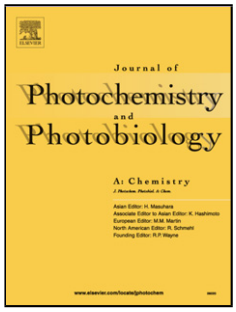
Accepted Manuscript



Title: A red-emission probe for intracellular biothiols imaging with a large Stokes shift

Authors: Dugang Chen, Zi Long, Yimin Sun, Zijuan Luo, Xiaoding Lou

PII: S1010-6030(18)31130-4
DOI: https://doi.org/10.1016/j.jphotochem.2018.09.030
Reference: JPC 11495

To appear in: *Journal of Photochemistry and Photobiology A: Chemistry*

Received date: 8-8-2018
Revised date: 11-9-2018
Accepted date: 21-9-2018

Please cite this article as: Chen D, Long Z, Sun Y, Luo Z, Lou X, A red-emission probe for intracellular biothiols imaging with a large Stokes shift, *Journal of Photochemistry and Photobiology, A: Chemistry* (2018), https://doi.org/10.1016/j.jphotochem.2018.09.030

A red-emission probe for intracellular biothiols imaging with a large Stokes shift

Dugang Chen,[a,#,*] Zi Long,[b,#] Yimin Sun,[c] Zijuan Luo,[a] Xiaoding Lou[b,*]

[a] *Key Laboratory for Green Chemical Process of Ministry of Education, School of Chemical Engineering and Pharmacy, Wuhan Institute of Technology, Wuhan 430205, P. R. China*

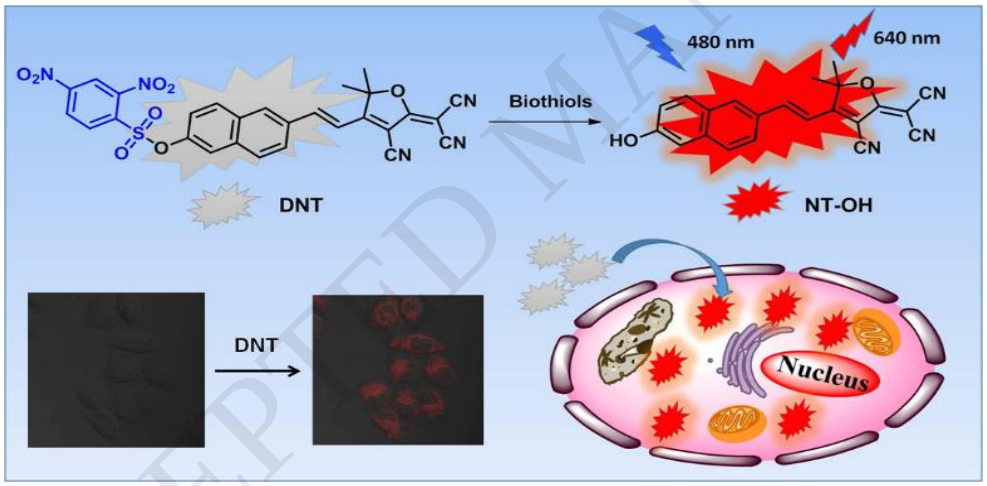
[b] *Engineering Research Center of Nano-Geomaterials of Ministry of Education, Faculty of Materials Science and Chemistry, China University of Geosciences, Wuhan 430074, P. R. China*

[c] *School of Materials Science and Engineering, Wuhan Institute of Technology, Wuhan 430205, P. R. China*

[*]Correspondence to: D. Chen (E-mail: dg.chen@163.com) or X. Lou (louxiaoding@cug.edu.cn)

[#] D. Chen and Z. Long contributed equally.

Graphical Abstract



Highlights

- 1. A novel fluorescent probe for biothiols detection.
- 2. Red fluorescence with emission maxima at 640 nm and a large Stokes shift of 160 nm.
- 3. High sensitivity and selectivity.
- 4. The sensing mechanism was studied by MS and HPLC.
- 5. Endogenous biothiols imaging in living MCF-7 cells.