

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 May 2006 (18.05.2006)

PCT

(10) International Publication Number
WO 2006/052615 A1

(51) International Patent Classification:

C07C 69/01 (2006.01) **B01J 19/00** (2006.01)
C07C 67/055 (2006.01) **B01J 8/02** (2006.01)

(21) International Application Number:

PCT/US2005/039714

(22) International Filing Date:

2 November 2005 (02.11.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/624,846 3 November 2004 (03.11.2004) US
11/256,217 20 October 2005 (20.10.2005) US

(71) Applicants (for all designated States except US): **VELO-CYS, INC.** [US/US]; 7950 Corporate Blvd., Plain City, OH 43064 (US). **CELANESE INTERNATIONAL CORPORATION** [US/US]; 1601 West Lbj Freeway, Dallas, TX 75234 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MAZANEC, Terry** [US/US]; 7168 Selworthy Lane, Solon, OH 44139 (US). **JOHNSTON, Victor, J.** [US/US]; 3234 Pleasant Cove Court, Houston, TX 77059 (US). **HUCKMAN, Michael** [US/US]; 2125 Riverside Drive, League City, TX 77573 (US). **FITZGERALD, Sean, P.** [US/US]; 3439 Katie Drive, Columbus, OH 43221 (US). **FOSTER, James, A.** [US/US]; 3203 Crescent Bay Drive, League City, TX 77573 (US). **LINDLEY, Daniel** [US/US]; 106 Shore Drive, Portland, TX 78374 (US). **TONKOVICH, Anna Lee** [US/US]; 6493 Ballantrae Place, Dublin, OH 43016 (US). **DALY, Francis, P.** [US/US]; 188 N. Franklin Street,

Delaware, OH 43015 (US). **WADE, Leslie** [US/US]; 1310 Sentore Drive, Pearland, TX 77581 (US). **HAM-MOCK, Tony** [US/US]; 902 Chase Lock, Bacliff, TX 77518 (US). **YUSCHAK, Thomas, D.** [US/US]; 6043 O'sweeney Lane, Dublin, OH 43016 (US). **YANG, Bin** [CN/US]; 5440 Riverport Drive, Columbus, OH 43221 (US). **JAROSH, Kai** [CA/US]; 839 Vernon Road, Bexley, OH 43209 (US).

(74) Agents: **ROSENBERG, Frank, S.** et al.; 18 Echo Hill Lane, Moraga, CA 94556 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

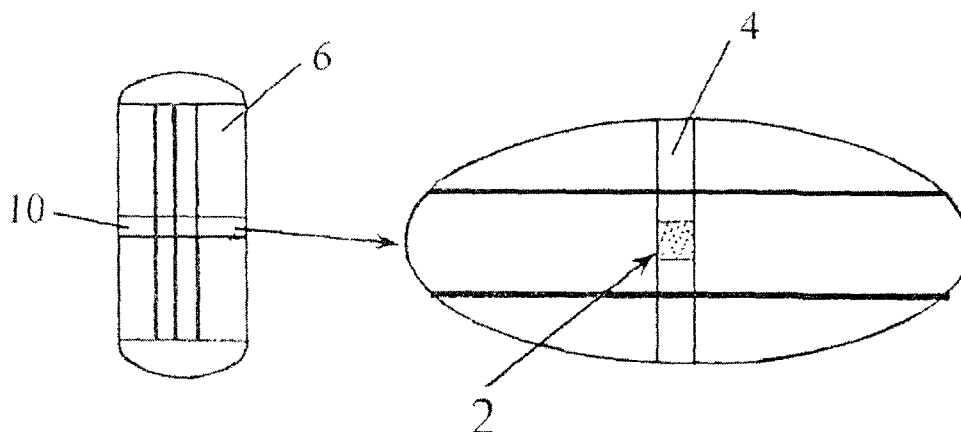
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, 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

[Continued on next page]

(54) Title: PROCESS AND APPARATUS FOR IMPROVED METHODS FOR MAKING VINYL ACETATE MONOMER (VAM)



(57) Abstract: The invention provides methods, apparatus and chemical systems for making vinyl acetate from ethylene, oxygen, and acetic acid.

WO 2006/052615 A1



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.