

## **HBT-based chemosensors for detection of fluoride through deprotonation process: experimental and DFT studies**

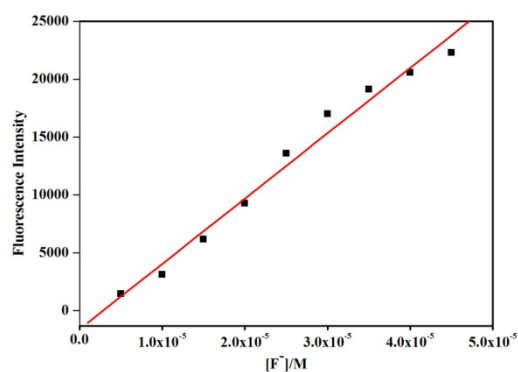
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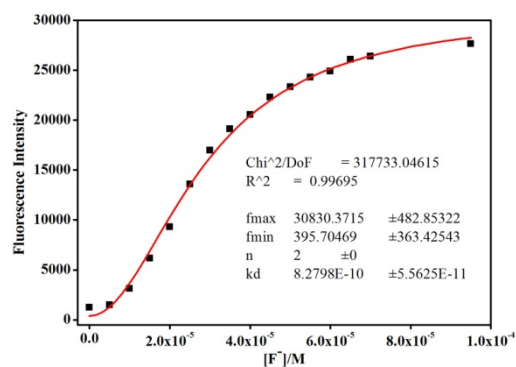
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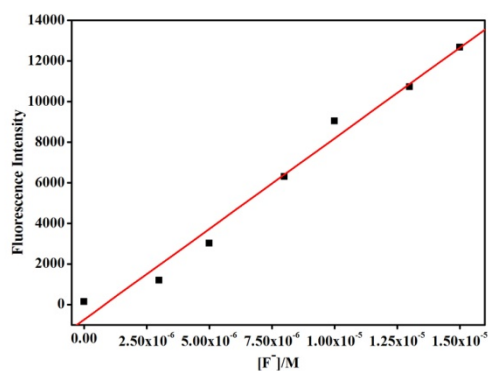
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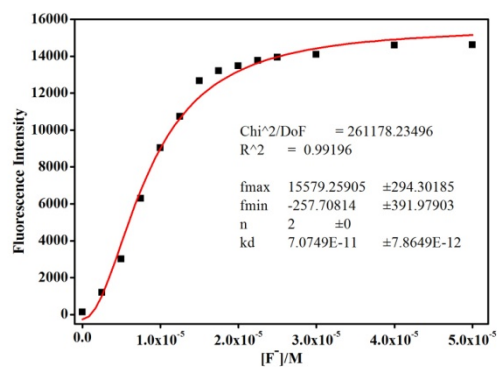
**Fig. S1** Linear fitting curve of the fluorescence intensity **L<sup>1</sup>H** versus [F<sup>-</sup>] (0 – 95 μM) at 426 nm based on the fluorescence titration files.



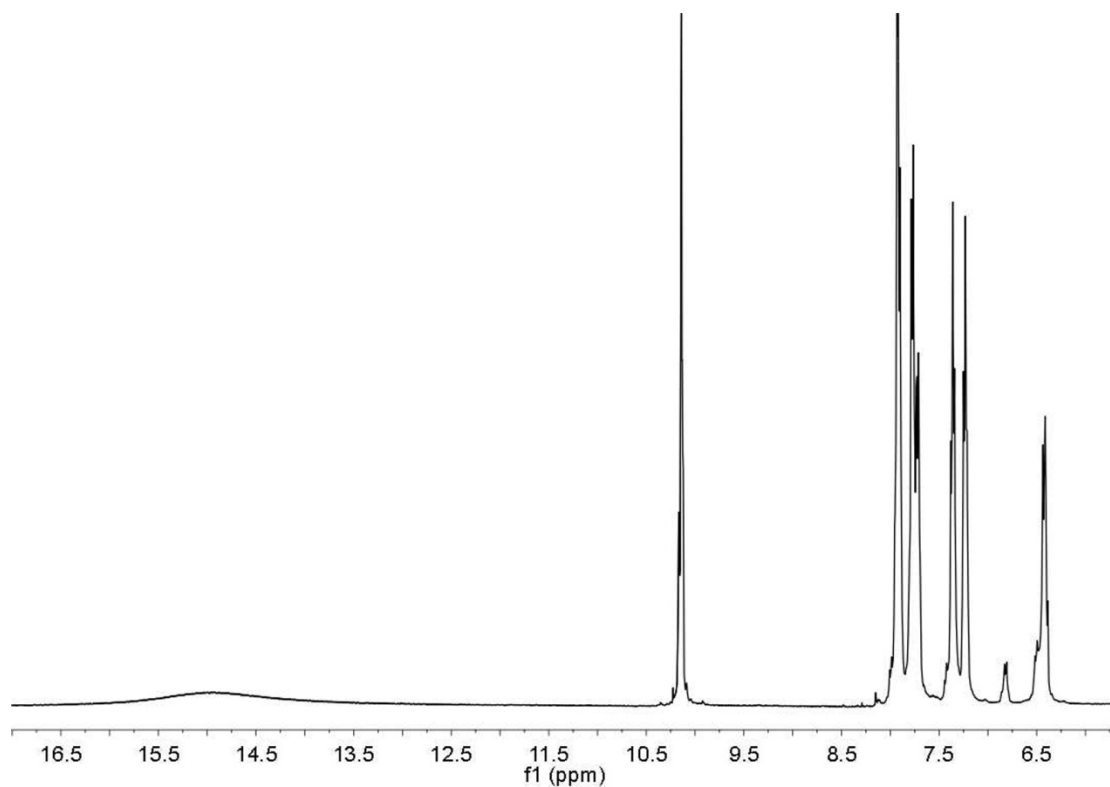
**Fig. S2** Nonlinear fitting curve of the fluorescence intensity **L<sup>1</sup>H** versus [F<sup>-</sup>] (0 – 95 μM) at 426 nm based on the fluorescence titration files.



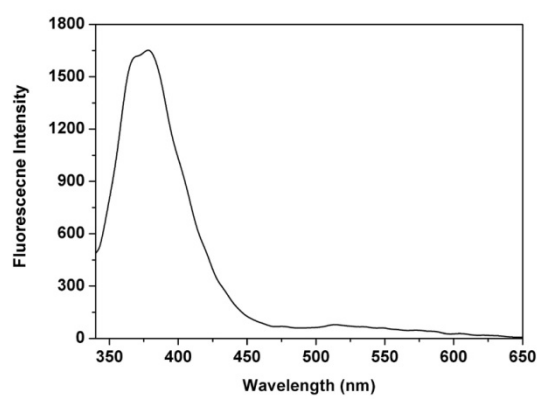
**Fig. S3** Linear fitting curve of the fluorescence intensity **L<sup>2</sup>H** versus [F<sup>-</sup>] (0 – 15 μM) at 480 nm based on the fluorescence titration files.



**Fig. S4** Nonlinear fitting curve of the fluorescence intensity **L<sup>2</sup>H** versus  $[F^-]$  (0 – 50  $\mu$ M) at 480 nm based on the fluorescence titration files.



**Fig. S5** Partial <sup>1</sup>H NMR spectra of probe **L<sup>2</sup>H** in the presence of 1 equiv. of  $F^-$  in  $CDCl_3$ -THF (V/V, 2/3) mixed solvent.



**Fig. S6** Fluorescence emission spectra of L<sup>2</sup>H (100 µM) in THF.  $\lambda_{\text{ex}} = 330$  nm.