

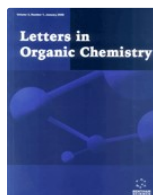


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Research Article

1-Ethyl-3-Methylimidazolium Cyanoborohydride Catalyzed Solvent Free Microwave Assisted One Pot Multicomponent Synthesis of Tetrahydrobenzo[b]Pyran Derivatives

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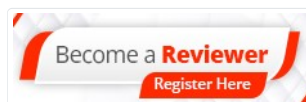
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Abstract

We present a facile and environmentally benign protocol for the synthesis of tetrahydrobenzo[b]pyran derivatives via multicomponent condensation of dimedon, malononitrile and different aromatic aldehydes in the presence of 1-ethyl-3-methylimidazolium cyanoborohydride ([EMIm][BH₃CN]) as catalyst under microwave irradiation. The one-pot synthesis, facile solvent-free condition and good isolated yield illustrate the utility of this green approach. The structural features are derived using analytical tools, including Fourier Transform Infrared Spectroscopy (FT-IR) and ¹H and ¹³C Nuclear Magnetic Resonance (NMR) Spectroscopy. Electronic synthesis of tetrahydrobenzo[b]pyran derivatives by using catalytic action of 1-ethyl-3-

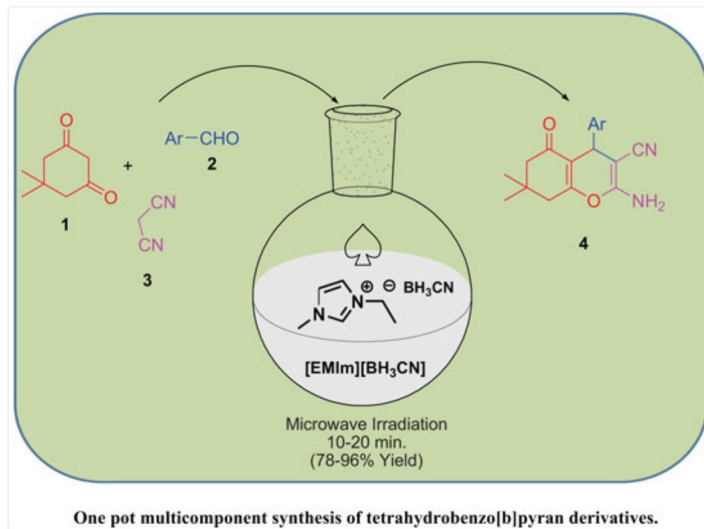
methylimidazolium cyanoborohydride has been used to obtain maximum yield.

Keywords: [Tetrahydrobenzo\[b\]pyran](#), [microwave irradiation](#), [solvent free](#), [ionic liquid](#), [FT-IR](#), [TLC](#).

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Graphical Abstract



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