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## Electronic Supplementary Information (ESI)

## Anthracene-based fluorescence turn-on chemodosimeter for the recognition of persulfate anion

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Fig. S1.<sup>1</sup>H-NMR spectra of 1.



Fig. S2. Mass spectra of 1. Molecular ion peak is observed at m/z = 280 [M+H]<sup>+</sup>.



**Fig. S3.** Emission spectra of **1** (10  $\mu$ M, grey line) and **1** + deionised water (300  $\mu$ L, black line) to see quenching effect due to presence of water. Please note that emission intensity is not affected, however, change in spectral features were observed.



Fig.S4: Increase in fluorescence intensity of 1 (10  $\mu$ M) in presence of 460 molar equivalents of potassium persulfate with respect to time.



**Fig.S5.** <sup>1</sup>H-NMR spectrum of isolated product **2** recorded in DMSO-d6.



Fig.S6. Mass spectra of isolated product 2. Molecular ion peak is observed at m/z = 274.27 [M+2MeOH+H]<sup>+</sup>.



Fig. S7. ORTEP diagram of isolated product 2 of the reaction between 1 and potassium persulphate.



Fig. S8. Absorption and emission spectra of the isolated product 2.  $\lambda_{ex}$  = 392 nm.