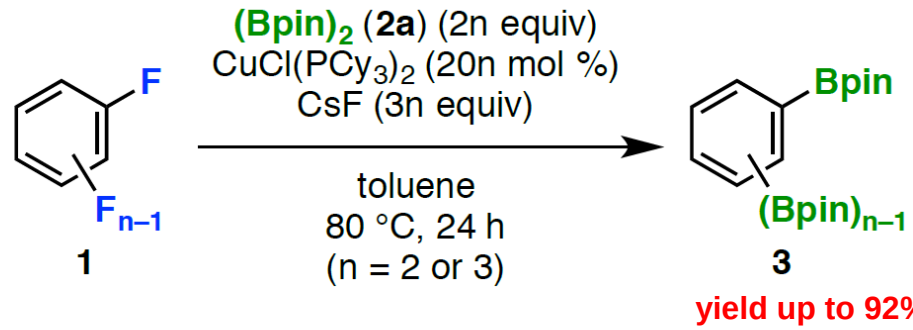
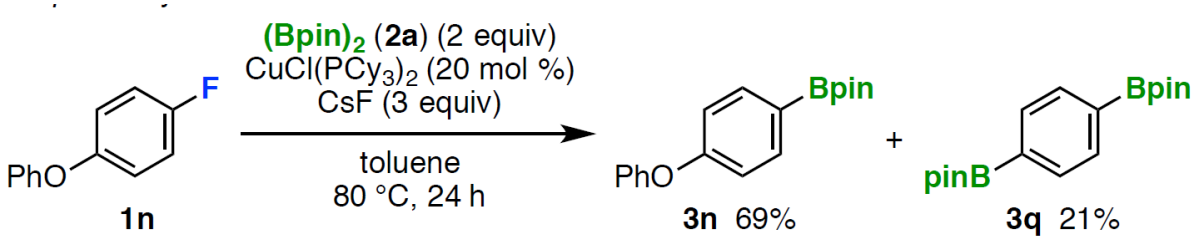
ACS Catalysis

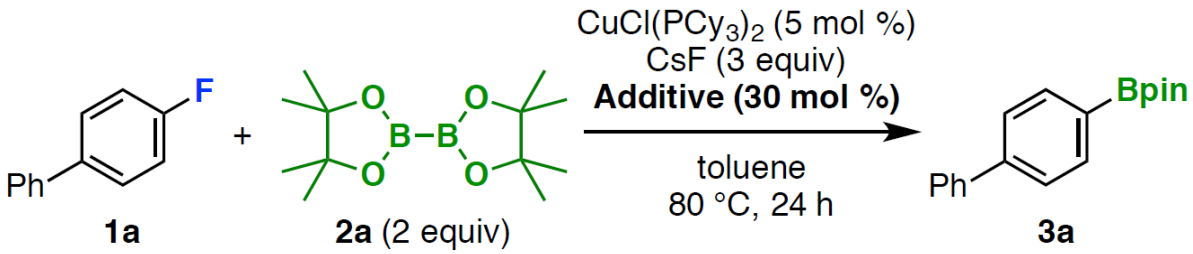
Copper-Catalyzed *ipso*-Borylation of Fluoroarenes

Takashi Niwa, Hidenori Ochiai, and Takamitsu Hosoya

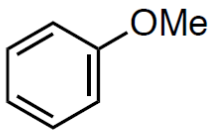
ACS Catal., 2017, 7, 5243–5247







Additive



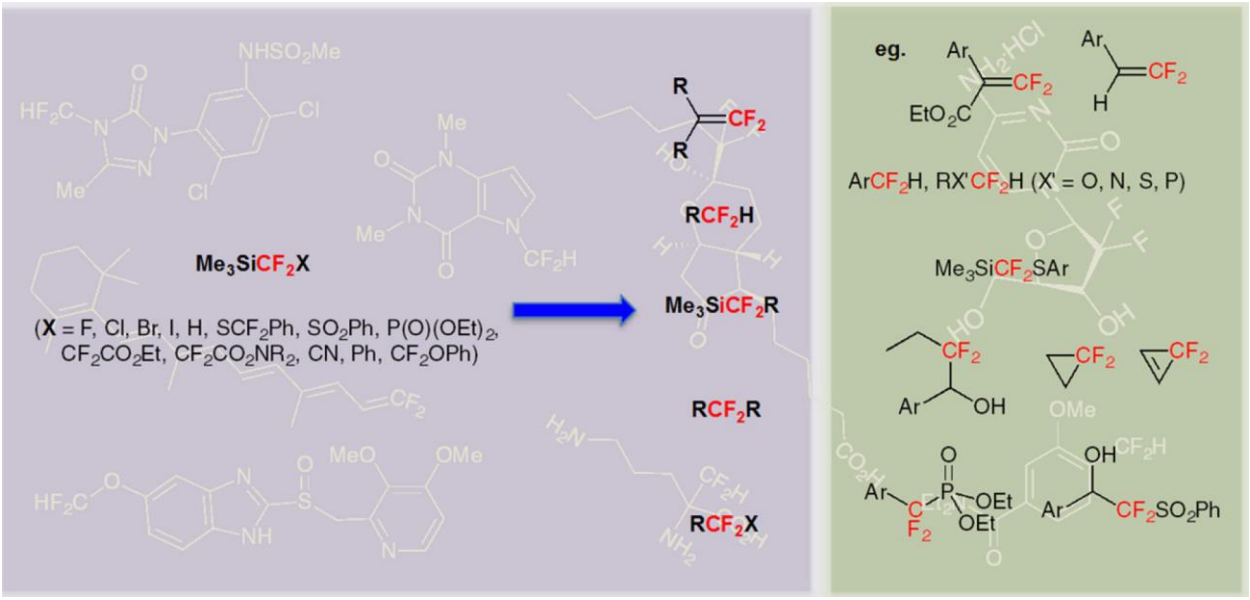
anisole >99%

Synthesis

Silicon-Based Reagents for Difluoromethylation and Difluoromethylenation Reactions

