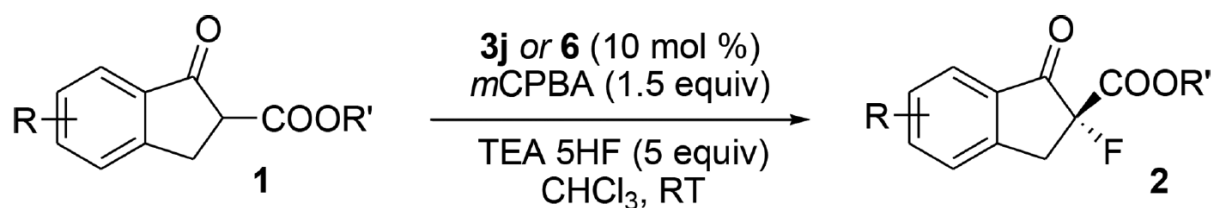


ACS Catalysis

Metal-Free Catalytic Asymmetric Fluorination of Keto Esters Using a Combination of Hydrogen Fluoride (HF) and Oxidant: Experiment and Computation

Roman Pluta, Patricia E. Krach, Luigi Cavallo, Laura Falivene, and Magnus Rueping

ACS Catal., 2018, 8, 2582–2588

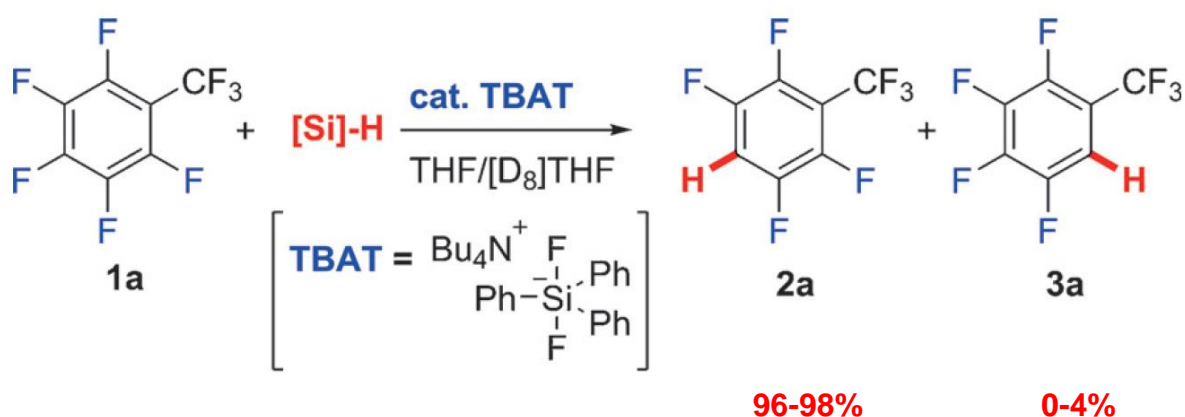


Angewandte Chemie International Edition

Transition-Metal-Free Catalytic Hydrodefluorination of Polyfluoroarenes by Concerted Nucleophilic Aromatic Substitution with a Hydrosilicate

Kotaro Kikushima, Mary Grellier, Masato Ohashi, and Sensuke Ogoshi

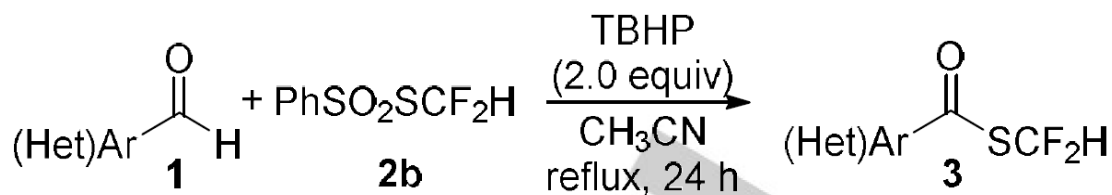
Angew. Chem. Int. Ed., 2017, 56, 16191-16196



Synthesis of Difluoromethylthioesters from Aldehydes

Shi-Huan Guo, Xing-Long Zhang, Gao-Fei Pan, Xue-Qing Zhu, Ya-Ru Gao, and Yong-Qiang Wang

