

The present invention relates to a method of producing a catalyst or pre-catalyst suitable for assisting in the production of alkenyl alkanoates. The method includes contacting a modifier precursor to a support material to form a modified support material. One or more catalytic component precursors (palladium or gold) may be contacted to the modified support material. The atomic ratio of gold to palladium is preferably in the range of about 0.3 to about 0.90. The support materials with the catalytic component may then be reduced using a reducing environment. A composition for catalyzing the production of an alkenyl alkanoates including a modified support material with palladium and gold is also included within the invention. Catalysts of the present invention may be used to produce alkenyl alkanoates in general and vinyl acetate in particular and are useful to produce low EA/VA ratios while maintaining or improving CO₂ selectivity.