

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 August 2009 (27.08.2009)

PCT

(10) International Publication Number
WO 2009/105251 A1

(51) International Patent Classification:

B01D 53/02 (2006.01) **B01J 20/00** (2006.01)
B01D 53/22 (2006.01) **C01B 39/00** (2006.01)
B01D 71/00 (2006.01)

(21) International Application Number:

PCT/US2009/001094

(22) International Filing Date:

20 February 2009 (20.02.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/066,550	21 February 2008 (21.02.2008)	US
12/321,752	23 January 2009 (23.01.2009)	US
12/322,364	30 January 2009 (30.01.2009)	US

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(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, 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))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: SEPARATION OF METHANE FROM HIGHER CARBON NUMBER HYDROCARBONS UTILIZING ZEOLITIC IMIDAZOLATE FRAMEWORK MATERIALS

(57) Abstract: The present invention relates to the selective separation of methane ('CH₄') from higher carbon number hydrocarbons ('HHCs') in streams containing both methane and higher carbon number hydrocarbons (e.g. ethylene, ethane, propylene, propane, etc.) utilizing a zeolitic imidazolate framework ('ZIF') material. Preferably, the stream to be separated is fed to the present process in a substantially gaseous phase. In preferred embodiments, the current invention is utilized in a process to separate methane from higher carbon number hydrocarbons in natural gas streams.



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