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(54) Title: METHODS FOR OPTIMIZING MATERIALS FOR LENSES AND LENS ARRAYS AND DEVICES THEREOF

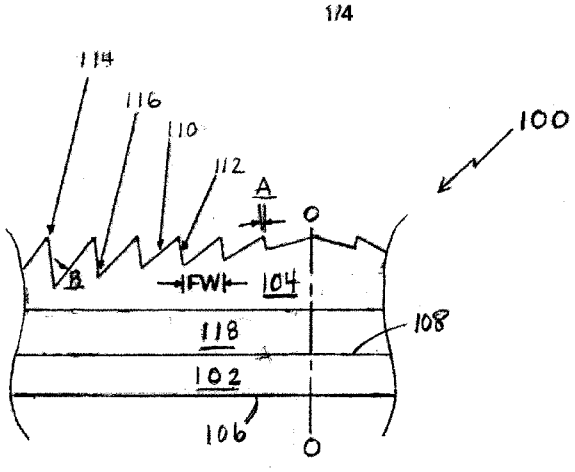

FIG. 1

(57) Abstract: This technology relates generally to methods for the fabrication of lenses which include a glass carrier and an at least partially transmissive layer with one or more slope facets coupled together by one or more draft facets on a surface of the glass carrier. This technology also relates to the resulting lenses and systems including lens arrays. These methods eliminate stress deformation in the resulting lenses by the use of a separator between the glass carrier and the at least partially transmissive layer, at least partial curing of the at least partially transmissive layer prior to formation of the slope and draft facets, modified at least partially transmissive layers which have a cure temperature at or below an operating temperature range of the lens, slope and draft facet dimensions which are selected to correspond with an operating temperature range of the lens, or UV-curable at least partially transmissive layers.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

H01L 31/052(2006.01)i, G02B 3/08(2006.01)i, H01L 31/18(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)

H01L 31/052; H05K 3/34; H01L 31/18; H01L 31/00

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: solar cell & concentrator & fresnel lens & transmissive.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2010-0269885 A1 (BENITEZ PABLO et al.) 28 October 2010 See abstract, paragraphs [0061]-[0084], claims 1-9, 15 and figures 1-3, 16-20, 23.	1-40
A	US 2008-0185034 A1 (CORIO RONALD P.) 07 August 2008 See abstract, paragraphs [0034]-[0035], claims 1-3, 11 and figures 3-5, 8-9.	1-40
A	US 2005-0092360 A1 (ROY CLARK) 05 May 2005 See abstract, paragraphs [0023]-[0026], claims 11-15 and figures 1, 4.	1-40
A	US 2011-0011445 A1 (SPENCER MATTHEW et al.) 20 January 2011 See abstract, claims 1-12 and figures 1-4.	1-40

☐ Further documents are listed in the continuation of Box C.

☒ 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
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Information on patent family members

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