

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 June 2008 (12.06.2008)

PCT

(10) International Publication Number
WO 2008/067627 A3

(51) International Patent Classification:

C07C 11/02 (2006.01) *C10G 50/00* (2006.01)
C07C 29/151 (2006.01) *C10J 3/00* (2006.01)
C10G 3/00 (2006.01) *C12P 7/02* (2006.01)

(21) International Application Number:

PCT/BR2007/000328

(22) International Filing Date:

30 November 2007 (30.11.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

PI0605 173-1 5 December 2006 (05.12.2006) BR

(71) Applicant (for all designated States except US):
BRASKEM S.A. [BR/BR]; Rua Eteno 1561, Complexo Petroquímico de Camaçari, 42810-000 Camaçari - BA (BR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **MORSCHBACKER, Antonio, Luiz, Ribeiro, de Castro** [BRTBR]; Rua Germano Gundlach 127/12, Chacara das Pedras, 91330-350 Porto Alegre - RS (BR).

(74) Agent: **MOMSEN, LEONARDOS & CIA.**; Rua Teófilo Otoni 63, 10th floor, 20090-080 Rio De Janeiro Rj (BR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, 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, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

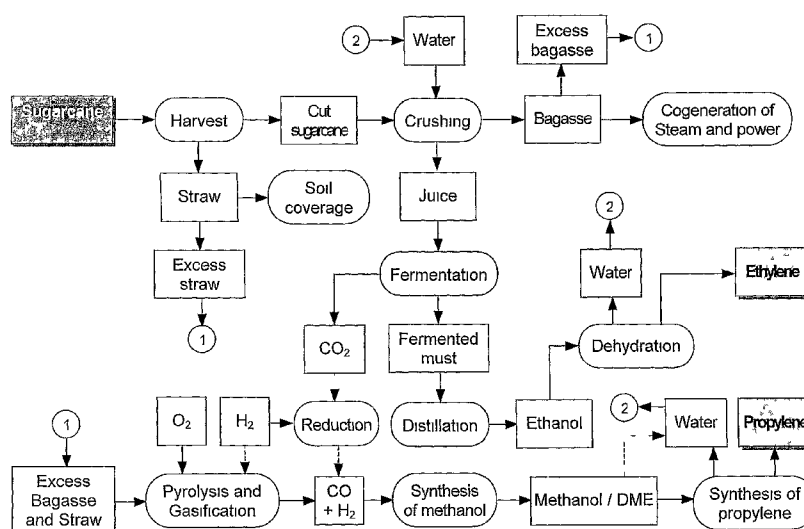
Published:

— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

24 July 2008

(54) Title: A METHOD FOR THE PRODUCTION OF ONE OR MORE OLEFINS, AN OLEFIN, AND A POLYMER



(57) Abstract: The present invention describes a method for the production of one or more olefins from the residue of at least one renewable natural raw material. The present invention is advantageously related to a method that is integrated with a processing method for processing renewable natural agricultural raw materials for the production of propylene, and optionally of ethylene and butylene, mainly from the residues of the processed renewable natural agricultural raw material. The propylene is obtained from the gasification reaction of the lignocellulosic materials and of other organic products contained in the raw material residues, followed by the formation of methanol and its subsequent transformation into propylene, where this route may further generate ethylene and/or butylene as by-products.

WO 2008/067627 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/BR2007/000328

A. CLASSIFICATION OF SUBJECT MATTER

INV. C07C11/02 C07C29/151 C10G3/00 C10G50/00 C10J3/00
C12P7/02

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C07C C10G C10J C12P

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 practical, search terms used)

EPO-Internal, WPI Data, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2004/060841 A (EXXONMOBIL CHEM PATENTS INC [US]; VAN EGMOND CORP [US]; XU TENG [US];) 22 July 2004 (2004-07-22) claims 1-4 paragraphs [0005], [0006]	1, 25-29
X	US 5 714 662 A (VORA BIPIN V [US] ET AL) 3 February 1998 (1998-02-03) claims 1, 29	1, 25-29
Y	EP 0 448 000 A (SUED CHEMIE AG [DE]; METALLGESELLSCHAFT AG [DE]) 25 September 1991 (1991-09-25) cited in the application claim 1	1-24
	----- -/-	

☒ 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

"E" earlier document but published on or after the international filing date

"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)

"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

"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

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search

9 June 2008

Date of mailing of the international search report

13/06/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 561 a Patentlaan 2
NL - 2280 HV RIJSWIJK
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Götz, Gerhard

INTERNATIONAL SEARCH REPORT

International application No

PCT/BR2007/000328

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with Indication, where appropriate, of the relevant passages	Relevant to claim No
Y	US 6 534 692 B1 (BARGER PAUL T [US] ET AL) 18 March 2003 (2003-03-18) cited in the application claim 1 -----	1-24
Y	WO 03/018723 A (STICHTING ENERGIE [NL]; BOERRIGTER HAROLD [NL]; BERGMAN PETER CHRISTIA) 6 March 2003 (2003-03-06) cited in the application page 5, line 25 - page 6, line 10 -----	1-24
Y	US 2004/180971 A1 (INOUE HITOSHI [JP] ET AL) 16 September 2004 (2004-09-16) cited in the application claims 9,10 -----	1-24

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/BR2007/000328

Patent document cited in search report		Publication date	Patent family member(s)			Publication date
wo 2004060841	A	22-07-2004	AU	2003295671	A1	29-07-2004
			US	2004116757	A1	17-06-2004
US 5714662	A	03-02-1998	AU	744933	B2	07-03-2002
			AU	5274798	A	26-08-1999
			CA	2228738	A1	02-08-1999
			CN	1224705	A	04-08-1999
			DE	69801643	D1	18-10-2001
			DE	69801643	T2	04-07-2002
			EP	0933345	A1	04-08-1999
			NO	980381	A	29-07-1999
			NZ	329645	A	29-06-1999
			RU	2165955	C2	27-04-2001
			ZA	9800735	A	27-07-1998
EP 0448000	A	25-09-1991	DE	4009459	A1	26-09-1991
			JP	4217928	A	07-08-1992
			NO	911139	A	24-09-1991
			PT	97104	A	29-11-1991
US 6534692	BI	18-03-2003	NONE			
wo 03018723	A	06-03-2003	AT	311427	T	15-12-2005
			CA	2458365	A1	06-03-2003
			DE	60207735	D1	05-01-2006
			DE	60207735	T2	03-08-2006
			DK	1419222	T3	27-03-2006
			EP	1419222	A1	19-05-2004
			ES	2254711	T3	16-06-2006
			JP	2005501169	T	13-01-2005
			NL	1018803	C2	25-02-2003
			US	2004220285	A1	04-11-2004
US 2004180971	A1	16-09-2004	CN	1537156	A	13-10-2004
			WO	03012012	A1	13-02-2003
			JP	2003041268	A	13-02-2003