Title: PROCESS FOR DESTROYING CARBONACEOUS MATERIALS AND COMPOSITION AND SYSTEM THEREOF

Abstract: A process for substantially removing carbonaceous material from a composition comprising providing the composition having carbonaceous material, reacting the carbonaceous material with a sulfur compound, and forming products having carbon and sulfuric acid, sulfurous acid and/or sulfur dioxide, and the resulting composition and system used therefore.

Claims:

1. A method of destroying carbonaceous material comprising a step of providing a composition having carbonaceous material, a step of reacting said composition with a sulfur compound, and a step of forming products having carbon and sulfuric acid, sulfurous acid and/or sulfur dioxide, and the resulting composition and system used thereby.

2. A method according to claim 1, wherein said sulfur compound is selected from the group consisting of sulfuric acid, sulfurous acid and/or sulfur dioxide.

3. A method according to claim 1, wherein said step of forming products has the characteristics of a carbonaceous material.
## INTERNATIONAL SEARCH REPORT

### A. CLASSIFICATION OF SUBJECT MATTER

INV. C01B17/50  C01B17/74  C01F11/46  C01B17/48  C01B31/02  C01B31/26

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)

COIB

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 practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data, API Data

### 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>
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<td>X</td>
<td>US 4 618 723 A (HERRINGTON DANIEL R [US]; KUCH PHILIP L [US]) 21 October 1986 (1986-10-21) claims; figure 3</td>
<td>1-25</td>
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### D

Further documents are listed in the continuation of Box C. See patent family annex.

- Special categories of cited documents:
  - 'A': document defining the general state of the art which is not considered to be of particular relevance
  - 'E': earlier document but published on or after the international filing date
  - 'L': document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
  - 'O': document referring to an oral disclosure, use, exhibition or other means.
  - '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
- 'X': document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- '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

Date of the actual completion of the international search: 31 July 2009

Date of mailing of the international search report: 06/08/2009

Name and mailing address of the ISA/Authorized officer:
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Tel. (+31-70) 340-2040,
Fax: (+31-70) 340-3016

Gumann, Sina
Continuation of Box II.2

Claims Nos.: 1-25 (partially)

The claims of the present application refer to a process for removing carbonaceous materials from a composition by reacting the carbonaceous material with a sulphur compound. Even when taking into account that those compounds are supposed to be carbon dioxide and hydrogen sulphide, respectively, it remains unclear under which conditions these should be contacted, and what is supposed to be the product obtained thereby. The claimed ranges "about room temperature to 1000 °C" and "approximately atmospheric pressure to above atmospheric pressure", are too broad for the skilled person to actually gain useful information, and neither does the description reveal more specific process conditions. Workable examples are not provided. Concerning the obtained products, the application fails to disclose which products actually result from the process. The products are merely claimed in terms of a result to be achieved (see also below, Item VIII) and with many possible alternatives. It is not disclosed which conditions would lead to which of those products. The present application as a whole does not enable the skilled person to carry out the invention without the burden of undue experimentation (see also the PCT-Guidelines II, 5.45-48). The present application does therefore not disclose the invention in a manner sufficiently clear and complete, as required by Article 5 PCT.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2) declaration be overcome.
This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
   because they relate to subject matter not required to be searched by this Authority, namely:

2. ☑ Claims Nos. I-25(part1) al ly
   because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
   
   see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claim Nos.:
   because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☑ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☑ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☒ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.
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<tbody>
<tr>
<td>US 4618723</td>
<td>A 21-10-1986</td>
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<td>US D548398</td>
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