Angew. Chem. Int. Ed., 2018, 57, 1663-1667

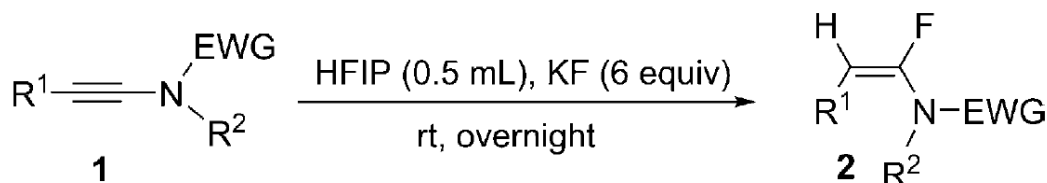


yield up to 87%

(Radio)fluoroclick Reaction Enabled by a Hydrogen-Bonding Cluster

Xiaojun Zeng, Junling Li, Chin K. Ng, Gerald B. Hammond, and Bo Xu

Angew. Chem. Int. Ed., 2018, 57, 2924-2928

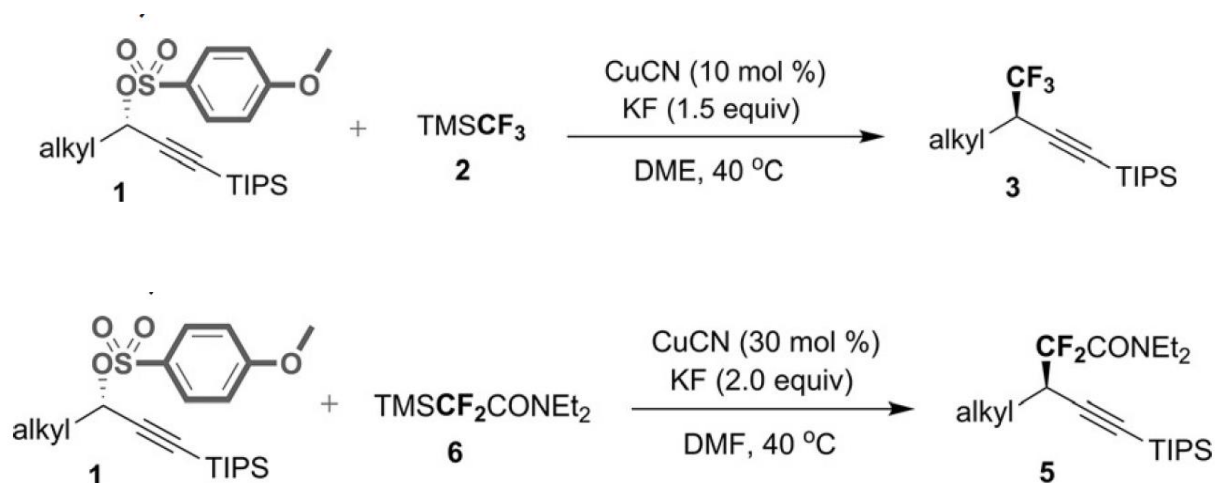


25 examples
yield 70-90%

Copper-Catalyzed Highly Stereoselective Trifluoromethylation and Difluoroalkylation of Secondary Propargyl Sulfonates

Xing Gao, Yu-Lan Xiao, Xiaolong Wan, and Xingang Zhang

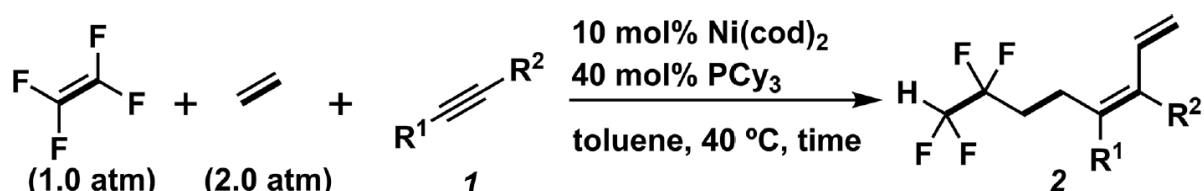
Angew. Chem. Int. Ed., 2018, 57, 3187-3191



Nickel-Catalyzed Formation of 1,3-Dienes via a Highly Selective Cross-Tetramerization of Tetrafluoroethylene, Styrenes, Alkynes, and Ethylene

Takuya Kawashima, Masato Ohashi, and Sensuke Ogoshi

J. Am. Chem. Soc., 2017, 139, 17795-17798

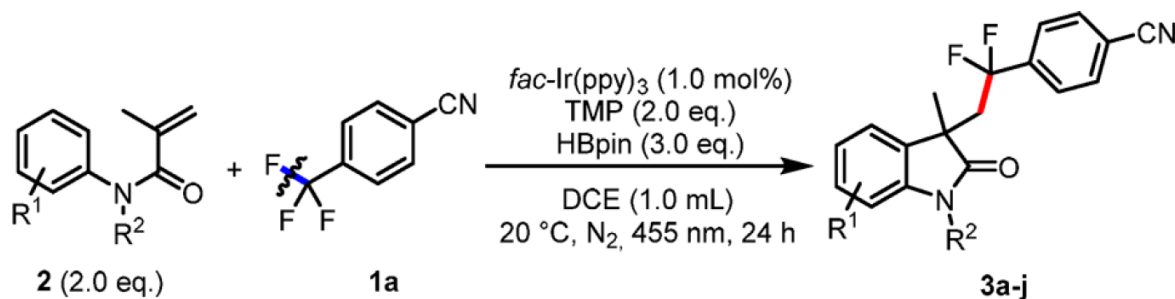


23 examples
yield up to 94%

Selective Single C(sp³)-F Bond Cleavage in Trifluoromethylarenes: Merging Visible-Light Catalysis with Lewis Acid Activation

Kang Chen, Nele Berg, Ruth Gschwind, and Burkhard König

J. Am. Chem. Soc., 2017, 139, 18444-18447

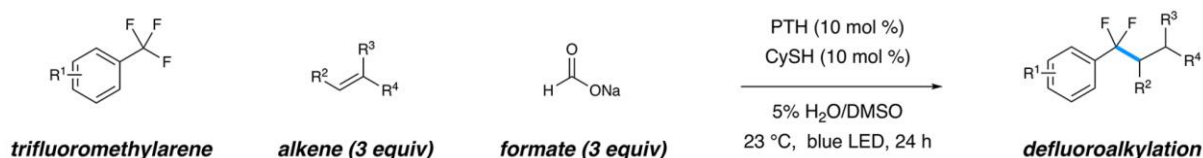


yield up to 82%

Catalytic Defluoroalkylation of Trifluoromethylaromatics with Unactivated Alkenes

