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(21) International Application Number: PCT/US98/00823 (22) International Filing Date: 19 January 1998 (19.01.98) (30) Priority Data: 60/035,900 ✓ 23 January 1997 (23.01.97) ✓ US 08/813,813 ✓ 6 March 1997 (06.03.97) ✓ US (71) Applicant: THE BOARD OF REGENTS OF THE UNIVERSITY OF OKLAHOMA [US/US]; 1000 Asp Avenue, Norman, OK 78019 (US). (72) Inventors: MALLINSON, Richard, G.; 4631 Ridgeline Drive, Norman, OK 73072 (US). LOBBAN, Lance; 804 Morningside Drive, Norman, OK 73071 (US). LIU, Chang-jun; Tianjin University, Dept. of Chemical Engineering, Tianjin 300072 (CN). (74) Agents: PALMER, John et al.; Ladas & Parry, Suite 2100, 5670 Wilshire Boulevard, Los Angeles, CA 90036-5679 (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, GE, GH, GM, GW, HU, ID, IL, 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, 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, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: CONVERSION METHOD FOR GAS STREAMS CONTAINING HYDROCARBONS (57) Abstract An apparatus and a method of using the apparatus are provided for converting a gas stream containing hydrocarbons to a reaction product containing effluent molecules having at least one carbon atom, having at least one interior surface and at least one exterior surface, a first electrode and a second electrode with the first and second electrodes being selectively movable in relation to each other and positioned within the housing so as to be spatially disposed a predetermined distance from each other, a plasma discharge generator between the first and second electrodes, gas stream introducer and a collector for collecting the reaction product effluent produced by the reaction of the gas stream containing hydrocarbons with the plasma discharge between the first and second electrodes.		