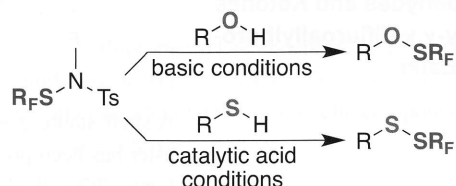


COMMUNICATIONS

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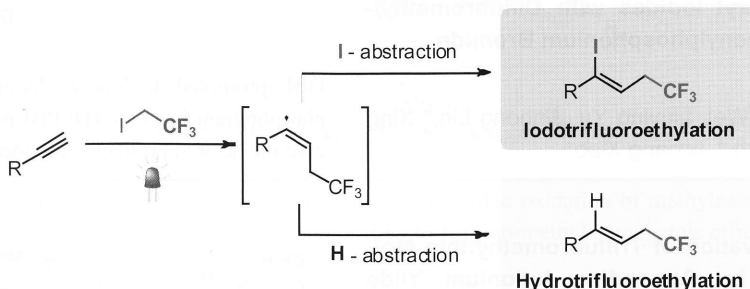
Direct Perfluoroalkylthiolation of Few Chalcogenols



2nd generation of perfluoroalkanesulfenamides reagents can react with chalcogenols in basic or catalytic acid conditions to give the corresponding perfluoroalkylthiochalcogenides still little described this day.

Quentin Glenadel, Thierry Billard*

459

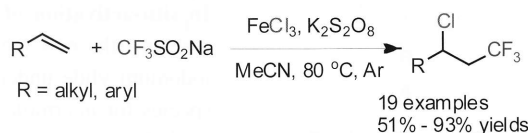
Trifluoroethylation of Alkynes: Synthesis of Allylic-CF₃ Compounds by Visible-Light Photocatalysis

The iodo and hydrotrifluoroethylation of alkynes with CF₃CH₂I proceeded selectively by visible-light photocatalysis. Subtle differences in the combination of the photocatalyst, base, and solvent controlled the selectivity of the two transformations.

Geum-bee Roh, Naeem Iqbal, Eun Jin Cho*

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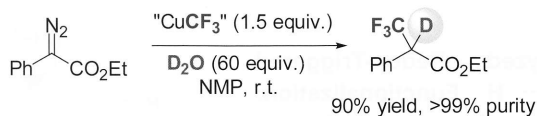
Iron-Mediated Chlorotrifluoromethylation of Alkenes with Sodium Trifluoromethanesulfinate



An iron-mediated chlorotrifluoromethylation of alkenes with CF₃SO₂Na was reported. This process works well for both styrenes and aliphatic alkenes giving the chlorotrifluoromethylated products in moderate to excellent yields.

Bin Yang, Xiu-Hua Xu, Feng-Ling Qing*

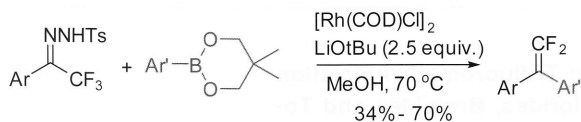
469

Copper-Mediated Deuterotrifluoromethylation of α -Diazo Esters

A copper-mediated deuterotrifluoromethylation of α -diazo esters under the promotion of deuterium oxide (D₂O) has been developed for the synthesis of deuterio-labeled trifluoromethyl compounds. This deuterotrifluoromethylation reaction is of broad scope and can afford the deuterated products with higher than 99% isotopic purity.

Mingyou Hu, Qiqiang Xie, Xinjin Li, Chuanfa Ni, Jinbo Hu*

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Rh(I)-Catalyzed Reaction of Trifluoromethylketone *N*-Tosylhydrazones and Arylboronates

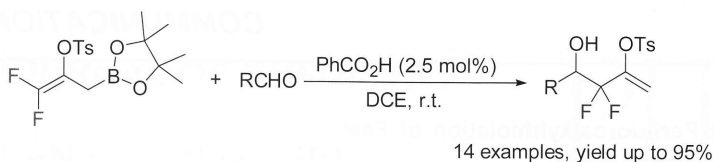
In this communication, a new synthetic method for 1,1-difluoro-2,2-diaryllkenes based on Rh(I)-catalyzed reaction of trifluoromethylketone *N*-tosylhydrazones and arylboronates is reported. The key step of the reaction is Rh(I)-carbene migratory insertion followed by β -fluoride elimination.