Hengbin Wang and Nathan T. Jui

J. Am. Chem. Soc., 2018, 140, 163-166

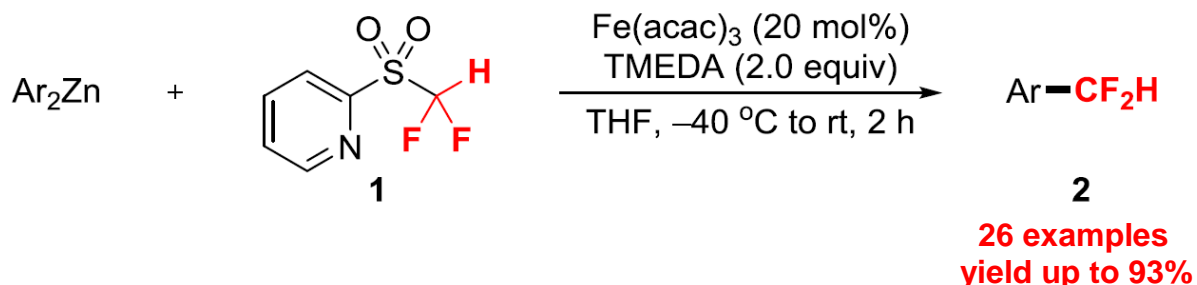


yield up to 86%

Iron-Catalyzed Difluoromethylation of Arylzincs with Difluoromethyl 2-Pyridyl Sulfone

Wenjun Miao, Yanchuan Zhao, Chuanfa Ni, Bing Gao, Wei Zhang, and Jinbo Hu

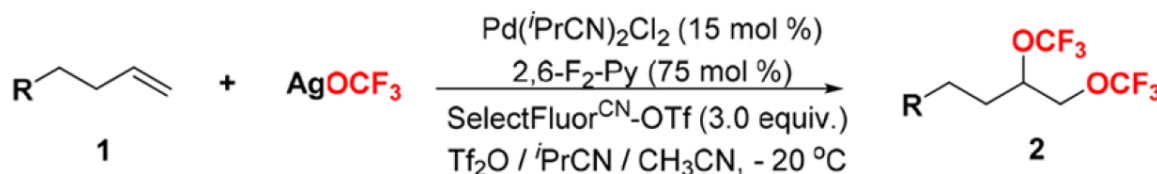
J. Am. Chem. Soc., 2018, 140, 880-883



Palladium-Catalyzed Intermolecular Ditrifluoromethoxylation of Unactivated Alkenes: CF_3O -Palladation Initiated by $\text{Pd}(\text{IV})$

Chaohuang Chen, Yixin Luo, Liang Fu, Pinhong Chen, Yu Lan, and Guosheng Liu

J. Am. Chem. Soc., 2018, 140, 1207-1210

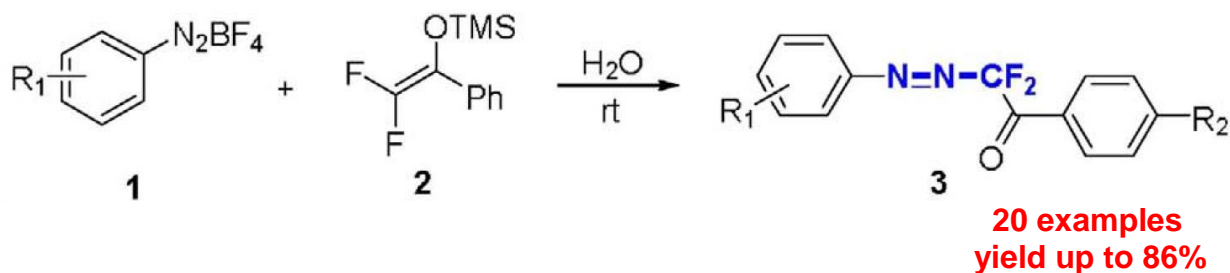


Journal of Fluorine Chemistry

“All-water” synthesis of the gem-difluoromethylene azo compounds from Arenediazonium Salts and fluorinated enol silyl ethers

Ye-bin Wu, Li Wan, Guo-ping Lu, Chun Cai

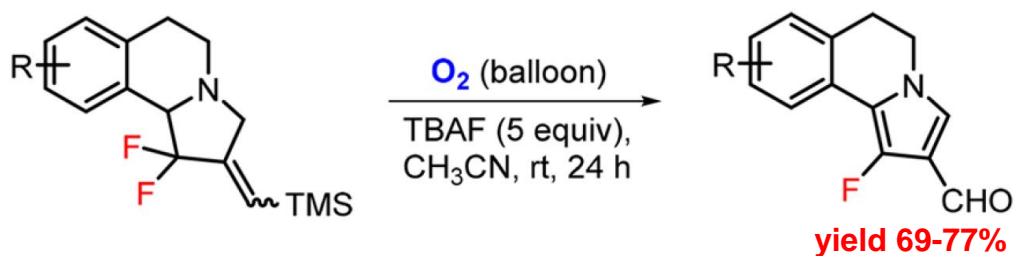
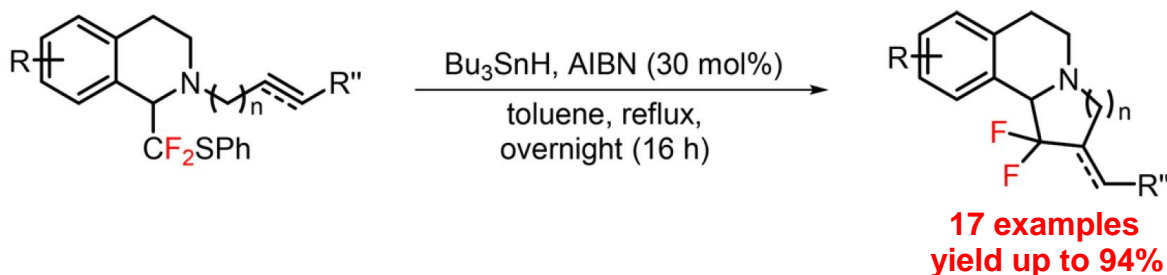
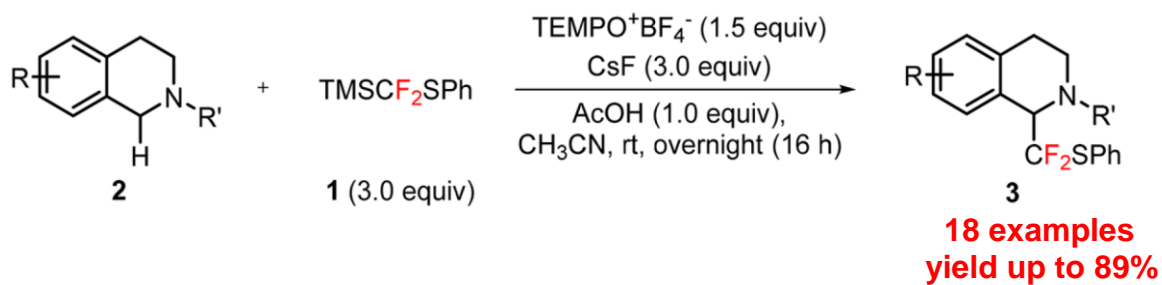
J. Fluor. Chem., 2018, 206, 125-127.



