

Title (en)

POROUS PELLET ADSORBENTS FABRICATED FROM NANOCRYSTALS

Title (de)

AUS NANOKRISTALLEN HERGESTELLTE PORÖSE PELLET-ADSOBENTIEN

Title (fr)

ADSORBANTS EN GRANULES POREUX FABRIQUES A PARTIR DE MONOCRISTAUX

Publication

EP 1091801 A4 20060510 (EN)

Application

EP 99927082 A 19990518

Priority

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- US 9324998 A 19980608

Abstract (en)

[origin: WO9962630A1] Pelletized adsorbent compositions and methods of adsorbing toxic target compounds are provided for the destructive adsorption or chemisorption of toxic or undesired compounds. The pelletized adsorbents are formed by pressing together powder nanocrystalline particles comprising a metal hydroxide or a metal oxide at pressures of from about 50 psi to about 6000 psi to form discrete self-sustaining bodies. The pelletized bodies should retain at least about 25 % of the surface area/unit mass and total pore volume of the starting metal particles.

IPC 1-7

B01J 20/02; **B01J 20/10**; **B01J 20/00**; **B27N 3/00**; **B27N 3/18**

IPC 8 full level

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CPC (source: EP US)

B01D 53/02 (2013.01 - EP US); **B01J 20/041** (2013.01 - EP US); **B01J 20/06** (2013.01 - EP US); **B01J 20/28014** (2013.01 - EP US); **B01J 20/2803** (2013.01 - EP US); **B01J 20/28057** (2013.01 - EP US); **B01J 20/28069** (2013.01 - EP US); **B01J 20/28078** (2013.01 - EP US); **B01J 20/28095** (2013.01 - EP US); **B01J 20/3021** (2013.01 - EP US); **B01J 20/3035** (2013.01 - EP US); **B01D 2253/10** (2013.01 - EP US); **B01D 2253/112** (2013.01 - EP US); **B01D 2253/304** (2013.01 - EP US); **B01D 2253/306** (2013.01 - EP US); **B01D 2253/308** (2013.01 - EP US); **B01D 2257/2064** (2013.01 - EP US); **B01D 2257/302** (2013.01 - EP US); **B01D 2257/404** (2013.01 - EP US); **B01D 2257/502** (2013.01 - EP US); **B01D 2257/70** (2013.01 - EP US); **B01D 2257/7027** (2013.01 - EP US); **B01D 2258/0225** (2013.01 - EP US)

Citation (search report)

- [X] JANE V. STARK: "Nanoscale Metal Oxide particles/clusters as chemical reagents. Adsorption of Hydrogen Halides, Nitric Oxide, and Sulfur Trioxide on Magnesium Oxide Nanocrystals and Compared with Microcrystals", CHEMISTRY OF MATERIALS, vol. 8, August 1996 (1996-08-01), pages 1913 - 1918, XP002369113
- [X] JANE V. STARK: "Nanoscale Metal oxide Particles/Clusters as Chemical Reagents. Unique Surface Chemistry on Magnesium Oxide As Shown by Enhanced Adsorption of Acid Gases (Sulfur Dioxide and Carbon Dioxide) and Pressure Dependence", CHEMISTRY OF MATERIALS, vol. 8, August 1996 (1996-08-01), pages 1904 - 1912, XP002369114
- See references of WO 9962630A1

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