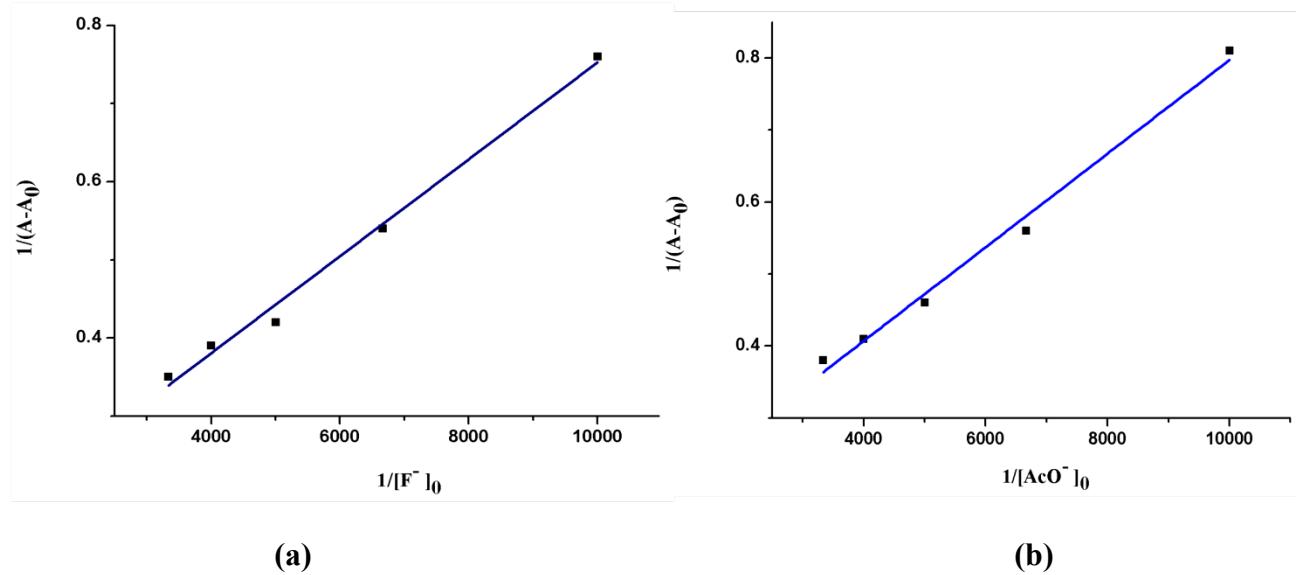


(a)

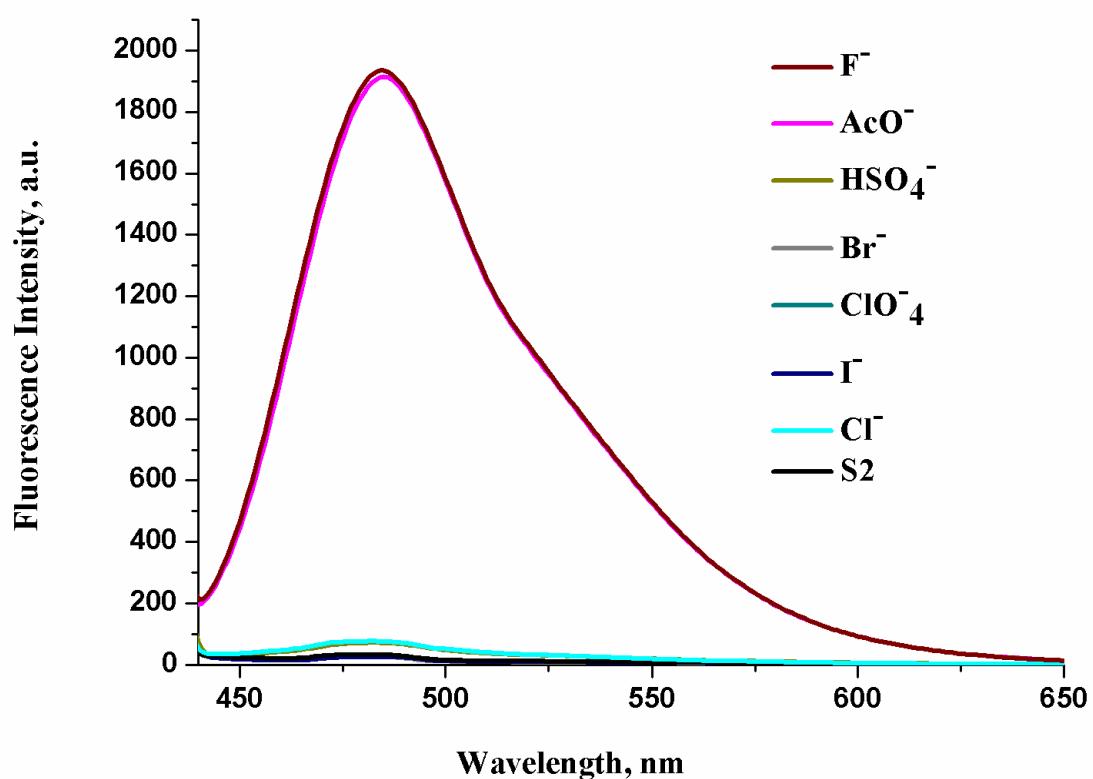


(b)

