

ABSTRACT

**PARAFFIN AMMOXIDATION USING VANADIUM ANTIMONY OXIDE
BASED CATALYSTS WITH HALIDE PROMOTERS**

The process for the ammoxidation of a C_3 to C_5 paraffinic hydrocarbon to its corresponding α, β -unsaturated hydrocarbon comprising reacting the C_3 to C_5 paraffinic hydrocarbon with ammonia and oxygen in a fluid bed reactor at a temperature of between 250°C to 600°C in the presence of a catalyst having the empirical formula as follows:



wherein A when present is Sn and/or Ti

D when present is one or more of Li, Mg, Na, Ca, Sr, Ba, Co, Fe, Cr, Ga, Ni, Zn, Ge, Nb, Zr, Mo, W, Cu, Te, Ta, Se, Bi, Ce, In, As, B, Al, P and Mn; and

wherein v is 1, m is 0.5-75, a is 0 to 25, d is 0 to 25, and x is determined by the oxidation state of the cations present,

and a minor quantity of an halogen-containing component, preferably characterized by the following formula:



where R=Hydrogen, C_1 - C_{20} alkyl

and X=F, Cl, Br, I or mixtures thereof.