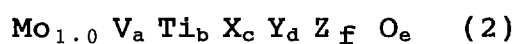
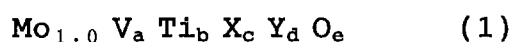


ABSTRACT

An object of the present invention is to provide a highly active catalyst for producing an unsaturated oxygen-containing compound from an alkane and the catalyst comprising Mo, V, Ti and Sb or Te as the indispensable active components. The preferable catalyst is represented by formula (1) or (2) as shown below,



wherein X represents Sb or Te; Y represents Nb, W or Zr; Z represents Li, Na, K, Rb, Cs, Mg, Ca or Sr; a, b, c, d, e and f represent atomic ratios of their respective elements, with $0 < a < 0.7$, $0 < b < 0.3$, $0 < c < 0.7$, $0 \leq d < 0.3$, $0 < f < 0.1$; e is a number determined by oxidation states of the other elements than oxygen.



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