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(54) Title: INTEGRATED SPECTROMETERS WITH SINGLE PIXEL DETECTOR

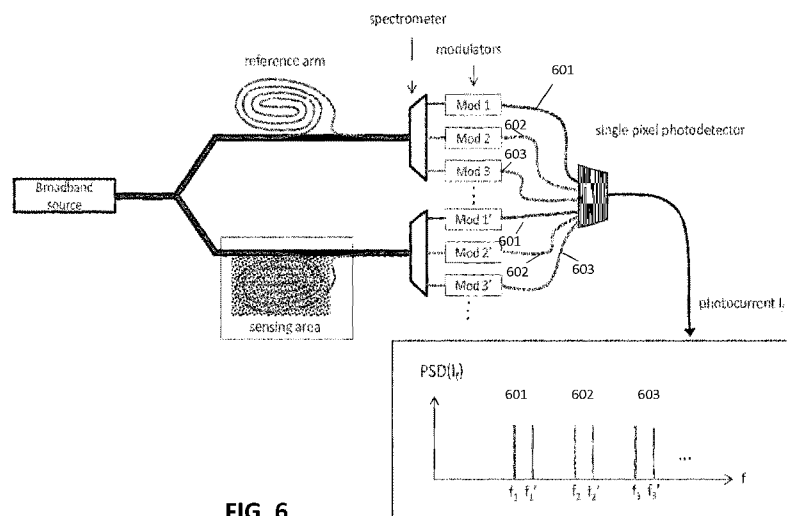
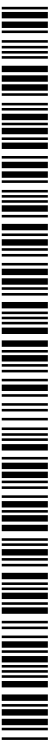


FIG. 6

(57) Abstract: Integrated Spectrometers with Single Pixel Detector An integrated waveguide based spectrometer is described. The spectrometer comprises a sensing region for receiving multi-wavelength radiation for irradiating a sample in the sensing region, a wavelength demultiplexing element arranged for capturing said multi-wavelength radiation after interaction with the sample and for providing a number of wavelength demultiplexed radiation outputs or a number of different groups of wavelength demultiplexed radiation outputs, an integrated modulator for differently modulating the different demultiplexed radiation outputs or different groups of demultiplexed radiation outputs, and a multiplexer element for multiplexing the differently modulated demultiplexed radiation outputs or the differently grouped demultiplexed radiation outputs.



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
INV. G01J3/02 G01J3/18 G01J3/32
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)
G01J G02B
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

C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 164 373 A (JOHNSON LARRY C [US] ET AL) 14 August 1979 (1979-08-14) column 3, line 62 - column 4, line 18; figure 1 -----	1-8,11,13,16-25
X	US 2007/285658 A1 (CLAPS RICARDO [US] ET AL) 13 December 2007 (2007-12-13) paragraph [0034] - paragraph [0044]; figure 1a -----	1-8,10,11,13,16,17,19-25
Y	US 2002/057431 A1 (FATELEY WILLIAM G [US] ET AL) 16 May 2002 (2002-05-16) paragraph [0058] - paragraph [0063]; figure 1 ----- -/--	1-8,10-19,25

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	"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
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
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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	US 4 999 489 A (HUGGINS RAYMOND W [US]) 12 March 1991 (1991-03-12) column 5, line 39 - column 6, line 39; figure 5	1-8, 10-19,25
A	----- RONNY BOCKSTAELE ET AL: "Glucose sensing by means of silicon photonics", PROCEEDINGS OF SPIE, vol. 8989, 8 March 2014 (2014-03-08), page 89890P, XP055147102, ISSN: 0277-786X, DOI: 10.1117/12.2047366 pages 89890P-2; figure 1 -----	1-25

INTERNATIONAL SEARCH REPORT

Information on patent family members

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PCT/EP2015/058764

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