

5608134

**PROCESS FOR PREPARING AN
EFFECTIVE CATALYST FOR
N-PARAFFINS
HYDROISOMERIZATION**

Perego Carl; Bellussi Giuseppe; Calemma Vincenzo Carnate, ITALY assigned to Eniricerche S p A

P1 contacting an n-paraffin or n-paraffin mixture with a difunctional catalyst; wherein said difunctional catalyst comprises: (a) an X-ray amorphous silica-alumina gel with a molar ratio of SiO₂:Al₂O₃ in the range of from 30:1 to 500:1, with a porosity in the range of 0.3 to 0.6 ml/g, and with a prevailing pore diameter in the range of from 10 to 30 #521 , and +RE+P1 (b) one or more metals from Group VIII in an amount of from +B 0.05 +L to +B 5+L % by wt. +RE+RE+RE+RE+RE+RE+RE+RE+RE+REwt. +RE+RE+RE+RE+RE+RE +RE+RE +RE+RE +REwt. +REwt. +RE

5609750

BORON-CONTAINING CATALYST

Nat Pieter J; de Booy Jacob L; Schoonhoven Johannes W F M Amersfoort, NETHERLANDS assigned to Akzo Nobel NV

A catalyst composition for converting hydrocarbons in a hydrotreatment process (hydrodesulfurization and/or hydrodenitrogenization) and simultaneously cracking them, containing an alumina-silica-alumina carrier built up from alumina and silica-alumina, on which hydrogenation metals, such as molybdenum, nickel, and/or cobalt, have been provided and which also contains a catalytically active amount of boron, generally in the range of 1 to 20 wt. %. The invention also relates to a process for the

preparation of such a catalyst, with boron being provided ahead of the Group VIII component. The carrier material used may be made up of mixtures of alumina and amorphous silica-alumina or of mixtures of alumina and silica-coated alumina. The catalyst composition is highly suitable for converting vacuum gas oil into middle distillate oils by hydrotreating.

5610112

**METHOD FOR MODIFYING A
CATALYST**

Lago Rudolph; Marler David; McCullen Sharon B Yardley, PA, UNITED STATES assigned to Mobil Oil Corporation

A process for shape selective hydrocarbon conversion involves contacting a hydrocarbon feedstream under conversion conditions with a modified catalytic molecular sieve which has been modified by being pre-selectivated with a first silicon source, then steamed. The feedstream may also contain a second silicon source which is a high efficiency para-xylene selectivating agent. The method for modifying the molecular sieve is also described.

5611912

**PRODUCTION OF HIGH CETANE
DIESEL FUEL BY EMPLOYING
HYDROCRACKING AND CATALYTIC
DEWAXING TECHNIQUES**

Han Scott; Heck Roland; Ehlers Michael E Lawrenceville, NJ, UNITED STATES assigned to Mobil Oil Corporation

A process for the production of diesel fuel with a high cetane number at a low cloud point, which involves hydrocracking highly aromatic fractions

obtained from catalytic cracking operations. The fraction of hydrocracker effluent which boils between about 400°F. (205°C) and 1000°F. (538°C) is subsequently catalytically dewaxed in order to obtain a cloud point of no more than 41°F. (5°C). The hydrocracker effluent fraction is preferably recycled to the hydrocracking step prior to dewaxing.

5612273

**CATALYST FOR THE
HYDROISOMERIZATION OF
CONTAMINATED HYDROCARBON
FEEDSTOCK**

Prada Ricardo; Torrealba Mariana, Tejada Jorge; Romero Yilda; Reyes Edito Caracas, VENEZUELA assigned to Intevep S A

A catalyst system for treating sulfur and nitrogen contaminated hydrocarbon feedstock including a matrix, at least one support medium substantially uniformly distributed through said matrix, a first catalytically active metal phase supported on said support medium, said first catalytically active metal phase comprising a first metal and a second metal each selected from group VIII of the periodic table of elements, said first metal being different from said second metal, a second catalytically active metal phase supported on said matrix, said second catalytically active metal phase comprising a third metal and a fourth metal each selected from group VIII of the periodic table of elements and a fifth metal selected from group VIb of the periodic table of elements, said third metal being different from said fourth metal. The catalyst system is prepared in a method which provides the system with excellent hydroisomerization, HDS, and HDN properties.

5612274

**METHOD OF PREPARING
TRANSALKYLATION CATALYST**

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

A Group VIII metal-promoted zeolite (preferably Pt-promoted H-mordenite) is contacted with ammonium hexafluorosilicate and hydrogen gas at a temperature of about 100°-450°C The obtained material is an effective catalyst for the transalkylation of aromatic hydrocarbons.

5614079

**CATALYTIC DEWAXING OVER
SILICA BOUND MOLECULAR SIEVE**

Farnos Maria D; Forbus Thomas R; McWilliams John P; Shihabi David Wilmington, DE, UNITED STATES assigned to Mobil Oil Corporation

A molecular sieve catalyst is composited with an inert binder derived from an organic silicon source and organic polymer. The catalyst is used in dewaxing of petroleum chargestocks.

5614082

**CATALYTIC REFORMING PROCESS
WITH SULFUR ARREST**

Russ Michael B; Sechrist Paul Villa Park, IL, UNITED STATES assigned to UOP

A catalyst system comprises a physical mixture of a conversion catalyst and a sulfur sorbent to accommodate small quantities of sulfur from a hydrocarbon feedstock. Preferably, the physical