

## III-56

**A CONVENIENT AND SUSTAINABLE METHOD FOR THE SYNTHESIS  
OF 4-SUBSTITUTED COUMARINS CATALYZED  
BY BRØNSTED ACIDIC IONIC LIQUIDS**

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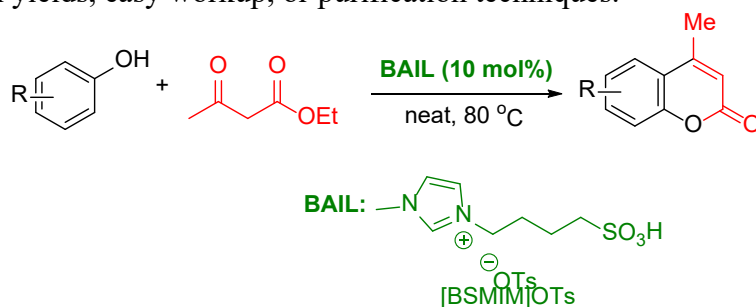
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Abstract. Brønsted acidic ionic liquids have been applied as an efficient catalyst for the synthesis of 4-substituted coumarins through the Pechmann condensation of different phenols and  $\beta$ -ketoesters under solvent-free conditions (Scheme 1). In particular, this organocatalyst makes the condensation feasible for less activated phenols. The present method offers several advantages such as cleaner reactions condition, short reaction times, high yields, easy workup, or purification techniques.



**Scheme 1.** Synthesis of coumarins in the presence of the BAIL

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