



## Heterogeneous PS-Fe-NHC Catalysed *N*-alkylation of Amide and Amine with Alcohol as Alkylating Agent through Dehydrative C-N bond Formation Reaction

Bhikan J. Khairnar<sup>1</sup>, Pravinsing S. Girase<sup>1</sup> and Bhata R. Chaudhari<sup>1,2\*</sup>

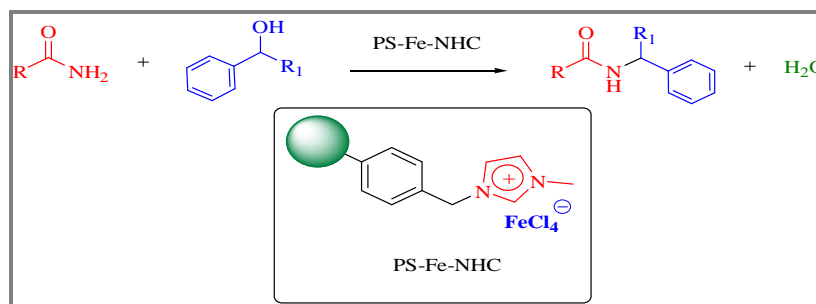
1. Department of Chemistry, JET's Z. B. Patil College, Dhule (MS), **INDIA**
2. Department of Chemistry, SSVPS's ACS College, Shindkheda, Dhule (MS), **INDIA**  
Email: [brc155@gmail.com](mailto:brc155@gmail.com), [brc15@rediffmail.com](mailto:brc15@rediffmail.com)

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### ABSTRACT

An efficient, high-yielding and rapid protocol has been developed the *N*-alkylation reactions of amides and amines through dehydrative C-N bond formation processes by using PS-Fe-NHC as green reusable heterogeneous catalyst. Absence of unwanted products, general applicability, reusability of the catalyst, green synthesis avoiding toxic reagents and improved and operational simplicity make this protocol a useful, greener, cost effective and practical for both academic as well as industrial purposes.

### Graphical Abstract



**Keywords:** C-N bond formation reaction, Amide, Green Chemistry, Heterogeneous catalyst.