

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 October 2007 (25.10.2007)

PCT

(10) International Publication Number
WO 2007/120386 A3

(51) International Patent Classification:

C01B 3/08 (2006.01) **B82B 3/00** (2006.01)
B82B 1/00 (2006.01)

(21) International Application Number:

PCT/US2007/004182

(22) International Filing Date:

14 February 2007 (14.02.2007)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/773,538 15 February 2006 (15.02.2006) US

CO, CR, CU, CZ, DE, DK, DM, 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, LV, 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, 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, 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

(71) Applicant and

(72) **Inventor:** ISTVAN, Rudyard, Lyle [US/US];
L'Hermitage 1 - #1203, 3100 North Ocean Boulevard, Ft.
Lauderdale, FL 33308 (US).

(74) **Agent:** MRKSICH, K., Shannon; Brinks Hofer Gilson &
Lione, P.O. Box 10087, Chicago, IL 60610 (US).

(88) **Date of publication of the international search report:**
29 November 2007

(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,

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.

(54) **Title:** MESOPOROUS ACTIVATED CARBONS

(57) **Abstract:** Catalytically activated carbon materials and methods for their preparation are described. The activated carbon materials are engineered to have a controlled porosity distribution that is readily optimized for specific applications using metal-containing nanoparticles as activation catalysts for the mesopores. The activated carbon materials may be used in all manner of devices that contain carbon materials, including but not limited to various electrochemical devices (e.g., capacitors, batteries, fuel cells, and the like), hydrogen storage devices, filtration devices, catalytic substrates, and the like.



WO 2007/120386 A3