## **Electronic Supplementary Information**

## A novel benzothiazole-based enaminone as fluorescent probe for highly selective and sensitive detection of CN-

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Fig. S1. UV-vis absorption spectrum changes of BTP (20  $\mu$ M) in DMSO/H<sub>2</sub>O (95/5, v/v, HEPES, 10 mM, pH = 7.4) upon addition of different anions (60.0 equiv. of each).



**Fig. S2.** Job's plot studies between **BTP** and CN<sup>-</sup>.  $\lambda_{ex} = 382$  nm.  $\lambda_{em} = 487$  nm.



Fig. S3. HRMS (ESI-) of BTP+CN<sup>-</sup>.



**Fig. S4**. Changes in fluorescence intensity of **BTP** (red,  $\lambda_{ex} = 382$  nm,  $\lambda_{em} = 602$  nm) and **BTP**-CN<sup>-</sup> adduct (black,  $\lambda_{ex} = 382$  nm,  $\lambda_{em} = 487$  nm) versus time.



Fig. S5. <sup>1</sup>H NMR of probe BTP in DMSO- $d_6$ .



Fig. S6. <sup>13</sup>C NMR of probe BTP in DMSO- $d_6$ .



**Fig. S7**. HRMS(ESI+) spectrum of probe **BTP** in DMSO- $d_6$ .