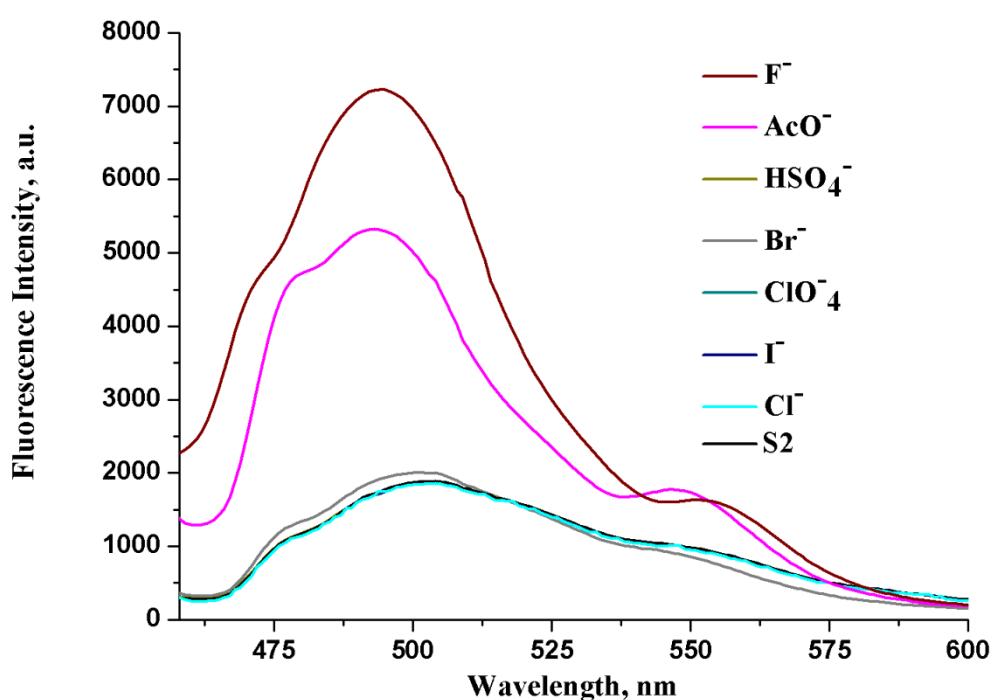
**Fig. S8.** Benesi-Hildebrand plot: UV-visible titration result of S1 with (a) fluoride & (b) acetate anion.



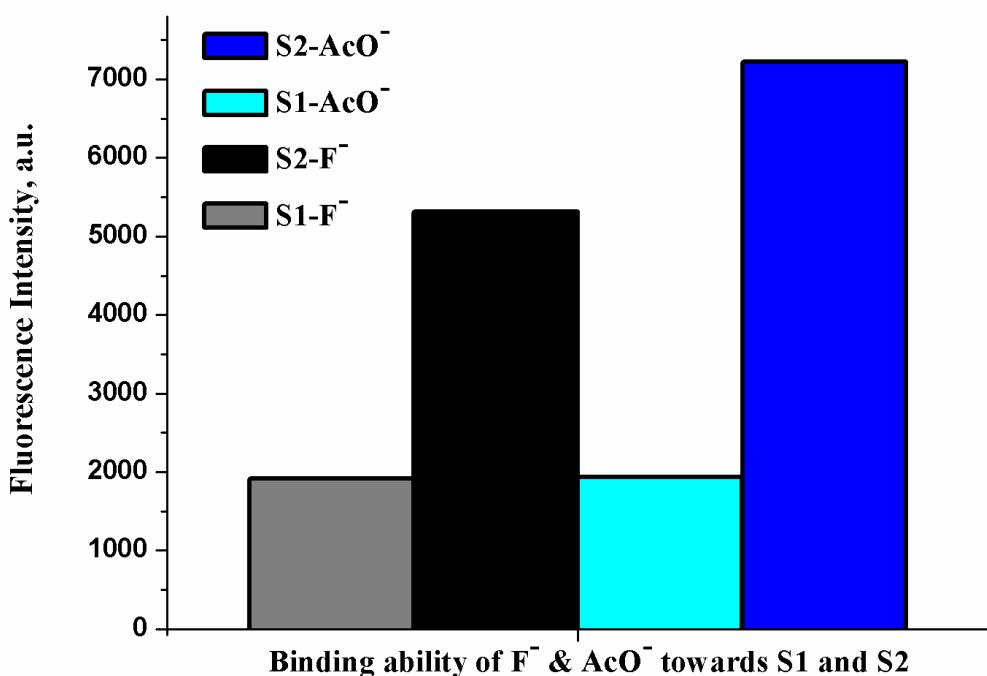
**Fig. S9.** Benesi-Hildebrand plot: UV-visible titration result of S2 with (a) fluoride & (b) acetate anion.