Sankarganesh Krishnamoorthy G. K. Surya Prakash

Synthesis, 2017, 49, 3394-3406



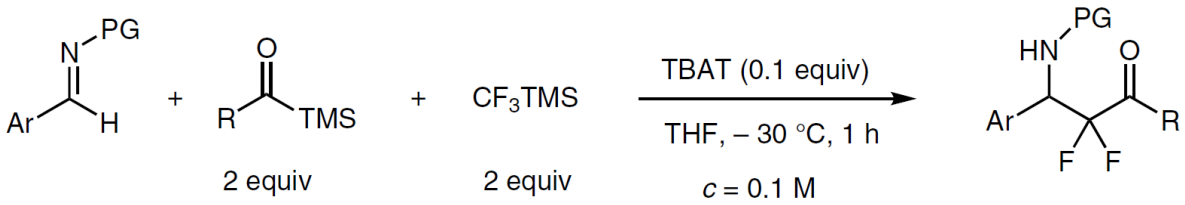
$$Me_3SiCF_3 \xrightarrow[\text{r.t., 2 h}]{NaBH_4,\ \text{dioxane}} Me_3SiCF_2H$$

70%

A Three-Component Reaction for the One-Pot Preparation of β-Amino-α,α-Difluoroketones from Trimethyl(trifluoromethyl) silane (CF_3TMS), Acylsilanes and Imines

Aurélien Honraedt, Lucía Reyes Méndez, Jean-Marc Campagne and Eric Leclerc

Synthesis, 2017, 49, 4082-4092

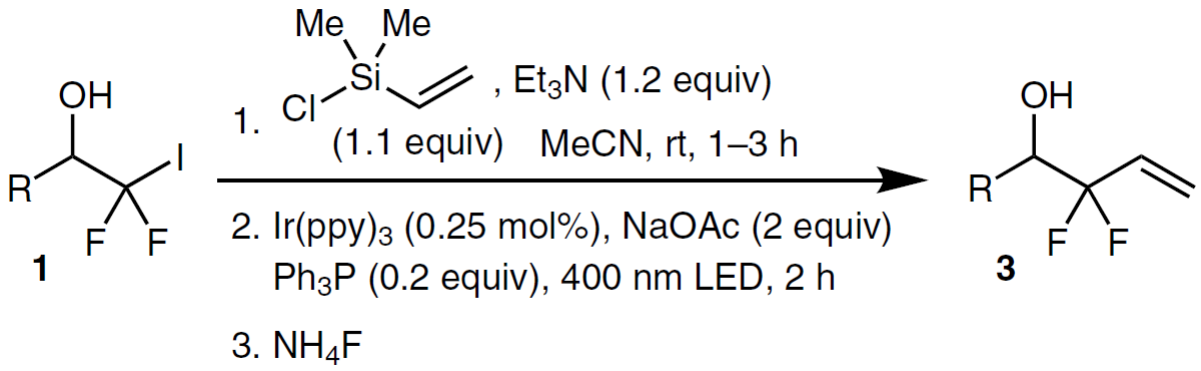


25 examples
yield up to 74%

Vinylation of Iododifluoromethylated Alcohols via a Light-Promoted Intramolecular Atom-Transfer Reaction

Liubov I. Panferova, Marina I. Struchkova and Alexander D. Dilman

Synthesis, 2017, 49, 4124-4132

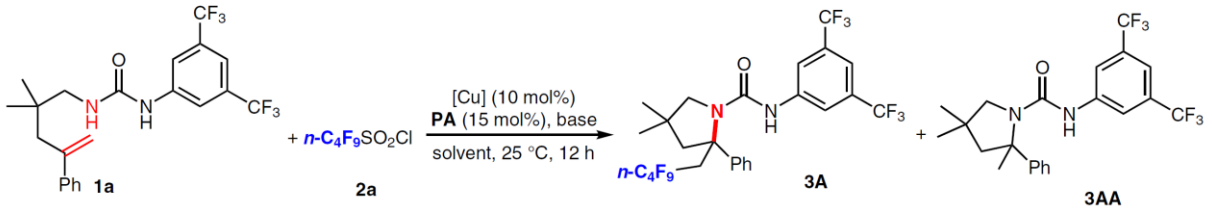


11 examples
yield up to 91%

Catalytic Radical Intramolecular Aminoperfluoroalkylation and Aminodifluoromethylation of Unactivated Alkenes with Fluoroalkylsulfonyl Chlorides

