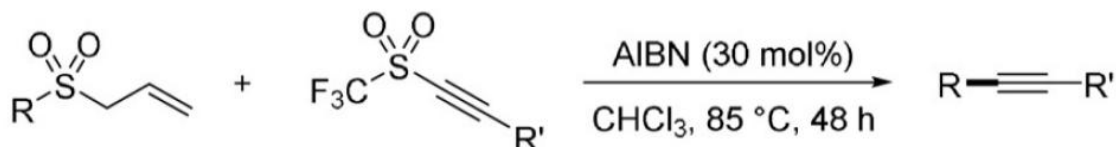


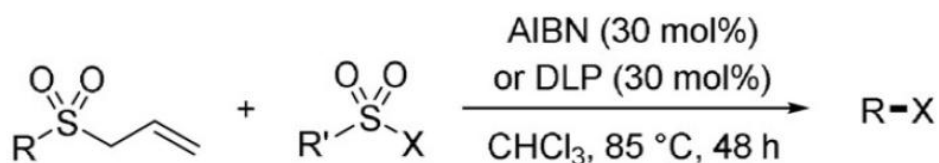
Diversity-Oriented Desulfonylative Functionalization of Alkyl Allyl Sulfones

Yong Xia and Armido Studer

Angew. Chem. Int. Ed., 2019, 58, 9836-9840



14 examples  
yield up to 81%

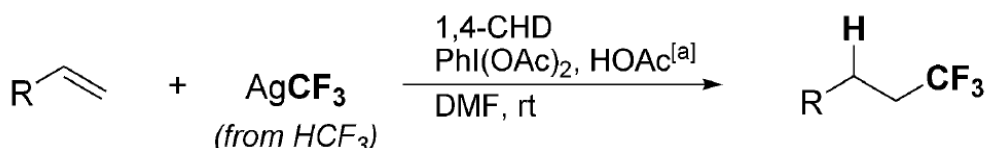


14 examples  
yield up to 99%

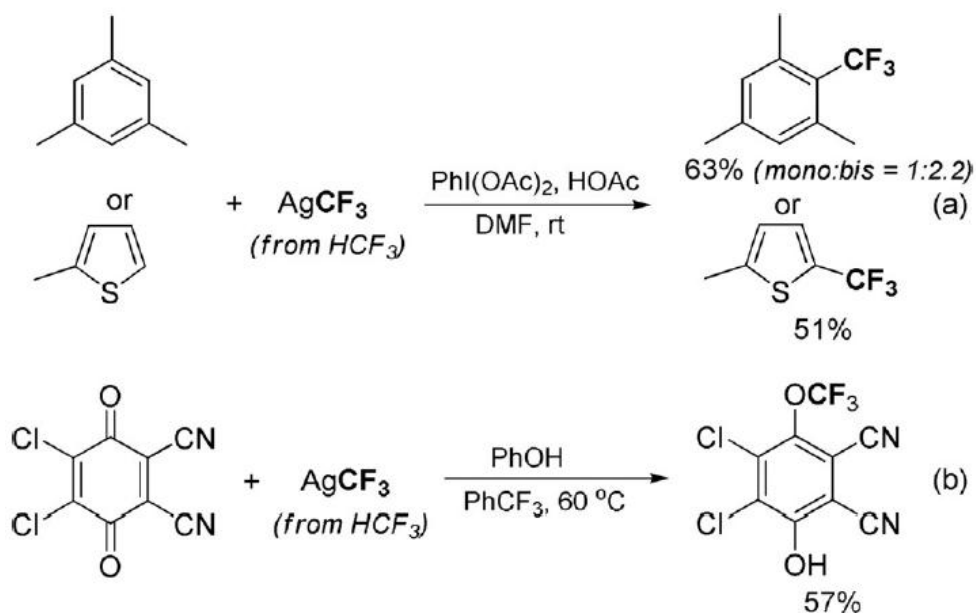
Argentination of Fluoroform: Preparation of a Stable  $AgCF_3$  Solution with Diverse Reactivities

Jia-Xiang Xiang, Yao Ouyang, Xiu-Hua Xu, and Feng-Ling Qing

Angew. Chem. Int. Ed., 2019, 58, 10320-10324



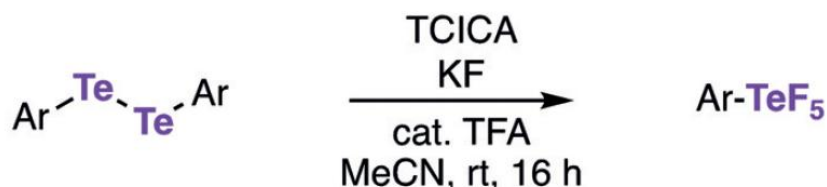
15 examples  
yield up to 90%



### Pentafluoro(aryl)-I<sup>6</sup>-tellanes and Tetrafluoro(aryl)(trifluoromethyl)-I<sup>6</sup>-tellanes: From SF<sub>5</sub> to the TeF<sub>5</sub> and TeF<sub>4</sub>CF<sub>3</sub> Groups

