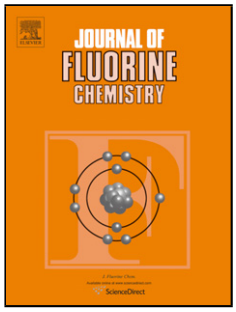

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Author: Yang Lu Yaming Li Rong Zhang Kun Jin Chunying Duan

PII: S0022-1139(14)00039-6
DOI: http://dx.doi.org/doi:10.1016/j.jfluchem.2014.01.020
Reference: FLUOR 8267

To appear in: *FLUOR*

Received date: 7-1-2014
Revised date: 24-1-2014
Accepted date: 29-1-2014

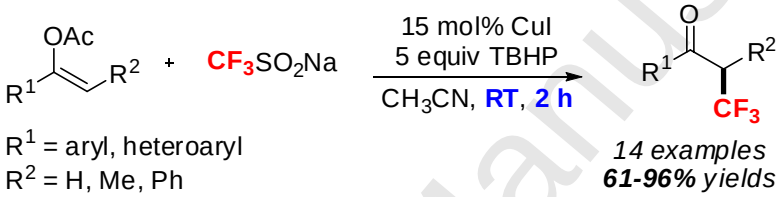
Please cite this article as: Y. Lu, Y. Li, R. Zhang, K. Jin, C. Duan, Highly efficient Cu(I)-catalyzed trifluoromethylation of aryl(heteroaryl) enol acetates with CF_3 radicals derived from CF_3SO_2Na and TBHP at room temperature, *Journal of Fluorine Chemistry* (2014), http://dx.doi.org/10.1016/j.jfluchem.2014.01.020

Highly efficient Cu(I)-catalyzed trifluoromethylation of aryl(heteroaryl) enol acetates with CF_3 radicals derived from CF_3SO_2Na and TBHP at room temperature

Yang Lu, Yaming Li*, Rong Zhang, Kun Jin, Chunying Duan*

State Key Laboratory of Fine Chemicals, School of Chemical Engineering, Dalian University of Technology, Dalian 116024, China

Tel./fax: +86 411 84986295; E-mail address: ymli@dlut.edu.cn (Y. Li)



ABSTRACT: An efficient method for the Cu(I)-catalyzed synthesis of α-trifluoromethyl ketones via the addition of CF_3 to aryl(heteroaryl) enol acetates by using the readily available CF_3SO_2Na (Langlois reagent) has been developed. The reaction is experimentally simple and carried out at room temperature, providing good to excellent yields with wide functional group tolerance.

Keywords: Trifluoromethylation; Enol acetates; Synthetic methods; α-CF_3 ketone; Radical addition

1. Introduction

Trifluoromethylated compounds have been widely utilized as the important building blocks for the synthesis of pharmaceuticals, agrochemicals and specialty materials due to the stereoelectronic property of the CF_3 moiety and the increased bioavailability [1]. Therefore, it has been of great interest to develop more efficient, operationally simple and