

**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 SiO<sub>2</sub>:Al<sub>2</sub>O<sub>3</sub> 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 A 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