

A method and nickel-containing catalyst are disclosed for preparing synthesis gas by the reforming of a hydrocarbyl compound using an oxygen-containing compound.

**5591323**

**PROCESS FOR SWEETENING  
PETROLEUM CUTS WITHOUT  
REGULAR ADDITION OF ALKALINE  
SOLUTION USING A BASIC SOLID  
CATALYST**

Marcilly Christian; Leporq Serge; Courty Philippe Houilles, FRANCE assigned to Institut Francais du Petrole

A process for sweetening a petroleum cut containing mercaptans, wherein said petroleum cut is subjected to oxidation conditions by being contacted with a porous catalyst, in the presence of air said process being characterised in that said catalyst comprises 10 to 98% by weight of at least one mineral solid phase constituted of an alkaline aluminosilicate with a Si/Al atomic ratio less than or equal to 5, 1 to 60% by weight of active carbon, 0.02 to 2% by weight of at least one metal chelate and 0 to 20% by weight of at least one organic or mineral binding agent, has a basicity determined according to the 2896 ASTM standard with 20 milligrams of potash per gram and a total BET surface area of 10 m<sup>2</sup>g<sup>-1</sup>, and contains inside its pore structure a permanent aqueous phase representing 0.1 to 40% by weight of dry catalyst.

**5591326**

**CATALYTIC PROCESS FOR CRUDE  
OIL DESALTING**

Shih Stuart S Cherry Hill, NJ, UNITED STATES assigned to Mobil Oil Corporation

A catalytic desalting process for processing whole crude oils. The desalting process uses an M41S catalyst to remove salts from the whole crude. Solids may also be removed from the whole crude using a porous material having a pore size greater than about 10 microns. The catalytic desalting process does not generate waste water.

**5591689**

**PREPARATION OF ISOMERIZATION  
CATALYST COMPOSITION**

Wu An-hsiang; Drake Charles A; Melton Ralph J Bartlesville, OK, UNITED STATES assigned to Phillips Petroleum Company

A Group VIII metal and chloride-containing composition (effective as an alkane/cycloalkane isomerization catalyst) is prepared by a method which comprises mixing aluminum trichloride with a solid material containing at least one Group VIII metal (Pt and/or Pd and/or Ni) and alumina, heating the obtained mixture in an inert gas at about 450°-750°C., and then treating the mixture with a hydrogen chloride-containing gas at about 300°-700°C.

**5597944**

**DEHYDROGENATION OF  
N-PARAFFIN TO N-OLEFIN  
EMPLOYING MANGANESE OXIDE  
OCTAHEDRAL MOLECULAR SIEVE  
AS CATALYST**

O'Young Chi-Lin; Sawicki Robert A; Yin Yuan-Gen; Xu Wen-Qing; Suib Steven L Poughkeepsie, NY, UNITED STATES assigned to Texaco Inc

The dehydrogenation of n-parrofinis to n-olefins is catalyzed by novel synthetic manganese oxide

octahedral molecular sieves such as OMS-1 and OMS-2.

## **NEW CATALYTIC MATERIALS**

**5583086**

### **CESIUM CONTAINING MULTIMETAL OXIDE CATALYST COMPOSITIONS FOR THE PREPARATION OF METHACROLEIN BY GAS-PHASE-CATALYTIC OXIDATION**

Tenten Andreas; Neumann Hans-Peter; Exner Herbert Neustadt, GERMANY assigned to BASF Aktiengesellschaft

Cesium based multimetal oxide compositions which are suitable as catalysts for the gas-phase-catalytic oxidative preparation of methacrolein from isobutene or tert-butanol or its methyl ether. The catalysts are characterized by increased selectivity for the formation of methacrolein. The catalysts have locally delimited regions of an oxide composition, preferably (Bi<sub>2</sub>W<sub>2</sub>O<sub>9</sub>), surrounded by the remaining constituents of the multimetal oxide.

**5583087**

### **METHOD FOR IMPREGNATING CATALYST SUPPORT WITH PLATINUM**

Slotte Thomas Oulu, FINLAND assigned to Kemira Oy

PCT No. PCT/FI93/00099 Sec. 371 Date Sep. 19, 1994 Sec. 102(e) Date Sep. 19, 1994 PCT Filed Mar. 18, 1993 PCT Pub. No. WO93/18855 PCT Pub. Date Sep. 30, 1993. The invention relates to a

method for impregnating alumina-containing catalyst support with platinum. In the method a platinum-containing solution is prepared by using a compound which contains bivalent platinum. The method comprises a stage during which the said platinum-containing solution is oxidized in order to form a solution which contains tetravalent platinum, from which solution platinum is adsorbed on the support.

**5587349**

### **PROCESS FOR PREPARING SILICA-TITANIA CATALYST**

Abe Mariko; Ebata Shuj; Abe Takafumi; Higuchi Hirofumi Niigata, JAPAN assigned to Mitsubishi Gas Chemical Company Inc

A process for preparing a silica-titania catalyst by adding an acidic solution containing a silicon compound such as sodium silicate and a titanium compound such as titanium sulfate dissolved therein to a solution of a compound such as ammonium bicarbonate to bring about co-precipitation, in which the acidic solution is a highly concentrated nitric acid-acidic or sulfuric acid-acidic solution, and a ratio of the dissolved titanium compound in the acidic solution is regulated in a certain range. According to this process, a catalyst capable of exerting a high performance in an esterification reaction and the like can be efficiently obtained.

**5591870**

### **PROCESS FOR PRODUCING A VANADIUM-PHOSPHORUS OXIDE CATALYST PRECURSOR**

Hatano Masakatsu; Murayama Masayosh; Shima Kenji; Ito Masumi Yokohama, JAPAN assigned to Mitsubishi Chemical Corporation