289b Low Temperature Selective Catalytic Reduction of No with Nh_3 over Manganese Oxides

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Manganese oxide catalysts were prepared by a simple precipitation method using sodium carbonate and used for low temperature selective catalytic reduction (SCR) of NOx with NH_3 in the presence of excess O_2. The effect of calcination temperature was investigated and the optimum calcination temperature was 623K. The catalysts thus obtained have exhibited excellent catalytic activity in the temperature range of 348 – 473 K compared with other manganese oxide based catalysts, which is probably due to its high surface area as well as framework structure and composition. The high catalytic activity is maintained in the presence of 20 vol% water vapor in the feed.