

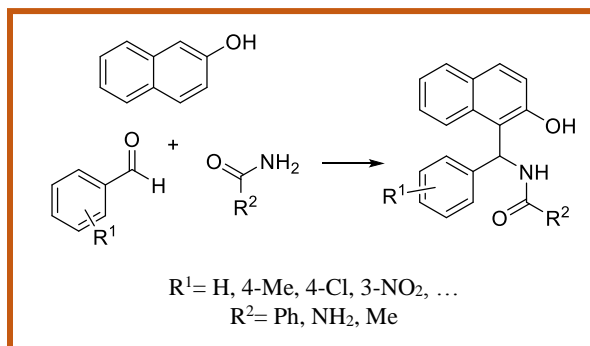
Microwave accelerated the synthesis of 1-amidoalkyl-2-naphthols using $\text{Cu}_2(\text{NH}_2\text{-BDC})_2(\text{DABCO})\text{-Sal-Co(II)}$ as a heterogeneous catalyst

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Multicomponent reactions (MCRs) have possessed significant attention since they are performed without the need to isolate any intermediate during their processes; this diminishes the time and saves both energy and raw materials [1-2]. 1-Amidoalkyl-2-naphthol derivatives are of importance as they can be easily converted to biologically active compounds through amide hydrolysis reaction [3]. Recently, various catalysts have been used to prepare these compounds through a multicomponent reaction. In this research, metal-organic frameworks were utilized as heterogeneous catalyst. They are often crystalline solids consisting of metal ions or clusters coordinated to mostly rigid organic linkers such as aromatic polycarboxylates or polyamines to form one-, two, or three-dimensional porous structures [4]. We reported a green and convenient method for the synthesis of 1-amidoalkyl-2-naphthols from the reaction between β -naphthol, aromatic aldehydes and amide derivatives under microwave irradiation in the presence of $\text{Cu}_2(\text{NH}_2\text{-BDC})_2(\text{DABCO})\text{-Sal-Co(II)}$ as a modified catalyst through post-synthesis method. (Scheme 1). $\text{Cu}_2(\text{NH}_2\text{-BDC})_2(\text{DABCO})$ was synthesized and then modified with salicylaldehyde and cobalt acetate (II) salt by ball milling technique.



Scheme 1. Synthesis of 1-Amidoalkyl-2-naphthol derivatives catalyzed by MOFs

References:

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