Dustin Bornemann, Cody Ross Pitts, Carmen J. Ziegler, Ewa Pietrasiak, Nils Trapp, Sebastian Kueng, Nico Santschi, and Antonio Togni

Angew. Chem. Int. Ed., 2019, 58, 12604-12608

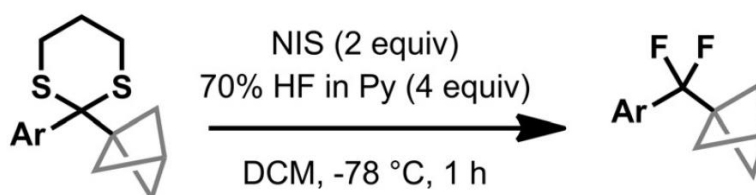


12 examples  
yield up to 84%

### Reactions of 2-Aryl-1,3-Dithianes and [1.1.1]Propellane

Nisalak Trongsiwat, Youge Pu, Yexenia Nieves-Quinones, Russell A. Shelp, Marisa C. Kozlowski, and Patrick J. Walsh

Angew. Chem. Int. Ed., 2019, 58, 13416-13420



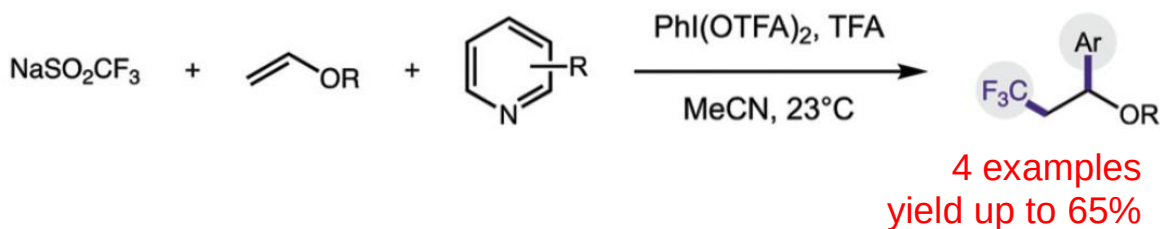
3 examples  
yield up to 86%

## Chemical Communications

### Multi-component heteroarene couplings via polarity-reversed radical cascades

Jeremy M. Lear, J. Quentin Buquoi, Xin Gu, Kui Pan, Darsheed N. Mustafa and David A. Nagib

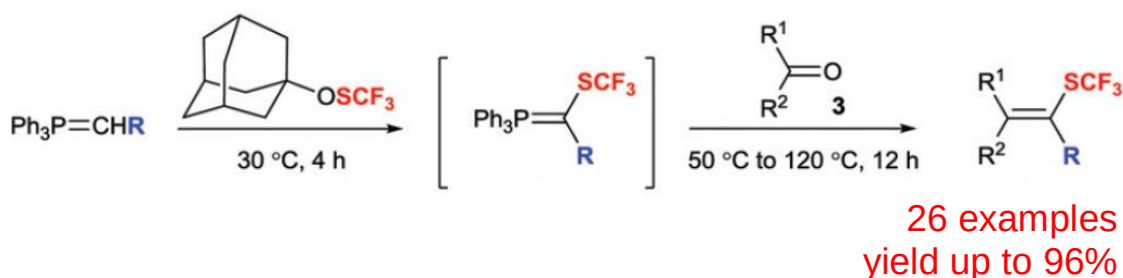
Chem. Commun., 2019, 55, 8820-8823



### Facile synthesis of a-trifluoromethylthio phosphonium ylides with a constrained trifluoromethylthiooxide via a proton-transfer procedure

Chengyao Kimmy Cao, Yue Zhang, Tianlei Lan, Wei Liu and Chao Chen

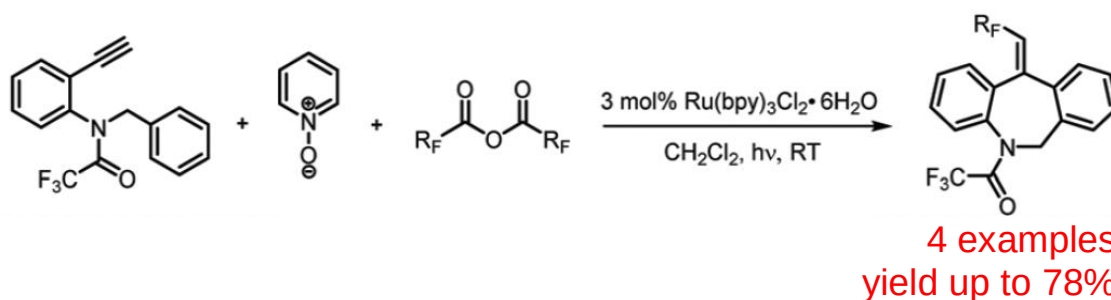
Chem. Commun., 2019, 55, 9479-9482



### Photoinduced synthesis of fluorinated dibenz[*b,e*]azepines via radical triggered cyclization

Xu-Kuan Qi, Hong Zhang, Zi-Tong Pan, Rong-Bin Liang, Can-Ming Zhu, Jing-Hong Li, Qing-Xiao Tong, Xue-Wang Gao, Li-Zhu Wu and Jian-Ji Zhong

