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(21) International Application Number: PCT/US98/26054 (22) International Filing Date: 8 December 1998 (08.12.98) (30) Priority Data: 08/986,505 8 December 1997 (08.12.97) US (71) Applicant (for all designated States except US): TWENTY-FIRST CENTURY RESEARCH CORPORATION [US/US]; 12 South Townview Lane, Newark, DE 19711-7419 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): DeCOSTER, David, C. [US/US]; 5509 234th Avenue East, Buckley, WA 98321 (US). VASSILIOU, Eustathios [US/US]; 12 South Townview Lane, Newark, DE 19711-7419 (US). DASSEL, Mark, W. [US/US]; P.O. Box 486, Indianola, WA 98342 (US). ROSTAMI, Ader, M. [IR/US]; 9205 Northeast Sea Ray Court, Bainbridge Island, WA 98110 (US). DUDGEON, Douglas, J. [US/US]; 280 Wyatt Way Northeast, No. B-206, Bainbridge Island, WA 98110 (US). (74) Agents: PARKER, David, W. et al.; Seed & Berry LLP, 6300 Columbia Center, 701 Fifth Avenue, Seattle, WA 98104-7092 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>Without international search report and to be republished upon receipt of that report.</i>
(54) Title: METHODS AND DEVICES FOR SEPARATING CATALYST FROM OXIDATION MIXTURES CONTAINING DIBASIC ACIDS		
(57) Abstract This invention relates to methods and reactor devices for controlling the oxidation of hydrocarbons to dibasic acids in the presence of a catalyst and a monobasic acid, by removing the catalyst from the reaction mixture, outside the oxidation zone, after the oxidation has taken place at least partially. Initially, the catalyst is partially precipitated and removed by reducing the water level in the reaction mixture and/or subjecting the reaction mixture to a temperature, at which or over which catalyst precipitates. After the initial partial precipitation of the catalyst, the mother liquor remaining is subjected to a thermal treatment during which at least the major part of the monobasic acid is removed leaving behind molten dibasic acids, in which the remaining catalyst precipitates substantially in its totality, and it is removed. The precipitated catalyst in the two precipitation stages may be recycled in miscellaneous ways. From the foregoing it will be appreciated that, although specific embodiments of the invention have been described herein for purposes of illustration, various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.		