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New phenanthroimidazole-based fluorescent probe for bisulfite and its application in living cell imaging

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Abstract

A new colorimetric fluorescent probe **1** contained a C=C double bond for the detection of bisulfite (HSO_3^-) via Michael-Addition was developed. Significantly, probe **1** can detect HSO_3^- with excellent selectivity, high sensitivity, fast response (< 10 min) and low detection limit (21 nM). Furthermore, the live cell imaging results provided a powerful method to study HSO_3^- chemistry in biological systems.

Keywords: Probe, Phenanthroimidazole, Bisulfite, Cell Imaging

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