Zhikun Zhang, Weizhi Yu, Qi Zhou, Tianjiao Li, Yan Zhang, Jianbo Wang*

CONTENT

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Brønsted Acid Catalyzed *gem*-Difluoroallylation of Aldehydes and Ketones with β -Tosyloxy- γ,γ -difluoroallylboronic Acid Pinacol Ester

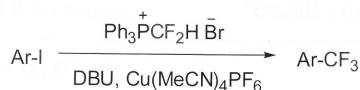


A shelf-stable *gem*-difluorinated reagent β -tosyloxy- γ,γ -difluoroallylboronic acid pinacol ester has been prepared, which can be easily used for the synthesis of *gem*-difluorinated homoallylic alcohols through Brønsted acid (PhCO_2H) catalyzed *gem*-difluoroallylation of aldehydes.

Bo Zhang, Xingang Zhang*

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DBU-Promoted Trifluoromethylation of Aryl Iodides with Difluoromethyltriphenylphosphonium Bromide

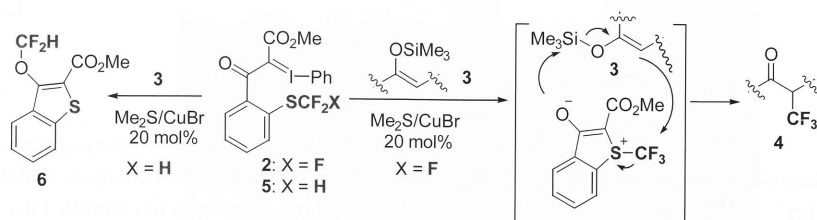


DBU-promoted trifluoromethylation of aryl iodides with difluoromethyltriphenylphosphonium bromide (DFPB) in the presence of copper source occurred smoothly to give the desired products in moderate to good yields.

Yun Wei, Liuying Yu, Jinhong Lin,* Xing Zheng,* Jichang Xiao*

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Activation of Trifluoromethylthio Moiety by Appending Iodonium Ylide under Copper Catalysis for Electrophilic Trifluoromethylation Reaction



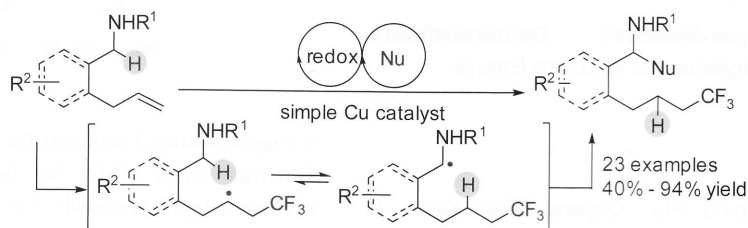
In situ-activation of SCF_3 to $+\text{CF}_3$. Unlike known electrophilic trifluoromethylation reagents, the new reagent **2** has a stable SCF_3 group which is activated by appending iodonium ylide under copper catalysis via sulfonium ylide to generate a cationic CF_3 species for intermolecular transfer trifluoromethylation. On the other hand, a difluoromethylthio analogue **5** does not affect intermolecular transfer difluoromethylation, but intramolecular 1,4-migration proceeded to a Stevens rearrangement product **6**.

