



PCT

(51) International Patent Classification:

C07C 5/25 (2006.01) C07C 2/10 (2006.01)
B01J 23/02 (2006.01) C07C 11/06 (2006.01)
B01J 35/02 (2006.01)

07901 (US). GREENE, Marvin, I. [US/US]; 277
Prospect Ave, Hackensack, NJ 07601 (US).

(21) International Application Number:

PCT/US2010/040528

(22) International Filing Date:

30 June 2010 (30.06.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

12/506,615 21 July 2009 (21.07.2009) US

(71) Applicant (for all designated States except US): LUM-
MUS TECHNOLOGY INC. [US/US]; 1515 Broad
Street, Bloomfield, NJ 07003-3096 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): RAMACHAN-
DRAN, Bala [US/US]; 4260 Fieldstone Drive, Easton,
PA 18045 (US). CHOI, Sukwon [KR/US]; 140 Hepburn
Road, Apt. 9C, Clifton, NJ 07012 (US). GARTSIDE,
Robert, J. [US/US]; 167 Colonial Rd., Summit, NJ

(74) Agents: BERGMAN, Jeffrey, S. et al.; Osha * Liang
LLP, 909 Fannin Street, Suite 3500, Houston, TX 77010
(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, 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, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: CATALYST FOR METATHESIS OF ETHYLENE AND 2-BUTENE AND/OR DOUBLE BOND ISOMERIZATION

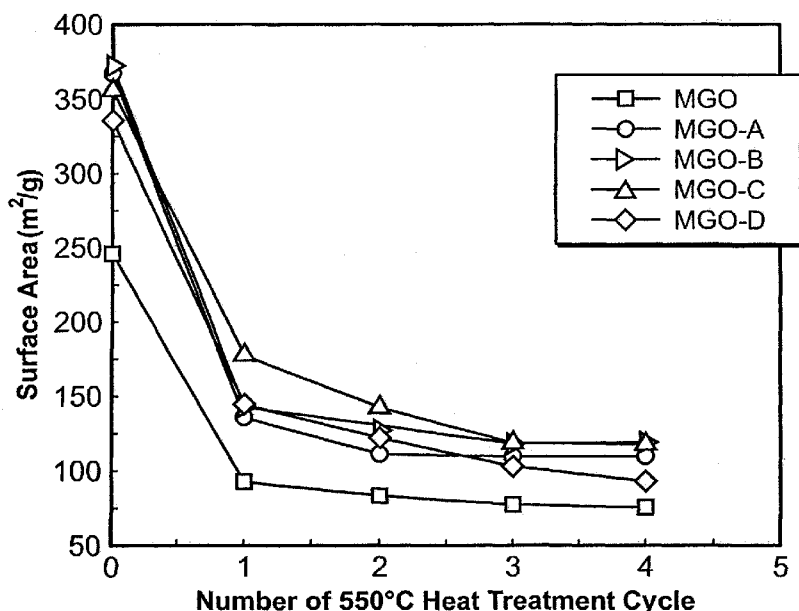


FIG. 1

(57) Abstract: A process for the double-bond isomerization of olefins is disclosed. The process may include contacting a fluid stream comprising olefins with a fixed bed comprising an activated basic metal oxide isomerization catalyst to convert at least a portion of the olefin to its isomer. The isomerization catalysts disclosed herein may have a reduced cycle to cycle deactivation as compared to conventional catalysts, thus maintaining higher activity over the complete catalyst life cycle.

**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))*
- *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))*

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

21 April 2011

Published:

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