

Paper 11

HOFMANN-MARTIUS REARRANGEMENT REACTIONS CATALYSED BY ZEOLITES

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ABSTRACT

N-Methylaniline was reacted over HZSM-5, H-Theta-1 and HY zeolites and was found to rearrange to give the toluidines, aniline and *N,N*-dimethylaniline. Percentage conversion to these products was found to be highest over HY zeolite with a higher selectivity to *p*-toluidine, whereas over HZSM-5 and H-Theta-1 selectivity was to *N,N*-dimethylaniline. The conversion to these products is in line with Hofmann-Martius and the Reilly-Hickin bottom rearrangement reactions. However the selectivity to *N,N*-dimethylaniline as observed over HZSM-5 and H-Theta-1 (medium pore zeolites) is new.