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## Ionic liquid i.e. 1-Pentyl-3-methylimidazolium bromide mediated synthesis of 2-phenylbenzoxazole

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### Abstract

An efficient and green synthesis of 2-phenylbenzoxazole have been carried out by a simple condensation of 2- aminophenol and aromatic aldehyde in an inexpensive ionic liquid i.e. 1-pentyl-3-methylimidazolium bromide ( $[pmIm]Br$ ) by microwave irradiation under solvent free condition. Initially, imidazolium based ionic liquid i.e. 1-Pentyl-3- methylimidazolium bromide  $[pmIm]Br$  have been synthesized by microwave irradiation from 1-methylimidazole and npentyl bromide. The structure of newly synthesized ionic liquid and 2-phenylbenzoxazole have been confirmed by spectral studies such as UV-Vis, FT-IR and  $^1H$ -NMR spectroscopy techniques. Ionic liquid i. e.  $[pmIm]Br$  as a reaction media offers several advantages including non-toxic, non-corrosive, shorter reaction time, high yield of the products, mild reaction conditions as well as simple experimental and isolation procedures.

### Author Keywords

Ionic liquid, Microwave,  $[pmIm]Br$ , Imidazolium, Catalyst-free, Green chemistry

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