Xue-Fei Li, Jin-Shun Lin and Xin-Yuan Liu

Synthesis, 2017, 49, 4213-4220



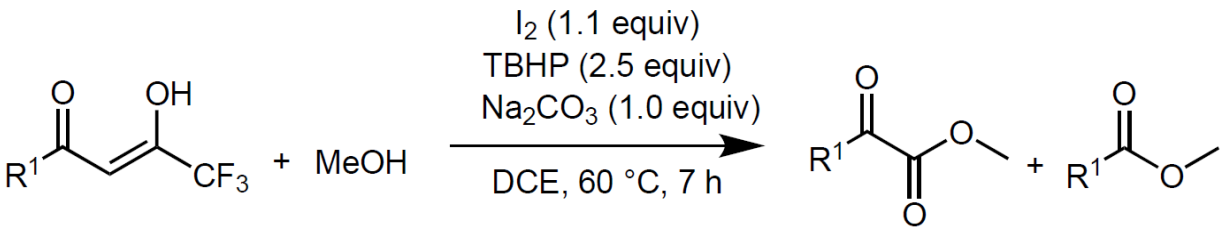
yield up to 98%

Synlett

I_2/TBHP-Promoted Approach to α-Keto Esters from Trifluoromethyl β-Diketones and Alcohols via C–C Bond Cleavage

Tongle Shao, Xiang Fang, Jun Zhou, Chen Jin, Xueyan Yang and Fanhong Wu

Synlett, 2017, 28, 2018-2023

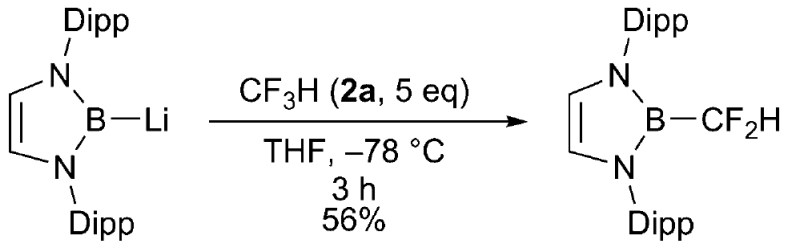


Chemical Communications

Stable (sila)difluoromethylboranes via C–F activation of fluoroform derivatives

Shigekazu Ito, Naoto Kato and Koichi Mikami

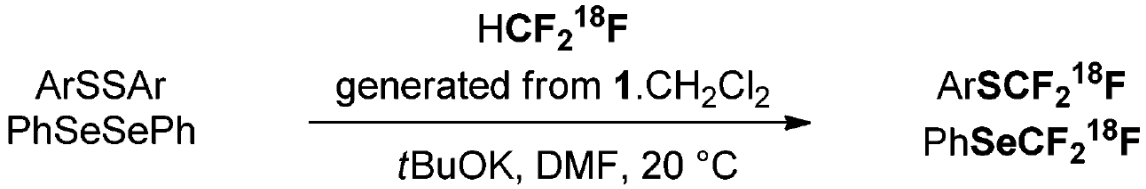
Chem. Commun., 2017, 53, 5546-5548



^{18}F-Fluoroform: a ^{18}F-trifluoromethylating agent for the synthesis of SCF_2 ^{18}F-aromatic derivatives†

Elodie Carbonnel, Tatiana Besset, Thomas Poisson, Daniel Labar, Xavier Pannecoucke and Philippe Jubault

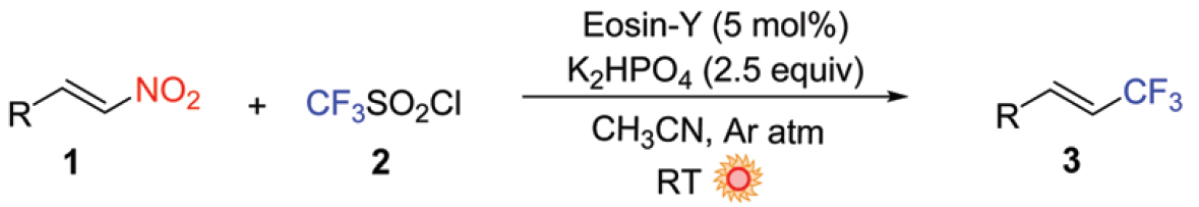
Chem. Commun., 2017, 53, 5706-5709



Metal-free radical trifluoromethylation of b-nitroalkenes through visible-light photoredox catalysis

Siba P. Midya, Jagannath Rana, Thomas Abraham, Bhaskaran Aswina and Ekambaram Balaraman

Chem. Commun., 2017, 53, 6760-6763



20 examples
yield up to 81%

S_NAr catalysis enhanced by an aromatic donor–acceptor interaction; facile access to chlorinated polyfluoroarenes

