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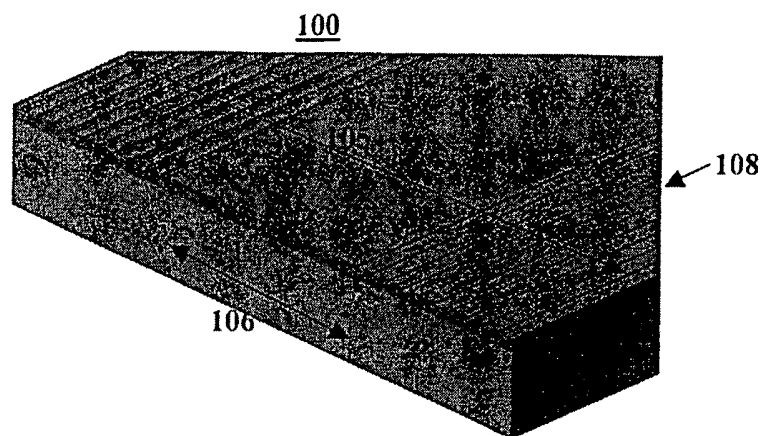
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[Continued on next page]

(54) Title: PLANAR-RESONATOR BASED OPTICAL CHEMO- AND BIOSENSORS



A

(57) Abstract: A biological or chemical optical sensing device comprises at least one planar micro-resonator structure included in a light emitting waveguide, and at least one biological or chemical probe bound to at least a part of the micro-resonator structure, the probe operative to bind specifically and selectively to a respective target substance, whereby the specific and selective binding results in a parameter change in light emitted from the waveguide. In one embodiment, the micro-resonator is linear. In some embodiments, the sensing device is active, the waveguide including at least one photoluminescent material operative to be remotely pumped by a remote optical source, and the parameter change, which may include a spectral change or a quality-factor change, may be remotely read by an optical reader.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G02B 06/00
 US CL : 385/12

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. : 385/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 IEEB and INSPEC

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 EAST search -- see attached search history.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/0135723 (CARR et al) 23 June 2005 (23.06.2005), abstract, paragraphs 19-20, fig. 4B	1-38
X	US 2004/0120638 (FRICK) 24 June 2004 (24.06.2004), abstract, paragraphs 80-84, fig. 6	1-38

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T"
"A" document defining the general state of the art which is not considered to be of particular relevance	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
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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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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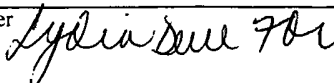
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