

## Bis(trifluoromethyl)disulfide(abb.; BTFMS) CF<sub>3</sub>SSCF<sub>3</sub>

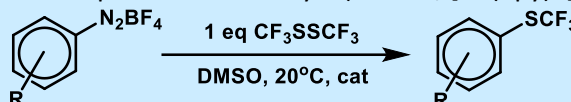
Purity 97%

CAS Number 372-64-5

Molecular Formula C<sub>2</sub>F<sub>6</sub>S<sub>2</sub>

Molecular Weight 202.14

1. A method for introducing a trifluoromethylthio group having a high lipophilicity from a commercially available raw material. A trifluoromethylthio group is introduced at the target position by irradiating the aromatic diazonium salt with light in the presence of a photoredox catalyst (eosin Y, [Ru(bpy)<sub>3</sub>]Cl<sub>2</sub>).



No.	R	NaOAc Yd(%)	Eosin Y Yd(%)	Ru(bpy) <sub>3</sub> Cl <sub>2</sub> Yd(%)
1	4-Br	35	55	67
2	4-OMe	75	77	77
3	4-F	27	73	89

(1) Arenediazonium tetrafluoroborate; 0.3mmol, (2) NaOAc; 0.3mmol

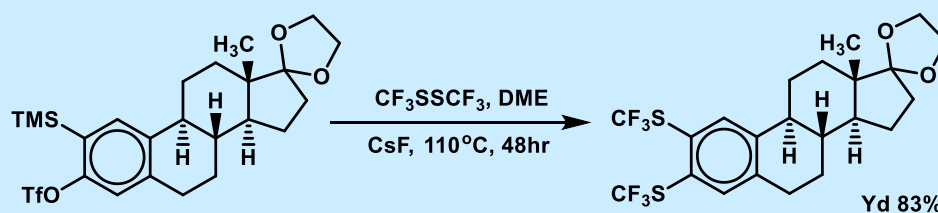
(3) Eosin Y; 0.006mmol, Green LED 525nm, 3.8W

(4) Ru(bpy)<sub>3</sub>Cl<sub>2</sub>; 0.0015mmol, Blue LED 450nm, 3.8W

*Eur.J. Org.Chem., 2017, p6722-6725*

### Application

2. A method for introducing a 1,2-bistrifluoromethylthio group into an aromatic nucleus. Introduction of two trifluoromethylthio groups at the 3,4 positions of 3-Trifluoromethylsulfonyl-4-trimethylsilylestrore using commercially available BTFMS and CsF.



*Org.Lett. 2017, 19(6), p4247-4250*

### Properties:

Appearance Liquid gas

Boiling point, °C 33-34

Capacity: -

Packing: -