Chem. Commun., 2019, 55, 10848-10851



**Palladium-Catalyzed  
Trifluoromethylation**

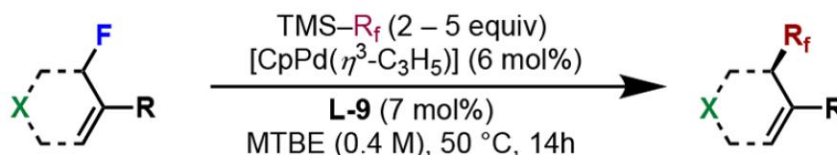
**Asymmetric**

**Allylic**

**Fluoroalkylation/**

Barry M. Trost, Hadi Gholami, and Daniel Zell

**J. Am. Chem. Soc., 2019, 141, 11446-11451**

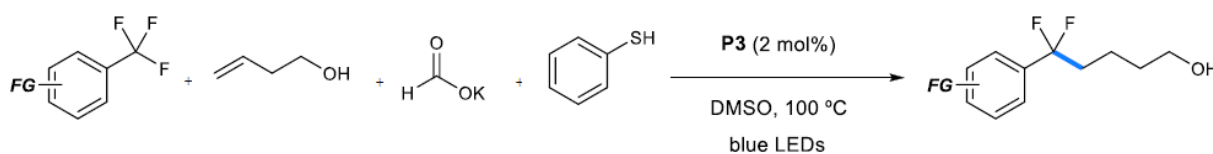


27 examples  
yield up to 95%

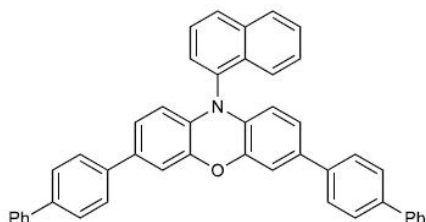
**Selective C–F Functionalization of Unactivated Trifluoromethylarenes**

David B. Vogt, Ciaran P. Seath, Hengbin Wang, and Nathan T. Jui

**J. Am. Chem. Soc., 2019, 141, 13203-13211**



Miyake phenoxazine (P3)