Ilbrayim Saidalimu, Shugo Suzuki, Etsuko Tokunaga, Norio Shibata*

FULL PAPERS

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Copper-Catalyzed Redox-Triggered Remote C—H Functionalization: Highly Selective Formation of C— CF_3 and C—O Bonds

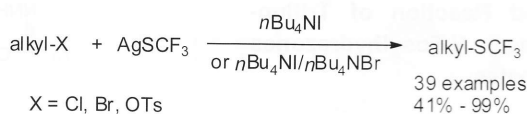


Taotao Li, Peng Yu, Jin-Shun Lin, Yonggang Zhi,* Xin-Yuan Liu*

C— CF_3 formation/1,5-H radical shift/remote functionalization of sp^3 C—H bond

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Nucleophilic Trifluoromethylthiolation of Alkyl Chlorides, Bromides and Tosylates

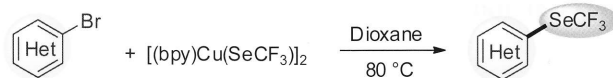


A direct nucleophilic trifluoromethylthiolation of alkyl chlorides, bromides and tosylates with AgSCF_3 was described. It was found that the presence of $n\text{Bu}_4\text{NI}$ or a combination of $n\text{Bu}_4\text{NI}/n\text{Bu}_4\text{NBr}$ significantly enhanced the reaction rates. The reaction conditions were mild, thus allowing the tolerance of a variety of functional groups.

Chunfa Xu, Qingyun Chen, Qilong Shen*

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A Convenient Process for the Preparation of Heteroaryl Trifluoromethyl Selenoethers

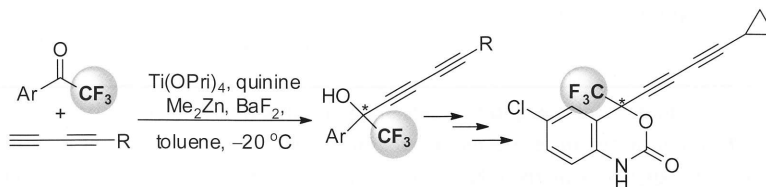


The synthesis of heteroaryl trifluoromethyl selenoethers by the trifluoromethylselenolation of heteroaryl bromides with $[(bpy)Cu(SeCF_3)_2]$ was investigated. The reaction affords a variety of trifluoromethylselenolated heterocyclic compounds in good yields and tolerates a range of functional groups.

Qinli Tian, Zhiqiang Weng*

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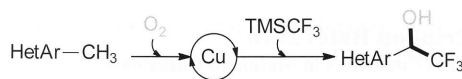
Catalytic Enantioselective 1,2-Addition of Terminal 1,3-Diynes to Trifluoromethyl Ketones



Yan Zheng, Hai Ma, Jun-An Ma*

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Copper-Catalyzed Aerobic Oxidation of Azinylmethanes for Access to Trifluoromethylazinyloles

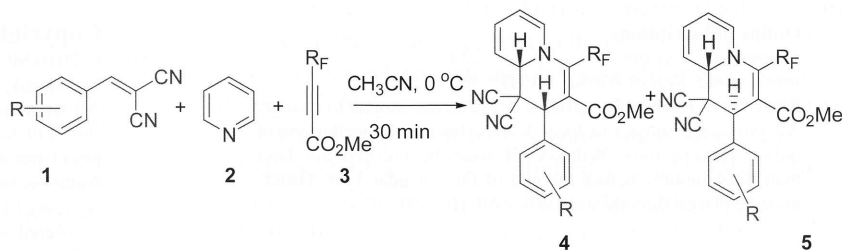


A ligand-free and additive-free copper-catalyzed aerobic oxidation of methylazaarenes was evolved by a trifluoromethylation leading to trifluoromethylazinyloles efficiently in one-pot.

Gang Zheng, Hao Liu, Mang Wang*

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An Efficient One-pot Three-component Process for the Synthesis of Perfluoroalkylated Quinolizines



Dandan Shen, Yanjie Xu, Dong He, Jing Han, Jie Chen, Hongmei Deng, Min Shao, Hui Zhang,* Weiguo Cao*

A facile multi-component process for the synthesis of perfluoroalkylated quinolizine derivatives was achieved.