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(54) Title: METHOD OF MAKING HEAT TREATED COATED ARTICLE USING CARBON BASED COATING AND PROTECTIVE FILM

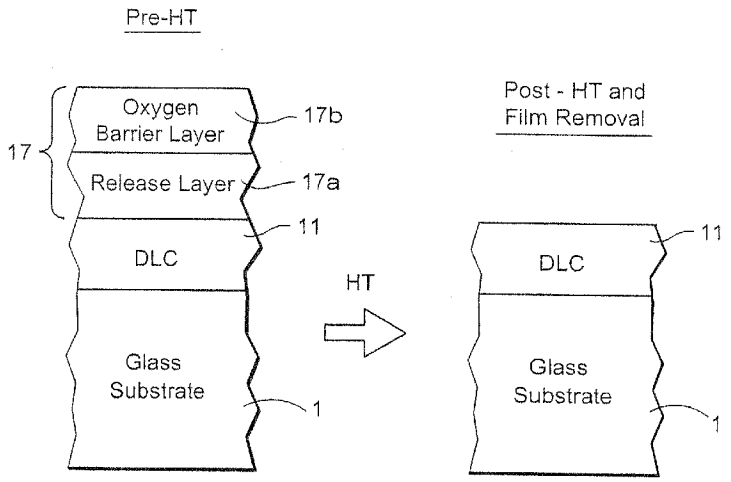

Fig. 4

(57) Abstract: A method of making a heat treated (HT) substantially transparent coated article to be used in shower door applications, window applications, tabletop applications, or any other suitable applications. For example, certain embodiments relate to a method of making a coated article including a step of heat treating a glass substrate coated with at least layer of or including carbon (e.g., diamond-like carbon (DLC)) and an overlying protective film thereon. The protective film may be of or include both (a) an oxygen blocking or barrier layer, and (b) a release layer, with the release layer being located between at least the carbon based layer and the oxygen blocking layer. The release layer is of or includes zinc oxynitride (e.g., ZnO_xN_z). Following and/or during heat treatment (e.g., thermal tempering, or the like) the protective film may be entirely or partially removed. Other embodiments of this invention relate to the pre-HT coated article, or the post-HT coated article.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. C03C17/22 C03C17/34
ADD.

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)
C03C

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)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2012/015196 A1 (WANG JIANGPING [US] ET AL) 19 January 2012 (2012-01-19) paragraph [0085]; claims 1-3,5-7,14-19; figures 11,15	1-26
Y	YE YAN ET AL: "High mobility amorphous zinc oxynitride semiconductor material for thin film transistors", JOURNAL OF APPLIED PHYSICS, AMERICAN INSTITUTE OF PHYSICS. NEW YORK, US, vol. 106, no. 7, 13 October 2009 (2009-10-13), pages 074512-1-074512-8, XP012127597, ISSN: 0021-8979, DOI: 10.1063/1.3236663 Summary; pages 74512-4, column 1, paragraph 1; figures 2,3	1-26

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
6 December 2013	13/12/2013

Name and mailing address of the ISA/	Authorized officer
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	J. L. PAU ET AL: "<title>Properties of zinc oxynitride films deposited by reactive magnetron sputtering at room temperature</title>", PROCEEDINGS OF SPIE, vol. 7603, 11 February 2010 (2010-02-11), pages 760306-1-760306-7, XP055091745, ISSN: 0277-786X, DOI: 10.1117/12.844221 Conclusion; figure 5; table 1	1-26

A	FUTSUHARA M ET AL: "Optical properties of zinc oxynitride thin films", THIN SOLID FILMS, ELSEVIER-SEQUOIA S.A. LAUSANNE, CH, vol. 317, no. 1-2, 1 April 1998 (1998-04-01), pages 322-325, XP004147672, ISSN: 0040-6090, DOI: 10.1016/S0040-6090(97)00646-9 the whole document	1-26

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2013/043965

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		WO 2013003130 A2	03-01-2013