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(71) Applicant (for all designated States except US): **BAKER HUGHES INCORPORATED** [US/US]; P.O. Box 4740, Houston, Texas 77210-4740 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WELCH, John, C.** [US/US]; 19307 Dianeshire Drive, Spring, Texas 77388 (US). **CHAKRABORTY, Soma** [IN/US]; 10919 West Road, #916, Houston, Texas 77064 (US).

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- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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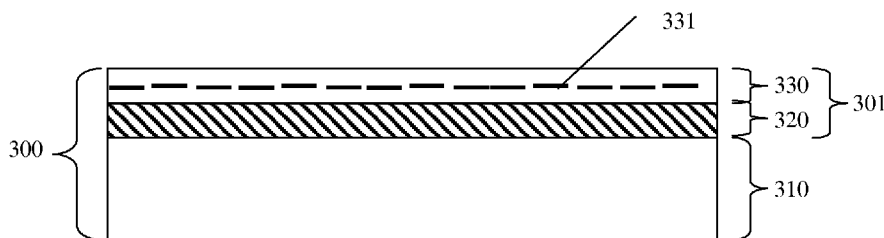
- with international search report (Art. 21(3))
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(54) Title: NANO-COATINGS FOR ARTICLES

FIG. 3



(57) Abstract: A nano-coating comprises multiple alternating layers of a first layer comprising a first nanoparticle having an aspect ratio greater than or equal to 10 and having a positive or negative charge, and a second layer comprising a second nanoparticle having an aspect ratio greater than or equal to 10 and having a positive or negative charge opposite that of the first nanoparticle, wherein the nano-coating is disposed on a surface of a substrate. An article comprising the nano-coating, and a method of forming the nano-coating, are each disclosed.

A. CLASSIFICATION OF SUBJECT MATTER***C23C 28/00(2006.01)i, E21B 10/46(2006.01)i, E21B 17/00(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)

C23C 28/00; H01L 21/20; H01B 1/12; B82B 3/00; H01J 1/146; G03G 15/02; H01L 29/66; B01J 19/08; H01J 1/14

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: nano-coating, nanoparticle, aspect ratio, positive and negative charge, substrate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005-0001317 A1 (GANAPATHIRAMAN RAMANATH et al.) 06 January 2005 See abstract, paragraphs 0032-0053 and claims 1,6-7,11-12,14,19	1-23
A	KR 10-2009-0086536 A (THE TRUSTEES OF PRINCETON UNIVERSITY) 13 August 2009 See abstract and claim 15	1-23
A	US 2010-0163844 A1 (ERMOLOV VLADIMIR ALEXSANDROVICH) 01 July 2010 See abstract and claims 10-11,15,19	1-23
A	US 2007-0237546 A1 (MICHAEL F. ZONA et al.) 11 October 2007 See abstract, paragraph 0036, claims 1,6-7 and figure 2	1-23
A	US 6882094 B2 (STEVEN DIMITRIJEVIC et al.) 19 April 2005 See abstract, claims 11,13 and figure 7	1-23



Further documents are listed in the continuation of Box C.



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Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

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Authorized officer

YEO, Kyeong Sook

Telephone No. 82-42-481-5612



INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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