



- (51) International Patent Classification:
C07C 7/20 (2006.01) *C07C 15/16* (2006.01)
- (21) International Application Number:
PCT/US2014/021967
- (22) International Filing Date:
7 March 2014 (07.03.2014)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
61/781,728 14 March 2013 (14.03.2013) US
- (71) Applicant: EXXONMOBIL CHEMICAL PATENTS
INC. [US/US]; 5200 Bayway Drive, Baytown, TX 77520-
5200 (US).

(72) Inventors: **DAKKA, Jihad, M.**; 3 Gleim Road, White-
house Station, NJ 08889 (US). **BAI, Chuansheng**; 4 Grant
Way, Phillipsburg, NJ 08865 (US). **TANKE, James, J.**; 38
Kipling Way, Mnalapan, NJ 07726 (US). **DE MARTIN,**
Gregory, J.; 5 Braintree Court, Flemington, NJ 08822
(US). **VAN NOSTRAND, Mary, T.**; 64 Leigh Street,
Clinton, NJ 08809 (US). **SALCICCIOLI, Michael**; 2435
Charleston Street, Unit D, Houston, TX 77021 (US).
KHEIR, Ali, A.; 11539 Valley Pike Court, Sugarland, TX
77498 (US). **SANGAR, Neeraj**; 915 Almond Pointe,
League City, TX 77573 (US).

(74) Agents: **BELL, Catherine, L.** et al.; Exxonmobil Chemi-
cal Company, Law Department, P.O.Box 2149, Baytown,
TX 77522-2149 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM,
ZW.

[Continued on next page]

(54) Title: METHYL-SUBSTITUTED BIPHENYL COMPOUNDS, THEIR PRODUCTION AND THEIR USE IN THE MANU-
FACTURE OF PLASTICIZERS

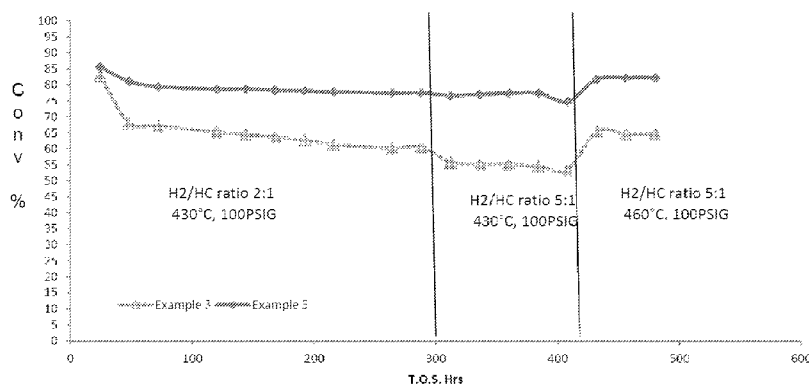
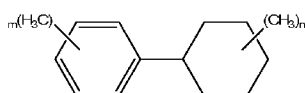


Figure 1



(57) Abstract: In a process for producing a methyl-substituted biphenyl compound, at least one methyl-substituted cyclohexylbenzene compound of the following formula: wherein each of m and n is independently an integer from 1 to 3, is contacted with a dehydrogenation catalyst under conditions effective to produce a dehydrogenation reaction product comprising at least one methyl-substituted biphenyl compound. The dehydrogenation catalyst comprises an element or compound thereof from Group 10 of the Periodic Table of Elements deposited on a refractory support, such as alumina.



(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*