

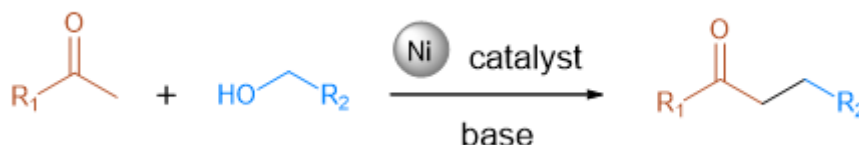
C-C Coupling Reaction of Ketones with Alcohols in the Presence of Nickel Nanocatalyst

Mina Taheri-Torbati and Hossein Eshghi*

*Department of Chemistry, Faculty of Science, Ferdowsi University of Mashhad, Mashhad, Iran.

*E-mail: heshghi@um.ac.ir

In the present era, metal-magnetic nanoparticles have been increasingly appreciated in heterogeneous catalysis and organometallic chemistry owing to their easy preparation, low toxicity, and large surface area, supermagnetic power and high stability. The magnetic material Fe₃O₄ is able to separate from the reaction mixture by using an external magnet without applying the traditional filtration methods.[1,2] Carbon-carbon bond-forming reactions are fundamental in organic synthesis to synthesize complex and functionalized molecules from readily available substrates. The direct α -alkylation of ketones with alcohol, to synthesize important α -alkylated ketones and enones is an attractive procedure for C-C bond formation. On the other hand selectivity represents one of the most important issues for catalysis.[3] As α -alkylation of ketones with primary alcohols can produce two kinds of valuable chemicals, it will be interesting if product selectivity can be well controlled. Therefore, herein we report synthesis of nickel NPs, which is applied as effective, clean, good stability, and recoverable magnetic nanocatalyst for the synthesis of important C-C coupling reaction of ketones with alcohols.



Keywords: α -alkylation, ketones, primary alcohols, Heterogeneous catalyst, C-C activation

References

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