

## Synthesis of benzimidazoles by Ni-catalyzed hydrogen transfer reduction of nitroarenes with alcohols

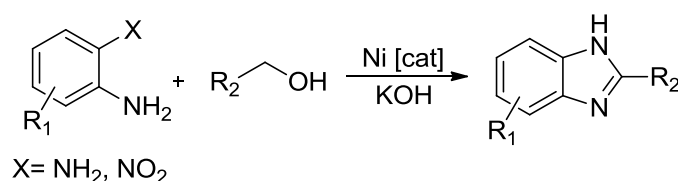
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In the present years, nanocomposite and catalysis are the most attractive combination, which inspires the scientific community to apply both the technology concurrently, because as the particle size of the metal catalyst decreases the relative number of surface metal atoms increases, and consequently the activity increases. The nanoparticle catalysts can also be easily separated and recycled with retention of high catalytic activity. Because of advantages of these nanocatalysts, many researchers have synthesized and characterized through the different analytical techniques followed by application studies in the synthesis of various heterocycles like benzothiazole, benzimidazole, benzoxazole and other heterocycles. In this section, we have discussed about the application of nanocatalysts for the synthesis of benzimidazoles [1-2].

Benzimidazole and its derivatives represent an important class of N-containing heterocyclic compounds, which have received considerable attention in recent years due to their potential applications as anticancer, antibacterial, antiulcer, antiviral and antihistamine agents. In addition, they could also be applied in other fields, such as chemosensing, dyes, fluorescence and corrosion science. Owing to the potential biological and other technical interest in benzimidazole compounds, a number of synthesis strategies have been developed [3]. herein we report a simple and efficient synthetic method of benzimidazoles by the reaction of ortho-nitroanilines and primary alcohols a nickel-catalyzed direct. This catalytic system afforded products with good yields.



**Keywords:** Heterogeneous Nanocatalyst, Nickel, Primary Alcohols, Benzimidazole

### References

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