

Organic Chemistry Frontiers

Copper-catalyzed one-pot synthesis of 2-(2,2,2-trifluoroethyl)-substituted benzofused heterocycles

Wei Wu, Beibei Luo, Yi You and Zhiqiang Weng

Org. Chem. Front., 2021, 8, 1997-2001



24 examples
yield up to 93%

Visible light-driven fluoroalkylthiocyanation of alkenes via electron donor-acceptor complexes

Zebiao Li, Shan Wang, Yumei Huo, Bing Wang, Jun Yan and Quanping Guo

Org. Chem. Front., 2021, 8, 3076-3081

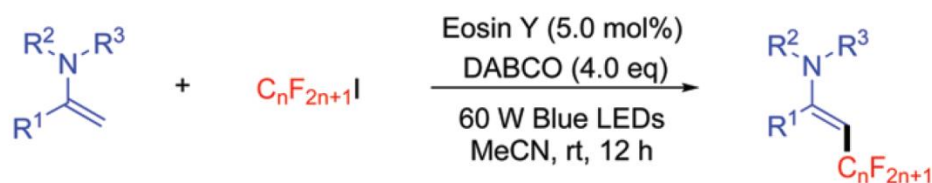


19 examples
yield up to 89%

Photoinitiated stereoselective direct C(sp²)-H perfluoroalkylation and difluoroacetylation of enamides

Kai Zhao, Jing-Yu Guo, Ting Guan, Ying-Xue Wang, Ji-Yu Tao, Yu Zhang, Qing-Hong Zhang, Kun Nia and Teck-Peng Loh

Org. Chem. Front., 2021, 8, 4086-4094



30 examples
yield up to 88%

Visible light induced deaminative alkylation of difluoroenoxyasilanes: a transition metal free strategy

Qi-Ping Huang, Yang Huang, An-Jun Wang, Liang Zhao, Jia Jia, Yanbo Yu, Jie Tong, Jiwei Gu and Chun-Yang He

Org. Chem. Front., 2021, 8, 4086-4094



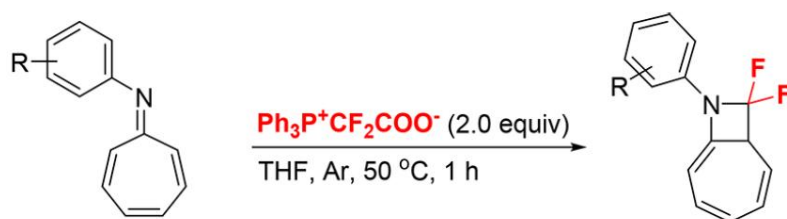
40 examples
yield up to 86%

Organic Letters

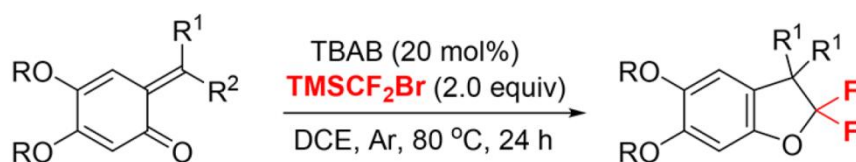
Synthesis of Difluorinated Heterocyclics through Metal-Free [8+1] and [4+1] Cycloaddition of Difluorocarbene

Yimin Jia, Yuan Yuan, Jinfeng Huang, Zhong-Xing Jiang, and Zhigang Yang

Org. Lett., 2021, 23, 2670-2675



19 examples
yield up to 99%

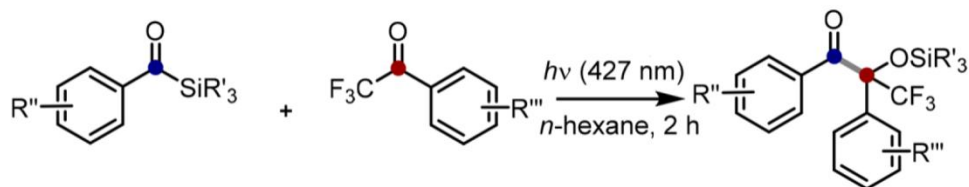


17 examples
yield up to 85%

Fluorinated Ketones as Trapping Reagents for Visible-Light-Induced Singlet Nucleophilic Carbenes

Daniel L. Priebbenow, Rowan L. Pilkington, Kyle N. Hearn, and Anastasios Polyzos

Org. Lett., 2021, 23, 2783-2789



20 examples
yield up to 99%

Regioselective C–H Trifluoromethylation of Aromatic Compounds by Inclusion in Cyclodextrins

Xu Lu, Ryohei Kawazu, Jizhou Song, Yusuke Yoshigoe, Takeru Torigoe, and Yoichiro Kuninobu

Org. Lett., 2021, 23, 4327-4331

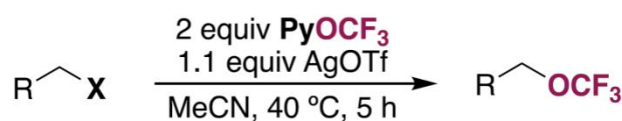


17 examples
yield up to 94%

Isolable Pyridinium Trifluoromethoxide Salt for Nucleophilic Trifluoromethoxylation

Geraldo Duran-Camacho, Devin M. Ferguson, Jeff W. Kampf, Douglas C. Bland, and Melanie S. Sanford