Oxidative Difluoromethylation of Tetrahydroisoquinolines Using TMSCF_2SPh : Synthesis of Fluorinated Pyrrolo[2,1-a]isoquinolines and Benzo[a]quinolizidines

Teerachai Punirun, Darunee Soorukram, Chutima Kuhakarn, Vichai Reutrakul, and Manat Pohmakotr

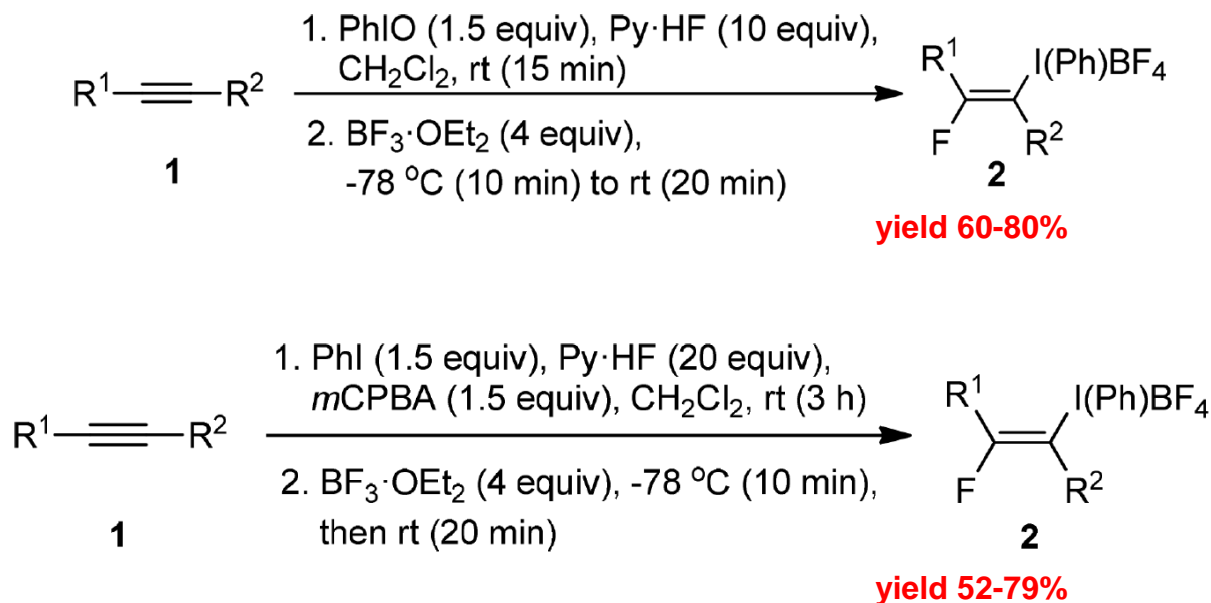
J. Org. Chem., 2018, 83, 765-782



Synthesis of β -Fluorovinylidonium Salts by the Reaction of Alkynes with Hypervalent Iodine/HF Reagents

