

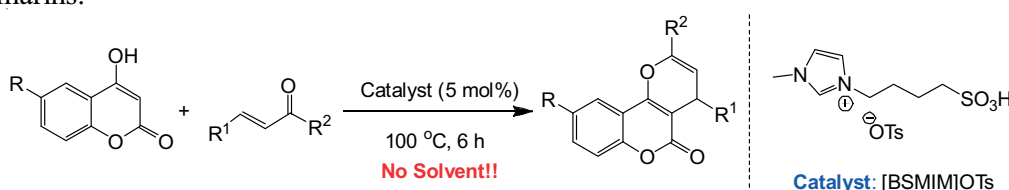
**DR-5. BRØNSTED ACIDIC IONIC LIQUID-CATALYZED TANDEM REACTION:
AN EFFICIENT APPROACH TOWARDS REGIOSELECTIVE SYNTHESSES
OF PYRANO[3,2-*c*]COUMARINS UNDER SOLVENT-FREE CONDITIONS
BEARING LOWER E-FACTORS**

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Pyranocoumarin derivatives are a class of fused oxygen containing heterocycles that have drawn much attention due to their potential biological and pharmaceutical activities including antifungal, anti-cancer, anti-HIV, anti-inflammatory and antibacterial activities and also important in medicinal chemistry [1]. Particularly a few important pyranocoumarins are xanthyletin (predominantly isolated from *Zanthoxylum americanum*), khellactone (isolated from *Ligusticum elatum*), arisugacins, and pyripyropenes [2]. In literature, most of the methodologies were developed *via* the reaction of 4-hydroxycoumarin with various types of electrophiles such as 1,3-diarylallylic compounds and α,β -unsaturated aldehydes or ketones and propargylic alcohols [3]. Herein we report the catalytic effect of Brønsted acidic task specific ionic liquid, 1-butane sulfonic acid-3-methylimidazolium tosylate, [BSMIM]OTs (BAIL-1) on the tandem reaction between 4-hydroxycoumarin with α,β -unsaturated carbonyl compounds for the formation of pyrano [3,2-*c*]coumarins.



BAIL-catalyzed synthesis of pyrano[3,2-*c*]coumarins

References

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