

(43) International Publication Date
21 July 2011 (21.07.2011)(10) International Publication Number
WO 2011/086402 A1

(51) International Patent Classification:

B01D 53/62 (2006.01) **B01D 53/78** (2006.01)
B01D 53/14 (2006.01)

(21) International Application Number:

PCT/IB2010/000060

(22) International Filing Date:

14 January 2010 (14.01.2010)

(25) Filing Language:

Hungarian

(26) Publication Language:

English

(72) Inventor; and

(71) Applicant : **MESZAROS, Ferenc** [HU/HU]; Vörösvári út 27, H-2519 Piliscsév (HU).(74) Agent: **VARGA, Tamás, Péter**; Bertalan Lajos u. 20. Fsz. 3/A, H-1111 Budapest (HU).

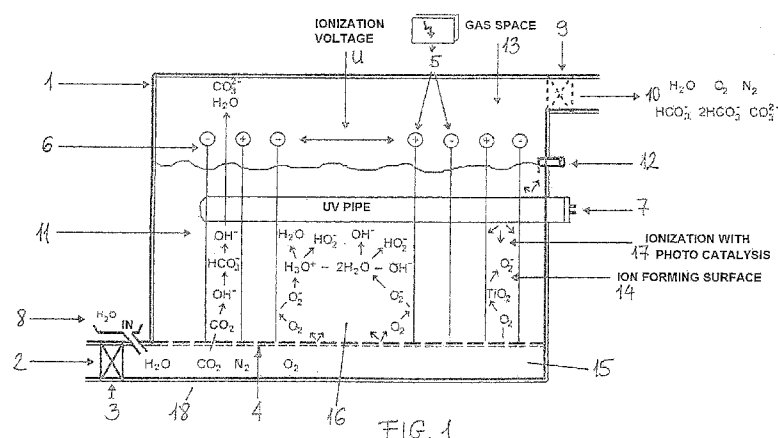
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

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, 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, 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).

Published:

— with international search report (Art. 21(3))

(54) Title: METHOD FOR REDUCTION OF THE CO₂ CONTENT OF FLUE AND ATMOSPHERIC GASES, AND EQUIPMENTS FOR APPLICATION OF THE METHOD(57) Abstract: The subject of the invention is a method for reduction of the CO₂ content of flue and atmospheric gases and equipment for application of the method. The characteristic of the solution according to the invention is, that, "hydroxide" ionized water containing (OH⁻) ions of alkaline characteristics is used as reaction medium for binding carbon dioxide (CO₂) gas, and carbon dioxide (CO₂) gas gets into reaction with alkaline ionized water, and during the reaction from the carbon dioxide (CO₂) gas an water, carbonate ion (CO₃²⁻) and hydrogencarbonate/bicarbonate (2HCO₃⁻) are formed and they leave for the outside atmosphere and/or outside water with the bound CO₂ content in stable gas or liquid form.