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Two colorimetric and ratiometric fluorescence probes for hydrogen sulfide based on AIE strategy of α -cyanostilbenes

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ABSTRACT:

Aggregation-induced emission (AIE) active fluorescent probes have attracted great potential in biological sensors. In this paper two cyanostilbene based fluorescence chemoprobe Cya-NO₂ (**1**) and Cya-N₃ (**2**) were developed and evaluated for the selective and sensitive detection of hydrogen sulfide (H₂S). Both of these probes behave aggregation-induced emission (AIE) activity which fluoresces in the red region with a large Stokes shift. They exhibit rapid response to H₂S with enormous colorimetric and ratiometric fluorescent changes. They are readily employed for assessing intracellular H₂S levels.

Keywords: Aggregation-induced emission, α -cyanostilbenes, Hydrogen sulfide, Ratiometric fluorescent.

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