

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
21 December 2023 (21.12.2023)



(10) International Publication Number
WO 2023/244941 A1

(51) International Patent Classification:
C07C 5/333 (2006.01) B01J 23/90 (2006.01)
C07C 11/06 (2006.01)

(21) International Application Number:
PCT/US2023/068192

(22) International Filing Date:
09 June 2023 (09.06.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/352,020 14 June 2022 (14.06.2022) US

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(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, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG,
KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,
MA, MD, MG, MK, MN, MU, 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, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,
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, ME, 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).

(54) Title: METHODS OF MAKING LIGHT OLEFINS THAT INCLUDE MODIFYING CATALYSTS

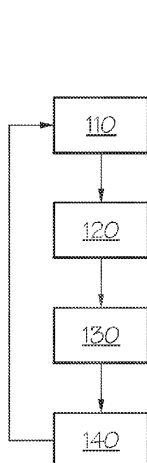


FIG. 1

(57) Abstract: A method may include operating a dehydrogenation process whereby a hydrocar-
bon-containing feed is converted to light olefins, wherein the dehydrogenation process utilizes a flu-
idized process catalyst that circulates between a reactor and a combustor. The method may comprise
withdrawing the process catalyst from the dehydrogenation process, modifying the process catalyst to
form a modified catalyst, and adding the modified catalyst back to the dehydrogenation process. The
process catalyst may include from 0.1 wt.% to 10 wt.% of one or more metals chosen from gallium,
indium, thallium, or combinations thereof, from 1 ppmw to 1000 ppmw of one or more metals cho-
sen from platinum, palladium, rhodium, iridium, ruthenium, osmium, or combinations thereof, and at
least 85 wt.% support. Modifying the process catalyst may include adding one or more of manganese,
iron, chromium, or vanadium.

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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))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*