



Oxidation of Benzyl Alcohols by Molecular Oxygen Catalyzed by Nickel Ferrite

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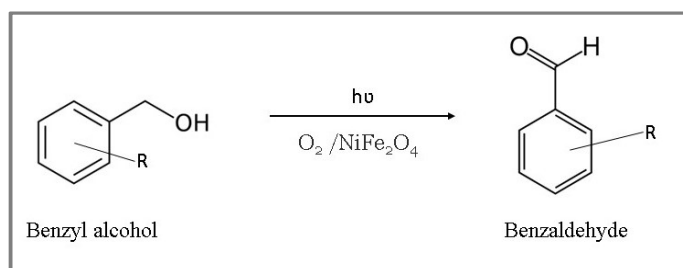
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ABSTRACT

Oxidation of alcohols to aldehydes/ketones/carboxylic acids is an important step in organic synthesis. Generally, alcohol is oxidized to carboxylic acid by strong oxidants and this reaction may or may not stop at the intermediate steps like aldehyde and ketone. On the other hand, mild oxidizing agents may stop oxidation at this stage. Molecular oxygen is such an oxidant, which can help us in achieving this objective, but molecular oxygen has a demerit as an oxidant that it has a slow rate of oxidation. Therefore, this reaction may be catalyzed by nickel ferrites. Nickel ferrites are easy to separate by an external magnet and it can be reused. Nickel ferrite has been used for the oxidation of benzyl alcohols to corresponding benzaldehydes in the present work.

Graphical Abstract:



Keywords: Catalyst, Oxidation, Molecular oxygen, Benzyl alcohol, Benzaldehyde, Nickel ferrite.