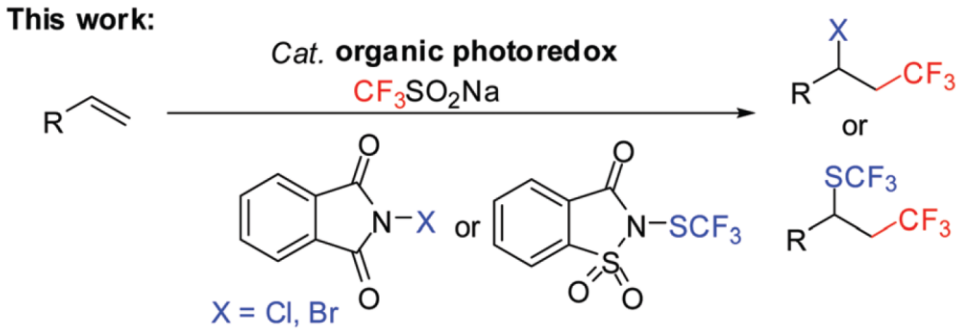
Sameera Senaweera and Jimmie D. Weaver

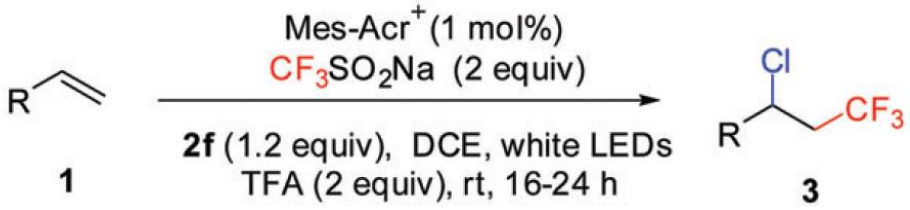
Chem. Commun., 2017, 53, 7545-7548

Photoredox-catalysed chloro-, bromo- and trifluoromethylthio-trifluoromethylation of unactivated alkenes with sodium triflinate

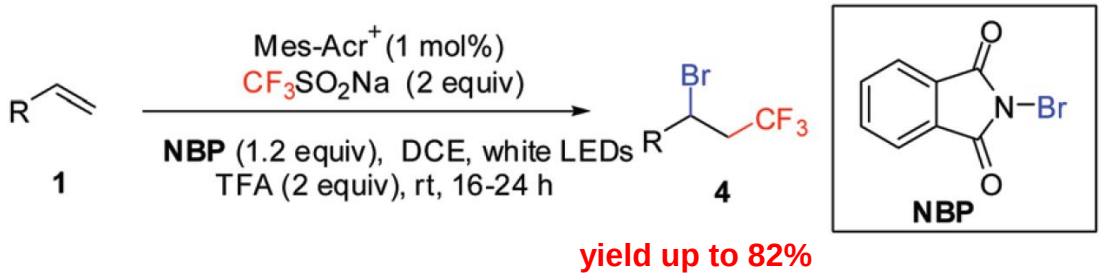
Jing Fang, Zhong-Kui Wang, Shu-Wei Wu, Wei-Guo Shen, Gui-Zhen Ao and Feng Liu

Chem. Commun., 2017, 53, 7638-7641





yield up to 85%



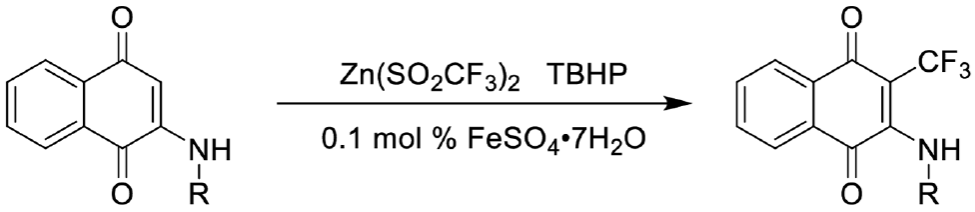
yield up to 82%

Journal of Organic Chemistry

C−H Trifluoromethylation of 2-Substituted/Unsubstituted Aminonaphthoquinones at Room Temperature with Bench-Stable $(CF_3SO_2)_2Zn$: Synthesis and Antiproliferative Evaluation

Jing Li, Xiaofei Zhang, Haoyue Xiang, Linjiang Tong, Fang Feng, Hua Xie, Jian Ding, and Chunhao Yang

J. Org. Chem., 2017, 82, 6795-6800

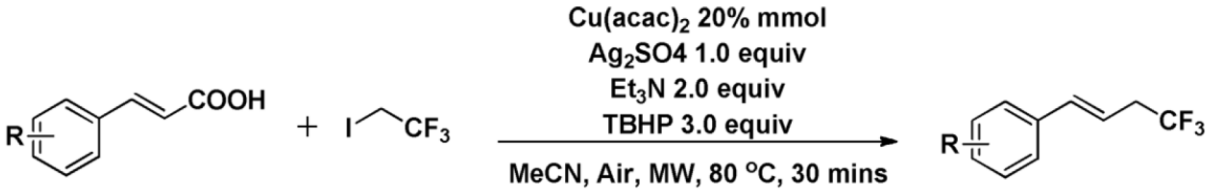


21 examples
yield up up to 87%

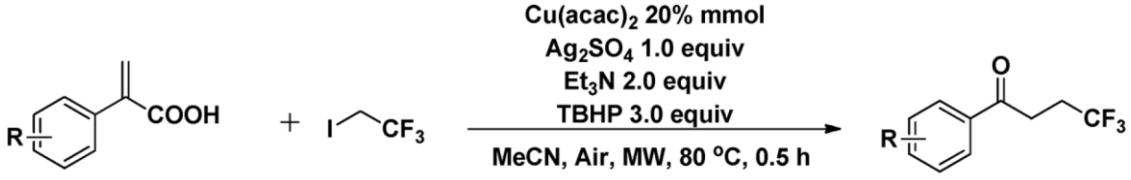
Free-Radical-Promoted Copper-Catalyzed Decarboxylative Alkylation of α,β-Unsaturated Carboxylic Acids with ICH_2CF_3 and Its Analogues

