

to 300 microns outward from the anchor surface. Catalyst particles which are also in the free molecule in the size range of 10 to 80 +521 ngstroms are attached to and dispersed throughout the support particle network. A process for making the reactor bed using binary gas phase nucleation of support particle and catalyst particle precursors is also disclosed.+RE

5543472

CONCURRENT EPOXIDATION AND CATALYST RESIDUE EXTRACTION

Stevens Craig; Rao Bhaskar P; Veith Cary A; Erickson James R Houston, TX, UNITED STATES assigned to Shell Oil Company

A process for the concurrent epoxidation of, and catalyst residue extraction from, anionically polymerized diene-containing polymers which have been hydrogenated using a Group VIII metal catalyst, said process comprising: (a) introducing a catalyst residue-containing diene-containing polymer cement into a reactor, (b) heating the polymer cement to a temperature of 25° to 65°C, (c) contacting the polymer cement with a caustic solution, (d) contacting the polymer cement with a peracid solution, (e) mixing the polymer, caustic, and acid at 25° to 65°C for 1/2 to 3 hours, (f) optionally adding sufficient caustic solution to neutralize excess acid while continuing the mixing, (g) adding sufficient water such that the aqueous/organic phase weight ratio is from 0.2:1 to 1:1 while continuing the mixing, (h) allowing the phases to settle for 5 to 90 minutes, (i) removing the aqueous phase from the reactor, (j) optionally repeating steps (g), (h), and (i) until the catalyst residue contents are less than 10 ppm, and (k) removing the polymer cement from the reactor and removing the solvent to recover the epoxidized polymer.

5552362

CATALYSTS FOR THE REMOVAL OF SULFUR COMPOUNDS FROM INDUSTRIAL GASES, A PROCESS FOR THEIR PRODUCTION AND THEIR USE

Immel Otto; Muml ulla Harald Krefeld, GERMANY assigned to Bayer Aktiengesellschaft

PCT No. PCT/EP93/00917 Sec. 371 Date Oct. 20, 1994 Sec. 102(e) Date Oct. 20, 1994 PCT Filed Apr. 16, 1993 PCT Pub. No. WO93/22052 PCT Pub. Date Nov. 11, 1993. Catalysts useful for the removal of volatile sulfur compounds from industrial gases composed of an inorganic, abrasion-resistant, incombustible support which is uniformly impregnated with either (a) an oxide or hydroxide of niobium or tantalum or (b) an oxide or hydroxide of manganese and an oxide or hydroxide of hafnium, lanthanum or an element in the Lanthanide Series of Elements.

5554793

CATALYTIC REFORMING OF ALKYLENEAMINES

Hartwell George; Bowman Robert G; Molzahn David C Midland, MI, UNITED STATES assigned to The Dow Chemical Company

A process of reforming an alkyleneamine feedstock or a mixture of such feedstocks to an alkyleneamine or a mixture of alkyleneamines which is different from the feedstock or feedstock mixture. The process is catalyzed by one of the following: Group VB metal oxides, Group VB metal phosphates, Group IIA metal silicates, and tungsten oxides. For example, ethylenediamine is contacted with a catalyst of niobic acid or magnesium silicate to yield predominantly diethylenetriamine and non-cyclic triethylenetetramines; whereas high

molecular weight polyethylenepolyamines are cracked by the same catalysts to mixtures of lower molecular weight linear and cyclic materials.

OXIDATION CATALYSIS

5543472

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5543532

CATALYST AND METHOD FOR VAPOR PHASE OXIDATION OF ALKANE HYDROCARBONS

Kourtakis Kostantinos; Sonnichsen George C Hockessin, DE, UNITED STATES assigned to E I Du Pont de Nemours and Company

This invention relates to cation substituted catalysts based primarily upon vanadium pyrophosphate, useful in the oxidation of alkane hydrocarbons.

5550093

PREPARATION OF SUPPORTED GOLD CATALYSTS FOR CARBON MONOXIDE OXIDATION

Wan Ben-Zu; Kang Yih-Ming Taipei, CHINA (TAIWAN) assigned to National Science Council

This invention relates to the preparation of supported gold catalysts for carbon monoxide oxidation. The supported gold catalysts were obtained by cation exchange of gold ion into ion exchangeable supports. After being heated in a stream of humidified inert gas at an elevated temperature, the resultant catalysts possess not only high catalytic activities for carbon monoxide oxidation but also good water-durability.