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[Continued on next page]

(54) Title: TUNABLE METAL ORGANIC FRAMEWORKS

(57) Abstract: Metal organic framework compositions can have a face centered cubic structure.



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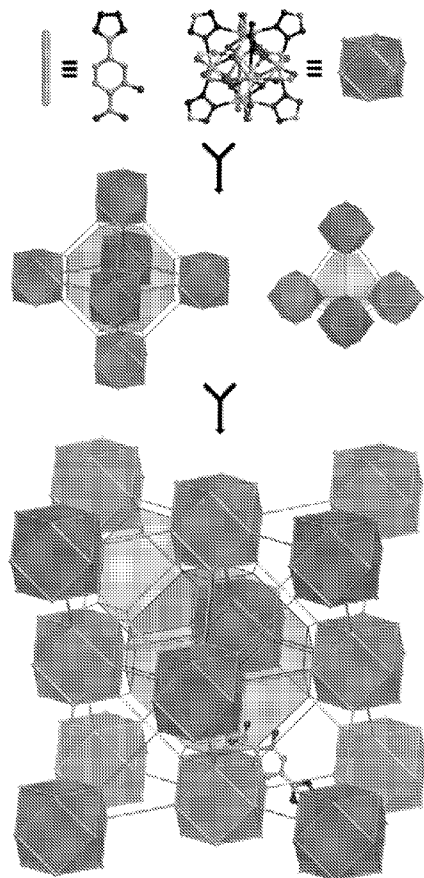


Figure 1



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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, BN, 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, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B01J 20/22, 20/02; B01D 53/02 (2014.01)

CPC - B01J 20/226, 20/0207; C07C 51/418

According to International Patent-Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8): B01J 20/22, 20/02; B01D 53/02; C07F 5/00 (2014.01)

CPC: B01J 20/226, 20/0207; C07C 51/418; B01D 2253/204; Y02C 10/08; USPC: 502/73, 401; 423/263; 95/139

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest Patent; Google Patent; Google; Google Scholar; ProQuest; metal organic framework, face centered cubic, ligand, anionic, bidentate, binding, para-, carboxylate, tetrazolate, aromatic, phenyl, 12-connected, MBB, tunable

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	XUE, DX et al. Tunable Rare-Earth fcu-MOFs: A Platform for Systematic Enhancement of CO2 Adsorption Energetics and Uptake. Journal of the American Chemical Society. 2013. Vol. 135. pages 7660-7667; published April 22, 2013; dx.doi.org/10.1021/ja401429x; pages 7660-7665	1-20
A	US 2004/0225134 A1 (YAGHI, OM et al.) 11 November 2004; entire document	1-20
A	US 2007/0068389 A1(YAGHI, OM) 29 March 2007; entire document	1-20
A	WO 2009/154374 A2 (SUH, MP) 23 December 2009; entire document	1-20

Further documents are listed in the continuation of Box C.

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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