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

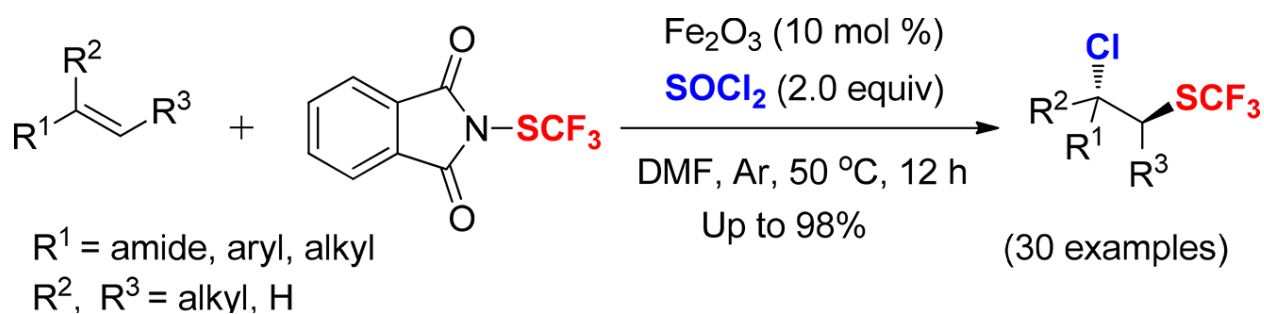
J. Org. Chem., 2018, 83, 2773-2778



Fe_2O_3 -Promoted Intermolecular Chlorotrifluoromethylthiolation of Alkenes

Yimin Jia, Hongmei Qin, Na Wang, Zhong-Xing Jiang, and Zhigang Yang

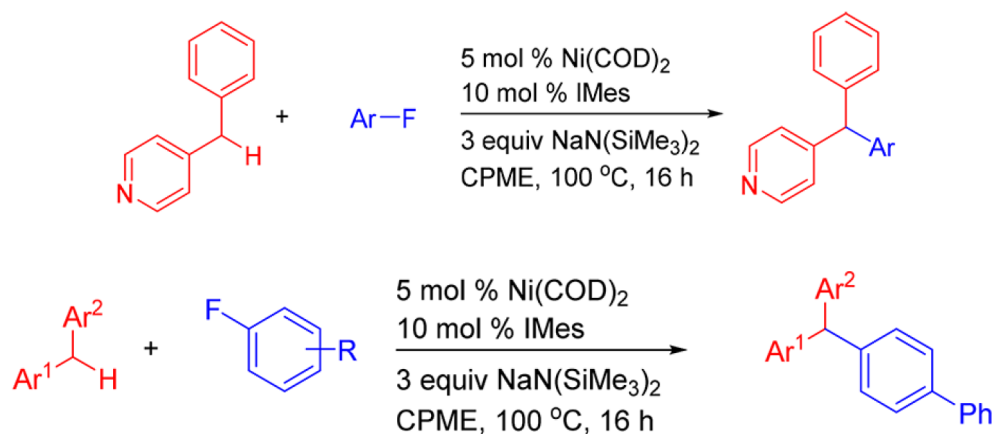
J. Org. Chem., 2018, 83, 2808-2817



Nickel-Catalyzed C(sp³)-H Arylation of Diarylmethane Derivatives with Aryl Fluorides

Jie Li, Chen Wu, Bihui Zhou, and Patrick J. Walsh

J. Org. Chem., 2018, 83, 2993-2999



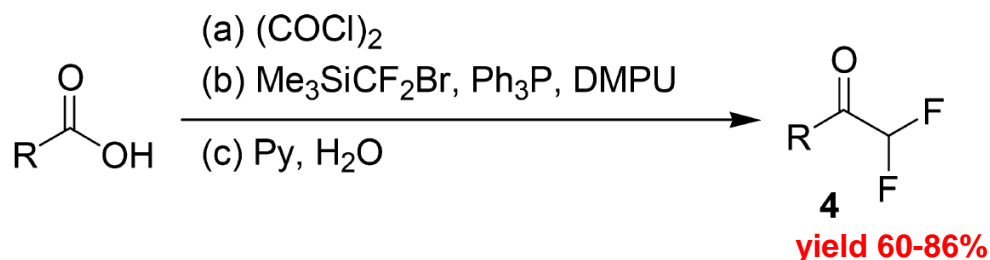
CPME = 1,4-dioxane, DME, toluene, and cyclopentyl methyl ether

Organic Letters

Difluoromethylation of Carboxylic Acids via the Addition of Difluorinated Phosphorus Ylide to Acyl Chlorides

Alexey L. Trifonov, Vitalij V. Levin, Marina I. Struchkova, and Alexander D. Dilman

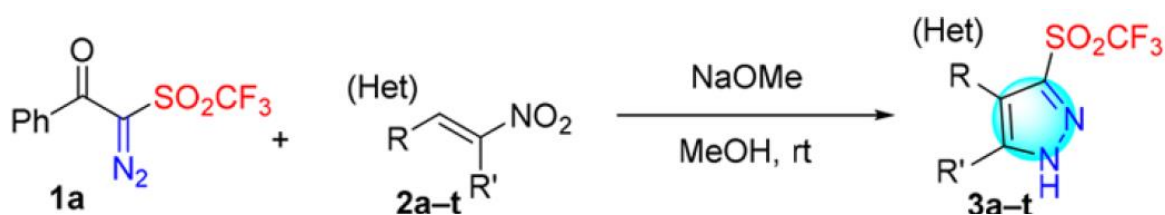
Org. Lett. 2017, 19, 5304-5307



Anionic Triflyldiazomethane: Generation and Its Application for Synthesis of Pyrazole-3-triflones via [3 + 2] Cycloaddition Reaction

Pulakesh Das, Satoshi Gondo, Etsuko Tokunaga, Yuji Sumii, and Norio Shibata

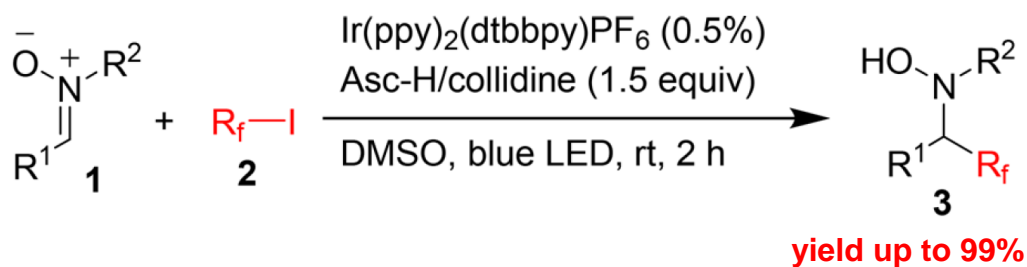
Org. Lett. 2018, 20, 558-561



Photocatalytic Reductive Fluoroalkylation of Nitrones

Vyacheslav I. Supranovich, Vitalij V. Levin, Marina I. Struchkova, and Alexander D. Dilman

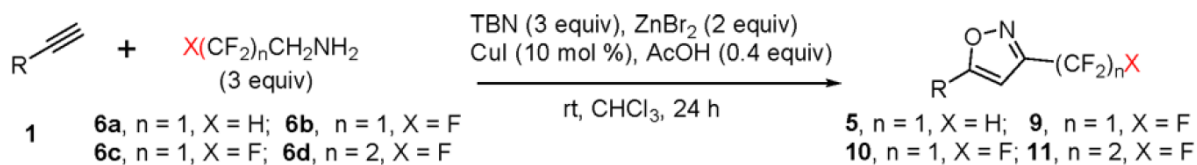
Org. Lett. 2018, 20, 840-843



Cu-Catalyzed Synthesis of Fluoroalkylated Isoxazoles from Commercially Available Amines and Alkynes

