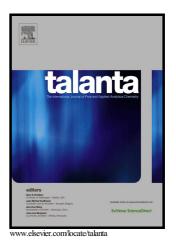
### Author's Accepted Manuscript

A novel colorimetric and fluorescent probe for simultaneous detection of  $SO_3^{2-}/HSO_3^{-}$  and  $HSO_4^{-}$  by different emission channels and its bioimaging in living cells

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# A novel colorimetric and fluorescent probe for simultaneous detection of SO<sub>3</sub><sup>2-</sup>/HSO<sub>3</sub><sup>-</sup> and HSO<sub>4</sub><sup>-</sup> by different emission channels and its bioimaging in living cells

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#### Abstract

A novel fluorescent probe (*E*)-3-ethyl-2-(4-hydroxystyryl)-1,1-di-methyl-1*H*-benzo-[*e*]indolium iodide (probe EDB) based on benzo[*e*]indolium was synthesized, which provided the simultaneous detection of  $SO_3^{2^-}/HSO_3^-$  and  $HSO_4^-$  ion with different emission channels. Based on the principle of ion-induced rotation-displaced H-aggregates, when treated with NaHSO<sub>4</sub>, a fluorescence enhancement at 580 nm was observed with the excitation wavelength at 420 nm. While, in the advantage of the nucleophilic addition of  $SO_3^{2^-}$  to the vinyl group, strong fluorescence was obtained at 455 nm when treated with Na<sub>2</sub>SO<sub>3</sub> with the excitation wavelength at 320 nm, along Download English Version:

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