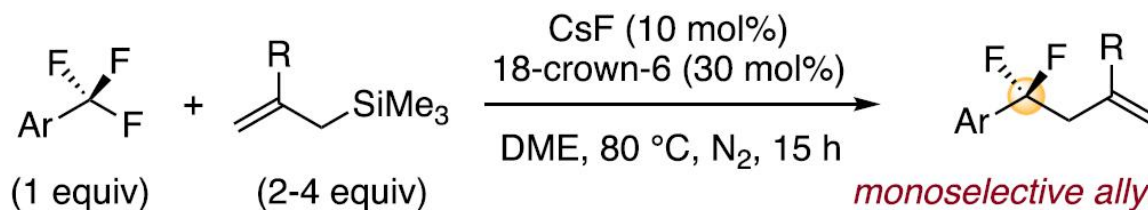


20 examples  
yield up to 92%

**Selective Defluoroallylation of Trifluoromethylarenes**

Chaosheng Luo and Jeffrey S. Bandar

**J. Am. Chem. Soc., 2019, 141, 14120-14125**



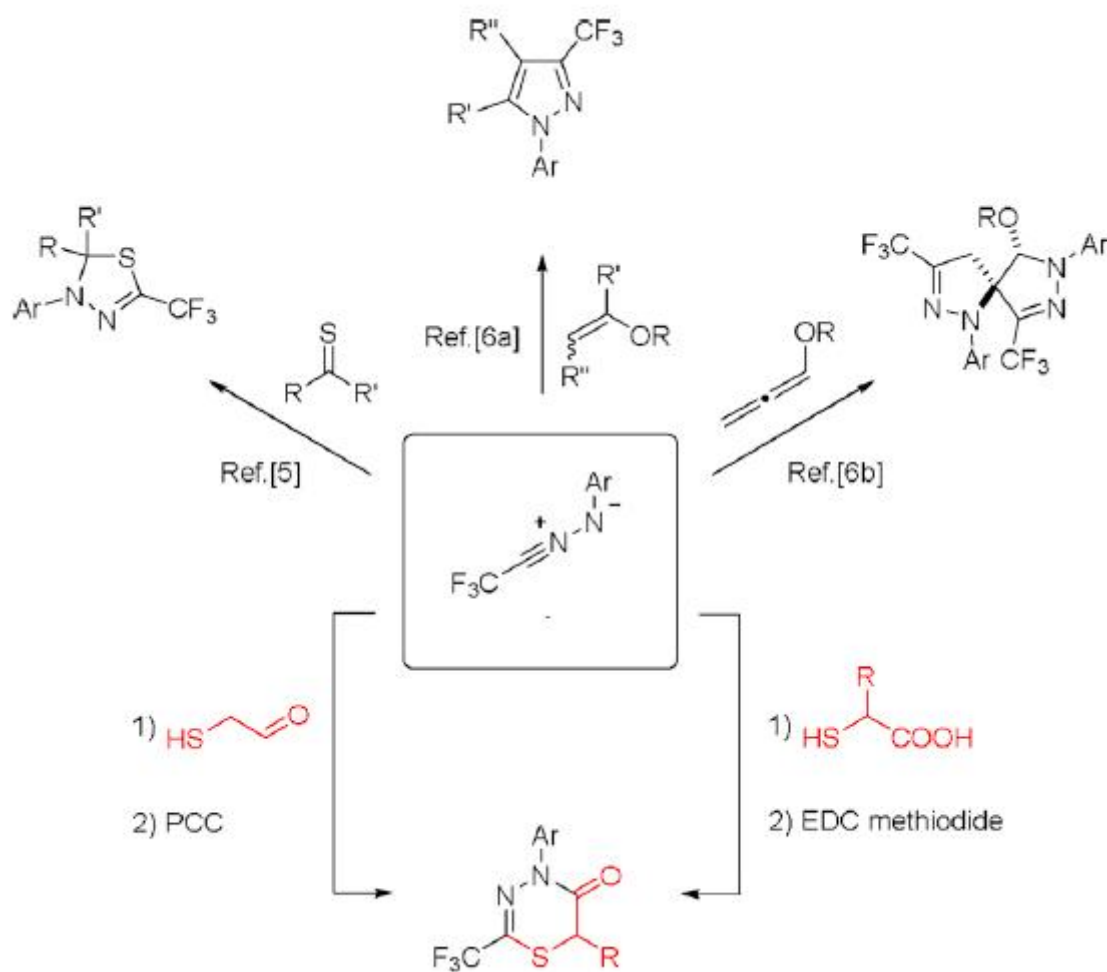
*monoselective allylation*

17 examples  
yield up to 91%

Trapping of trifluoroacetonitrile imines with mercaptoacetaldehyde and mercaptocarboxylic acids: An access to fluorinated 1,3,4-thiadiazine derivatives via (3+3)-annulation

Greta Utecht-Jarzyńska, Aleksandra Michalak, Justyna Banaś, Grzegorz Młostoń, Marcin Jasiński

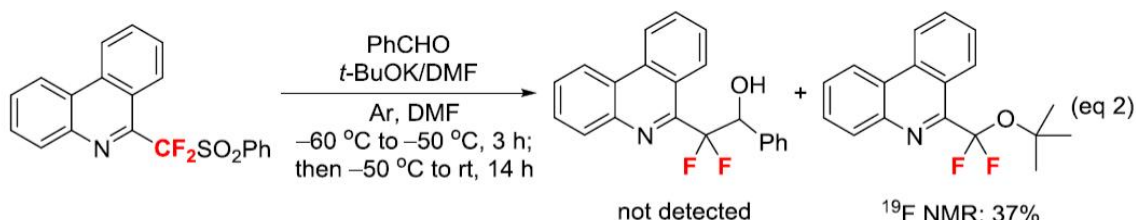
J. Fluor. Chem., 2019, 222-223, 8-14.



**Fluoroalkylation of Various Nucleophiles with Fluoroalkyl Sulfones through a Single Electron Transfer Process**

Pan Xiao, Chuanfa Ni, Wenjun Miao, Min Zhou, Jingyu Hu, Dingben Chen, and Jinbo Hu

