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(71) Applicant (for all designated States except US): **BASE SE** [DE/DE]; Carl Bosch Strasse 38, 67056 Ludwigshafen (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SONG, Zhiqiang** [CA/US]; 2 Stuart Drive, Newtown, CT 06470 (US). **DEISENORTH, Ted** [US/US]; 32 Barnview Terrace, Brookfield, CT 06804 (US). **THOMAS, Richard** [US/US]; 74 Mountainview Avenue, Nutley, NJ 07110 (US). **LAU, Jacqueline** [US/US]; 45 Briary Road, Dobbs Ferry, NJ 10522 (US).

(74) Agents: **BROWN, Melanie** et al.; Basf Corporation, 500 White Plains Road, Tarrytown, NY 10591 (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))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

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

5 January 2012

(54) Title: ANTICORROSION COATING CONTAINING SILVER FOR ENHANCED CORROSION PROTECTION AND ANTIMICROBIAL ACTIVITY

(57) Abstract: Incorporating antimicrobial metals, such as silver salts, into an anticorrosion coating provides both excellent antimicrobial protection and surprisingly improves the anti corrosion activity as well, proving anti corrosion coatings effective as thin films and well suited for coating medical devices. Suitable binder polymers for the coating include but not limited to poly-electrolytes containing charged and/or potentially chargeable groups and polymers containing hydrophilic entities.



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A. CLASSIFICATION OF SUBJECT MATTER*C09D 5/10(2006.01)i, C09D 5/14(2006.01)i, C08K 3/08(2006.01)i, C23F 11/00(2006.01)i, A61L 31/10(2006.01)i*

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)

C09D 5/10; C08G 65/00; C09C 1/62; C04B 14/36; C04B 9/02; A01N 25/10; C08J 7/04; A61K 9/70; C09D 5/16; B05D 7/16

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: polyelectrolyte, silver nitrate, silver citrate, silver acetate, silver fluoride, silver sulfide, DADMAC, diallyldimethyl ammonium chloride, maleic acid, styrene sulfonic acid, vinyl sulfonic acid, allyl sulfonic acid, acrylamidopropyl sulfonic acid

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2007-0243237 A1 (MAZEN KHALED et al.) 18 October 2007 See [0011]-[0058]	1-2,6-8
A	WO 2010-006783 A1 (W.L. GORE & ASSOCIATES GMBH et al.) 21 January 2010 See page 18, line 5 - page 22, line 18	1-2,6-8
A	US 2010-0034858 A1 (CHAMP SIMON et al.) 11 February 2010 See [0025]-[0073]	1-2,6-8
A	WO 2009-046915 A1 (MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTEN E.V. et al.) 16 April 2009 See page 4, line 20 - page 8, line 7	1-2,6-8
A	US 2009-0078153 A1 (SHCHUKIN DMITRY et al.) 26 March 2009 See [0011]-[0022]	1-2,6-8

 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 application or patent 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 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

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Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsu-ro,
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

Choi Young Hee

Telephone No. 82-42-481-8156



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.:
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:

3. Claims Nos.: 3-5, 9-11
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 an additional fee, this Authority did not invite payment of any additional fee.
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

Information on patent family members

International application No.

PCT/US2011/028503

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007-0243237 A1	18.10.2007	None	
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