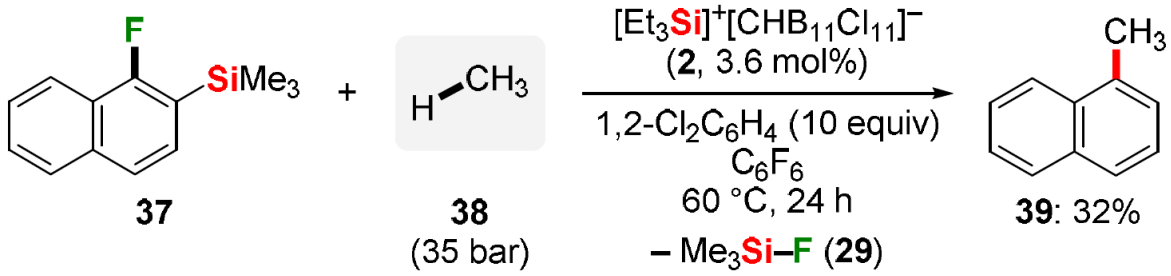
ACS Catalysis

Catalytic C–H Arylation of Unactivated C–H Bonds by Silylium Ion-Promoted C(sp2)–F Bond Activation

Hendrik F. T. Klare

ACS Catal., 2017, 7, 6999–7002

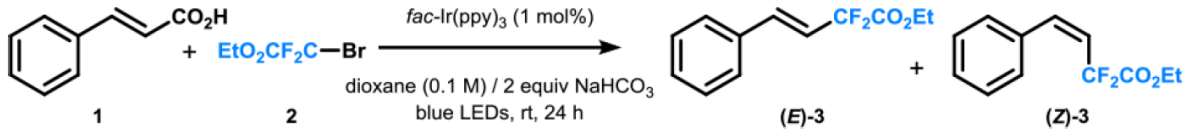


37 38 (35 bar) **39**: 32%

Visible-Light Photocatalytic Decarboxylation of α,β-Unsaturated Carboxylic Acids: Facile Access to Stereoselective Difluoromethylated Styrenes in Batch and Flow

Xiao-Jing Wei, Wout Boon, Volker Hessel, and Timothy Noël

ACS Catal., 2017, 7, 7136–7140



1 2 (*E*)-3 (*Z*)-3

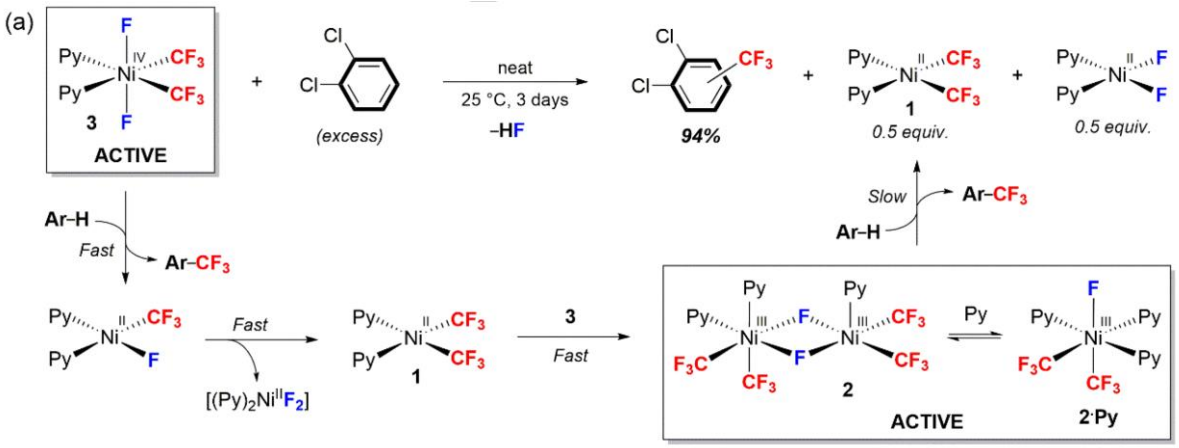
18 examples
yield up to 81%

Angewandte Chemie International Edition

C–H Bond Trifluoromethylation of Arenes Enabled by a Robust, High-Valent Ni^{IV}-Complex.

