

The invention concerns novel zeolite Y containing catalyst compositions and the use thereof for the treatment of oxygenated effluents containing nitrogen oxides. The invention further concerns the preparation of such novel zeolite Y containing catalyst compositions.

**5536687**

**CATALYST CONTAINING ZEOLITE  
BETA**

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A composition of matter comprising both (1) zeolite Beta and a (2) Y zeolite having either a unit cell size below about 24.45 angstroms or a water vapor sorption capacity at 25 degrees C at P/Po of 0.10 or less than 10.00 weight percent. Typical of the Y zeolites used in the composition of the invention is a UHP-Y zeolite such as LZ-10 zeolite. The composition is especially suited for use in combination with one or more hydrogenation components as a catalyst for hydrocracking various types of feedstocks to produce either gasoline or middle distillate products.

**5536689**

**CATALYTIC COMPOSITION AND A  
PROCESS FOR THE DIMERIZATION  
OF OLEFINS**

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The invention is concerned with a catalytic composition resulting from dissolving a nickel complex mixed or complexed with a tertiary

phosphine in the medium resulting from mixing at least one quaternary ammonium halide and/or at least one quaternary phosphonium halide, at least one aluminum halide, at least one aromatic hydrocarbon and optionally an aluminum organometallic compound. The invention is also concerned with a process for the dimerization, codimerization and oligomerization of olefins with this composition.

**5536691**

**COBALT CATALYSTS AND A  
PROCESS REQUIRED FOR THEIR  
PREPARATION**

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Cobalt catalysts whose catalytically active material comprises from 55 to 98 wt % of cobalt, from 0.2 to 15 wt % of phosphorus, from 0.2 to 15 wt % of manganese, and from 0.2 to 15 wt % of alkali metal, calculated as oxide, in which the catalyst material is calcined in a first step at final temperatures of from 550 degrees to 750 degrees C and in a second step at final temperatures of from 800 degrees to 1000 degrees C, and a process for the hydrogenation of organic nitriles and/or imines, in which the novel cobalt catalyst is used.

**5536692**

**ISOMERIZATION CATALYST AND  
USE THEREOF IN ISOMERIZATION  
OF SATURATED HYDROCARBONS**

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A catalyst composition is prepared by a method comprising impregnating alumina with at least one platinum compound, followed by treatment with at least one organoaluminum chloride (preferably ethylaluminum dichloride), titanium tetrachloride and at least one chloroalkane (preferably carbon tetrachloride). The thus-prepared catalyst composition is employed in the isomerization of saturated C4-C8 hydrocarbons (alkanes and/or cycloalkanes), preferably n-butane.

**5536694**

**CATALYST PRECURSOR FOR AN  
ACTIVATED RANEY METAL  
FIXED-BED CATALYST, AN  
ACTIVATED RANEY METAL  
FIXED-BED CATALYST AND A  
PROCESS FOR ITS PREPARATION  
AND USE, AND A METHOD OF  
HYDROGENATING ORGANIC  
COMPOUNDS USING SAID  
CATALYST**

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Shaped, activated Raney metal fixed-bed catalysts are obtained by molding a powder of at least one catalyst alloy, comprising at least one Raney process metal as catalytically active component and a leachable alloy component, and a powder of pure Raney process metal as binder with the addition of a shaping aid and pore-producer and subsequent calcination at temperatures below 850 degrees C. During calcination the shaping aid and pore-producer are burned away. Catalyst alloy powder and binder powder thereby sinter together to give a mechanically stable and porous molded item. This molded item thus consists of particles of catalyst alloys which are bonded by the powder

of pure Raney process metal. It has no catalytically inactive, ceramic or glassy binder. The surface layer of the molded item is activated by leaching the leachable alloy component contained in the catalyst alloys with caustic soda solution.

**5536695**

**DEHYDROGENATION CATALYSTS  
FOR C3-C20 PARAFFINS, AND  
PREPARATION THEREOF**

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The invention concerns a catalyst containing a support comprising at least one metal from group VIII of the periodic classification of elements such as platinum, palladium, ruthenium, rhodium, nickel, osmium or iridium, at least one additional metal selected from the group formed by groups IIB, IIIA, IVA, IVB, VA, VB, VIIB and VIII and at least one metal selected from the group formed by alkali and alkaline-earth metals, characterized in that said alkali or alkaline-earth metal is at least partially contained in the support in the form of an aluminate. The invention also concerns the preparation and use of said catalyst for dehydrogenation of C3-C20 paraffins.

**5536894**

**MCM-56 AS SORBENT AND  
CATALYST COMPONENT**

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