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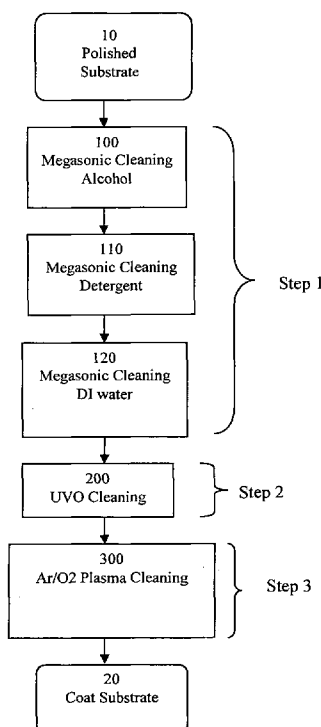
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[Continued on next page]

(54) Title: CLEANING METHOD FOR DUV OPTICAL ELEMENTS TO EXTEND THEIR LIFETIME

Figure 1



(57) Abstract: The present invention" is directed to a process for coating at least one geometrically defined surface of an optical article's substrate, without generating optical defects, said surface forming a Fresnel lens (2) comprising: providing a removable plastic carrier (4) having a specific thickness and a specific base curvature, depositing a curable coating composition (3) onto either the at least one surface forming a Fresnel lens or the internal surface of the carrier, moving the carrier and the optical article relatively to each other to bring the deposited curable coating composition into contact with either the at least one surface forming a Fresnel lens or the internal surface of the carrier, applying a specific pressure onto the external surface of the carrier to spread out the curable coating composition so as to cover said at least one surface forming a Fresnel lens, curing the layer of curable coating composition and withdrawing the removalbe carrier



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. B08B3/12 B08B7/00 C30B33/00

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)
B08B C30B

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/019136 A1 (SUZUKI HIROYUKI [JP]) 14 February 2002 (2002-02-14) paragraph [0026] - paragraph [0033] figure 1	1-10
A	EP 1 372 010 A (CANON KK [JP]) 17 December 2003 (2003-12-17) paragraph [0026]; figure 1	1-10
A	US 6 848 455 B1 (SHRINIVASAN KRISHNAN [US] ET AL) 1 February 2005 (2005-02-01) column 6, line 3 - line 17 column 7, line 41 - line 55 figure 1	1-10
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☒ 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 document but published on or after the international filing date
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"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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International application No

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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.
A	WO 00/12231 A (ANON INC [US]) 9 March 2000 (2000-03-09) page 9, line 19 - line 33 figure 1 -----	1-10
A	US 6 242 361 B1 (LEE SHYH-DAR [TW] ET AL) 5 June 2001 (2001-06-05) claim 1 -----	1-10
A	DE 10 2004 030803 A1 (FRAUNHOFER GES FORSCHUNG [DE]) 19 January 2006 (2006-01-19) abstract -----	6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/008934

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.:
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:

see additional sheet

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 fees, this Authority did not invite payment of 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.:

1-10

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-10

Method for cleaning the surface of MF2 single crystal optical elements and method for making coated MF2 optical elements which have been cleaned prior to coating

2. claims: 11-14

A DUV optic having an increased lifetime

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/008934

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