(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
5 June 2003 (05.06.2003)

PCT

(10) International Publication Number
WO 03/045555 A3

(51) International Patent Classification[7]: B01J 37/16, 31/18, 31/30, C07F 15/04, C07C 253/10, C01G 53/09

(21) International Application Number: PCT/US02/36468

(22) International Filing Date:
14 November 2002 (14.11.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/994,102 26 November 2001 (26.11.2001) US

(71) Applicant: **E. I. DU PONT DE NEMOURS AND COMPANY** [US/US]; 1007 Market Street, Wilmington, DE 19898 (US).

(72) Inventors: **CHU, Luis, A.**; 750 Christopher Drive, Forsyth, IL 62535 (US). **HERRON, Norman**; 408 Apple Road, Newark, DE 19711 (US). **MOLOY, Kenneth, G.**; 549 Cabot Drive, Hockessin, DE 19707 (US). **CLARKSON, Lucy, M.**; 1041 Kaolin Road, Kennett Square, PA 19348 (US). **MCKINNEY, Ronald, J.**; 1243 Lakewood Drive, Wilmington, DE 19803 (US). **TEKIE, Zeru**; 520 Dowlen Road, Apartment 115, Beaumont, TX 77706 (US).

(74) Agent: **DEITCH, Gerald, E.**; E. I. Du Pont De Nemours And Company, Legal Patent Records Center, 4417 Lancaster Pike, Wilmington, DE 19805 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

(88) Date of publication of the international search report:
6 November 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 03/045555 A3

(54) Title: PROCESS FOR THE PREPARATION OF A NICKEL/PHOSPHORUS LIGAND CATALYST FOR OLEFIN HYDROCYANATION

(57) Abstract: A process for preparing a hydrocyanation catalyst comprising contacting a bidentate phosphorous-containing ligand with a nickel chloride in the presence of a nitrile solvent and a reducing metal which is more electropositive than nickel. Preferably, the nickel chloride is dried before use.