Yan Zhu, Juwen Gong, and Yonghui Wang

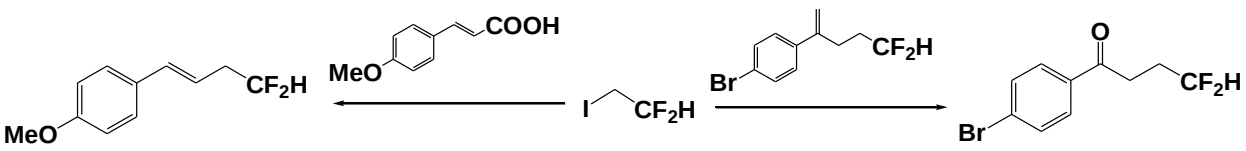
J. Org. Chem., 2017, 82, 7428-7436



21 examples
yield up to 85%



yield up to 95%



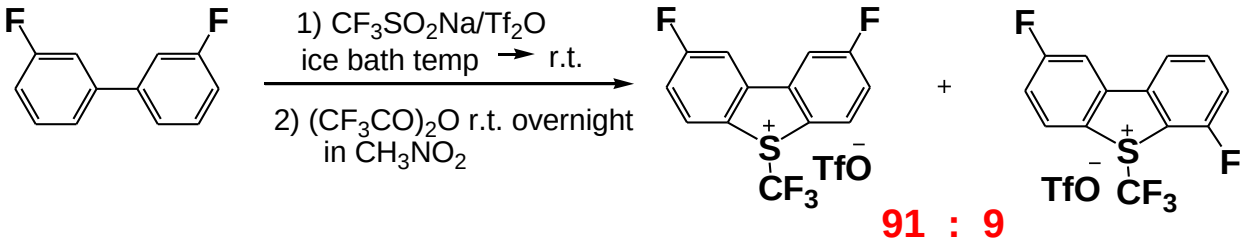
84%

85%

Powerful, Thermally Stable, One-Pot-Preparable, and Recyclable Electrophilic Trifluoromethylating Agents: 2,8-Difluoro- and 2,3,7,8-Tetrafluoro-S-(trifluoromethyl)dibenzothiophenium Salts

Teruo Umemoto, Bin Zhang, Tianhao Zhu, Xiaocong Zhou, Peng Zhang, Song Hu, and Yuanqiang Li

J. Org. Chem., 2017, 82, 7708-7719

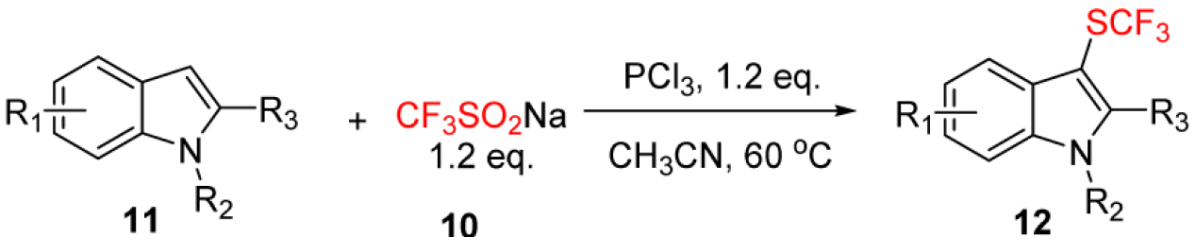


91 : 9

Transition-Metal-Free Direct Trifluoromethylthiolation and Trifluoromethylsulfoxidation of Electron-Rich Aromatics with CF_3SO_2Na in the Presence of PCl_3

Xia Zhao, Aoqi Wei, Bo Yang, Tianjiao Li, Quan Li, Di Qiu, and Kui Lu

J. Org. Chem., 2017, 82, 9175-9191

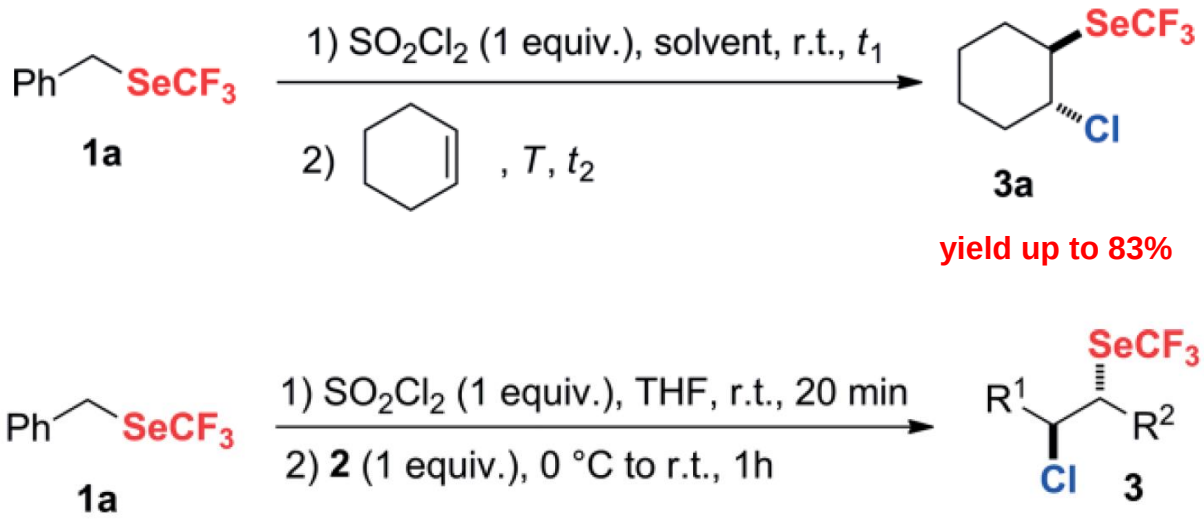


European Journal of Organic Chemistry

Trifluoromethylselenolation and Fluoroalkylselenolation of Alkenes by Electrophilic Addition

