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(71) Applicant and

(72) Inventor: **RAZAVI, Ali** [US/US]; 122 White Birch Lane,  
Dallas, PA 18612-9148 (US).

(74) Agent: **ZALE, Lawrence, P.**; 434 Lackawanna Ave.,  
Suite 200, Scranton, PA 18503-2053 (US).

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Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: MULTIFUNCTIONAL ARTICLES AND METHOD FOR MAKING THE SAME

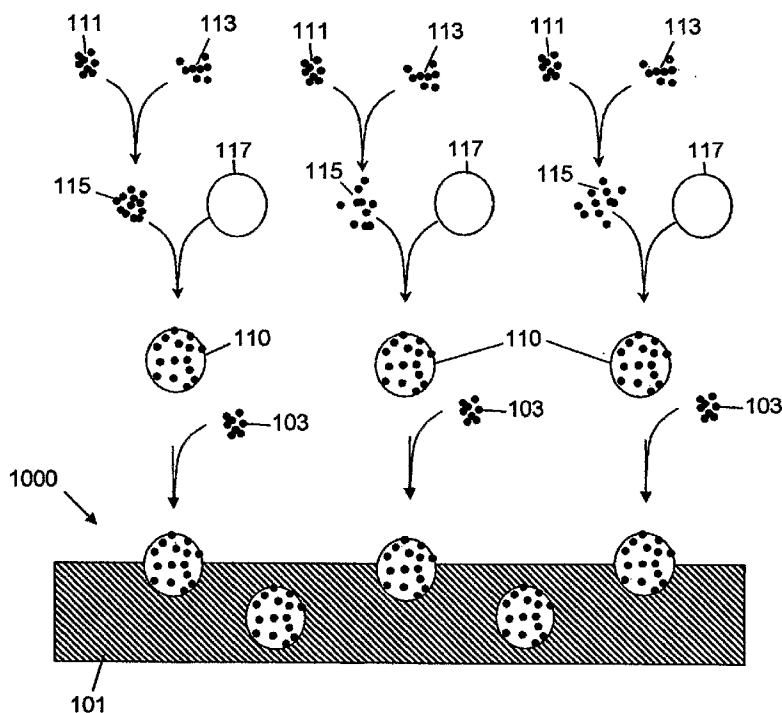


FIG. 1

(57) Abstract: An absorbent article (1000) includes "beads" (1 1 1) that are modified to add functional groups (1 1 3). The functional groups (1 1 3) add antimicrobial, fire retardant, alcohol repellant and other properties. In addition, the beads (1 1 1) may be inert diamond, or conductive graphite. The substrate (101) of the article (1000) may be made with the beads (1 1 1) and functional groups (1 1 3) retaining the properties. The beads (1 1 1) and functional groups (1 1 3) may be incorporated into super absorbent materials (1 1 7) and attached to the substrate (101), with or without a binder (103). The resulting article (1000) therefore may have antimicrobial, fire retardant, alcohol repellant and antistatic properties making it specifically useful in medical applications. It may also be made as a multi-layered article (1000) having different amounts of super absorbent ("SA") particles (1207, 1307, 1407) printed or embedded in patterns on each layer (1 100, 1200, 1300, 1400), thereby channeling liquids.



— *of inventorship (Rule 4.17(iv))*

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**Previous Correction:**

see Notice of 10 April 2008

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/16194

### Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

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.: 8-12  
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:  
Claims 8-12 are unsearchable because they are indefinite as stated in detail *supra*.
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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 additional fees, this Authority did not invite payment of any 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.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/16194

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: A61F 13/15( 2006.01),13/20( 2006.01)

USPC: 604/367,368

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. : 604/367,368

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

| Category * | Citation of document, with indication, where appropriate, of the relevant passages                                                                                 | Relevant to claim No.                 |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| X          | US 6,803,034 B2 (DUVAL et al) 12 October 2004 (12.10.2004), col. 1, line 67- col. 2, line 17, col. 3, ll. 29,30,62-66, col. 4, ll. 3-9, 49-58, col. 20, ll. 21,22. | 1,3,6,13,14<br>-----<br>2,4,5,7,15-17 |
| ---        |                                                                                                                                                                    |                                       |
| Y          |                                                                                                                                                                    |                                       |
| Y          | US 2005/0220829 A1 (SUNG et al) 6 October 2005 (6.10.2005), paragraphs 0012,0035,0036,0042,0044                                                                    | 2,4                                   |
| X          | US 2005/0203471 A1 (KELLY) 15 September 2005 (15.09.2005), paragraphs 0023,0091                                                                                    | 17,18                                 |



Further documents are listed in the continuation of Box C.



See patent family annex.

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"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

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Facsimile No. (571) 273-3201

Authorized officer

MELANIE J. HAND

Telephone No. 571-272-3700