**J. Org. Chem., 2019, 84, 8345-8359**

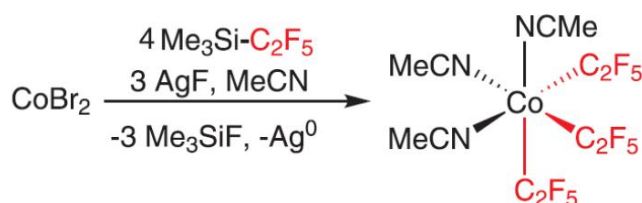


**Organometallics**

**$[(\text{MeCN})_3\text{Co}(\text{C}_2\text{F}_5)_3]$ : A Versatile Precursor to Cobalt(III) Perfluoroethyl Complexes**

Scott T. Shreiber, John J. Scudder, and David A. Vicic

**Organometallics, 2019, 38, 3169-3173**

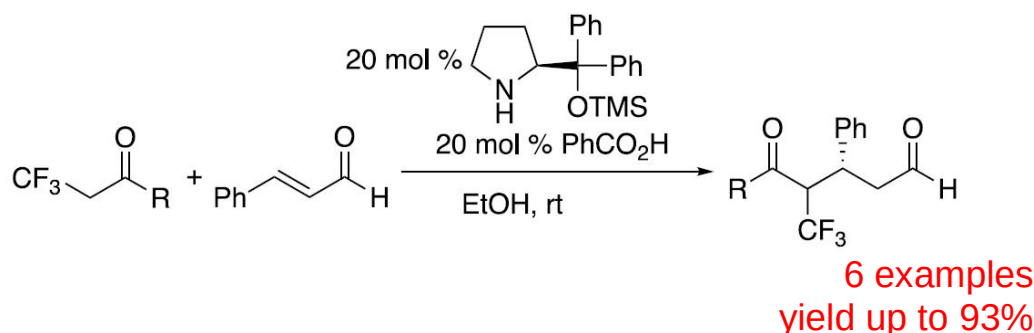


**Organic Letters**

**Asymmetric Michael Reaction of  $\alpha\text{-CF}_3$  Thioester and  $\alpha,\beta$ -Unsaturated Aldehyde Catalyzed by Diphenylprolinol Silyl Ether**

Yujiro Hayashi, Tomoaki Yamada, Misaki Sato, Shoya Watanabe, Eunsang Kwon, Kotaro Iwasaki, and Shigenobu Umemiya

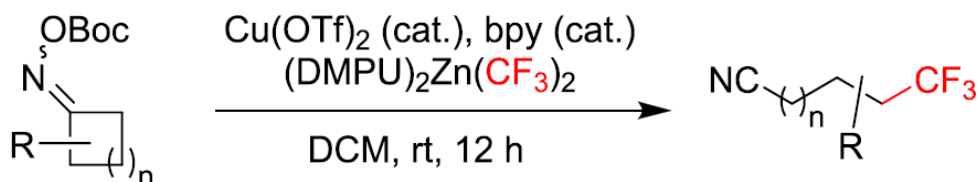
**Org. Lett., 2019, 21, 5183-5186**



## Copper-Catalyzed Ring-Opening Radical Trifluoromethylation of Cycloalkanone Oximes

Zhonglin Liu, Haigen Shen, Haiwen Xiao, Zhentao Wang, Lin Zhu, and Chaozhong Li

Org. Lett., 2019, 21, 5201-5205

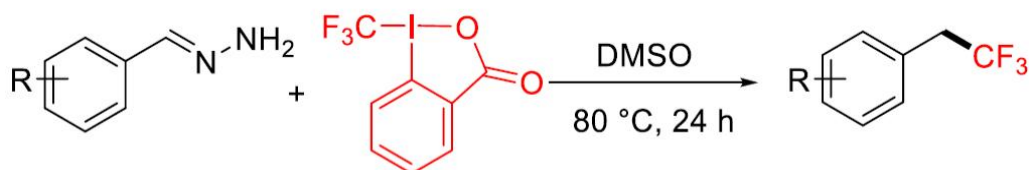


31 examples  
yield up to 92%

## Metal-Free Construction of the $\text{C}(\text{sp}^3)\text{-CF}_3$ Bond: Trifluoromethylation of Hydrazones with Togni's Reagent under Mild Conditions

Huiying Zeng, Zhen Luo, Xinlong Han, and Chao-Jun Li

Org. Lett., 2019, 21, 5948-5951

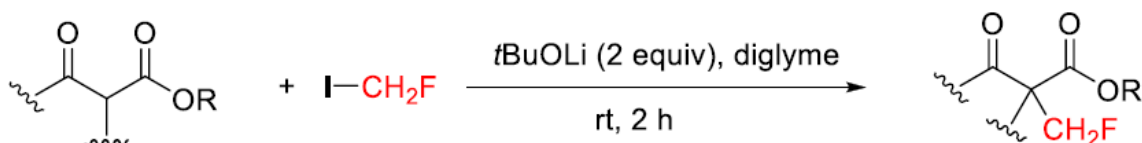


31 examples  
yield up to 94%

## Highly Carbon-Selective Monofluoromethylation of $\beta$ -Ketoesters with Fluoromethyl Iodide

Tianqi Ding, Lvqi Jiang, Jie Yang, Yimin Xu, Guixiang Wang, and Wenbin Yi

Org. Lett., 2019, 21, 6025-6028

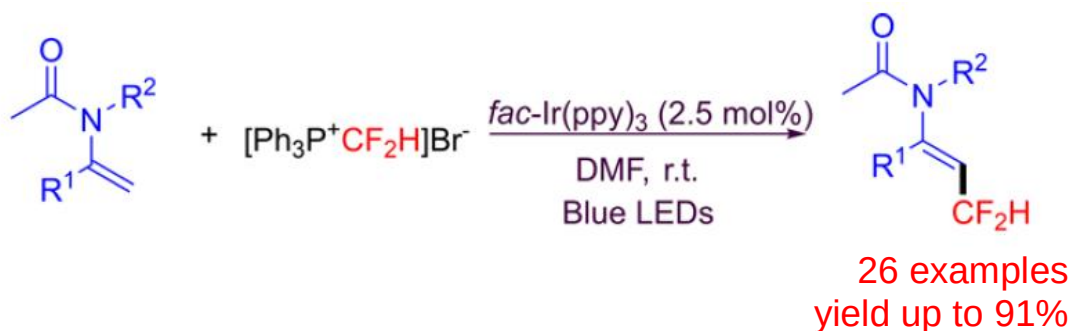


27 examples  
yield up to 90%

## Regioselective and Stereoselective Difluoromethylation of Enamides with Difluoromethyltriphenylphosphonium Bromide via Photoredox Catalysis