Xiao-Wei Zhang, Wen-Li Hu, Suo Chen, and Xiang-Guo Hu

Org. Lett. 2018, 20, 860-863

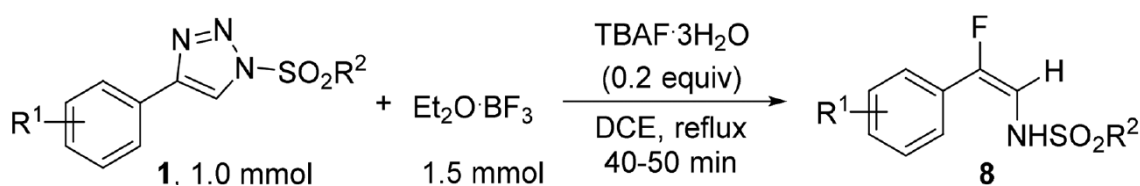


yield up to 91%

Metal-Free Synthesis of (E)-Monofluoroenamine from 1-Sulfonyl-1,2,3-triazole and $\text{Et}_2\text{O}\cdot\text{BF}_3$ via Stereospecific Fluorination of α -Diazoimine

Ze-Feng Xu, Haican Dai, Lihong Shan, and Chuan-Ying Li

Org. Lett. 2018, 20, 1054-1057

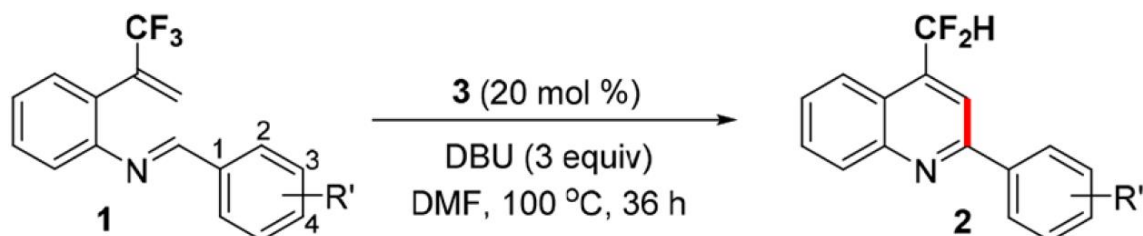


yield up to 85%

Synthesis of 4-Difluoromethylquinolines by NHC-Catalyzed Umpolung of Imines

Atanu Patra, Fabien Gelat, Xavier Pannecoucke, Thomas Poisson, Tatiana Besset, and Akkattu T. Biju

Org. Lett. 2018, 20, 1054-1057

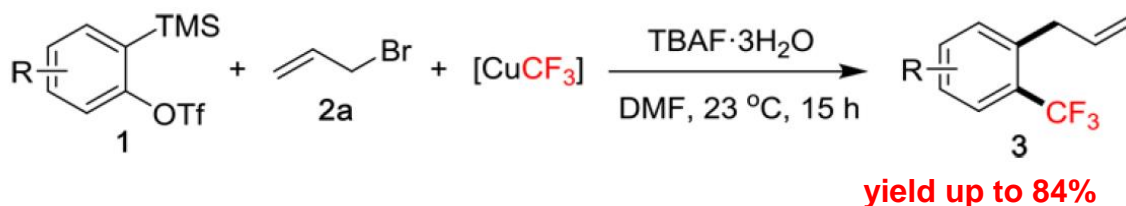


yield up to 90%

Copper-Mediated Trifluoromethylation–Allylation of Arynes

Xinkan Yang and Gavin Chit Tsui

Org. Lett. 2018, 20, 1179-1182

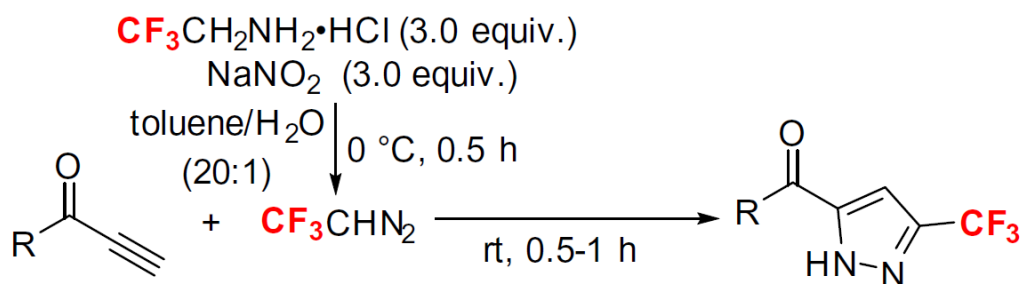


Tetrahedron Letters

Direct [3+2]-cycloaddition of electron-deficient alkynes with CF₃CHN₂: Regioselective one-pot synthesis of 3-trifluoromethylpyrazoles

Feng Li, Jingjing Wang, Wenlong Pei, Hong Li, Huiling Zhang, Manman Song, Linyun Guo, Anan Zhang, Lantao Liu

Tetrahedron Letters 2017, 58, 4344-4347

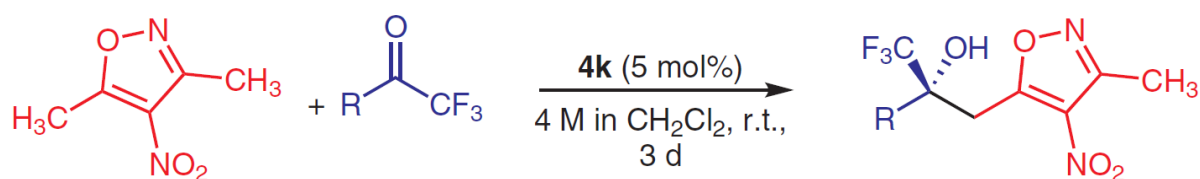


Synthesis

Organocatalytic Enantioselective Vinylogous Henry Reaction of 3,5-Dimethyl-4-nitroisoxazole with Trifluoromethyl Ketones

