

5534476

### USE OF A SUPER ALLOY AS A SUBSTRATE FOR CATALYSTS

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A metal alloy in which the highest individual metal concentration is nickel and which always includes at minimum 4% by weight aluminum is used as the substrate for catalysts for purifying exhaust gases. Chromium, iron, cobalt, molybdenum and titanium are among the other metals possible.

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## *HETEROGENEOUS CATALYSIS*

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5529968

### HYDRODEAROMATIZATION OF HYDROCARBON OILS USING NOVEL PHOPHORUS TREATED CARBON SUPPORTED METAL SULFIDE CATALYSTS

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Patel Mahendra S; Fritz Paul Wappingers Falls,  
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A process for simultaneous hydrodearomatization, hydrodesulfurization and hydrodenitrogenation of a charge hydrocarbon oil containing undesired aromatic components, sulfur and nitrogen compounds, which comprises: maintaining a bed of a sulfided metal catalyst comprising one or more metals of non-noble Group VIII, at least one metal selected from tungsten and molybdenum on

a novel phosphorus treated carbon support, the phosphorus treated carbon support being comprised of phosphorus bound to the carbon surface predominantly as polyphosphate species characterized by peaks between -5 and -30 ppm in the solid-state magic angle spinning  $^{31}\text{P}$  nuclear magnetic resonance spectrum; passing a charge hydrocarbon feed in the presence of hydrogen into contact with said catalyst at hydrotreating conditions, thereby effecting hydrodearomatization, and simultaneously effecting hydrodesulfurization and hydrodenitrogenation.

5530144

### PROCESS FOR PRODUCING A PHOSPHORUS-VANADIUM OXIDE CATALYST PRECURSOR, PROCESS FOR PRODUCING A PHOSPHORUS-VANADIUM OXIDE CATALYST, AND PROCESS FOR PRODUCING MALEIC ANHYDRIDE BY VAPOR PHASE OXIDATION USING THE CATALYST

Tsurita Yasushi; Murayama Masayoshi; Shima Kenji; Ito Masumi Kurashiki, JAPAN assigned to Mitsubishi Chemical Corporation

A process for producing a precursor of a phosphorus-vanadium oxide catalyst for production of maleic anhydride by vapor phase oxidation of a hydrocarbon having 4 carbon atoms, which comprises reacting phosphoric acid and a pentavalent vanadium compound in an organic solvent capable of reducing at least a portion of the pentavalent vanadium to a valence state of +4, the phosphoric acid being substantially composed of orthophosphoric acid, and a phosphoric acid solution whose concentration is 88 to 96% being used as a source of the phosphoric acid; and a process for producing the catalyst comprising dry-pulverizing the catalyst precursor.