Supporting Information for:

A highly selective fluorescence probe for sulfide ions based on aggregation of Cu nanoclusters induced emission enhancement

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**Fig. S1** XPS spectra of the as–prepared Cu NCs before and after the addition of 50 μM $S^{2-}$. 
**Fig. S2** (A) Effect of temperature on fluorescence emission intensity at 460 nm of the as-prepared Cu NCs in the absence of H$_2$S. (B) Effect of pH on fluorescence emission intensity at 460 nm of the as-prepared Cu NCs in the absence of H$_2$S. Error bars were estimated from three independent measurements.
Fig. S3 Effect of salt with a concentration of 50 μM on the fluorescent properties of the as-prepared Cu NCs in the absence and presence of 50 μM S²⁻. All experiments were carried out at 30 °C for 5 min at pH 7.00. Error bars were estimated from three independent measurements.
Fig. S4 Effect of buffer solutions on the fluorescence of the as-prepared Cu NCs in the absence and presence of 50 μM S²⁻ at pH 7.00. The experiments were taken at 30 °C for 5 min. Error bars were estimated from three independent measurements.