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A one-pot C-H functionalization protocol for the synthesis of (hetero)chalcones

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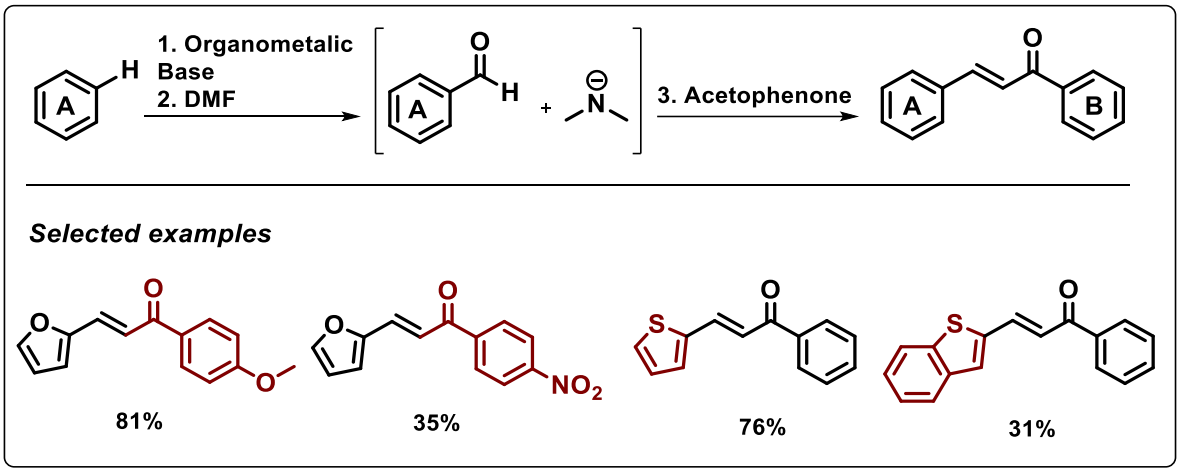
ABSTRACT

Chalcones comprehend an interesting class of organic compounds which have been studied in several works.[1] They can be obtained from natural sources as important precursors of secondary metabolites and, not restricted to biosynthetic roles, chalcones can also be synthetized and employed in different fields such as optical devices[2] and medicinal chemistry, exhibiting a wide range of relevant biological activities.[3] A variety of synthetic methodologies are available to provide chalcones like classical Claisen-Schmidt aldol condensation[4] or more recent ones, using C-H activation.[5] In our study, a number of (hetero)aromatic chalcones displaying interesting drug-like structural features could be synthesized in a one-pot approach, using a novel organometallic base-mediated protocol, that explores a direct C-H functionalization of readily available aromatic and heterocyclic substrates.



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