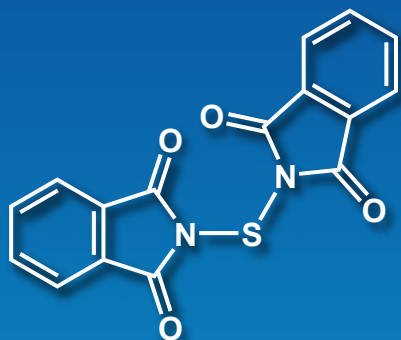


New

CHEMISTRY LIFE SCIENCE



# Synthetic Reagent for Unsymmetrical Disulfide Compounds



**N,N'-Thiodipthalimide**

1g / 5g

[T4001]

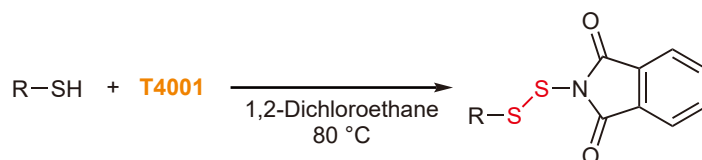
## Advantages

- Can form unsymmetrical disulfide bonds via a two-step process
- Applicable to the cross-linking of biomolecules such as amino acids, sugars, nucleic acids, fluorescent probes etc.

## Applications

### Step 1: N-Phthalimidyl Disulfide Formation

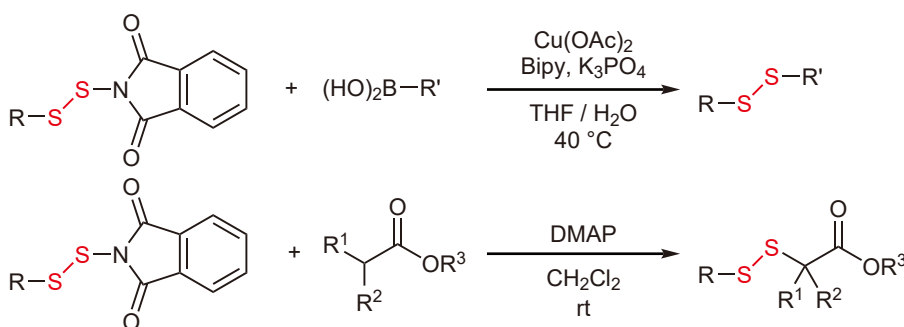
**T4001** can react with a variety of thiols bearing bulky functional groups in mild conditions.



R = alkyl (*primary, secondary, tertiary*), aryl, benzyl, allyl, propargyl etc.

### Step 2: Asymmetric Disulfide Bond Formation

Various asymmetric disulfide compounds can be obtained by coupling or substitution reactions.



References W. Gao, J. Tian, Y. Shang, X. Jiang, *Chem. Sci.* **2020**, *11*, 3903. DOI: <https://doi.org/10.1039/D0SC01060J>  
J. Zou, T. Shi, Z. Wang, *et al.*, *ACS Catal.* **2019**, *9*, 11426. DOI: <https://doi.org/10.1021/acscatal.9b04326>

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