(54) Title: ANISOTROPIC THERMAL APPLICATIONS OF COMPOSITES OF CERAMICS AND CARBON NANOTUBES

(57) Abstract: Ceramic materials are converted to materials with anisotropic thermal properties by forming the ceramics into composites with carbon nanotubes dispersed therein and uniaxially compressing the composites in a direction in which a lower thermal conductivity is desired.
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

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.

(88) Date of publication of the international search report:

28 July 2005
INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US04/20067

A. CLASSIFICATION OF SUBJECT MATTER
   IPC(7) : F28F 7/00; F28D 15/00; F05K 7/20; C04B 35/00; H01L 23/15; D01F 9/12
   US CL. : 165/185.80.3,104.33,906,905; 423/447.1; 501/95.1, 95.2; 361/704,708,712; 257/703
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)
   U.S. : 165/185.80.3,104.33,906,905; 423/447.1; 501/95.1, 95.2; 361/704,708,712; 257/703

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>US 6,284,323 B1 (MALONEY) 04 September 2001 (04.09.2001), See column 1, lines 14-20.</td>
<td>17-31</td>
</tr>
<tr>
<td>Y</td>
<td>US 6,407,922 B1 (ECKLAD et al) 18 June 2002 (18.06.2002), See figure 1.</td>
<td>1-16</td>
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☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search
24 March 2005 (24.03.2005)

Date of mailing of the international search report
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