European Journal of Organic Chemistry

A New Approach for the Synthesis of Perfluoroalkanesulfenic Acids

Jia-Hong Xu, Min Jiang, Li-Ping Song, Jin-Tao Liu

Eur. J. Org. Chem., 2021, 12, 16076-16082

110 °C, 8 h, 100% conv. 100 °C, 3 h, 100% conv.

8 examples yield up to 88%

Organic Letters

Using Chlorotrifluoroethane for Trifluoroethylation of (Hetero)aryl Bromides and Chlorides via Nickel Catalysis

Xuefei Li, Xing Gao, Chun-Yang He, Xingang Zhang

Org. Lett., 2021, 23, 1400-1405

49 examples yield up to 94%

High Chemo-/Stereoselectivity for Synthesis of Polysubstituted Monofluorinated Pyrimidyl Enol Ether Derivatives

Lei Kang, Fang Wang, Jinlong Zhang, Huameng Yang, Chungu Xia, Jinlong Qian, Gaoxi Jiang

Org. Lett., 2021, 23, 1669-1674

26 examples yield up to 99%

Deoxyfluorination of Carboxylic Acids with CpFluor: Access to Acyl Fluorides and Amides

Xiu Wang, Fei Wang, Fengfeng Huang, Chuanfa Ni, Jinbo Hu

Org. Lett., 2021, 23, 1764-1768

22 examples yield up to 86%

Metal-Free Difunctionalization of Pyridines: Selective Construction of *N*-CF₂H and *N*-CHO Dihydropyridines

Sen Zhou, Ze-Ying Sun, Kongying Zhu, Wentao Zhao, Xiangyang Tang, Minjie Guo, Guangwei Wang

Org. Lett., 2021, 23, 2205-2221

$$R = \frac{1}{1000} + BrCF_2CO_2Et + R^2 = \frac{1}{1000} + \frac{1}$$

25 examples yield up to 81%

Tetrahedron

Synthesis of CF₂H-containing isoquinoline-1,3-diones through metal-free, visible-light and air-promoted radical difluoromethylation/cyclization of N-benzamides

JiaxuanShao, YoujiaWang, Silu Chen, Shaowei Wang, Yanhui Wu, Xulian Li, Weihua Zhang, Chao Deng

Tetrahedron, 2021, 79, 131822

$$R^{1} \stackrel{\square}{=} R^{2} \stackrel{\square}{=} R^{3}$$
+ NaSO₂CF₂H
$$\frac{5 \text{ mol \% Eosin B}}{\text{white LED}}$$

$$\frac{\text{White LED}}{\text{air, DMSO}}$$

$$40 \text{ °C}$$

$$R^{1} \stackrel{\square}{=} R^{2} \stackrel{\square}{=} R^{2}$$

$$R^{2} \stackrel{\square}{=} R^{2} \stackrel{\square}{=} R^{2}$$

25 examples yield up to 95%

Tetrahedron Letters

Visible-light induced radical aryldifluoromethylation of *N*-arylacrylamides by [bis(difluoroacetoxy)iodo]benzene

Kui Lu, Lingyu Lei, Qijun Wei, Ting Zhou, Xiaodong Jia, QuanLi, Xia Zhao

Tetrahedron Letters, 2021, 67, 152864

$$R^{1} \xrightarrow{\text{II}} \\ N = 0$$

$$R^{2} \xrightarrow{\text{HF}_{2}C} \\ N = 0$$

$$R^{2} \xrightarrow{\text{HF}_{2}C} \\ N = 0$$

$$R^{2} \xrightarrow{\text{LED}} \\ 1,4-\text{dioxane}$$

$$R^{3} \xrightarrow{\text{R}_{3}} \\ R^{3} \xrightarrow{\text{R}_{3}} \\ R^{3$$

25 examples yield up to 97%