

Abstract

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Title of thesis: The synthesis of substituted pyridines employing gold(I) catalyst

This work is focused on the preparation of 3,4-disubstituted pyridine derivatives. MBS-protected propargylamine and MS-protected 1-ethynylcyklohexylamine provide with methyl propiolate to form appropriate 1,5-enyne, which undergoes Sonogashira coupling with various aryl iodides.

Substituted enyne is subjected to cyclization yielding appropriate tetrahydropyridine in the presence of catalyst tris(2-furyl)phosphinegold(I) chloride. Derivate substituted by pentamethylen-1,5-diyl didn't cyclize. Deprotection leads to the preparation of substituted pyridines, which could serve as an intermediates in organic synthesis or potentially with biological activity.

Keywords: gold catalysis, enyne cyclization, pyridine derivatives