Clement Ghiazza, Quentin Glenadel, Anis Tlili, and Thierry Billard

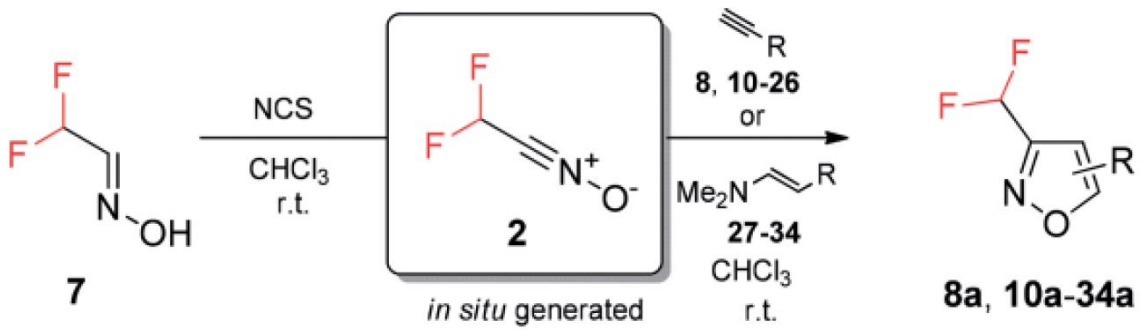
Eur.J. Org.Chem., 2017, 3812-3814



Difluoromethyl Nitrile Oxide (CF_2HCNO): A Neglected Chemical Reagent

Andrii Khutorianskyi, Bohdan Chalyk, Petro Borysko, Anna Kondratiuk, and Pavel K. Mykhailiuk

Eur.J. Org.Chem., 2017, 3935-3940

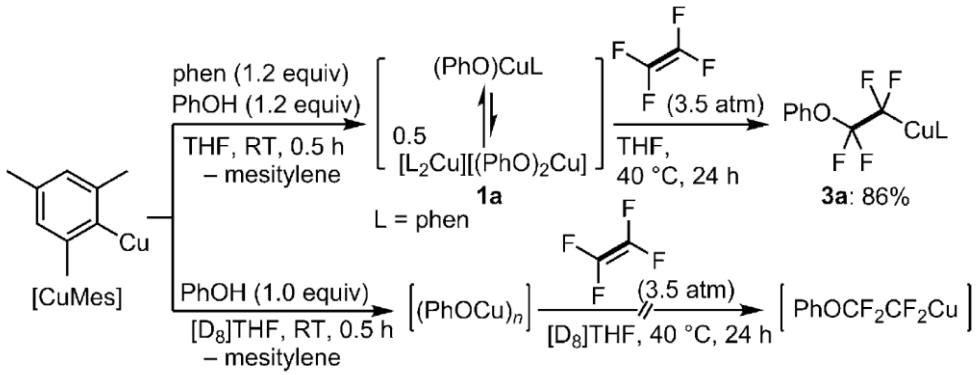


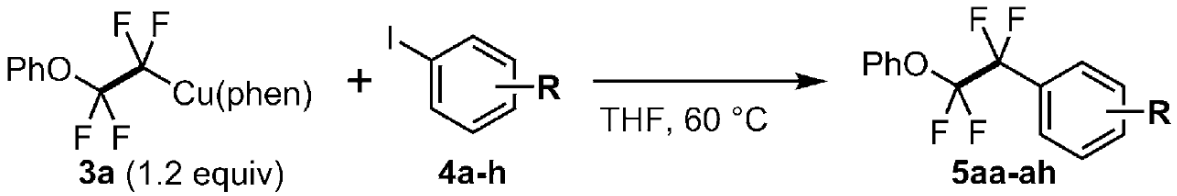
Angewandte Chemie International Edition

Synthesis and Reactivity of Fluoroalkyl Copper Complexes by the Oxycupration of Tetrafluoroethylene

Masato Ohashi, Takuya Adachi, Naoyoshi Ishida, Kotaro Kikushima, and Sensuke Ogoshi

Angew. Chem. Int. Ed., 2017, 55, 11911-11914



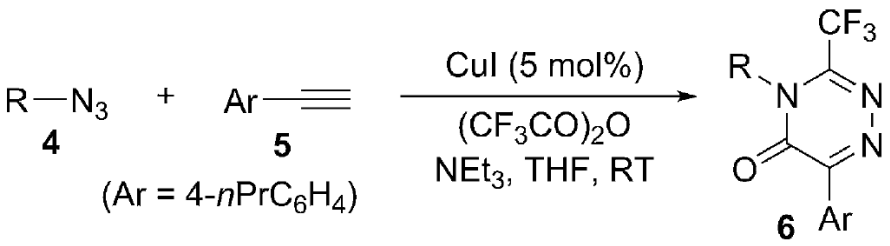


85-99%

Trifluoroacetic Anhydride Promoted Copper(I)-Catalyzed Interrupted Click Reaction: From 1,2,3-Triazoles to 3-Trifluoromethyl-Substituted 1,2,4-Triazinones

