Mn Layered Structure Catalysts for Low Temperature NH_3 Selective Catalytic Reduction

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In this study, Mn layered structure catalysts are prepared by co-precipitation method and they are used as catalysts for low temperature NH_3 selective catalytic reduction. The Mn catalysts are characterized by X-ray diffraction, Brunaurer-Emmett-Teller analysis, NH_3-temperature programed desorption, H_2-temperature programed reduction and X-ray photoelectron spectroscopy. The prepared Mn layered structure oxide was explored as a catalyst, resulted in an outstanding deNO_x performance under 200 °C with a GHSV of 60,000 h^{-1}. Moreover, the outstanding H_2O and SO_2 resistance of Mn layered structure catalysts was also obtained. The enhanced NO_x removal performance at low temperature suggests that Mn layered structure catalysts could be a promising catalyst for NH_3-SCR processes.