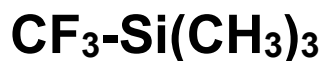


## Trimethyl(trifluoromethyl)silane

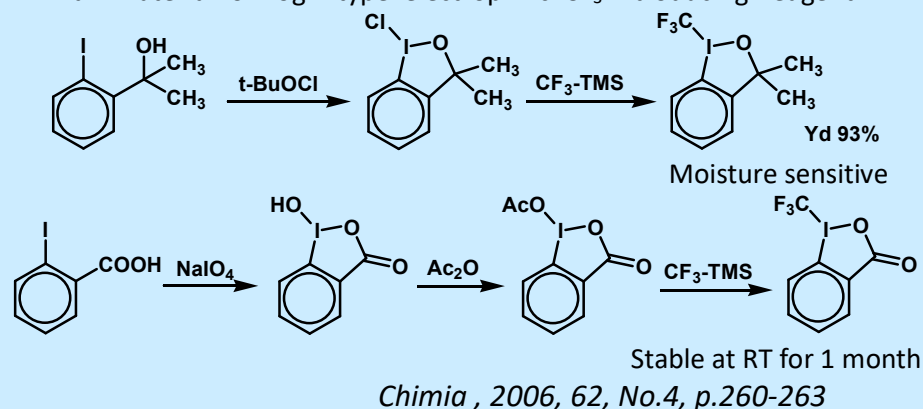
トリメチル(トリフルオロメチル)シラン (略号 ; CF<sub>3</sub>-TMS)



Purity	99%
CAS Number	81290-20-2
Molecular Formula	C <sub>4</sub> H <sub>9</sub> F <sub>3</sub> Si
Molecular Weight	142.2

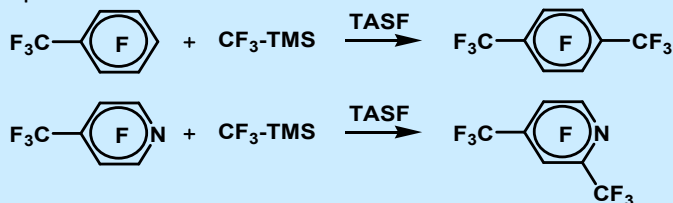
CF<sub>3</sub>-nucleophilic reactive to Carbonyls. Aldehydes, Acid halides and Imines, and coupling with Halo-aromatics and alkyls, a late stage functionalization reagent

1. A raw material for Togni-type electrophilic CF<sub>3</sub>-introducing reagent



### Application

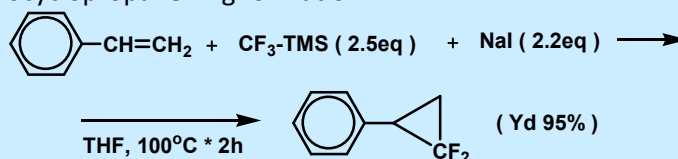
2. Nucleophilic and radical CF<sub>3</sub>-introduction to aromatics and alkyls



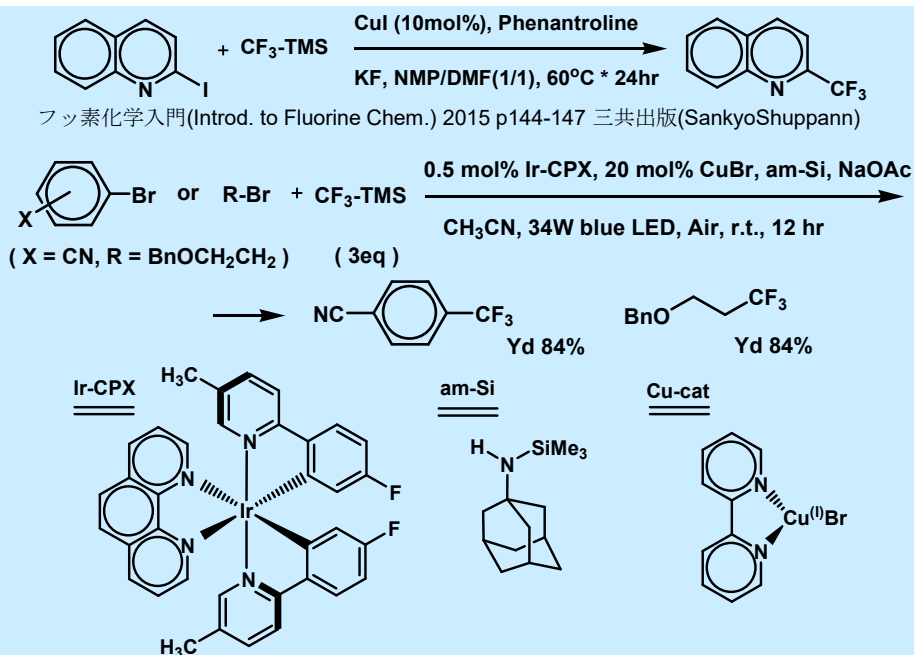
*Izv.Akad.Nauk SSSR, Ser.Khim.*, 1990, p.260-263

*Tetrahedron Lett.*, 22, p.6191-6192

3. Difluorocyclopropane ring formation

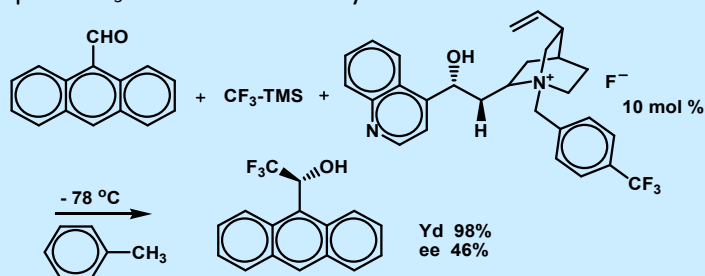


*Thesis submitted to Ph.D. Degree at Univ. of WARWICK., by Sio Lan Wong, May 2015, p.64*



*J. Am. Chem. Soc.* 2020, 142, p19480-19486

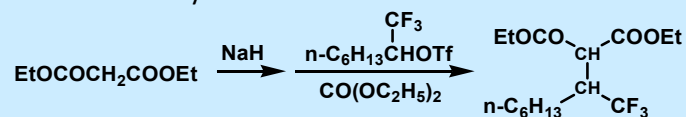
#### 4. Nucleophilic CF<sub>3</sub> reaction to carbonyl enantio-selective alcohol



*Tetrahedron; Asymmetry*, 19, 2008, p.2633-2644

Note; CF<sub>3</sub>-TMS/CF<sub>3</sub>I price ratio at P&M-Invest = 0.906, advantageous at Liquid as CF<sub>3</sub>I is a high pressure gas, CF<sub>3</sub>-TMS is recommended when you do not have high pressure reactors nor HF treatment facilities for Swarts reaction applications.

#### 5. C-C bond formation using the secondary alcohol resulting CF<sub>3</sub>-TMS methylation to the aldehyde



Thesis submitted to PhD. Degree at Tokyo Metro.Univ., by T.Hagiwara, March 1991, p.11

#### Properties:

Appearance	Liquid
Boiling point, °C	54-55
Flash point, °C	-16

Capacity: 500kg/month

Packing: -

UN, PG: -