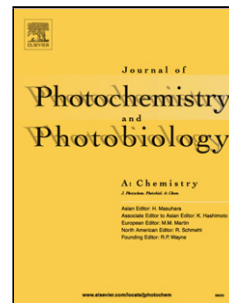


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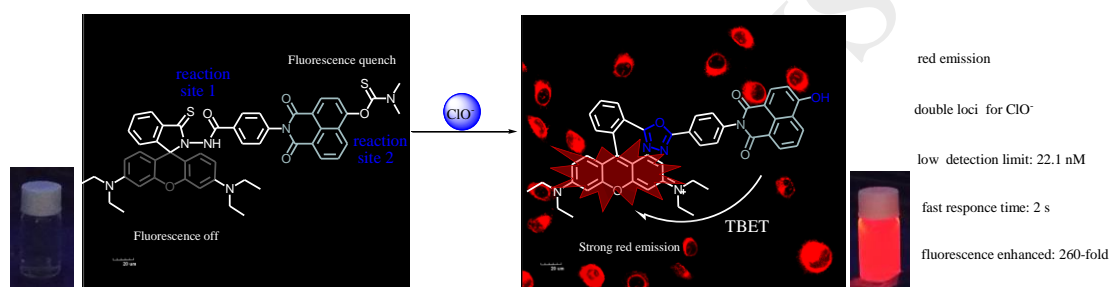
# A naphthalimide–rhodamine chemodosimeter for hypochlorite based on TBET: high quantum yield and endogenous imaging in living cells

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## Graphical abstract

In this article, a naphthalimide-rhodamine fluorescent turn-on probe RHSNO with red emission for hypochlorous acid based on dual reaction linkage induce through-bond energy transfer (TBET) system was designed and synthesized, and had been applied to the detection of endogenous and exogenous  $\text{ClO}^-$ .



## Highlights:

- A naphthalimide-rhodamine fluorescent turn-on probe RHSNO with red emission for hypochlorous acid based on dual reaction linkage induce through-bond energy transfer (TBET) system was designed and synthesized
- $\text{ClO}^-$ -triggered intramolecular desulfurization cyclization of rhodamine-thiohydrazide, an obvious increase of rhodamine emission at 590 nm and enhanced up to 260-fold.
- The efficiency of energy transfer was calculated to be 86 %, and the quantum yield of rhodamine moiety is 0.64

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