

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
20 November 2008 (20.11.2008)

PCT

(10) International Publication Number
WO 2008/141008 A3

(51) International Patent Classification:
C10G 3/00 (2006.01)

(21) International Application Number:
PCT/US2008/062780

(22) International Filing Date: 6 May 2008 (06.05.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/747,380 11 May 2007 (11.05.2007) US

(71) Applicant (for all designated States except US): **CONO-COPHILLIPS COMPANY** [US/US]; 600 North Dairy Ashford Road, Houston, TX 77079 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GHONASGL, Dhananjay, B.** [US/US]; 2424 Chapel Hill Ct., Bartlesville, OK 74006 (US). **SUGHRUE, Edward, L., II.** [US/US]; 6468 Clear Creek Loop, Bartlesville, OK 74006 (US). **YAO, Jianhua** [CN/US]; 1532 Whitney Lane, Bartlesville, OK 74006 (US). **XU, Xiaochun** [CN/US]; 1929 Rolling Hills Drive, Bartlesville, OK 74006 (US).

(74) Agent: **KELLY, Kameron, D.**; Hovey Williams LLP, 10801 Mastin Blvd., Suite 1000, 84 Corporate Woods, Overland Park, KS 66210 (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, BR, BW, BY, BZ, CA, CH, 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, IS, JP, KE, KG, KM, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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

(88) Date of publication of the international search report:
31 December 2008

(54) Title: PROPANE UTILIZATION IN DIRECT HYDROTREATING OF OILS AND/OR FATS

(57) Abstract: Methods for producing C10-C30 hydrocarbons from fatty compounds are provided in which at least a portion of the hydrogen required to accomplish the conversion is generated from by-products of the conversion process. Light hydrocarbons, especially propane, produced during the conversion of triglyceride compounds are used to generate hydrogen which is used in the conversion process thereby reducing the need for outside hydrogen sources.



WO 2008/141008 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US08/62780

A. CLASSIFICATION OF SUBJECT MATTER

IPC: C10G 3/00(2006.01)

USPC: 585/240

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S.: 585/240

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3,119,667 (McMahon) 28 January 1964, see entire document.	1-32
Y	US 4,640,765 (Kubo) 03 February 1987, see entire document.	1-32
Y	US 4,966,679 (Kubo et al) 30 October 1990, see entire document.	1-32
Y	US 4,992,605 (Craig et al) 12 February 1991, see entire document.	1-32
Y	US 5,705,722 (Monnier et al) 06 January 1998, see entire document.	1-32
Y	US 6,270,655 B1 (Ganguli) 07 August 2001, see entire document.	1-32
Y	US 7,041,271 B2 (Drnevich et al) 09 May 2006, see entire document.	1-32



Further documents are listed in the continuation of Box C.



See patent family annex.

Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

Date of the actual completion of the international search

30 August 2008 (30.08.2008)

Date of mailing of the international search report

29 SEP 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

Thomas Dunn

Telephone No. 571-272-1700

Jean Proctor
Paralegal Specialist

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US08/62780

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3,956,105 (Conway) 11 May 1976, see entire document.	1-32