Florian D'Accriscio, Pilar Borja, Nathalie Saffon-Merceron, Marie Fustier-Boutignon, Nicolas Mézailles, Noel Nebra

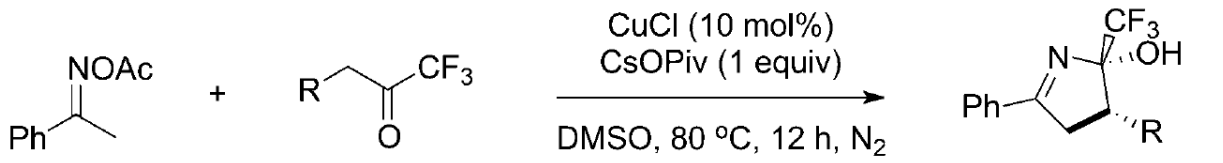
Angew. Chem. Int. Ed., 2017, 56, 12898-12902



Copper-Catalyzed C(sp3)–H/C(sp3)–H Cross-Dehydrogenative Coupling with Internal Oxidants: Synthesis of 2-Trifluoromethyl-Substituted Dihydropyrrol-2-ols

Chuanle Zhu, Rui Zhu, Hao Zeng, Fulin Chen, Chi Liu, Wanqing Wu, and Huanfeng Jiang

Angew. Chem. Int. Ed., 2017, 56, 13324-13328

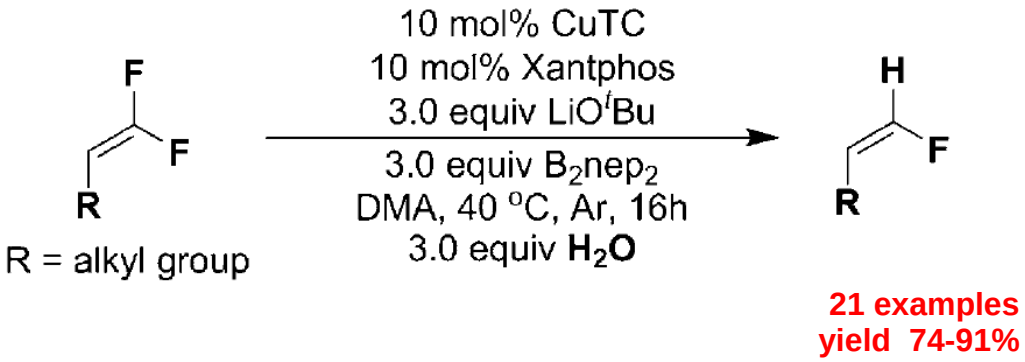


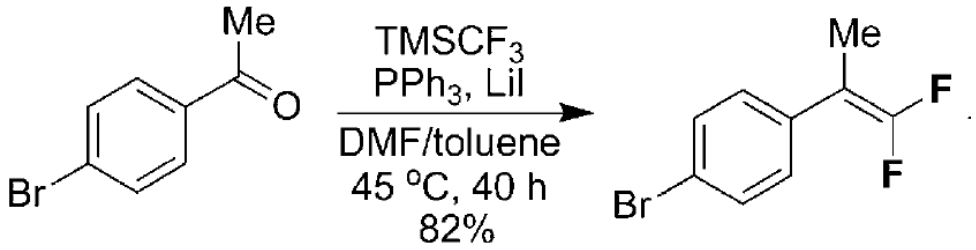
yield up to 76%

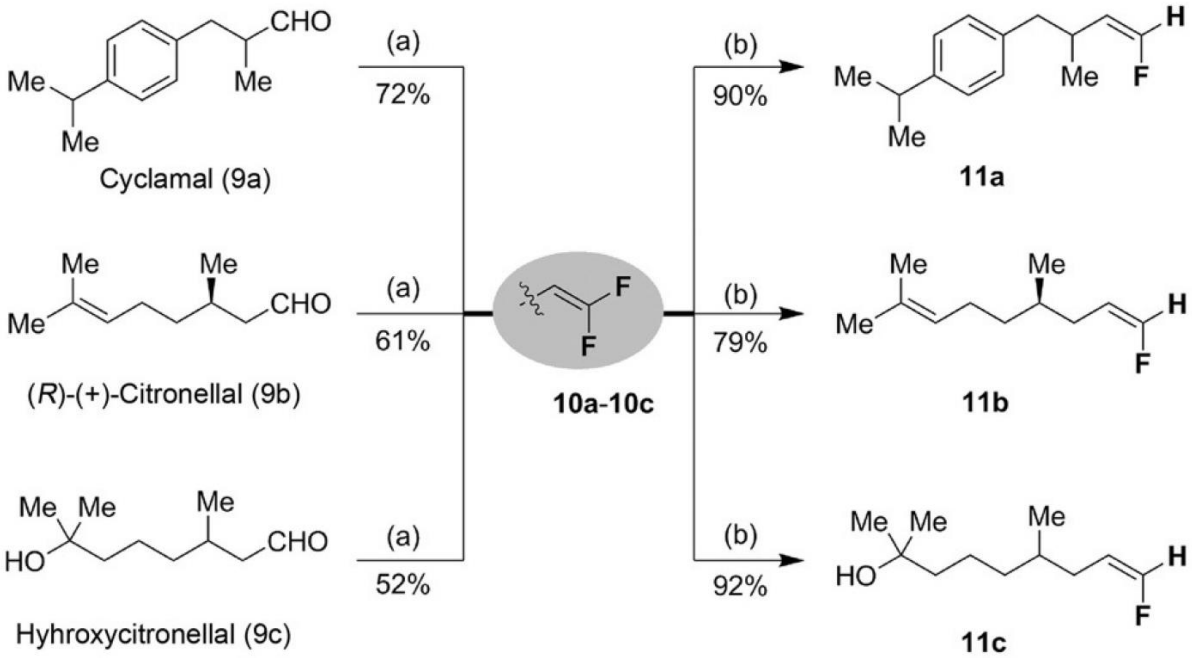
Stereoselective Synthesis of Z Fluoroalkenes through Copper-Catalyzed Hydrodefluorination of gem-Difluoroalkenes with Water

