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(54) Title: WOOD-POLYMER-ZEOLITE COMPOSITES

(57) Abstract: Composite materials containing a cellulose component such as wood fibers or particles, a zeolite component, and a polymer such as polyethylene, polypropylene, or polyvinyl chloride are able to provide good physical strength performance. The composites may be prepared by any of a number of mixing and forming processes, and may be used for making lumber and other structural materials.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/37715

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - C08J 3/20, B29C 70/00 (2007.01)

USPC - 428/549, 428/326, 524/13

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 428/549; 428/326; 524/35 and 524/13, 428/393, 428/507, 524/450Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
N/A

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

USPTO, PubWEST, Google Scholar: zeolite, molecular sieve, polyanhydride, polyepoxy(ide).

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category*      | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No.   |
|----------------|---|---|
| X<br>----<br>Y | US 4,833,181 A (Narukawa et al.) 23 May 1989 (23.05.1989), abstract, claim 1, col 1, ln 1-45, Col 3, ln 12-25, col 4, ln 32-42, col.2, ln 15-45, Col 2, ln 52-59, col. 5, ln 44-68, col 6, ln 1-5, Examples | 1-4, 11-17, 20-22, 26-29, 32, 37, 40, 42-49<br>-----<br>5-10, 18-19, 23-25, 30-31, 33-36, 38-39, 41 |
| Y              | US 4,420,582 A (Canard et. al.) 13 December 1983 (13.12.1983), col 2, ln 60-68, col 3, ln 45-46   | 5-8   |
| Y              | US 4,250,081 A ( Bode et al.) 10 February 1981 (10.02.1981), Claims   | 9-10, 18-19   |
| Y              | US 2003/0100683 A1 (Toyoizumi et al.) 29 May 2003 (29.05.2003), para [0138]   | 30-31   |
| Y              | US 3,888,810 A (Shinomura) 10 June 1975 (10.06.1975), col 1, ln 64-67, col.2, ln 23-31  | 18-19   |
| Y              | US 6,682,789 B2 (Godavarti et al.) 27 January 2004 (27.01.2004), col. 10, ln 1-29, col. 11, ln 1-25, col. 12, ln 5-38   | 23-25, 33-36, 38-39   |
| Y              | US 6,054,207 A (Finley) 25 April 2000 (25.04.2000), abstract, Claims  | 41  |
| A              | US 6,106,956 A (Heyn et al.) 22 August 2000 (22.08.2000), entire document   | 1-4, 19   |
| A              | US 5,432,214 A (Lancesseur) 11 July 1995 (11.07.1995), entire document  | 1-49  |

 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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"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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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

"&amp;" document member of the same patent family

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