Tong-Hao Zhu, Ze-Yu Zhang, Ji-Yu Tao, Kai Zhao, and Teck-Peng Loh

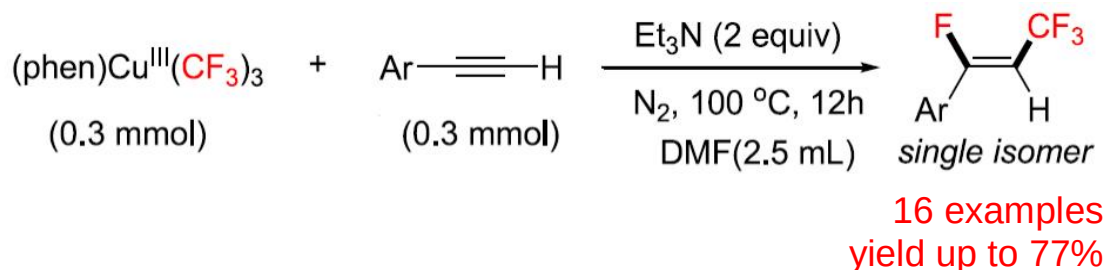
Org. Lett., 2019, 21, 6155-6159



## Hydrogen-Bonding-Assisted $\alpha$ -F Elimination from Cu- $\text{CF}_3$ for in Situ Generation of $\text{R}_3\text{N}\cdot\text{HF}$ Reagents: Reaction Design and Applications

Song-Lin Zhang and Jia-Jia Dong

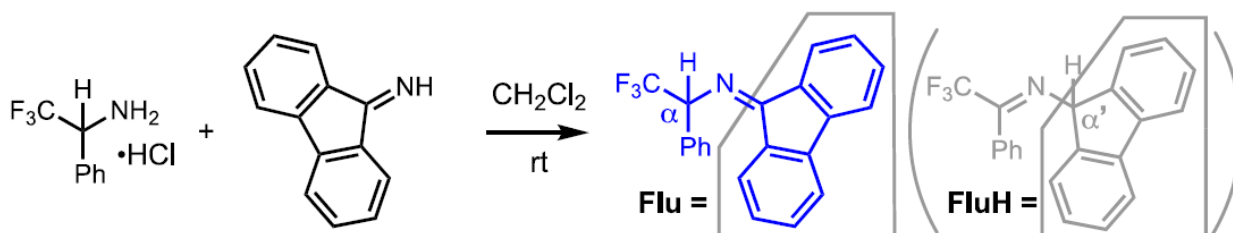
Org. Lett., 2019, 21, 6893-6896



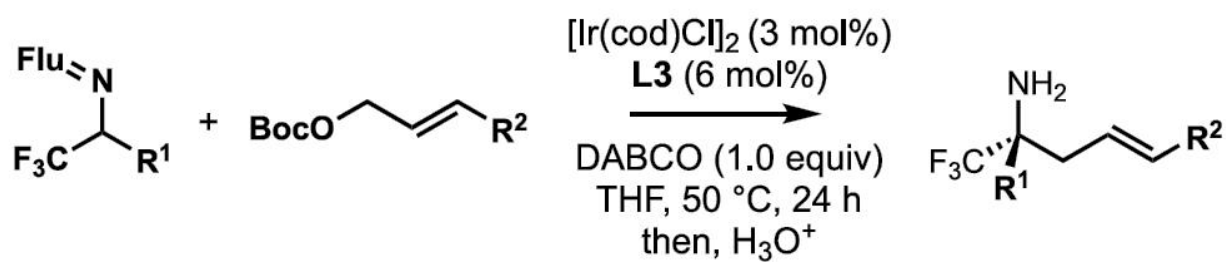
## Catalytic Asymmetric Synthesis of $\alpha$ -Tetrasubstituted $\alpha$ -Trifluoromethyl Homoallylic Amines by Ir-Catalyzed Umpolung Allylation of Imines