Jiefeng Hu, Xiaowei Han, Yu Yuan, and Zhuangzhi Shi

Angew. Chem. Int. Ed., 2017, 56, 13342-13346







Fluorine Effects on Group Migration via a Rhodium(V) Nitrenoid Intermediate

Cheng-Qiang Wang, Yu Zhang, and Chao Feng

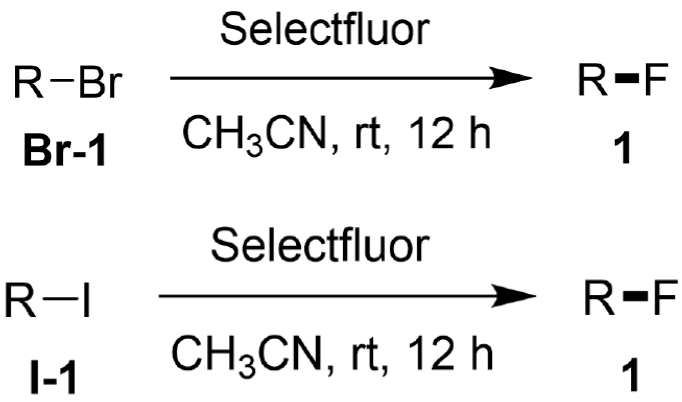
Angew. Chem. Int. Ed., 2017, 56, 14918-14922

yield up to 89%

Selective Radical Fluorination of Tertiary Alkyl Halides at Room Temperature

He Chen, Zhonglin Liu, Ying Lv, Xinqiang Tan, Haigen Shen, Hai-Zhu Yu, and Chaozhong Li

Angew. Chem. Int. Ed., 2017, 56, 15411-15415



Trifluoromethylfluorosulfonylation of Unactivated Alkenes Using Readily Available Ag($O_2CCF_2SO_2F$) and N-Fluorobenzenesulfonimide

Yongan Liu, Hao Wu, Yong Guo, Ji-Chang Xiao, Qing-Yun Chen, and Chao Liu

Angew. Chem. Int. Ed., 2017, 56, 15432-15435

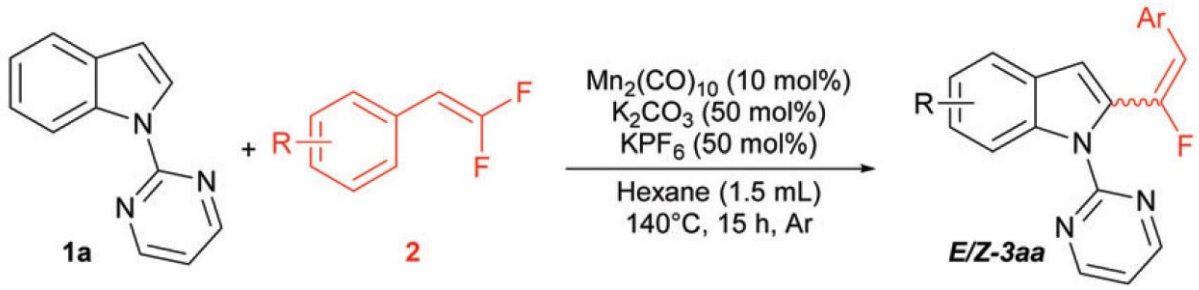
35 examples
yield up to 84%

Chemical Communications

Manganese-catalyzed synthesis of monofluoroalkenes via C–H activation and C–F cleavage

Sai-Hu Cai, Lu Ye, Ding-Xing Wang, Yi-Qiu Wang, Lin-Jie Lai, Chuan Zhu, Chao Feng and Teck-Peng Loh

Chem. Commun., 2017, 53, 8731-8734

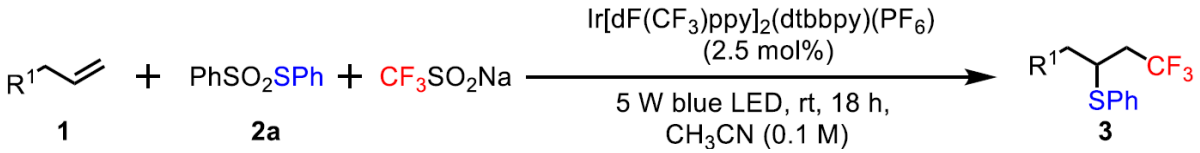


12 examples
yield up to 83%

Visible-Light-Induced Thiotrifluoromethylation of Terminal Alkenes with Sodium Triflinate and Benzenesulfonothioates

