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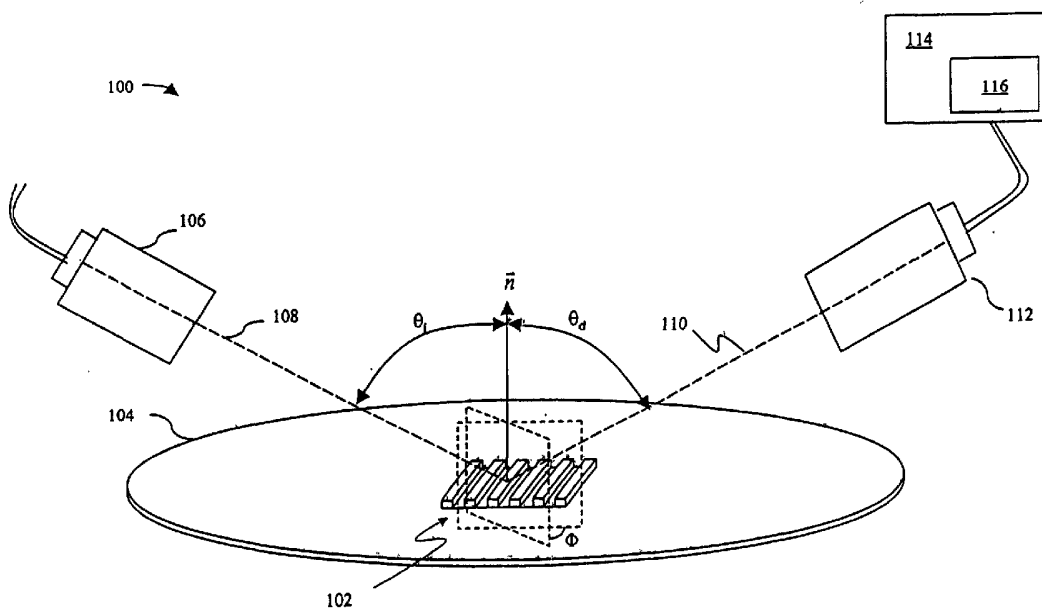
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[Continued on next page]

(54) Title: OPTICAL METROLOGY OF SINGLE FEATURES



(57) Abstract: The profile of a single feature (102) formed on a wafer (104) can be determined by obtaining an optical signature of the feature using a beam of light (108) from a light source (106) focused on the feature (102) and a detector (112) to detect the light (110) diffracted by the feature (102). The obtained optical signature can then be compared by a processor (114) to a set of simulated optical signatures stored in a library (116), where each simulated optical signature corresponds to a hypothetical profile of the single feature and is modeled based upon the hypothetical profile.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01B 11/00
 US CL : 356/636

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)

U.S. : 356/636; 237.5; 250/550, 559.22, 559.24; 257/E21.53

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 NONE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,137,570 A (CHUANG et al) 24 October 2000 (24.10.2000), see whole document, and in particular column 6, lines 57-58 taken with column 12, lines 17-21, colun 8, lines 21-22, and column 16, lines 34-61.	1-55

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"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
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"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	

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