Abstract of the Disclosure

METHOD FOR PREPARING IMPROVED VANADIUM ANTIMONY OXIDE BASED OXIDATION AND AMMOXIDATION CATALYSTS

A method of making a catalyst having the following empirical formula:

$$VSb_mA_aD_dO_x$$

where A = Sn, Ti or mixtures thereof,

D = at least one element selected from Li, Mg, Na, Ca, Sr, Ba, Co, Fe, Cr, Ga, Ni, Zn, Ge, Nb, Mo, W, Cu, Ti, Ta, Se, Bi, Ce, In, As, B, Al, and Mn, and

wherein m = 0.5 to 10

a = 0 to 10

d = 0 to 10

x = number of oxygen atoms necessary to satisfy the valency requirements of the other elements,

comprising reacting a monoperoxovanadium ion, $VO(O_2)^+$, while in aqueous solution with a first portion of an Sb compound which contains Sb, having a valence of 3^+, thereby reducing the average valence of the V to less than 5^+ and oxidizing Sb to a valence state of 5^+, removing the water from the solution to form a dried catalyst precursor, and calcining the resulting dried precursor at a temperature in the range of 650° to 950°C to form the catalyst, wherein the improvement comprises adding at least a second portion of an Sb compound after the first portion of Sb compound has been added and has at least partially reacted with the monoperoxovanadium ion.