

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.

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**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.

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**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.

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

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