Weiguang Kong, Hejun An and Qiuling Song

Chem. Commun., 2017, 53, 8968-8971

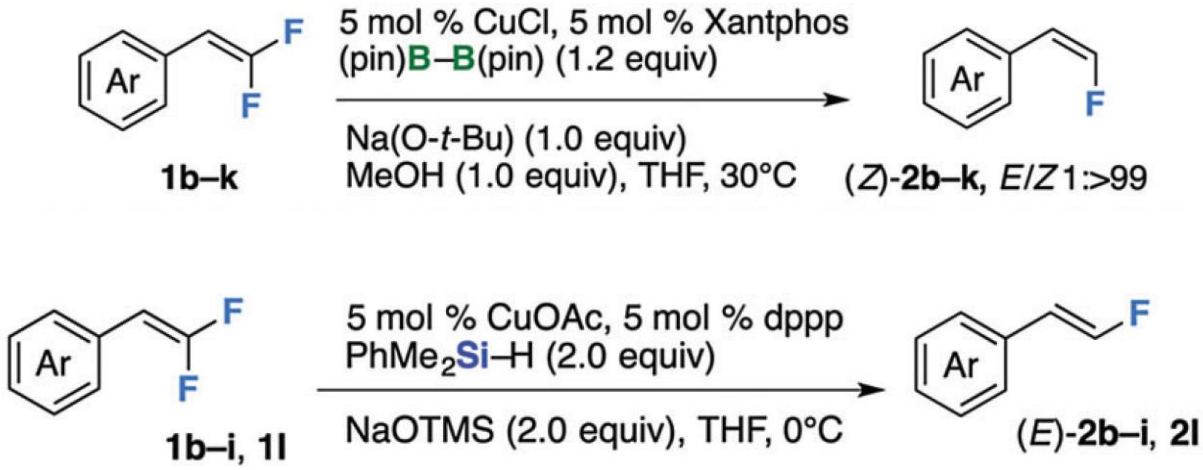


28 examples
yield 50-86%

Stereodivergent hydrodefluorination of gem-difluoroalkenes: selective synthesis of (Z)- and (E)-monofluoroalkenes

Ryoto Kojima, Koji Kubota and Hajime Ito

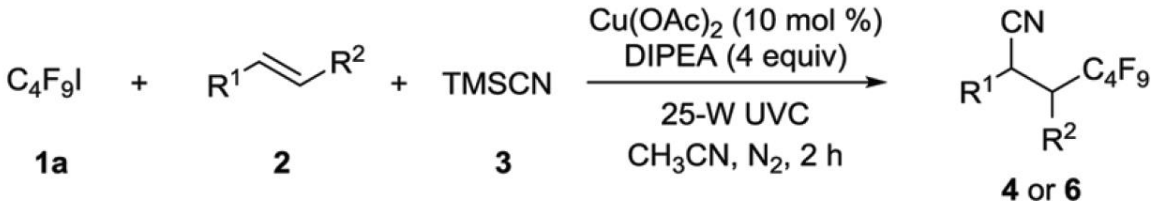
Chem. Commun., 2017, 53, 10688-10691



Photoinduced, copper-catalyzed three components cyanofluoroalkylation of alkenes with fluoroalkyl iodides as fluoroalkylation reagents

