



(51) International Patent Classification:
C25B 1/02 (2006.01) C25B 13/04 (2006.01)
C25B 3/02 (2006.01)

(21) International Application Number:
PCT/US2020/013452

(22) International Filing Date:
14 January 2020 (14.01.2020)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/801,946 06 February 2019 (06.02.2019) US
19162341.2 12 March 2019 (12.03.2019) EP

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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, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, 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, GH, GM, KE, LR, LS, MW, MZ, NA, RW, 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, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,

(54) Title: ELECTROCHEMICAL DEHYDROGENATION OF ALKANES TO ALKENES

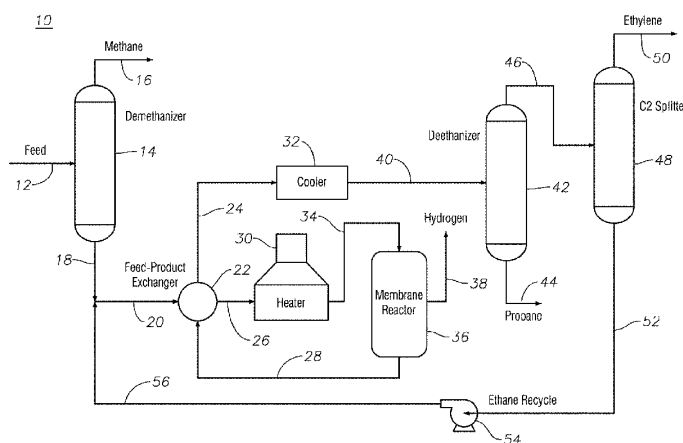


FIG. 1

(57) Abstract: A process and apparatus useful for continuously contacting an alkane feed at a temperature within a range from 300°C to 600°C and a pressure within the range from 50 psig to 500 psig with one or more reactive ceramic membrane to form an alkene with some remaining alkane and hydrogen, the hydrogen in physical isolation from the alkane and alkene, separating the alkene from the remaining alkane, and recycling the alkane to contact the reactive ceramic membrane.

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TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

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