



Synthesis, Spectroscopic Studies and Applications of CuNPs/SBA-15 Catalysts

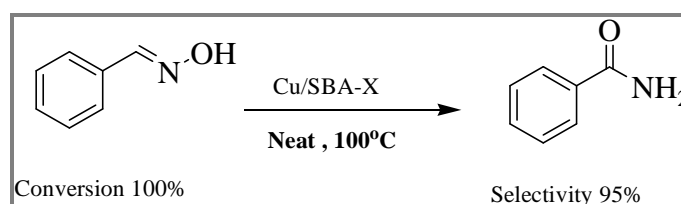
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ABSTRACT

CuNPs/SBA-15 catalysts have been synthesized using functionalized SBA-15 (SBA-NH₂, SBA-COOH) as support, copper acetate as a Cu precursor and characterized by XRD, N₂-adsorption-desorption isotherms and FT-IR techniques. These catalysts are found to be highly active and selective for the Beckmann rearrangement of benzaldoxime into benzamide under solvent-free and acid-free conditions.

Graphical Abstract



Highlights

- Compare to SBA-15 and SBA-NH₂ supported copper catalysts SBA-COOH supported copper catalysts shows superior catalytic activity in the rearrangement of benzaldoxime into benzamide.
- High surface area is the reason for its high catalytic activity

Keywords: CuNPs/SBA-15, Beckmann Rearrangement, Benzaldoxime, Benzamide.