Quanping Guo, Mengran Wang, Yanfang Wang, Zhaoqing Xu and Rui Wang

Chem. Commun., 2017, 53, 12317-12320

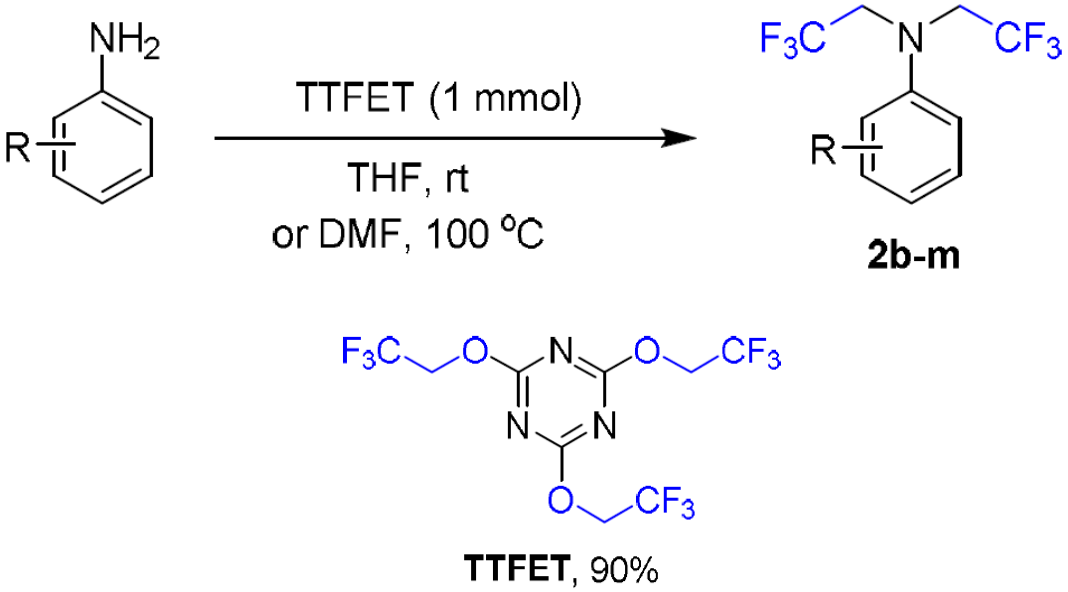


27 examples
yield up to 91%

Transition metal-free *N*-fluoroalkylation of amines using cyanurate activated fluoroalcohols

Fatemeh Haghighi, Farhad Panahi, Mohsen Golbon Haghighi and Ali Khalafi-Nezhad

Chem. Commun., 2017, 53, 12650-12653

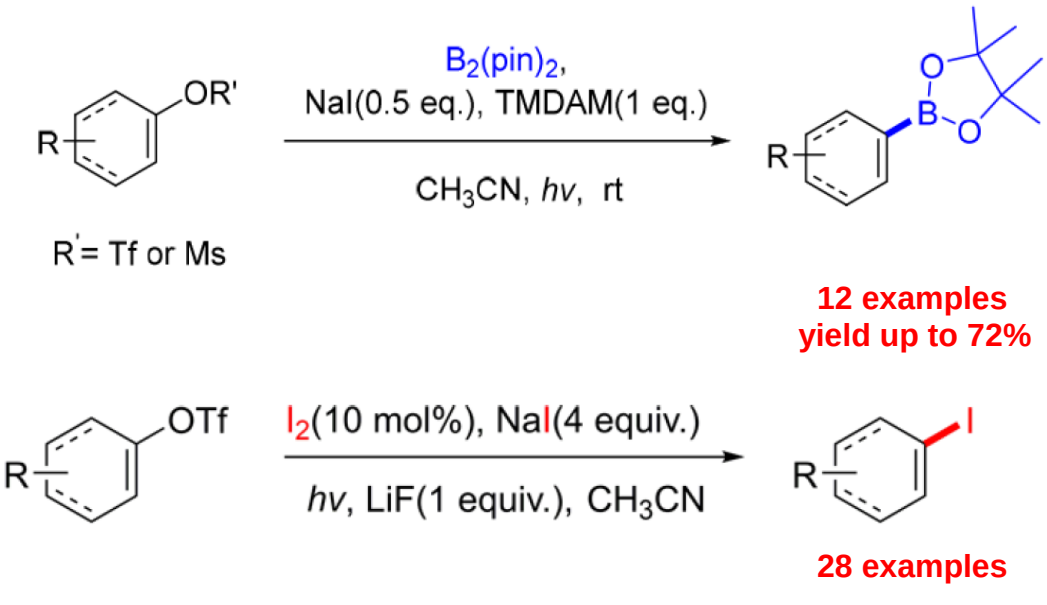


Journal of the American Chemical Society

Simple and Efficient Generation of Aryl Radicals from Aryl Triflates: Synthesis of Aryl Boronates and Aryl Iodides at Room Temperature

Wenbo Liu, Xiaobo Yang, Yang Gao, and Chao-Jun Li

J. Am. Chem. Soc., 2017, 139, 8621-8627

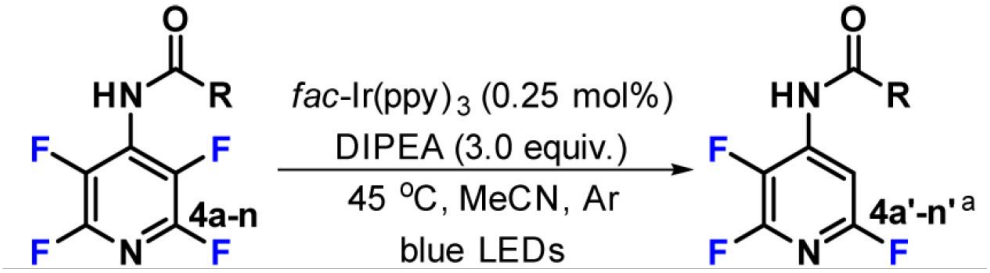


yield up to 80%

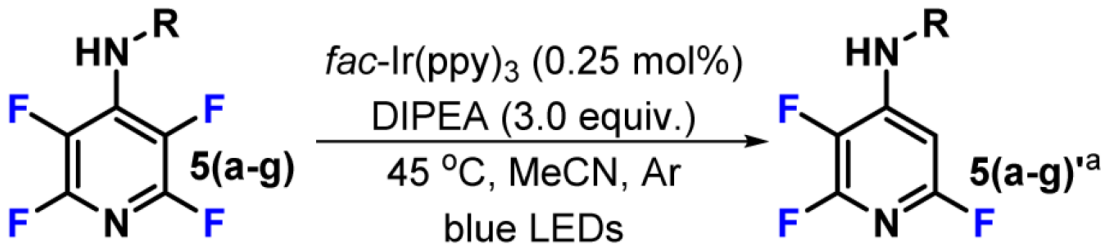
Hydrogen Bond Directed Photocatalytic Hydrodefluorination: Overcoming Electronic Control