Yingwei Wang, Li-Fan Deng, Xia Zhang, and Dawen Niu

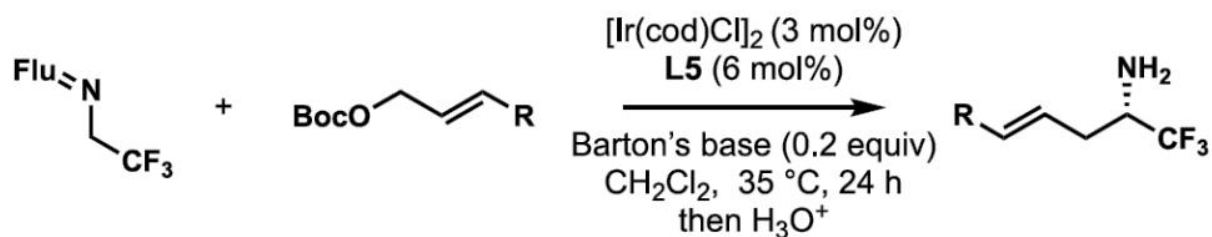
Org. Lett., 2019, 21, 6951-6958







18 examples  
yield up to 73%  
ee up to 90%

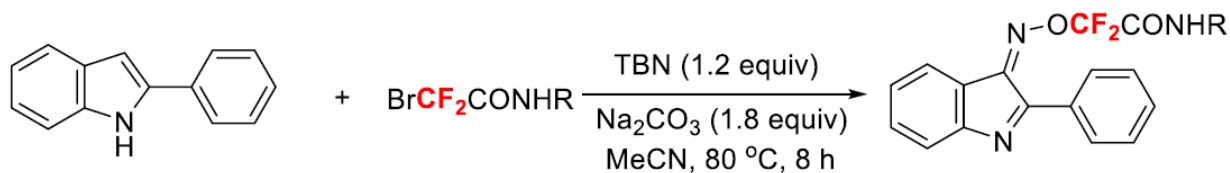


16 examples  
yield up to 90%  
ee up to 95%

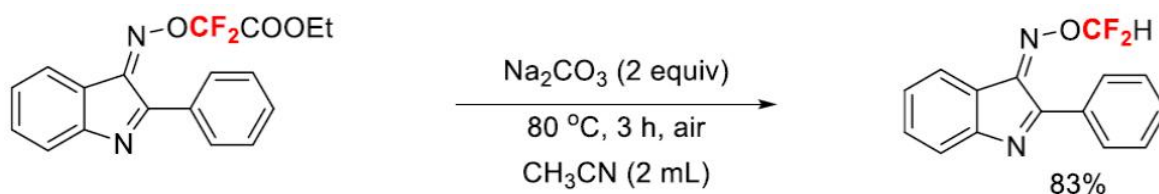
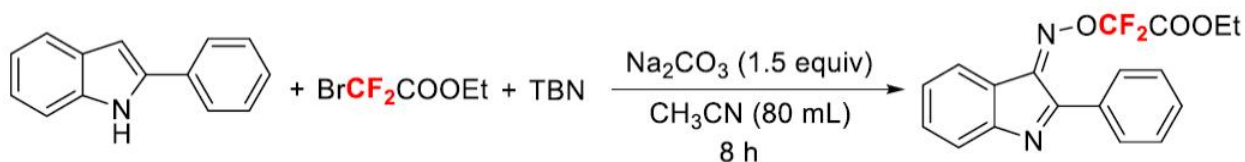
## ***tert*-Butyl Nitrite Mediated Synthesis of Fluorinated *O*-Alkyloxime Ether Derivatives**

Xingxing Ma and Qiuling Song

Org. Lett., 2019, 21, 7375-7379



7 examples  
yield up to 83%



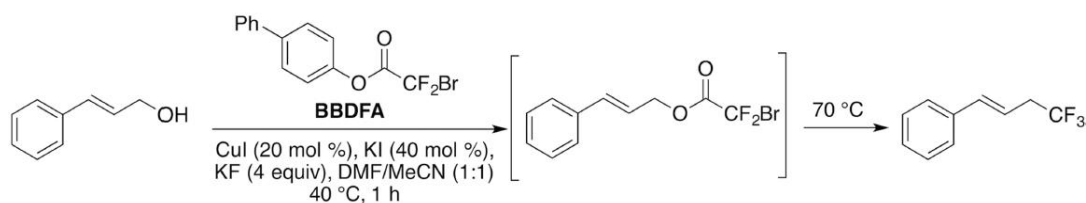
83%

## Organic Process Research & Development

### BBDFA: A Practical Reagent for Trifluoromethylation of Allylic and Benzylic Alcohols on Preparative Scale

Chong Han, Lady Mae Alabanza, Sean M. Kelly, Douglas L. Orsi, Francis Gosselin, and Ryan A. Altman

Org. Process Res. Dev., 2019, 23, 1695-1702

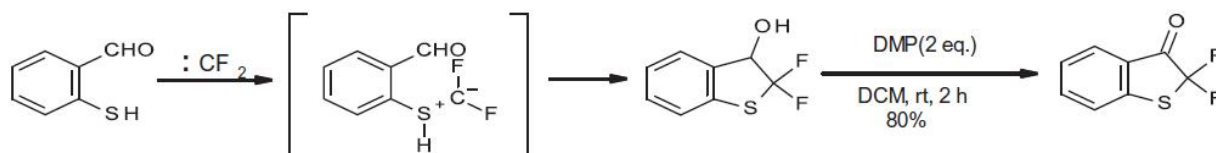


## Synthetic Communications

### Synthesis of 2,2-difluoro-3*H*-benzothiophen-3-ol via a difluorocarbene insertion reaction, investigating the scope for further derivatization

