



(43) International Publication Date
17 October 2013 (17.10.2013)

(10) International Publication Number
WO 2013/155291 A4

(51) International Patent Classification:

C08F 220/06 (2006.01) *C08L 33/02* (2006.01)
A61L 15/60 (2006.01) *C07C 57/04* (2006.01)

(21) International Application Number:

PCT/US2013/036155

(22) International Filing Date:

11 April 2013 (11.04.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/623,054	11 April 2012 (11.04.2012)	US
13/760,483	6 February 2013 (06.02.2013)	US
13/835,187	15 March 2013 (15.03.2013)	US
13/838,692	15 March 2013 (15.03.2013)	US

(71) Applicant: **THE PROCTER & GAMBLE COMPANY**
[US/US]; One Procter & Gamble Plaza, Cincinnati, Ohio
45202 (US).

(72) Inventors: **GODLEWSKI, Jane, Ellen**; One Procter & Gamble Plaza, Cincinnati, OH 45202, Cincinnati, Ohio 45202 (US). **LINGOES, Janette, Villalobos**; One Procter & Gamble Plaza, Cincinnati, OH 45202, Cincinnati, Ohio 45202 (US). **COLLIAS, Dimitris, Ioannis**; One Procter & Gamble Plaza, Cincinnati, OH 45202, Cincinnati, Ohio 45202 (US). **VELASQUEZ, Juan, Esteban**; One Procter & Gamble Plaza, Cincinnati, OH 45202, Cincinnati, Ohio 45202 (US).

(74) Agent: **GUFFEY, Timothy B.**; c/o THE PROCTER & GAMBLE COMPANY, Global Patent Services, 299 East

6th Street, Sycamore Building, 4th Floor, Cincinnati, Ohio
45202 (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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, RW, SD, SL, 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, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- with amended claims (Art. 19(1))

Date of publication of the amended claims: 5 December 2013

(54) Title: PROCESS FOR PRODUCTION OF ACRYLIC ACID OR ITS DERIVATIVES

(57) Abstract: Processes for the catalytic dehydration of hydroxypropionic acid, hydroxypropionic acid derivatives, or mixtures thereof to acrylic acid, acrylic acid derivatives, or mixtures thereof with high yield and selectivity and without significant conversion to undesired side products, such as, acetaldehyde, propanoic acid, and acetic acid, are provided.



WO 2013/155291 A4