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## Heterogeneous catalysis for effective synthesis of *alkylquinolines*

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An environment-friendly vapour phase synthesis of alkylquinolines from commercially available and low cost feeds in a single step was studied over modified Y zeolites, SiO2-Al2O3, USY zeolites and ZnCl2 catalyst in the presence of hydrogen under normal atmospheric pressure. Reaction of N-propanol, 1, 2-propanediol,1,3-propanediol and glycol with aniline was investigated, and the possible reaction pathway for each synthesis is proposed, to evidence the product components over the outstanding catalysts. Transition metal cation modified USY zeolites with ZnCl2 catalyst are found to be more active for synthesis of 2-ethyl-3 methylquinoline than Y zeolites and others. The maximum yield of 79% of alkylquinolines (with 60% yield of 2-ethyl-3methylquinoline) was obtained from aniline and N-propanol over USY and ZnCl2 catalyst at 430°C.

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