

ABSTRACT

VANADIA-BASED DENOX CATALYSTS AND CATALYST SUPPORTS

A vanadia-based catalytic composition for reduction of nitrogen oxides includes a titania-based support material; vanadia deposited on the titania-based support material; a primary promoter comprising tungsten oxide, molybdenum oxide or combinations thereof; and an amount of phosphate to achieve a mole ratio of phosphorus to vanadium plus molybdenum of about 0.2:1 or greater. A zirconia, tin or manganese oxide can be added to further inhibit the volatility of molybdenum. Results show low SO₂ oxidation rates and excellent NO_x conversion and/or molybdenum stability.