
Investigation of one-pot three-component synthesis of polyhydrochromene carbonitriles using imidazole catalysts

Hodeis Ahmadi Machiani*,

In recent years, 4H-benzopyran and its derivatives have attracted many attentions for their biological properties, such as anti-clotting, anti-cancer, and diuretic activities. In this study, an efficient and eco-friendly one-pot three-component method was developed for the synthesis of tetrahydrobenzo[b]pyrans by the reaction of aldehyde, malononitrile and dimedone, using basic ionic liquid like-phase (SILLP) catalyst under ultrasonic irradiation. In this research 2-amino-5-oxo-5,6,7,8- tetrahydro-4H-chromenes were obtained with high yields (80-92%) and in 5-20 min.

Keywords : aldehyde, malononitrile, dimedone, 4H-chromene, basic ionic liquid like-phase

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