Mohammad B. Khaled, Roukaya K. El Mokadem, and Jimmie D. Weaver

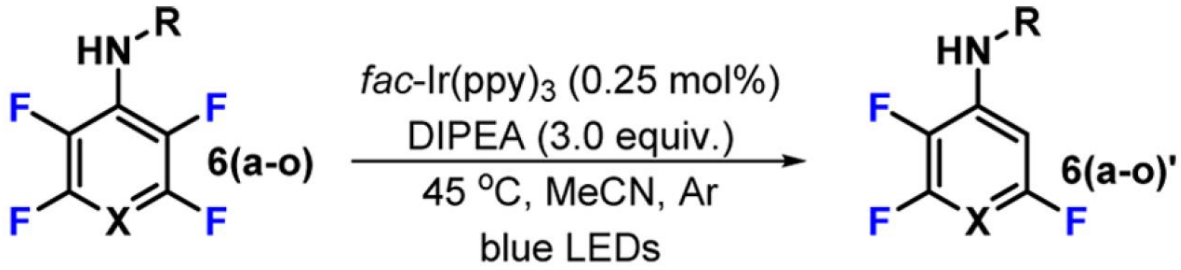
J. Am. Chem. Soc., 2017, 139, 13092-13101



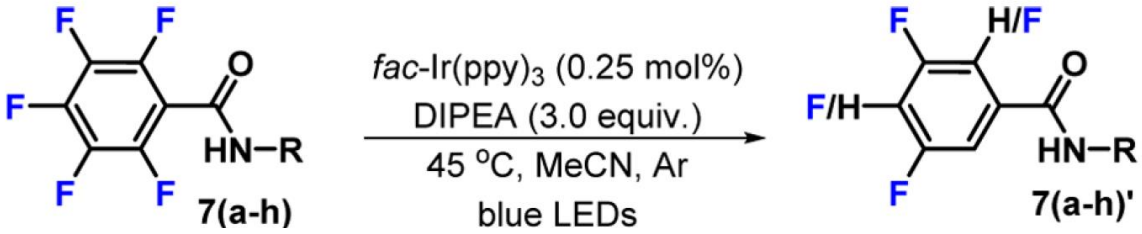
28 examples
yield 78-98%



yield up to 98%



yield up to 98%



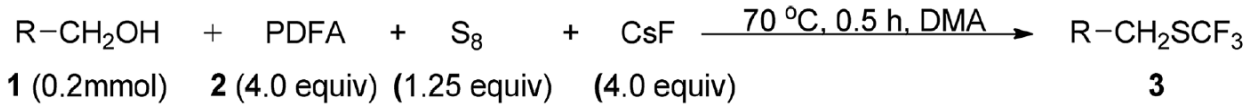
yield up to 88%

Journal of Organic Chemistry

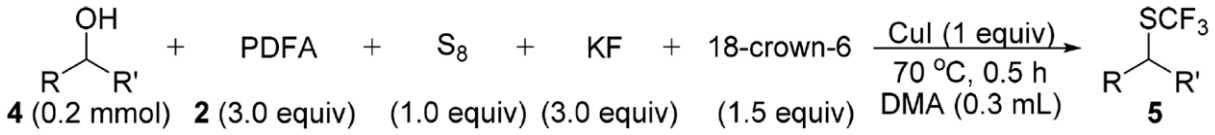
Difluorocarbene for Dehydroxytrifluoromethylthiolation of Alcohols

