

from the group consisting of the metals in Group 8, Group 9 Group 10 and mixtures thereof; (b) one or more promoters selected from the group consisting of oxides of the elements in Group 1, Group 2, the Lanthanides group, the Actinides group and mixtures thereof; and (c) a support has also been developed.

**5554274**

**MANUFACTURE OF IMPROVED CATALYST**

Degnan Thomas F; Klocke Donald J; Rubin Mae Moorestown, NJ, UNITED STATES assigned to Mobil Oil Corporation

This invention relates the use of a catalyst composition having the structure of ZSM-5 and a matrix material, which has been manufactured by a new and useful method, for organic compound, e.g., hydrocarbon compound, conversion. The organic compound conversion processes described include catalytic cracking, gasoline hydrofinishing, toluene disproportionation, xylene isomerization, and ethylbenzene production.

**5554573**

**RANEY-TYPE CATALYSTS FOR THE HYDROGENATION OF HALONITROAROMATIC COMPOUNDS**

Cordier Georges; Damon Jean-Pierre; Fouilloux Pierre; Marion Philippe Francheville, FRANCE assigned to Rhone-Poulenc Chimie

Halonitroaromatic compounds, e.g., 3-chloro-4-fluoronitrobenzene, are selectively hydrogenated into the corresponding haloaromatic amines, in the essential absence of hydrodehalogenation, by reacting same with

hydrogen in the presence of a catalytically effective amount of a novel Raney-type catalyst composition consisting essentially of an alloy of nickel, aluminum and molybdenum, Ni/Al/Mo, the Al/Mo ratio by weight thereof being equal to or greater than 1.

**5554574**

**METHOD FOR PREPARING COPPER-CONTAINING HYDROGENATION REACTION CATALYST AND METHOD FOR PRODUCING ALCOHOL**

Tsukada Kiyoshi; Hattori Yasuyuki; Mimura Taku Wakayama, JAPAN assigned to Kao Corporation

A copper-containing hydrogenation reaction catalyst is prepared by reducing a precursor of a copper-containing catalyst usable in hydrogenation reaction with hydrogen gas or a mixture of hydrogen and an inert gas by liquid phase reduction in a stream of a solvent in the temperature range of from 50° to 140°C. An alcohol is produced using the catalyst thus obtained in a fixed bed continuous reaction system.

**5554778**

**RUTHENIUM HYDROGENATION CATALYSTS**

Beatty Richard; Paciello Rocco Newark, DE, UNITED STATES assigned to E I Du Pont de Nemours and Company

The invention relates to a novel ruthenium complex having the formula  $Ru(\eta^3-C_6H_8-PCy_2)(PCy_3)Cl$ , wherein Cy is cyclohexyl; its use in the preparation of  $RuHCl(H_2)(PCy_3)_2$  and  $RuH_2(H_2)_2(PCy_3)_2$ ; and the use of the complexes as catalysts in