

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 March 2001 (01.03.2001)

PCT

(10) International Publication Number
WO 01/14292 A1

- (51) International Patent Classification⁷: C07C 7/152
- (21) International Application Number: PCT/EP00/08166
- (22) International Filing Date: 17 August 2000 (17.08.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/379,090 23 August 1999 (23.08.1999) US
- (71) Applicant: SHELL INTERNATIONALE RESEARCH
MAATSCHAPPIJ B.V. [NL/NL]; Carel van Bylandtlaan
30, NL-2596 HR The Hague (NL).
- (72) Inventors: FENOUIL, Laurent, Alain; 3805 West
Alabama No. 4308, Houston, TX 77027 (US). FONG,
Howard, Lam-Ho; 1707 Creekside Drive, Sugar Land,
TX 77478 (US). SLAUGH, Lynn, Henry; 11911 Cy-
presswood Drive, Houston, TX 77070 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ,
DE, DK, DM, 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, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,
TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, 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), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— With international search report.
- For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR SEPARATING LINEAR ALPHA OLEFINS FROM A STREAM CONTAINING SATURATED HY-
DROCARBONS, INTERNAL OLEFINS, BRANCHED OLEFINS AND LINEAR ALPHA OLEFINS

WO 01/14292 A1

(57) Abstract: Process for treating feedstock comprising linear alpha olefins, internal olefins and saturated hydrocarbons, comprising: (a) contacting feedstock with a linear polyaromatic compound to form reaction mixture comprising linear polyaromatic compound-olefin adducts and saturated hydrocarbons; (b) separating the linear polyaromatic compound-olefin adducts from the saturated hydrocarbons in the reaction mixture to form first adducted olefin stream and saturated hydrocarbon stream; (i) dissociating said linear polyaromatic compound-olefin adducts to form linear polyaromatic compounds and olefin composition comprising alpha olefins and internal olefins; (ii) contacting olefin composition with linear polyaromatic compounds to form reaction mixture comprising linear polyaromatic compound-linear alpha olefin adducts and internal olefin composition; (iii) separating said linear polyaromatic compound-linear alpha olefin adducts to form linear alpha olefin adducted stream and internal olefin stream; and (iv) dissociating said linear polyaromatic compound-linear alpha olefin adducts to form linear polyaromatic compounds and linear alpha olefin composition; whereby concentration of linear alpha olefins in linear alpha olefin composition is enriched over concentration of linear alpha olefins in olefin composition, and concentration of linear alpha olefins in the olefin composition is enriched over concentration of linear alpha olefins in feedstock.