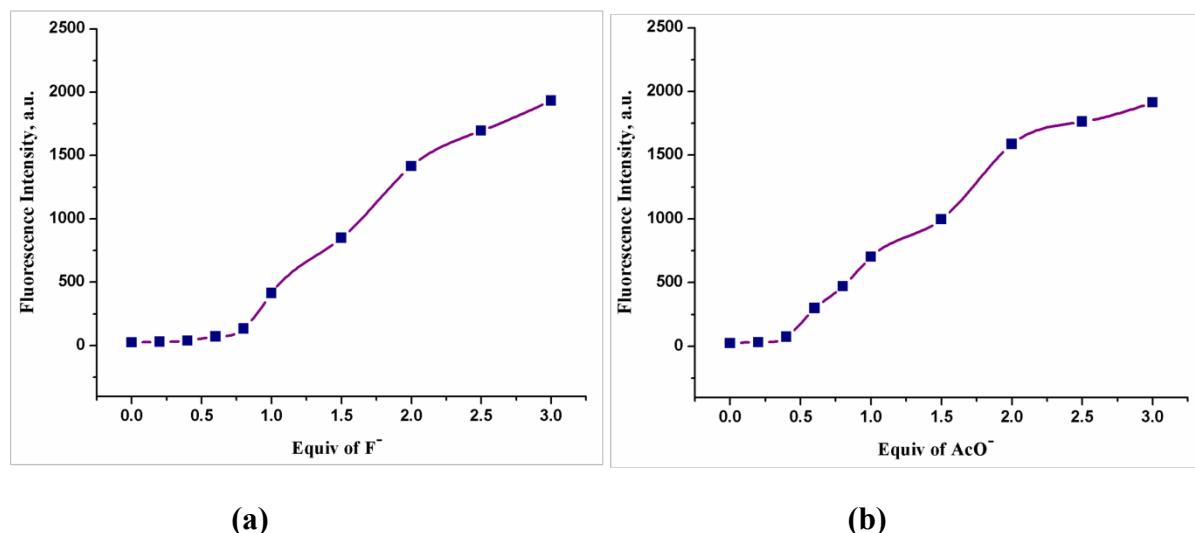
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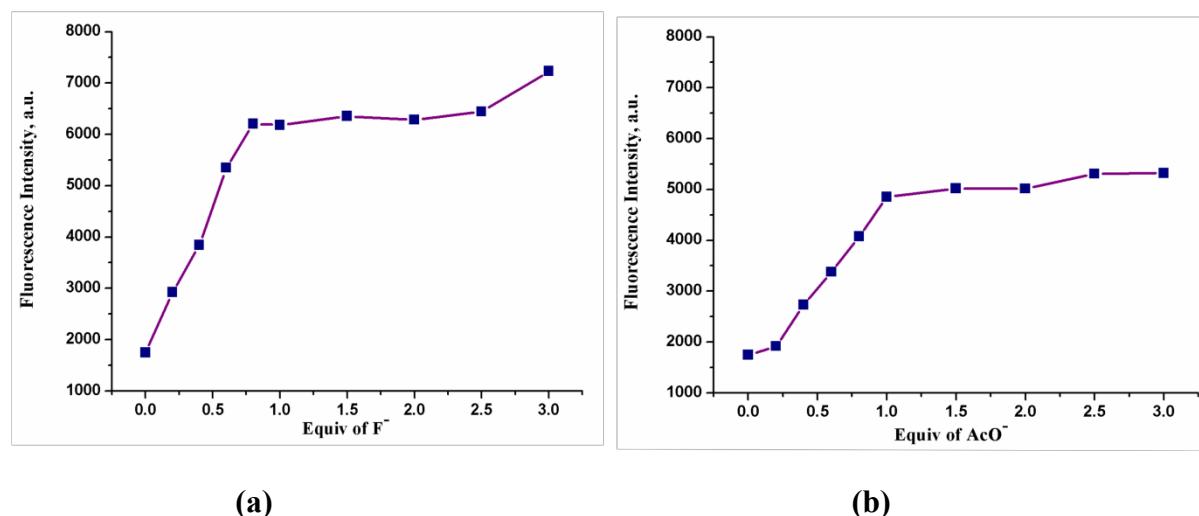
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**Fig. S12.** Comparison bar graph of fluorescence emission spectra of S1 ( $\lambda_{\text{ex}}$  at 419 nm) and S2 ( $\lambda_{\text{ex}}$  at 450 nm) in DMSO solution ( $5 \times 10^{-5}$  M) towards F<sup>-</sup> and AcO<sup>-</sup> (3 equiv) anions, respectively.



**Fig. S13.** Changes in emission spectra of S1 in DMSO ( $5 \times 10^{-5}$  M) upon (a) addition of  $\text{F}^-$  & (b)  $\text{AcO}^-$  anions;  $\lambda_{\text{ex}}$  at 450 nm.



**Fig. S14.** Changes in emission spectra of S2 in DMSO ( $5 \times 10^{-5}$  M) upon (a) addition of  $\text{F}^-$  & (b)  $\text{AcO}^-$  anions;  $\lambda_{\text{ex}}$  at 450 nm.