

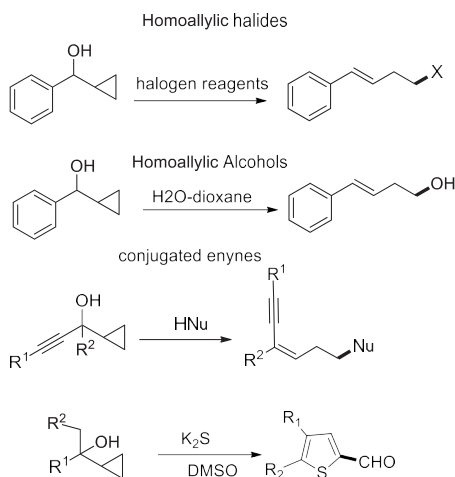
CuBr₂-Catalyzed ring opening/Formylation reaction of Cyclopropyl Carbinols with DMF to Synthesize formate Esters

Tharcisse Gatera

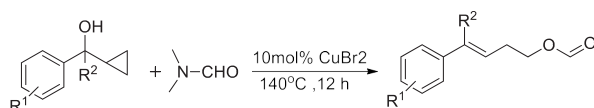
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Our group developed a protocol for the synthesis of formate esters by using N, N dimethylformamide (DMF) as both the source of CHO and solvent. This reaction underwent ring opening of the cyclopropyl carbinols and in situ formation of homoallylic alcohols, which reacted with DMF to afford the desired products. The substrate cyclopropyl carbinols with different groups participated smoothly in this process and the desired products were obtained in moderate to good yields.

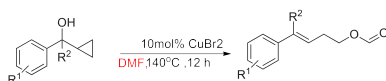
Some of the previous related works



This work

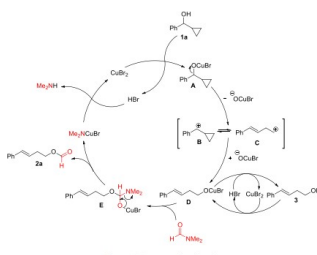


Optimal reaction condition



Reaction conditions: substrates **1** (0.3 mmol), CuBr₂ (0.03 mmol), DMF (2 mL), 140 °C, 12 h.

Plausible reaction mechanism



Biography

Tharcisse GATERA (Magnificat) is a master's researcher at Lanzhou University, where he researches and writes on the synthesis of organic compounds. He graduated from the university of Rwanda College of science and technology with a Bachelor Degree of Science in chemistry in 2016. During the undergraduates, he was privileged to participate in many forums (Africa Youth Leadership Forum training in 2015, Young Professional forum meet the President in 2018, youth dialogue sessions (Youth connect), Women Empowerment forum held in Kigali Rwanda (July 18th 2018), peace keeping dialogues sessions and many more. After graduation, He took a one year Chinese language course and traveled in east african countries before moving to china. He is currently working on a master's of science in Organic chemistry at Lanzhou University, P.R.China since 2019. In china, He took part in many national and international conferences, workshops, training and even symposium, including the 2019 International Training on climate change "the training course on Desertification Combating and Ecological Safety Assessment in Central Asia and Western Asia, and a Solid Waste Management Capacity-building Workshop in 2020.