5585528

COBALT-CATALYZED PROCESS FOR PREPARING 1,3-PROPANEDIOL USING A LIPOPHILIC TERTIARY AMINE PROMOTER

Powell Joseph B; Slaugh Lynn; Semple Thomas C; Weider Paul Houston, TX, UNITED STATES assigned to Shell Oil Company

1,3-Propanediol is prepared in a process which involves reacting ethylene oxide with carbon monoxide and hydrogen in an essentially non-water-miscible solvent in the presence of a non-phosphine-ligated cobalt catalyst and a lipophilic tertiary amine promoter to produce an intermediate product mixture containing 3-hydroxypropanal in an amount less than 15 wt %; extracting the 3-hydroxypropanal from the intermediate product mixture into an aqueous liquid at a temperature less than about 100°C. and separating the aqueous phase containing 3-hydroxypropanal from the organic phase containing cobalt catalyst; hydrogenating the 3-hydroxypropanal in the aqueous phase to 1,3-propanediol; and recovering the 1,3-propanediol. The process enables the production of 1,3-propanediol in high yield and selectivity without the use of a phosphine ligand-modified cobalt catalyst.

5587348

ALKYNE HYDROGENATION CATALYST AND PROCESS

Brown Scott H; Zisman Stan A; Kimble James B Bartlesville, OK, UNITED STATES assigned to Phillips Petroleum Company

A catalyst composition comprises palladium, at least one chemically bound alkali metal (preferably potassium), chemically bound fluorine and an inorganic support material (preferably alumina), wherein the atomic ratio of fluorine to alkali metals about 1.3:1 to about 4:1. Preferably, silver is also present in the catalyst composition. The above-described catalyst is employed as a catalyst in the selective hydrogenation of C2-C10 alkynes (preferably acetylene) to the corresponding alkenes in the presence of sulfur impurities.

5591688

PROCESS FOR THE PREPARATION OF FLUID BED VINYL ACETATE CATALYST

Blum Patricia R; Cirjak Larry M; Pepera Marc A; Paparizos Christos Macedonia, OH, UNITED STATES assigned to The Standard Oil Company

A process for the preparation of a fluid bed vinyl acetate (VAM) catalyst comprising impregnating a support comprising a mixture of substantially inert microspheroidal particles with a solution comprising a halide-free metal salt of Pd and M, wherein M comprises Ba, Au, La, Nb,Ce, Zn, Pb, Ca, Sr, Sb or mixtures thereof, reducing the metal salts to form a deposit of Pd and M on the support surface and impregnating the support with at least one halide-free alkali metal salt. At least 50% of the particles used for the microspheroidal support have a particle size below 100 microns, preferably below 60 microns.

5591873

FORMED COPPER CATALYST FOR THE SELECTIVE HYDROGENATION OF FURFURAL TO FURFURYL ALCOHOL

Bankmann Martin; Ohmer Johannes; Tacke Thomas Gelnhausen, GERMANY assigned to Degussa Aktiengesellschaft