Jia-Jia Luo, Min Zhang, Jin-Hong Lin, and Ji-Chang Xiao

J. Org. Chem., 2017, 82, 11206-11211



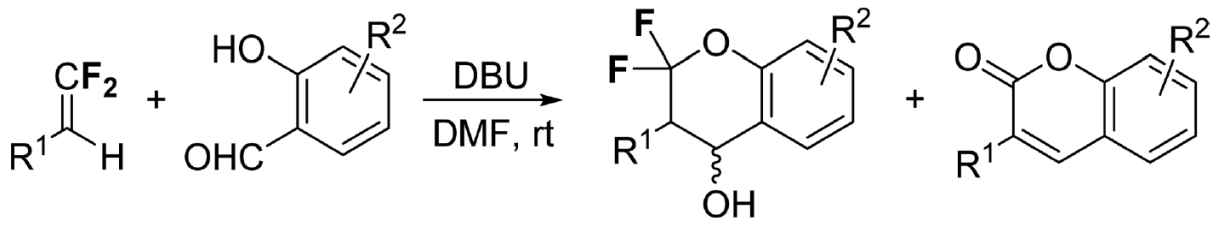
yield up to 95%

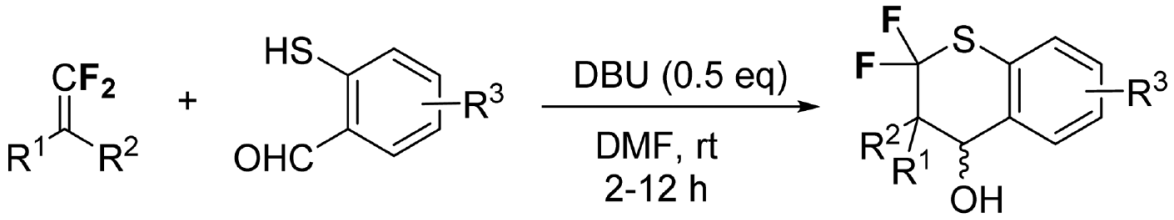


Synthesis of 2,2-Difluorinated 4-Isoflavanols/4-Thioisoflavanols via a Base-Catalyzed [4 + 2] Annulation Reaction of gem-Difluoroolefins

Jiaheng Li, Cong Xu, Na Wei, and Mang Wang

J. Org. Chem., 2017, 82, 11348-11357



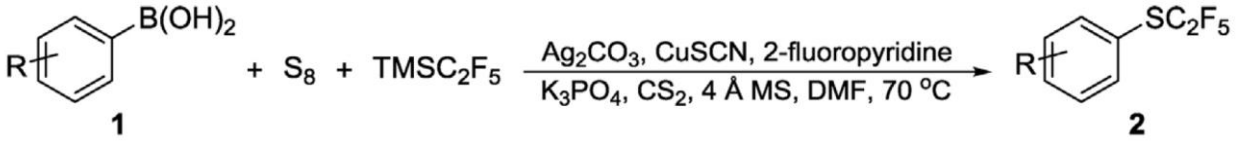


Journal of Fluorine Chemistry

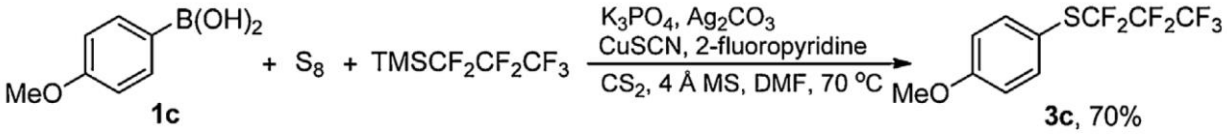
Copper-mediated oxidative pentafluoroethylthiolation of aryl boronic acids with $TMSC_2F_5$ and elemental sulfur

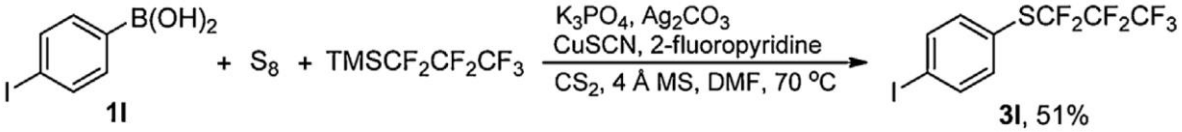
Jia-Xiang Xiang, Xiu-Hua Xu, Feng-Ling Qinga

J. Fluor. Chem., 2017, 203, 110-114.



yield up to 82%

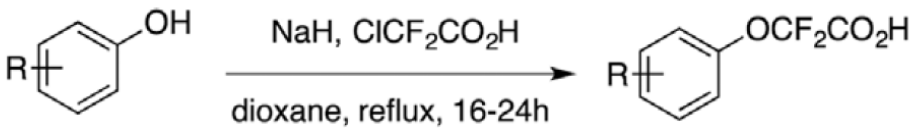


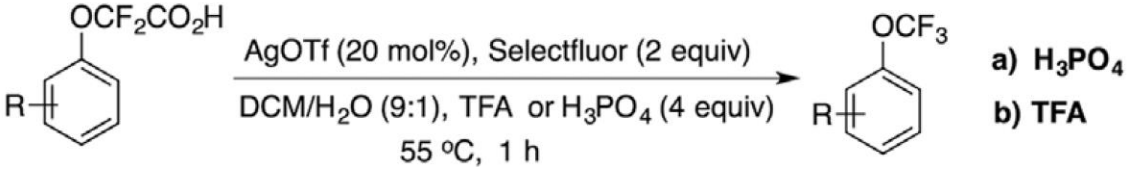


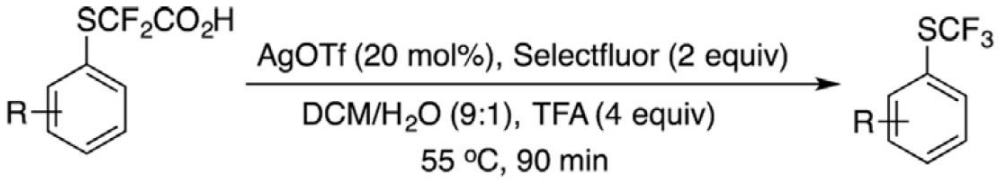
Fluorodecarboxylation: Synthesis of aryl trifluoromethyl ethers ($ArOCF_3$) and thioethers ($ArSCF_3$)