Org. Lett., 2021, 23, 5138-5142

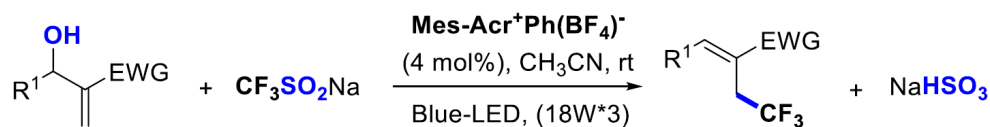


11 examples
yield up to 91%

Visible-Light-Induced Trifluoromethylation of Allylic Alcohols

Bowen Li, Wubing Zeng, Lin Wang, Zhishuai Geng, Teck-Peng Loh*, and Peizhong Xie

Org. Lett., 2021, 23, 5235-5240

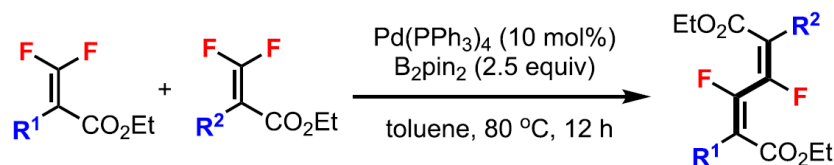


35 examples
yield up to 78%

Stereoselective Synthesis of Difluorinated 1,3-Dienes via Palladium-Catalyzed C–F Bond Activation of Tetrasubstituted *gem*-Difluoroalkenes

Yanhui Wang, Qiao Ma, and Gavin Chit Tsui

Org. Lett., 2021, 23, 5241-5245

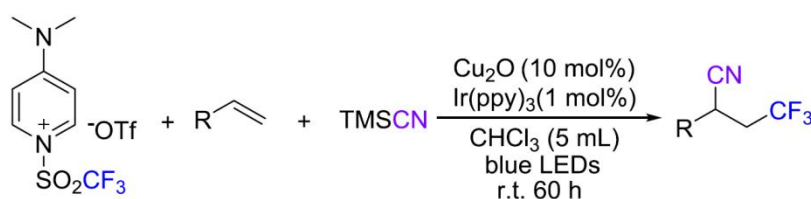


2 examples
yield up to 32%

A Readily Available Trifluoromethylation Reagent and Its Difunctionalization of Alkenes

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

Org. Lett., 2021, 23, 6079-6083



17 examples
yield up to 76%

Photoredox Generation of N-Centered Hydrazonyl Radicals Enables the Construction of Dihydropyrazole-Fused *gem*-Difluoroalkenes

Qi-Sheng Gao, Zhuo Niu, Yang Chen, Jing Sun, Wei-Ying Han, Jing-Yun Wang, Miao Yu, and Ming-Dong Zhou

Org. Lett., 2021, 23, 6153-6157

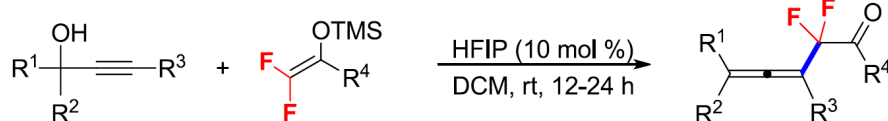


18 examples
yield up to 94%

HFIP-Catalyzed Difluoroalkylation of Propargylic Alcohols to Access Tetrasubstituted Difluoroalkyl Allenes

Jinshan Li, Wenxue Xi, Saimei Liu, Chenxi Ruan, Xiaochun Zheng, Jianguo Yang, Lei Wang, and Zhiming Wang

Org. Lett., 2021, 23, 7264-7269



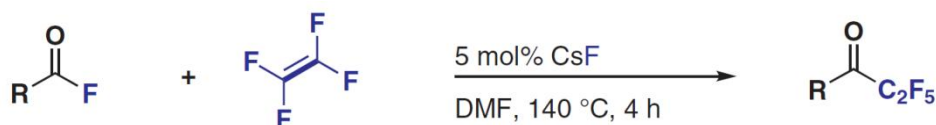
26 examples
yield up to 92%

Synthesis

CsF-Catalyzed Fluoroacylation of Tetrafluoroethylene Using Acyl Fluorides for the Synthesis of Pentafluoroethyl Ketones

Ishida, Naoyoshi; Iwamoto, Hiroaki; Sunagawa, Denise Eimi; Ohashi, Masato; Ogoshi, Sensuke

Synthesis, 2021, 53, 3137-3143



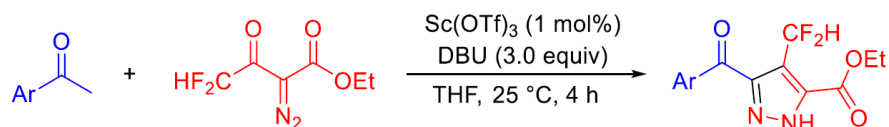
15 examples
yield up to 95%

Tetrahedron

A method for synthesis of polysubstituted 4-difluoromethyl and perfluoroalkyl pyrazoles

Huahong Chen, Shunli Wen, Yubo Cui, Lu Lin, Hanbang Zhang, Zheng Fang, Yi You, Zhiqiang Weng

Tetrahedron, 2021, 85, 132062



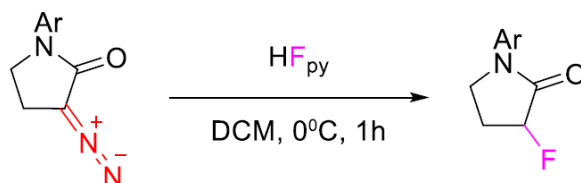
21 examples
yield up to 87%

Tetrahedron Letters

Fluorination of α -diazo- γ -lactams with the Olah reagent

Alexander Kazantsev, Daniil Zhukovsky, Andrey Bubyrev, Dmitry Dar'in, Mikhail Krasavin

Tetrahedron Lett., 2021, 69, 152969



7 examples
yield up to 51%