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(71) Applicant (for all designated States except US): THE REGENTS OF THE UNIVERSITY OF CALIFORNIA [US/US]; 1111 Franklin Street, 5th Floor, Oakland, CA 94607-5200 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): YAGHI, Omar, M. [US/US]; 435 Dalehurst Avenue, Los Angeles, CA 90024 (US). FURUKAWA, Hiroyasu [JP/US]; 11411 Rochester Avenue, #9, Los Angeles, CA 90025 (US). WANG, Bo [CN/US]; 3350 Sawtelle Boulevard #105, Los Angeles, CA 90066 (US).

(74) Agent: BAKER, Joseph, R.; Gavrilovich, Dodd & Lindsey LLP, 4660 La Jolla Village Drive, Suite 750, San Diego, CA 92122 (US).

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[Continued on next page]

(54) Title: PREPARATION OF FUNCTIONALIZED ZEOLITIC FRAMEWORKS

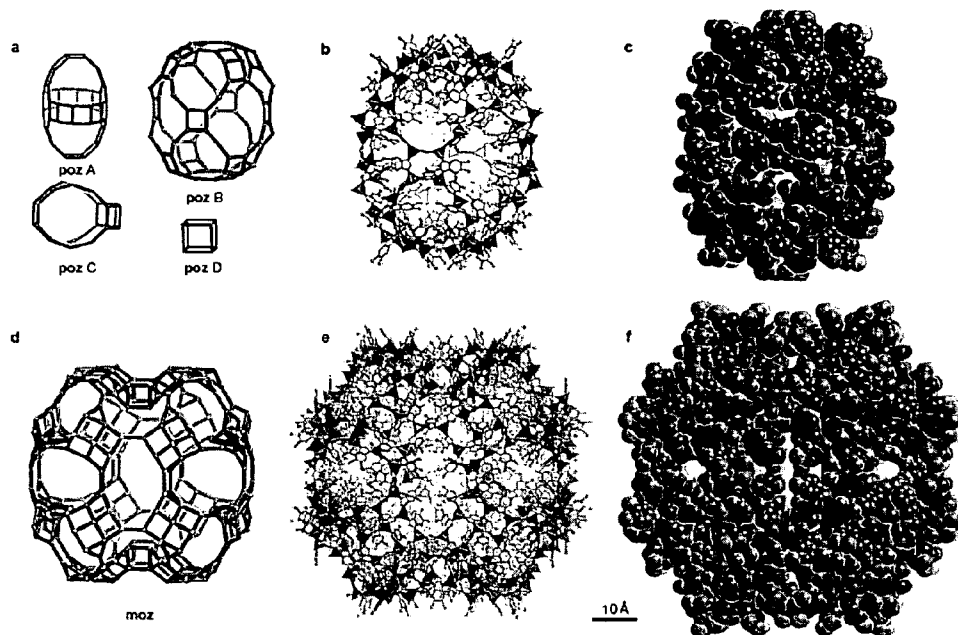


Figure 1C

(57) Abstract: The disclosure provides zeolitic frameworks for gas separation, gas storage, catalysis and sensors. More particularly the disclosure provides zeolitic frameworks (ZIFs). The ZIF of the disclosure comprises any number of transition metals or a homogenous transition metal composition.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C07F 7/02, C01B 39/00 (2008.04)

USPC - 423/702, 423/706, 546/14, 548/110

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)

USPC - 423/702, 423/706, 546/14, 548/110

IPC(8) - C07F 7/02, C01B 39/00 (2008.04)

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

USPC - 423/702, 423/706, 546/14, 548/110

IPC(8) - C07F 7/02, C01B 39/00 (2008.04) (Search term delimited)

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

PUBWest (USPT, PGPB, EPAB, JPAB); google.com

Search Terms Used: zeolite, adsorb, adsorption, reversible, imidazolate, transition, methyl, cyano, halo, chloro, bromo, ethyl, cyclic, bicyclic, halogen, nitrile, carbonyl, link, linking

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|-----------|--|-----------------------|
| Y         | US 4,532,225 A (Tsao et al.) 30 July 1985 (30.07.1985), entire document, especially Abstract; col. 1, ln. 20-33; col. 3, ln. 12-33; col. 4, ln. 1-6; col. 5, ln. 5-50; col. 6, ln. 35-50 | 1-23, 27-43           |
| Y         | US 5,160,500 A (Chu et al.) 03 November 1992 (03.11.1992), entire document, especially Abstract; col. 8, ln. 34-46   | 1-23, 27-43           |
| Y         | US 6,501,000 B1 (Stibrany et al.) 31 December 2002 (31.12.2002), entire document, especially Abstract; col. 4, ln. 1-29  | 8, 9, 11, 13          |
| Y         | US 5,208,335 A (Ramprasad et al.) 04 May 1993 (04.05.1993), entire document, especially Abstract; col. 4, ln. 37-59; col. 6, ln. 5-18  | 23, 30-37, 39, 40     |
| E, X      | US 2007/0202038 A1 (Yaghi et al.) 30 August 2007 (30.08.2007), entire document   | 1-23, 27-43           |

Further documents are listed in the continuation of Box C.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"&" document member of the same patent family

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Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300  
PCT OSP: 571-272-7774