Wei Wu, Junwen Wang, Yukang Wang, Yangjie Huang, Yingfei Tan, and Zhiqiang Weng

Angew. Chem. Int. Ed., 2017, 55, 10476-10480

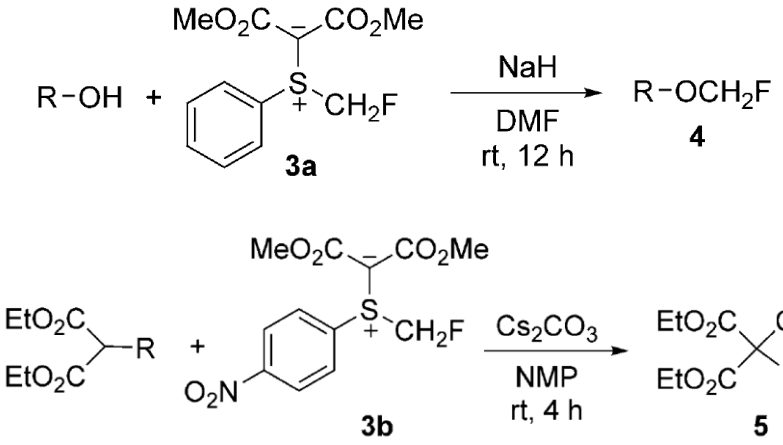


yield up to 99%

Monofluoromethyl-Substituted Sulfonium Ylides: Electrophilic Monofluoromethylating Reagents with Broad Substrate Scopes

Yafei Liu, Long Lu,* and Qilong Shen

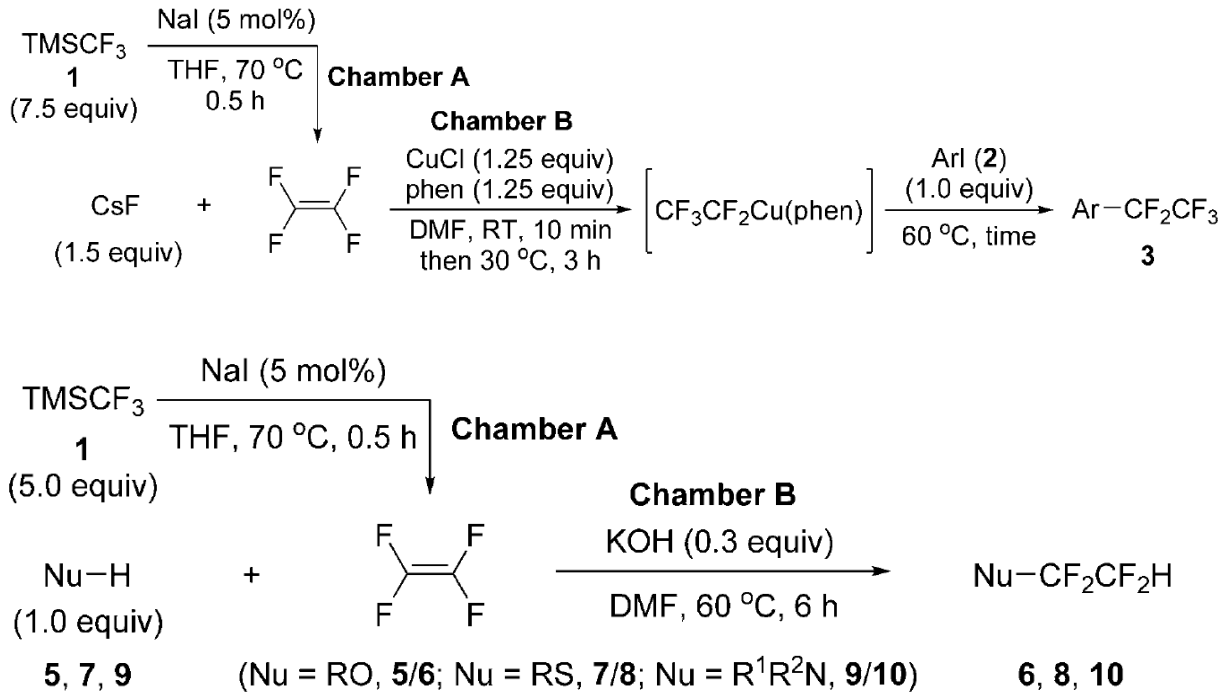
Angew. Chem. Int. Ed., 2017, 55, 9930-9934



$TMSCF_3$ as a Convenient Source of $CF_2=CF_2$ for Pentafluoroethylation, (Aryloxy)tetrafluoroethylation, and Tetrafluoroethylation

