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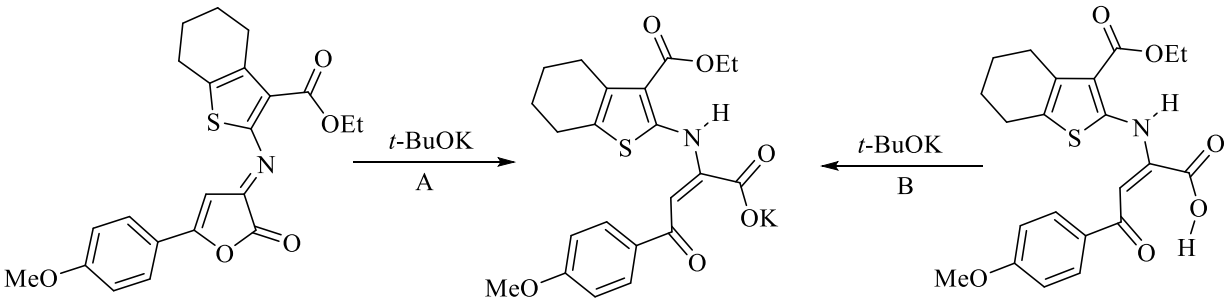
SYNTHESIS OF 2-((3-(ETHOXYCARBONYL)-4,5,6,7-TETRAHYDROBENZO[*b*]THIOPHEN-2-YL)AMINO)-4-(4-METHOXYPHENYL)-4-OXOBUT-2-ENOATE*

Keyword: 3-imino-3*H*-furan-2-ones, 2-aminothiophenes Gewald, 2,4-dioxobutanoic acids.

One of the main tasks of organic chemistry is the synthesis of new compounds that have practical applications. Due to the presence of several reaction centers in the molecules of 3-imino-3*H*-furan-2-ones, these compounds make it possible to obtain various structures of acyclic and heterocyclic structures based on it [1–3]. These reactions often proceed with the preservation of a fragment of 2,4-dioxobutanoic acids, the interest in which, at present, remains at a high level in the field of medical chemistry[4–6].

Will be discussed synthesis of 2-((3-(ethoxycarbonyl)-4,5,6,7-tetrahydrobenzo[*b*]thiophen-2-yl)amino)-4-(4-methoxyphenyl)-4-oxobut-2-enoate.



1 **2** **3**

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SYNTHESIS OF 3-(POLYFLUOROALKYL)PYRAZOL-4-AMINES ON THE BASIS OF LITHIUM 1,3-DIKETONATES*

Keywords: lithium 3-polyfluoroalkyl-1,3-diketonates, hydrazine hydrate, 3-(polyfluoroalkyl)-4-aminopyrazoles.

Fluoroalkyl-containing pyrazoles are important building blocks for the synthesis of biologically active compounds and a variety of coordination compounds. Indeed, effective anti-inflammatory drugs, such as celebrex or celecoxib, and the veterinary anti-arthritic agent mavacoxib (troxoxyl) contain the (trifluoromethyl)-pyrazole fragment in their structures [1, 2]. The incorporation of functional groups into the pyrazole ring expands synthetic opportunities for modification of these compounds. For example, due to the presence of NH_2-group in 5-phenyl-3-(trifluoromethyl)-1*H*-pyrazol-4-amine, new derivatives bearing fragments of 3-trifluoromethylpyrazole and 1,2,3-triazole have been obtained. These compounds proved to exhibit a cytotoxicity against lung cancer cells and antimycobacterial activity against *Mycobacterium smegmatis* [3]. However, the known methods to obtain 3-(polyfluoroalkyl)-4-aminopyrazoles involve several laborious operations and require isolation of the intermediates [3, 4].

In this communication we wish to report on the developed *step by step* and *one pot* syntheses of 3-(polyfluoroalkyl)-4-aminopyrazoles **3** starting from the readily available lithium 1,3-diketonates **1**.

Step by step method 1. Nitrosation of 1,3-diketonates **1** results in the corresponding oximes **2** [5]. Treatment of compounds **2** with hydrazine yields the required 4-aminopyrazoles **3**.