

**EFFECT OF CALCINATION TEMPERATURE ON
THE ACTIVATION PERFORMANCE OF Ce-Mn-Ru
CATALYST FOR SELECTIVE CATALYTIC
REDUCTION OF NO WITH NH₃:
A REVIEW**

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**BACHELOR OF CHEMICAL ENGINEERING
(ENVIRONMENT) WITH HONOURS**

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SELECTIVE CATALYTIC REDUCTION OF NO WITH NH₃:
A REVIEW**

By

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ABSTRACT

Nitrogen oxides (NO, NO₂, and N₂O) remain a major source for air pollution. They are responsible for the major environmental issues such as acid rain, photochemical smog, ozone depletion, and greenhouse impacts. To remove the NO_x, several methods has been studied and one OF the method is by using selective catalytic process. Selective catalytic process can covert NO_x into nitrogen gas, water and a tiny amount of carbon dioxide by using ammonia or urea as the reagent, oxygen and a catalyst. The catalyst used in the process are Ce-Mn-Ru. The three catalyst Ce-Mn-Ru for SCR are chosen and reviewed. The catalyst preparation method also being reviewed to produce the best quality catalyst for the SCR process. Qualitative analysis and quantitative analysis was used to analyse the best preparation method and best calcination temperature. The co precipitation method was the best method for the preparation of the catalyst in SCR. The calcination temperature range suitable for Ce-Mn-Ru catalyst was between 400°C to 500°C.