

Catalytic performance of metal pillared ilerites for liquid phase Beckmann rearrangement of cyclohexanone oxime

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The metal pillared ilerites were synthesized with good crystalline structures and characterized by XRD, BET and FT-IR. The X-ray patterns of the synthesized ilerites were in very good accordance with the structures proposed by earlier workers. The metal pillared ilerite catalysts were evaluated in Beckmann rearrangement of cyclohexanone oxime.

The reaction was carried out in a 3-necked round flask reactor under rather mild conditions with the metal pillared ilerite catalysts, the conversion of cyclohexanone oxime was about 55% and the selectivity to ϵ -caprolactam was about 85%. This catalyst could be used several times without any change in its catalytic activity.