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Poster Presentation

Organozinc Reagents from Polyfluorinated Pyridines: Preparation and Reactions with Electrophiles

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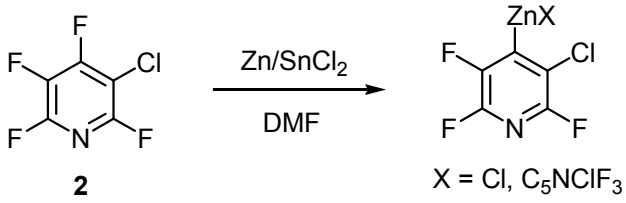
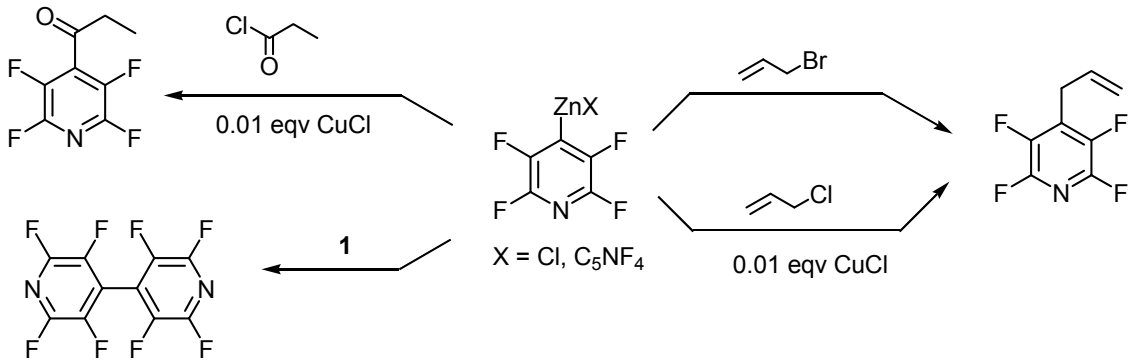
Recently, organozinc compounds have been prepared by direct reaction of pentafluoropyridine (**1**) with Zn and catalytic amounts of $SnCl_2$; the 4-position was involved into reaction [1]. In this work, we have shown that treatment of 3-chlorotetrafluoropyridine (**2**) with Zn in the presence of $SnCl_2$, like that of pyridine **1**, resulted in the formation of organozinc compounds in position 4. This reaction pathway in pyridine **2** exclusively dominates over the classical organometallic formation with participation of C-Cl bond. Earlier, it was shown in [2] that the reaction of pyridine **2** with Zn, in the absence of $SnCl_2$, produces only organozinc compounds with participation of C-Cl bond.



2 X = Cl, C_5NClF_3

The organozinc reagents obtained were involved in reactions with some electrophiles directly or by means of the catalyst Cu(I), for example:



Mechanism of organozinc formation via organotin intermediates will be discussed.

1. A.O. Miller, V.I. Krasnov, D. Peters, V.E. Platonov, R. Miethchen. *Tetrahedron Lett.* **2000** (41), 3817-3819.
2. V.I. Krasnov, V.E. Platonov. *Russ. J. Org. Chem.* **2000** (36), 1488-1499.