Sankarganesh Krishanmoorthy, Simon D. Schnell, Huong Dang, Fang Fu, G.K. Surya Prakash

J. Fluor. Chem., 2017, 203, 130-135.



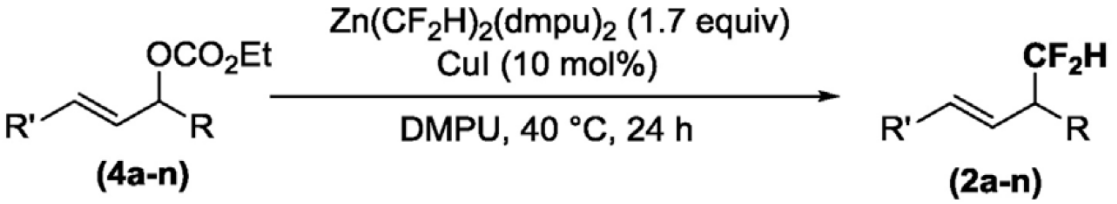




Copper-catalyzed allylic difluoromethylation of allyl carbonates with (difluoromethyl)zinc reagent

Kohsuke Aikawa, Koki Ishii, Yu Endo, Koichi Mikami

J. Fluor. Chem., 2017, 203, 122-129.



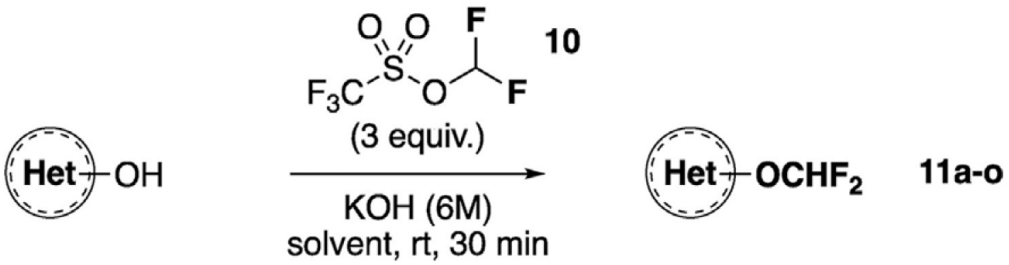
yield up to 95%

Tri- and difluoromethoxylated N-based heterocycles − Synthesis and insecticidal activity of novel F_3CO- and F_2HCO-analogues of Imidacloprid and Thiacloprid

Gregory Landelle, Etienne Schmitt, Armen Panossian, Jean-Pierre Vors, Sergiy Pazenok, Peter Jeschke, Oliver Gutbrod, Frédéric R. Leroux

J. Fluor. Chem., 2017, 203, 155-165.

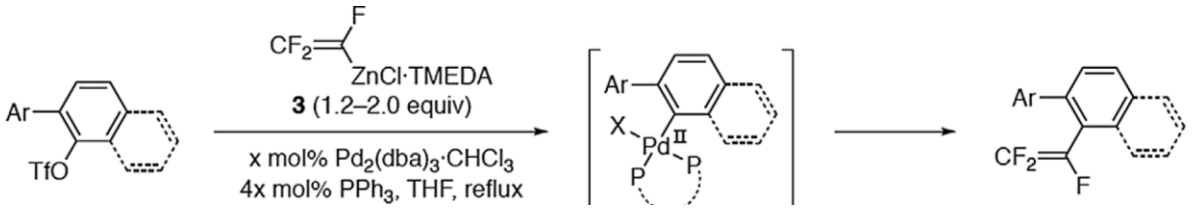
Difluoromethylation of various N-based heterocycles using difluoromethyl triflate.



Pinpoint-fluorinated polycyclic aromatic hydrocarbons (F-PAHs): Syntheses of difluorinated subfamily and their properties

Kohei Fuchibe, Kento Shigeno, Nan Zhao, Hiromichi Aihara, Rikuo Akisaka,Toshiyuki Morikawa, Takeshi Fujita, Kie Yamakawa, Toshihiro Shimada, Junji Ichikawa

J. Fluor. Chem., 2017, 203, 173-184.



A perfluorometallacycloheptane complex of nickel bipyridine

Katherine R. McGarry, David A. Vicic

J. Fluor. Chem., 2017, 203, 206-209.