Ehsan Jafari, Dipti S. Kundu, Pankaj Chauhan, V. P. Reddy Gajulapalli, Carolina von Essen, Kari Rissanen, Dieter Enders

Synthesis, 2018, 50, 323-329

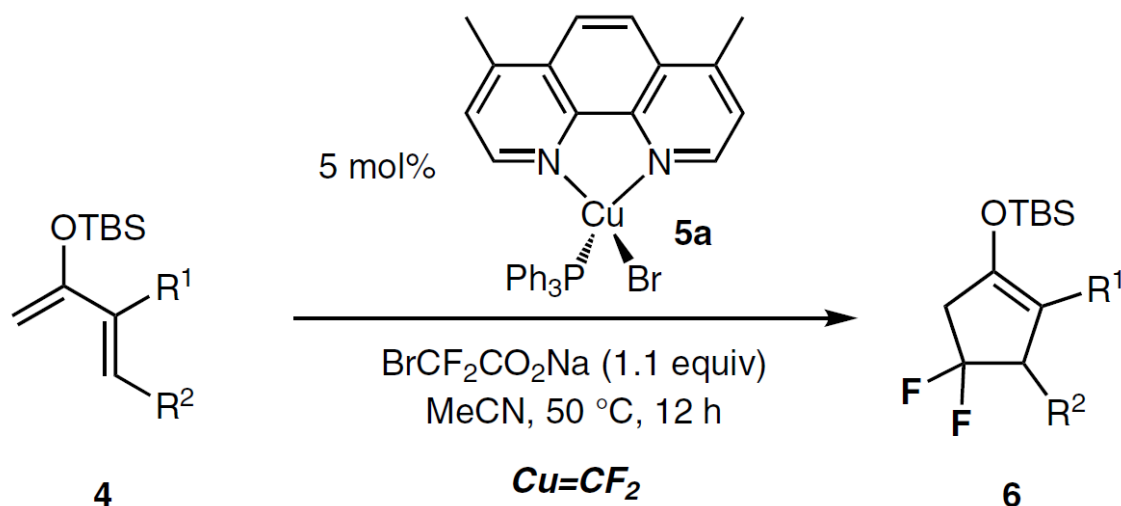


15 examples
yield up to 94%

Regioselective Syntheses of Fluorinated Cyclopentanone Derivatives: Ring Construction Strategy Using Transition-Metal-Difluorocarbene Complexes and Free Difluorocarbene

Kohei Fuchibe, Ryo Takayama, Tatsuya Aono, Ji Hu, Tomohiro Hidano, Hisashi Sasagawa, Masaki Fujiwara, Shinji Miyazaki, Ryo Nadano, Junji Ichikawa

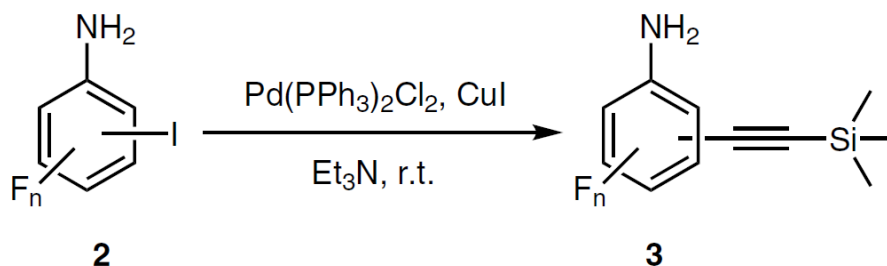
Synthesis, 2018, 50, 514-528



p-Toluenesulfonic Acid Induced Conversion of Fluorinated Trimethylsilylethyneylanilines into Aminoacetophenones: Versatile Precursors for the Synthesis of Benzoazaheterocycles

