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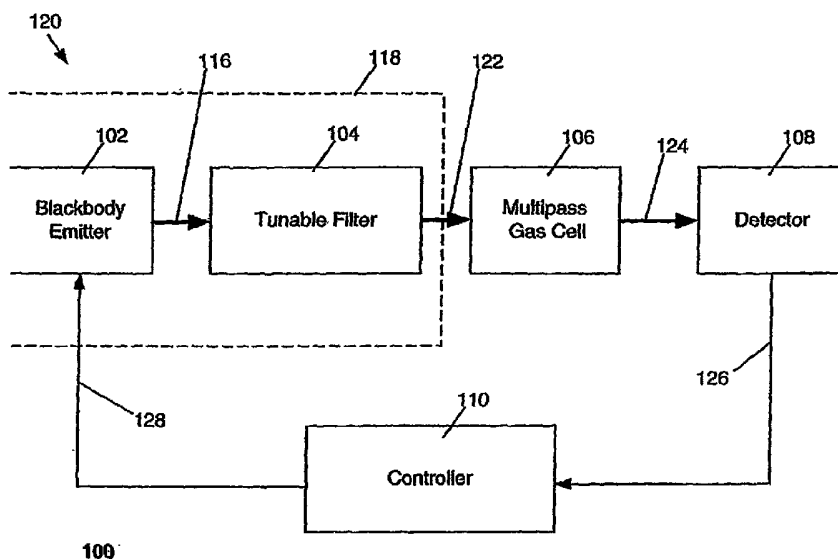
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[Continued on next page]

(54) Title: THERMO-OPTIC FILTER AND INFRARED SENSOR USING SAID FILTER.



(57) Abstract: An optical sensor for detecting a chemical in a sample region includes an emitter for producing light, and for directing the light through the sample region. The sensor also includes a detector for receiving the light after the light passes through the sample region, and for producing a signal corresponding to the light the detector receives. The sensor further includes a thermo-optic filter disposed between the emitter and the detector. The optical filter has a tunable passband for selectively filtering the light from the emitter. The passband of the optical filter is tunable by varying a temperature of the optical filter. The sensor also includes a controller for controlling the passband of the optical filter and for receiving the detection signal from the detector. The controller modulates the passband of the optical filter and analyzes the detection signal to determine whether an absorption peak of the chemical is present.

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01N21/61 G01J3/26 G02F1/01

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)

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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, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	DE 44 24 717 A (DAIMLER BENZ AEROSPACE AG) 18 January 1996 (1996-01-18)	22, 24, 27
Y	column 2, lines 15-56; column 3, lines 49-56; figures 1a and 5	9, 21, 23, 25, 26
Y	----- WO 02/103441 A (AEGIS SEMICONDUCTOR INC) 27 December 2002 (2002-12-27) page 15, lines 27-30; page 27, line 30 - page 28, line 4; claim 7; figure 20	23, 26
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A	column 3, lines 18-25; column 3, line 47 - column 6, line 14; figure 2	1-24, 26, 27
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Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

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