Lingchun Li, Chuanfa Ni, Qiqiang Xie, Mingyou Hu, Fei Wang, and Jinbo Hu

Angew. Chem. Int. Ed., 2017, 55, 9971-9975

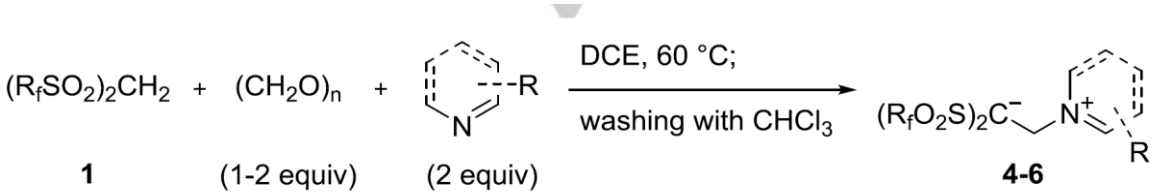


CHEMISTRY A European Journal

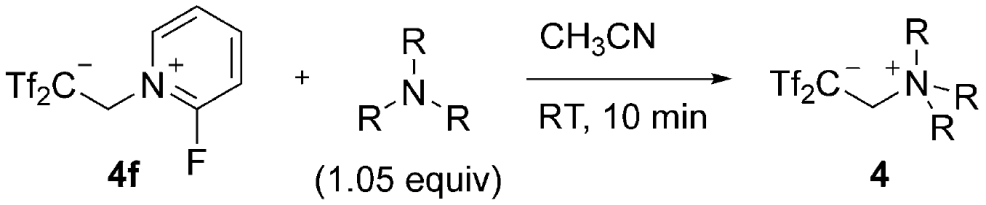
2-(Pyridinium-1-yl)-1,1-bis((perfluoroalkyl)sulfonyl)ethan-1-ide: A Practical Reagent for Synthesis of Strongly Acidic 1,1-Bis((perfluoroalkyl)sulfonyl)alkanes

Hikaru Yanai, Ryuta Takahashi, Yoichi Takahashi, Akira Kotani, Hideki Hakamata, and Takashi Matsumoto

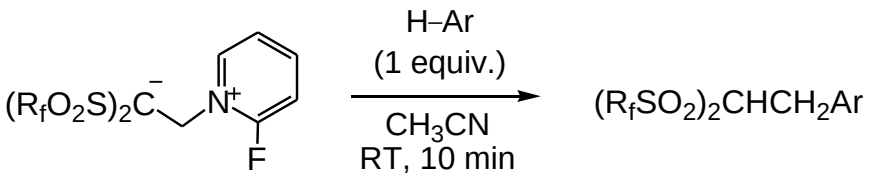
Chem. Eur. J., 2017, 23, 8203-8211



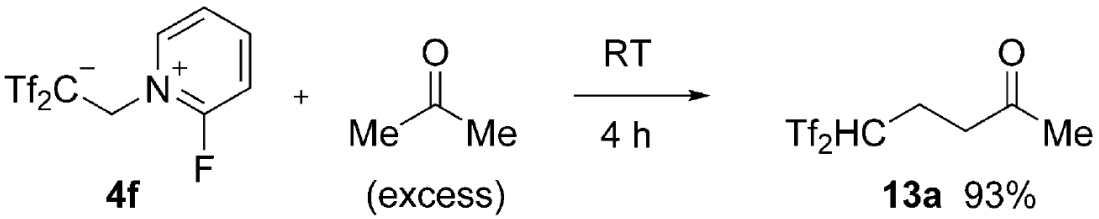
yield up to 99%

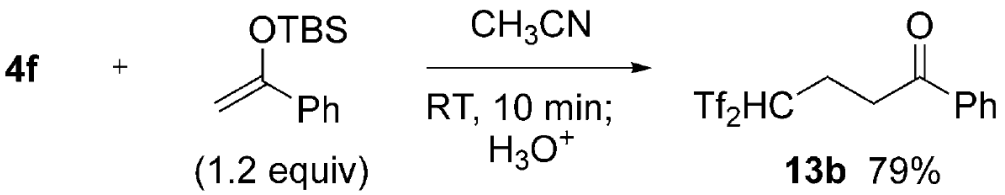


yield up to 97%



yield up to 91%



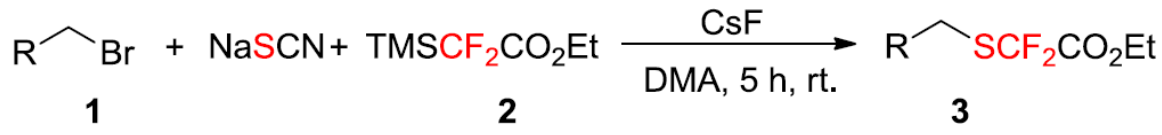


Tetrahedron

One-pot synthesis of (ethoxycarbonyl)difluoromethylthioethers from thiocyanate sodium and ethyl 2-(trimethylsilyl)-2,2-difluoroacetate (TMS-CF_2CO_2Et)

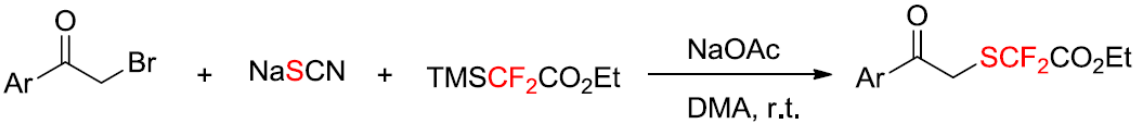
Lijun Xu, Hongyu Wang, Changwu Zheng, Gang Zhao

Tetrahedron 2017, 73, 6057-6066



1 **2** **3**

60-91%



4 **2** **5**

27-68%