Surface impregnated catalyst, process for the production thereof, and use thereof for the preparation of vinyl acetate. The invention relates to Pd/K/Au, Pd/K/Ba or Pd/K/Cd supported catalysts built up in the form of an outer layer, the production thereof and also the use thereof for preparing vinyl acetate from ethylene, acetic acid and oxygen in the gas phase. The catalysts specified are produced by impregnating the support particles, while mixing intimately, with a solution of salts of the corresponding elements and then drying the support particles immediately, with the dynamic viscosity of the solution being at least 0.003 Pa\*s and the solution volume in impregnation being from 5 to 80% of the pore volume of the support particles.

### 5559072

# NOX REMOVAL CATALYST AND METHOD OF PURIFYING EXHAUST GAS BY USING THE SAME

Itoh Takashi; Kosaki Yukio; Chonan Takeshi; Matsuda Takashi; Kanno Yasuharu; Wakabayashi Masao; Nakamura Makoto Ichikawa, JAPAN assigned to N E Chemcat Corporation; Sumitomo Metal Mining Co Ltd

A NOx removal catalyst resistant to high temperatures, comprising an activated alumina wherein the specific surface area measured by the nitrogen adsorption method is 120 m2/g or more, the bulk density measured by the mercury porosimetry is 0.60 g/cm3 or more, and the skeleton density measured by the mercury porosimetry is 1.80 g/cm3 or less and silver carried on said activated alumina. When said catalyst or a structure having said catalyst coated on a substrate is brought in contact with exhaust gas from an internal combustion engine that is operated at a lean fuel/air ratio, such as a lean-burn engine, NOx can be removed efficiently within a quite short contact time.

### CATALYTIC HYDROCARBON

#### 5552357

## CATALYST MODIFICATION FOR SHAPE SELECTIVE HYDROCARBON CONVERSIONS

Lago Rudolph M; Marler David O; McCullen Sharon B; Olson David 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 catalytic molecular sieve which has been modified by treatment with an amino silane polymer while molecular sieve acid sites are protected. When the process is toluene disproportionation, a toluene feedstream may also contain a second silicon source which is a high p-xylene selectivating agent. The invention also includes the modification method and the shape selective catalyst which results from the modification.

### 5552363

# HALOGEN RESISTANT HYDROGENATION PROCESS AND CATALYST

Pannell Richard B; Maroie Serge M J P Kingwood, TX, UNITED STATES assigned to Exxon Chemical Patents Inc

A process has been developed for decolorizing (and/or hydrogenating, and/or dehalogenating) a halogen containing unsaturated feedstock and/or polymeric resins. The process has the advantage of being substantially less affected by prolonged exposure to halogen contaminants and impurities than typical hydrogenation catalysts. A novel catalyst comprising (a) one or more metals selected