Clarence Rodrigues, Roger G. Hall, Mark Montgomery, Xiuhua Yang, Yong Xiang, Long Lu, Sitaram Pal, and Bhanu N. Manjunath

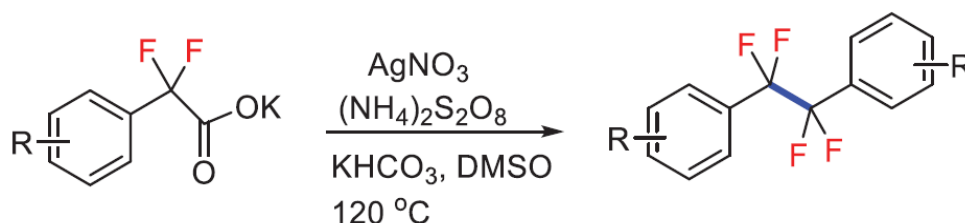
Synthetic Communications, 2019, 49, 1997-2004



### Silver-catalyzed decarboxylative homocoupling reaction for the construction of tetrafluoroethylene-bridging aromatic compounds

Yong Wang, Huaxin Zhao, Xiaojuan Xie, Haizhen Jiang, Hongmei Deng, Jian Haoa, and Wen Wana

Synthetic Communications, 2019, 49, 2961-2970



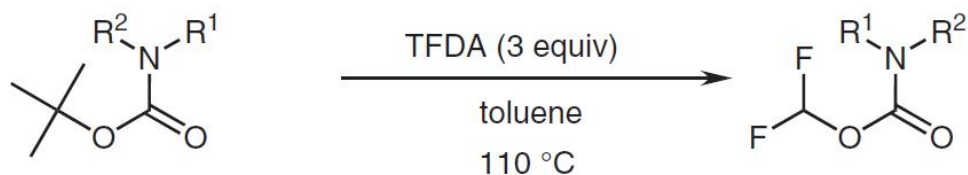
15 examples  
yield up to 85%

## Synthesis

### Reactions of *t*-Boc-Protected Amines with Difluorocarbene

Gerasov, Andrii; Shivanyuk, Alexander; Fetyukhin, Volodymyr; Lukin, Oleg

Synthesis, 2019, 51, 2579-2582

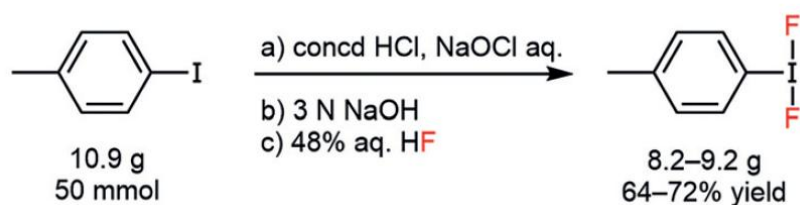


7 examples  
yield up to 80%

### A Practical, Large-Scale Synthesis of *p*-(Difluoroiodo)toluene (*p*-TolIF<sub>2</sub>)

Tao, Jason; Murphy, Graham K.

Synthesis, 2019, 51, 3055-3059

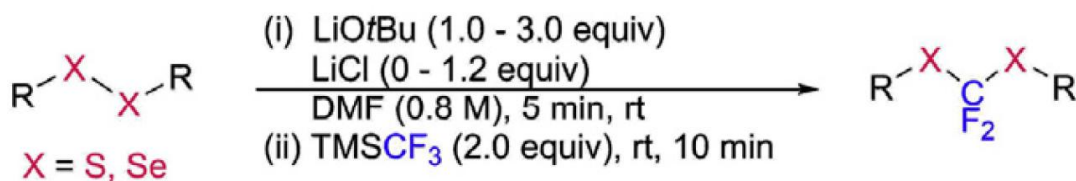


## Tetrahedron

### One-pot preparation of (RSe)<sub>2</sub>CF<sub>2</sub> and (RS)<sub>2</sub>CF<sub>2</sub> compounds via insertion of TMSCF<sub>3</sub>-derived difluorocarbene into diselenides and disulfides

Colby Barrett, Vinayak Krishnamurti, Artur Pratas Oliveira, G.K. Surya Prakash

Tetrahedron 2019, 75, 4167-4173



12 examples  
yield up to 98%

## Tetrahedron Letters

### Nucleophilic fluoroalkylation of terminal vinyl triflones with $\text{SO}_2\text{CF}_3$ as aremovable activating group

Ping-ping Tian, Hong-qing Xiao, Lu Wang, Yingxin Yu, Yangen Hu

Tetrahedron Letters 2019, 60, 1015-1018

