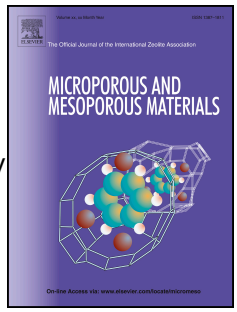
Accepted Manuscript



Synthesis of ANA-zeolite-based Cu nanoparticles composite catalyst and its regularity in styrene oxidation

Beibei Gu, Jie Bai, Wei Yang, Chunping Li

PII: S1387-1811(18)30458-X

DOI: 10.1016/j.micromeso.2018.08.023

Reference: MICMAT 9085

To appear in: *Microporous and Mesoporous Materials*

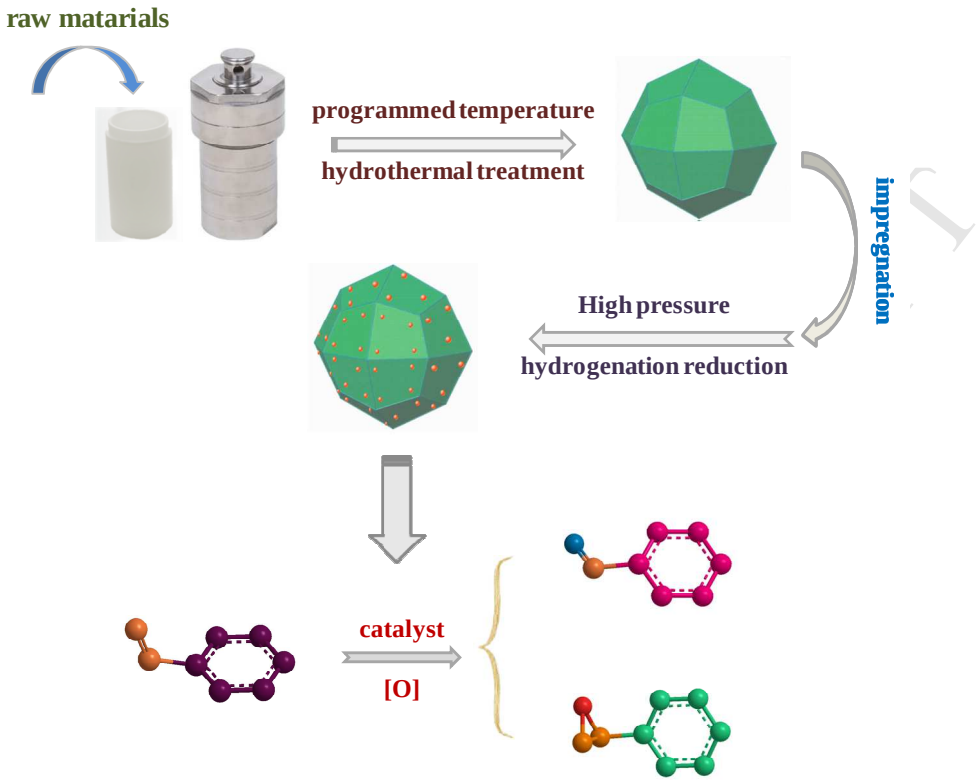
Received Date: 23 April 2018

Revised Date: 10 July 2018

Accepted Date: 21 August 2018

Please cite this article as: B. Gu, J. Bai, W. Yang, C. Li, Synthesis of ANA-zeolite-based Cu nanoparticles composite catalyst and its regularity in styrene oxidation, *Microporous and Mesoporous Materials* (2018), doi: 10.1016/j.micromeso.2018.08.023.

Graphical Abstract



Zeolite analcime was synthesized by hydrothermal treatment method with silicon-aluminum sol. The copper supported zeolite analcime (Cu/ANA) has been successfully prepared through impregnation in copper nitrate solution and high pressure hydrogenation reduction. In order to firmly anchor the Cu nanoparticles on the surface of the analcime, the method of thermal curing was adopted and the composite catalyst obtained was kept in nitrogen atmosphere at 300□ for 2 h. The catalytic performance of Cu/NPs composite catalyst was manifested in styrene oxidation reaction. Finally, a significant regularity was observed.