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(54) Title: ETHANE OXIDATION CATALYST AND PROCESS UTILISING THE CATALYST

(57) Abstract: A catalyst composition and its use for the selective oxidation of ethane to acetic acid and/or for the selective oxidation of ethylene to acetic acid which composition comprises in combination with oxygen the elements molybdenum, vanadium, niobium, gold in the absence of palladium according to the empirical formula: $\text{Mo}_a\text{W}_b\text{Au}_c\text{V}_d\text{Nb}_e\text{Z}_f$ wherein Z is one or more elements selected from the group consisting of B, Al, Ga, In, Ge, Sn, Pb, Sb, Cu, Pt, Ag, Fe and Re; a, b, c, d, e and f represent the gram atom ratios of the elements such that: $0 < a \leq 1$; $0 \leq b < 1$ and $a + b = 1$; $10^{-5} \phi c \leq 0.02$; $0 < d \leq 2$; $0 < e \leq 1$; and $0.0001 \leq f \leq 0.05$.



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