HYDRATIVE AMINOXYLATION OF THIOALKYNES

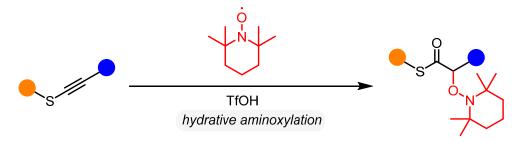
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Thioesters are versatile compounds with broad applicatility in organic synthesis. They additionally serve as common intermediates in many biosynthetic processes.

Surprisingly, methods for their direct synthesis are still scarce and don't go beyond direct C-S coupling reactions.

Reactivity pathways which allow the direct formation of more complex thioesters (e.g. α -functionalized thioesters) are of even greater interest. In this context, our group and others have engaged thioalkynes in acid-catalyzed arylative rearrangements employing arylsulfoxides.[1]

Following our recent report on the acid-promoted reaction of TEMPO with activated ynamides[2] we were eager to extend those investigations to thioalkynes. Herein, we report the development of a hydrative aminoxylation of thioalkynes as well as several intriguing mechanistic features of the process.



^[1] Kaldre, D.; Maryasin, B.; Kaiser, D.; Gajsek, O.; González, L.; Maulide, N. Angew. Chem. Int. Ed., 2017, 56, 2212.

^[2] Pinto, A.; Kaiser, D.; Maryasin, B.; Di Mauro, G.; González, L.; Maulide, N. Chem. Eur. J., 2018, 24, 2515.