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Boron tribromide promoted domino cyclization reaction of OxoTriphenylHexanOates (OTHOs) leading to a tetracyclic compounds

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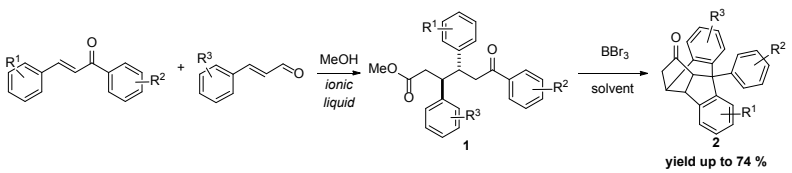
Carbon-carbon bond formation is a fundamental transformation in synthetic organic chemistry. Hence, many transformations leading to C-C bond formation have been developed and then used in synthesis of simple and complex molecules. In recent years considerable attention has been given to increase the efficiency of organic synthesis, particularly by reducing of chemical waste and production cost.

One option to meet these criteria are domino reactions. This method involves the formation of several bonds under the same reaction conditions without adding additional reagents, catalysts, or isolating the reaction intermediates.1

With respect to our previous research,2 we turned our attention to OxoTriphenylHexanOates (1, OTHOs) due to their easy accessibility via a three-component ionic liquid promoted reaction.

The treatment of corresponding OTHOs with boron tribromide lead to the formation of tetracyclic molecules 2, in good yields of up to 74%, via the reaction sequence involving the formation of three new C-C bonds.



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Biography

Martin Kamlar completed his PhD in 2015 at Charles University, Czech Republic. After three years working as a postdoctoral fellow and Assistant Professor at the same university, he received a scientific internship and moved to Gothenburg in Sweden. He currently works in the research group of Professor Sundén at Chalmers University of Technology.

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