compounds of formulae (*See Patent for Chemical Structure*) I and PSO3X2PSO3X2 II wherein R1, R2, R3 and R4 independently signify lower alkyl or lower alkoxy; m and n are 0, 1 or 2; and X signifies hydrogen, an alkali :metal, the equivalent of an earth alkali metal or an ammonium ion; with the provision that R3 is in position 4 or 5 and R4 is in position 4' or 5'. The invention is also concerned with complexes of such compounds with a metal of Group VIII. These complexes are, useful as catalysts for asymmetric hydrogenation and for enantioselective hydrogen displacement in prochiral allylic systems.

5536860

PROCESS FOR PREPARING AMINOPROPYLALKOXYSILANES IN THE PRESENCE OF SHAPED POLYMERIC RHODIUM COMPLEX CATALYSTS AND THEIR USE

Monkiewicz Jaroslaw; Frings Albert; Horn Michael; Koetzsch Hans-Joachim; Kropfgans Frank; Seiler Claus-Dietrich; Srebny Hans-Guenther; Standke Burkhard Rheinfelden, GERMANY assigned to Huels Aktiengesellschaft

Aminopropylalkoxysilanes of formula (I): (*See Patent for Tabular Presentation*) PS are prepared by reacting hydrogensilanes of formula (II): (*See Patent for Tabular Presentation*) PS with an amine of formula (III): (*See Patent for Tabular Presentation*) PS where R and R1 are alkyl radicals having from 1 to 8 carbon atoms and n is equal to 0, 1 or 2 and R2 and R3 are hydrogen, alkyl radicals having from 1 to 8 carbon atoms, omega-alkenyl radicals having from 3 to 8 carbon atoms or combinations thereof, and R4 is hydrogen or an alkyl radical having from 1 to 8 carbon atoms, in the presence of a shaped polymeric rhodium complex catalyst containing organosiloxanemonophenylphosphine ligands.

ENVIRONMENTAL CATALYSIS

5531972

STAGED THREE-WAY CONVERSION CATALYST AND METHOD OF USING THE SAME

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A catalyst composition has an upstream stage and a downstream stage, the upstream stage containing a catalytic material which is different from the catalytic material contained on the downstream stage and is characterized by having a low ignition temperature, eg, 350 degrees C to less than 400 degrees C for the substantially simultaneous conversion of HC, CO and NOx pollutants contained in, eg, the exhaust of an automobile engine operating at a substantially stoichiometric air-to-fuel weight ratio. The downstream catalytic material is characterized by having a higher conversion efficiency for substantially simultaneous conversion of HC, CO and NOx than the upstream catalytic material at elevated operation temperatures which may be, for example, from about 400 degrees to 800 degrees C. The method of the invention includes passing a gaseous exhaust stream containing HC, CO and NOx pollutants sequentially through first the upstream and then through the downstream catalytic materials.