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(74) Agents: **LEMUTH, Richard, F.** et al.; Sheil Oil Company,
One Shell Plaza, P.O. Box 2463, Houston, Texas 77252-
2463 (US).

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(71) Applicant (*for all designated States except US*): **SHELL OIL COMPANY** [US/US]; One Shell Plaza, P.O. Box 2463, Houston, Texas 77252-2463 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **GERDES, William, Herman** [US/US]; 7799 Ranett Avenue, Hudson, Ohio 44236 (US). **LOCKMEYER, John, Robert** [US/US]; 3403 Stoney Mist Drive, Sugar Land, Texas 77479 (US). **REMUS, Donald, James** [US/US]; 2901 Wexford Boulevard, Stow, Ohio 44224 (US). **SZYMANSKI, Thomas** [US/US]; 2705 Blue Heron Drive, Hudson, Ohio 44236 (US). **YEATES, Randall, Clayton** [US/US]; 16310 Maple Downs Lane, Sugar Land, Texas 77478 (US).

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(54) Title: A CATALYST, A PROCESS FOR PREPARING THE CATALYST, AND A PROCESS FOR THE PRODUCTION OF AN OLEFIN OXIDE, A 1,2-DIOL, A 1,2-DIOL ETHER, OR AN ALKANOLAMINE

(57) Abstract: A catalyst which comprises a carrier and silver deposited on the carrier, which carrier has a surface area of at least 1.3 m²/g, a median pore diameter of more than 0.8 µm, and a pore size distribution wherein at least 80 % of the total pore volume is contained in pores with diameters in the range of from 0.1 to 10 µm and at least 80 % of the pore volume contained in the pores with diameters in the range of from 0.1 to 10 µm is contained in pores with diameters in the range of from 0.3 to 10 µm; process for the preparation of a catalyst which process comprises depositing silver on a carrier, wherein the carrier has been obtained by a method which comprises forming a mixture comprising: a) from 50 to 95 weight percent of a first particulate a-alumina having a median particle size (d₅₀) of from 5 to 100 µm; b) from 5 to 50 weight percent of a second particulate a-alumina having a d₅₀ which is less than the d₅₀ of the first particulate a-alumina and which is in the range of from 1 to 10 µm; and c) an alkaline earth metal silicate bond material; weight percent being based on the total weight of a-alumina in the mixture; and firing the mixture to form the carrier; a process for the epoxidation of an olefin, which process comprises reacting a feed comprising an olefin and oxygen in the presence of a said catalyst; and a process for preparing a 1,2-diol, a 1,2-diol ether or an alkanolamine.

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