Larisa Politanskaya, Evgeny Tretyakov

Synthesis, 2018, 50, 555-564



**11 examples
yield up to 98%**

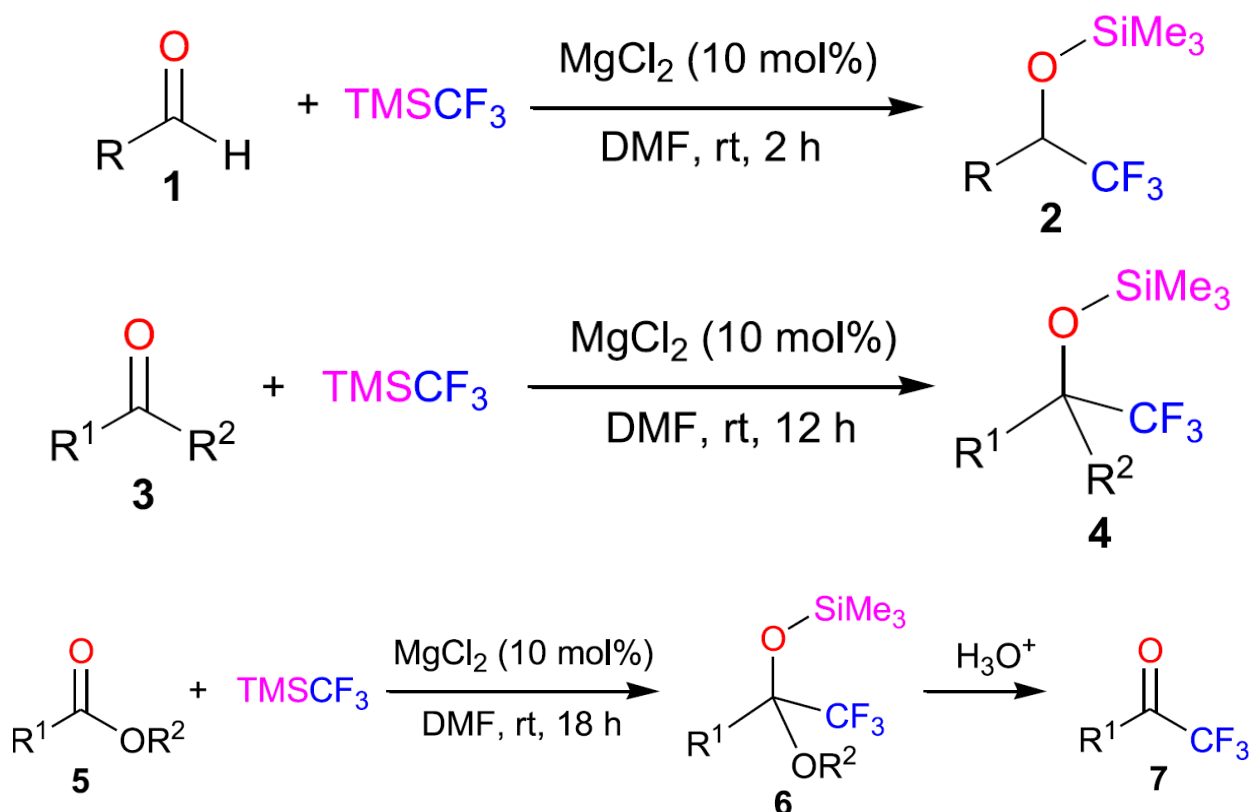
**11 examples
yield up to 96%**

Tetrahedron

MgCl₂-catalyzed trifluoromethylation of carbonyl compounds using (trifluoromethyl)trimethylsilane as the trifluoromethylating agent

Bin Cui, Hui Sun, Yibo Xu, Lili Duan, Yue-Ming Li

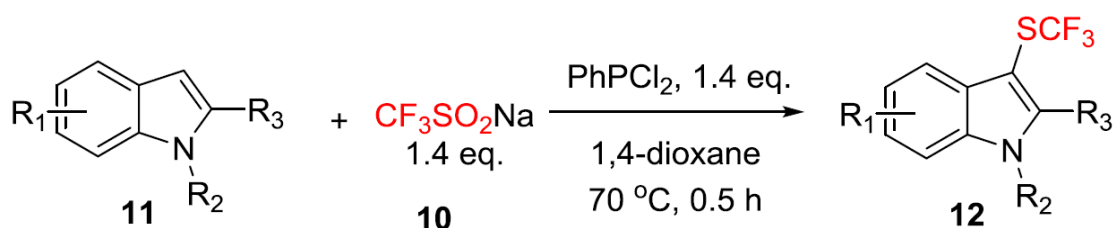
Tetrahedron 2017, 73, 6754-6762



Transition-metal-free direct trifluoromethylthiolation of electron-rich aromatics using CF₃SO₂Na in the presence of PhPCl₂

Xia Zhao, Xiancai Zheng, Miaomiao Tian, Jianqiao Sheng, Yifan Tong, Kui Lu

Tetrahedron 2017, 73, 7233-7238



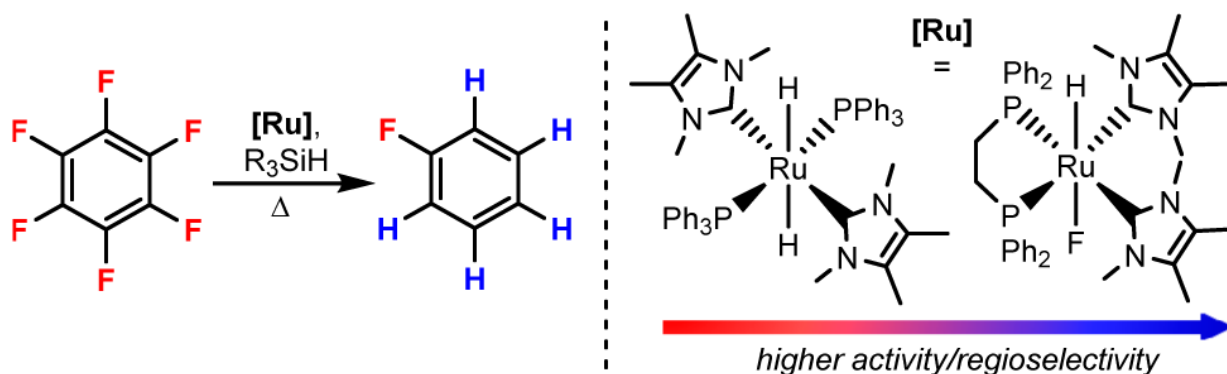
18 examples
yield up to 89%

Organometallics

Catalytic Hydrodefluorination of Fluoroarenes Using Ru(IME₄)₂L₂H₂ (IME₄ = 1,3,4,5-Tetramethylimidazol-2-ylidene; L₂ = (PPh₃)₂, dppe, dppp, dppm) Complexes

Mateusz K. Cybulski, Jessica E. Nicholls, John P. Lowe, Mary F. Mahon, and Michael K. Whittlesey

Organometallics, 2017, 36, 2308-2316



Copper- and Nickel-Catalyzed Cross-Coupling Reaction of Monofluoroalkenes with Tertiary, Secondary, and Primary Alkyl and Aryl Grignard Reagents

Hongyan Shi, Wenpeng Dai, Biyun Wang, and Song Cao

Organometallics, 2018, 37, 459-463

