wherein the catalyst system comprises an inorganic oxide support having immobilized thereon a least one strong Lewis acid comprising at least one metal salt of a strong Bronsted acid wherein the metal is selected from the group consisting of aluminum, boron gallium, antimony, tantalum, niobium, yttrium, cobalt, nickel, iron, tin, zinc, magnesium barium strontium, calcium, tungsten, molybdenum and the metals of the lanthanide series and wherein the strong Bronsted acid is selected from the group consisting of mineral and organic acids stronger than 100% sulfuric acid.

5612270

AMMONIUM TREATED SELECTIVATED ZEOLITE CATALYST

Beck Jeffrey S; Stern David L Princeton, NJ, UNITED STATES assigned to Mobil Oil Corporation

There is provided zeolite catalyst, which is first selectivated with a siliceous material and then treated with an aqueous solution comprising ammonium or organoammonium ions under ion exchange conditions.

5618772

METHOD FOR PRODUCING CATALYST

Suda Akihiko; Ukyo Yoshio; Sobukawa Hide; Kandori Toshi; Fukui Masayuk Aichi, JAPAN assigned to Kabushiki Kaisha Toyota Chuo Kenkyusho

A method for producing a catalyst having high catalytic activity even at high temperatures of 1200°C or higher. Fine alumina particles, of which 50% by weight or more have a particle size of 100 nm or less, are mixed with a catalytic component and a substance of inhibiting the sintering of fine alumina particles to form a slurry mixture. This slurry is dried and then calcined to obtain a porous catalyst. The fine alumina particles in the porous catalyst have a large specific surface area even at high temperatures and therefore the porous catalyst maintains its high catalytic activity even at high temperatures of 1200°C or higher.

5624543

AQUEOUS PHASE PRODUCTION OF HYDROGEN PEROXIDE AND CATALYSTS FOR USE THEREIN

Guillet James; Kohler Kevin; Friedman Gad Don Mills, CANADA assigned to Peroxco Incorporated

Hydrogen peroxide is produced by a process which uses as catalyst a polymer which has anthraquinone/anthrahydroquinone groups attached to it,and which exhibits differential solubility in water. The polymer is water soluble under one set of conditions, e.g. temperature range, but insoluble under another set of such conditions. Accordingly, the polymer bound anthrahydroquinone groups are oxidized in aqueous solution to form anthraquinone groups and hydrogen peroxide, which dissolves in the aqueous medium. Then the conditions, e.g. temperature, are changed to precipitate the polymer, which can readily be separated off, ready for re-use.

5624879

METHOD OF PREPARING ISOMERIZATION CATALYST

Smith Robert S; McMahon Steven L Houston, TX, UNITED STATES

This invention provides a method of preparing an

isomerization catalyst by contacting an alkali metal with catalyst support particles in a fluidized bed. After the alkali metal is uniformly dispersed on the support particles, oxygen is added to the fluidizing gas to oxidize a portion of the alkali metal.

5625104

ALKALI METAL ION EXCHANGED SELECTIVATED ZEOLITE CATALYST

Beck Jeffrey S; Stern David L Princeton, NJ, UNITED STATES assigned to Mobil Oil Corporation

There is provided a zeolite catalyst, which is first selectivated with a siliceous material and then treated with an aqueous solution comprising alkali metal ions under ion exchange conditions.

5626826

ZIRCONIUM/CERIUM MIXED OXIDE CATALYST/CATALYST SUPPORT COMPOSITIONS HAVING HIGH/STABLE SPECIFIC SURFACES

Chopin Thierry; Vilmin Gabriel Saint Denis, FRANCE assigned to Rhone-Poulenc Chimie

Zirconium/cerium mixed oxides (optionally including thermally stabilizing dopant values), comprising solid solutions thereof, having contents of zirconium of up to 99% by weight, and having high specific surface areas, are well suited as catalysts and/or catalyst supports, notably for the treatment/conversion of vehicular exhaust gases; such ZrO2/CeO2 mixed oxides are conveniently prepared by (i) intimately admixing a zirconium sol with a cerium sol, the ratio r of the mean diameter r1 of the particles of the zirconium sol to the diameter r2 of the particles of the cerium sol being at least 5, (ii) adding a precipitating amount of a base thereto, (iii) recovering the precipitate thus formed, and (iv) calcining the recovered precipitate.

5629257

SOLID SUPERACID CATALYSTS COMPRISING PLATINUM METAL

Umansky Benjamin S; Bhinde Manoj; Hsu Chao-Yang; Huang Chen-Sh Wilmington, DE, UNITED STATES assigned to Sun Company Inc (R&M)

A sulfated solid catalyst is provided which comprises (1) oxide or hydroxide of Group III or Group IV element, e.g. zirconium, and (2) a first metal comprising a metal or combination of metals selected from the group consisting of platinum, palladium, nickel, platinum and rhenium, and platinum and tin. The catalyst may further comprise (3) a second metal selected from the group consisting of Group VIII elements, e.g. iron. One embodiment of the invention further comprises (4) a third metal selected from the group consisting of Group V, VI and VII elements, e.g. manganese. The catalyst of the invention is useful for the isomerization of normal alkanes having 4 to 40 carbon atoms per molecule,for the naphtha upgrading of a hydrocarbon feedstock and for the hydrocracking of a hydrocarbon feedstock.

5629474

PRODUCTION OF A SENSOR FOR CARBON MONOXIDE OR WATER VAPOR INCLUDING A SEMI CONDUCTOR METALLIC OXIDE, CATALYST, AND RHEOLOGICAL AGENT

Williams Edward W Keele, UNITED KINGDOM assigned to Keele University