

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 December 2002 (27.12.2002)

PCT

(10) International Publication Number
WO 02/102939 A2

- (51) International Patent Classification⁷: **C10G 45/52**
- (21) International Application Number: PCT/EP02/05906
- (22) International Filing Date: 29 May 2002 (29.05.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
01202051.7 1 June 2001 (01.06.2001) EP
- (71) Applicants (*for all designated States except US*): **AKZO NOBEL N.V.** [NL/NL]; Velperweg 76, NL-6824 BM Arnhem (NL). **ATOFINA RESEARCH** [BE/BE]; Zone Industrielle C, B-7181 Senefte (Feluy) (BE).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **LEVIVELD, Robertus, Gerardus** [NL/NL]; Wageningseberg 320, NL-3524 LX Utrecht (NL). **STAADEGAARD, Ron** [NL/NL]; Lindenlaan 79, NL-1815 HD Alkmaar (NL). **CERFONTAIN, Marinus, Bruce** [NL/NL]; S. Louisweg 99, NL-1034 WR Amsterdam (NL). **VANHAEREN, Xavier, Gilles, Gérard, Léopold** [BE/BE]; Vieux Chemin de l'Helpe 63, B-1332 Genval (BE).
- (74) Agent: **SCHALKWIJK, Pieter, Cornelis**; Akzo Nobel N.V., Intellectual Property Dept. (Dept. AIP), P.O. Box 9300, NL-6800 SB Arnhem (NL).
- (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, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, 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, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— *without international search report and to be republished upon receipt of that report*
- 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.*

(54) Title: PROCESS FOR THE HYDROGENATION OF AROMATICS

(57) Abstract: The present invention pertains to a process for effecting aromatics hydrogenation which process comprises contacting a hydrocarbon feedstock which contains 10-80 vol.% of aromatics in the presence of a hydrogen-containing gas with a catalyst which comprises hydrogenation metals on a carrier. Wherein (i) the hydrogenation metals comprise a combination of platinum and palladium, and (ii) the carrier comprises silica-alumina dispersed in an alumina binder, wherein the alumina binder is present in an amount of 5-50 wt.%, based on the total weight of the silica-alumina and alumina binder present in the carrier, and wherein the silica-alumina comprises 5-50 wt.% of alumina, based on the weight of the silica-alumina. The use of a catalyst comprising platinum and palladium on a carrier comprising silica-alumina and 5-50 wt.% of an alumina binder, the silica-alumina comprising 5-50 wt.% of alumina, based on the weight of the silica-alumina, leads to an increased aromatics hydrogenation as compared to a catalyst containing only platinum as hydrogenation metal, and as compared to a catalyst containing more than 50 wt.% of an alumina binder and/or more than 50 wt.% of alumina in the silica-alumina contained in the carrier.



WO 02/102939 A2