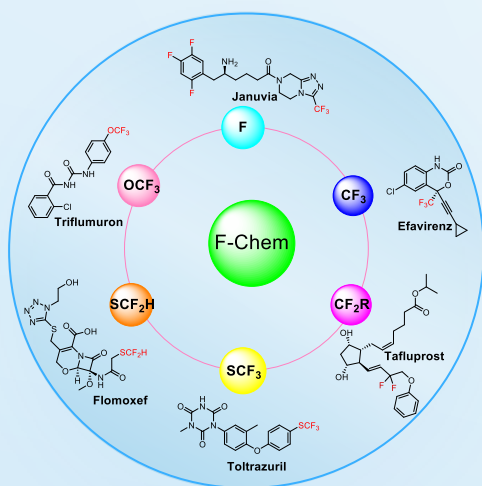


Fluorine Chemistry Platform

- Founded in 2012, we have a professional and experienced team specializing in fluorine chemistry
- Our collection contains most reagents used for introducing fluorine-containing groups into small molecules
- Developed and established the application of SF₄ in Flow Chemistry

Capability of Fluorine Chemistry Platform



Condition Screening & Optimization

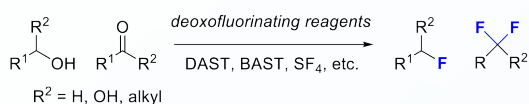
Scalable Procedure

Late-stage Functionalization

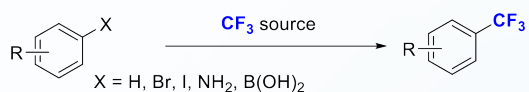
F-containing Building Blocks

Well-Developed Condition Optimization System

Deoxyfluorination (F)

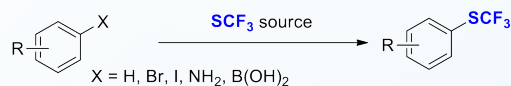


Trifluoromethylation (CF₃)



Difluoroalkylation (CF₂R)

Trifluoromethylthiation (SCF₃)



OCF₃, N-CF₃, SF₅, etc.

15+ years experience **10K+** fluorinated BBs **66%+** internal success rate

20+ reaction types **<48 h** from request to proposal

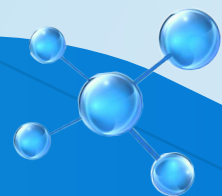
mg to kg scale



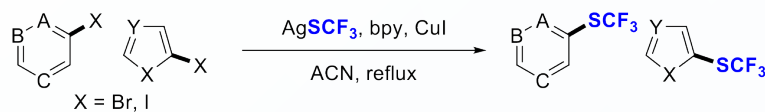
Contact us

 <https://rcs.wuxiapptec.com>

 chemistry_service@wuxiapptec.com



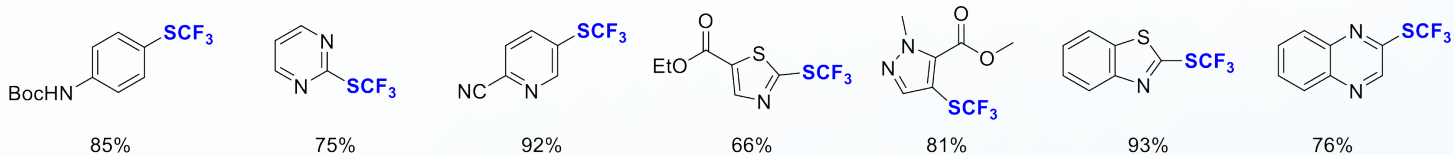
Improved Trifluoromethylthiolation by Fluorine Chemistry Platform



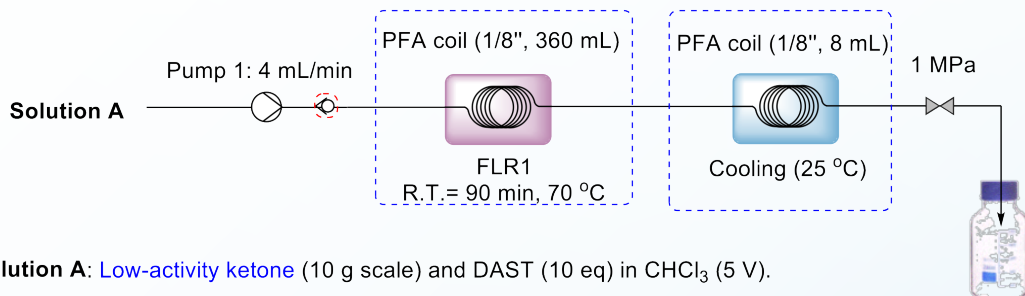
WuXi method: CN202110238774.8

- Broad substrate scope
- Good functional group tolerance
- Good to excellent yield
- Commercially available reagents

Selected examples



Cross-Platform Cooperation: Fluorine + Flow-Chemistry


 Solution A: Low-activity ketone (10 g scale) and DAST (10 eq) in CHCl_3 (5 V).

- Higher yield & safer operation for sterically hindered ketones

Cross-Platform Cooperation: Fluorine + Photo-Chemistry

Decarboxylative Trifluoromethylation



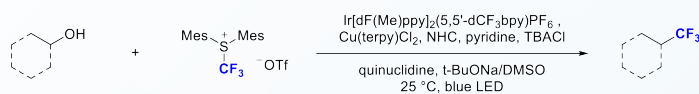
Carboxylic acids

Togni's Reagent I

J. Am. Chem. Soc. **2018**, *140*, 6522–6526

- Highly efficient: no need for pre-activated substrates
- Excellent functional group compatibility: heterocycles, olefins, alcohols, and strained ring systems

Deoxytrifluoromethylation of Alcohols



Alcohols

Mes-Umemoto Reagent

J. Am. Chem. Soc. **2022**, *144*, 11961–11968

- Large substrate scope: primary, secondary, and tertiary alcohols
- Late-stage functionalization, such as sugars, nucleosides and complex drug-like molecules

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