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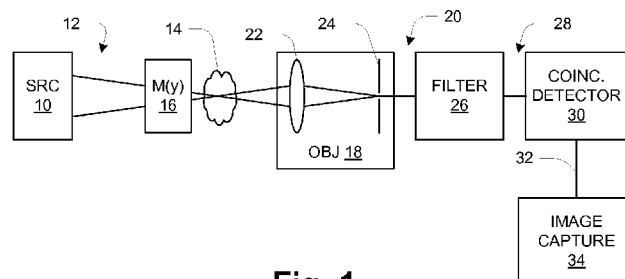


Fig. 1

(57) **Abstract:** A correlation confocal microscope uses correlated photon pairs to improve resolution. It employs a source of a light beam converging to a point location on a sample, and an objective that gathers light from the point location and generates an image beam. A modulator applies a spatial pattern of modulation to the source light beam to define spatially correlated photons whose spatial correlations are preserved in modulated light gathered from the sample. A filter applies a modulation-selective filter function to the image light beam to generate a filtered light beam of like-modulated photons. A coincidence detector detects temporally coincident photon pairs in the filtered light beam, generating a pulse output that indicates the magnitude of a light-detectable property (such as transmissivity or reflectivity) of the sample at the point location. The modulator may apply phase modulation and the filter may be a phase-sensitive component such as an interferometer.

INTERNATIONAL SEARCH REPORT

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PCT/US2011/020186**A. CLASSIFICATION OF SUBJECT MATTER****G02B 21/00(2006.01)i, G01B 9/04(2006.01)i**

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)

G02B 21/00; G02B 21/06; G01J 3/28; G02B 21/36; G02B 27/42

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: confocal, microscope, modulator

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 11-249023 A (MAX PLANCK GES FOERDERUNG WISSENSCHAFT EV) 17 September 1999 See abstract; paragraph [0011]–[0048]; figures 1–6.	1–13
A	WO 97-31282 A1 (ISIS INNOVATION LIMITED) 28 August 1997 See abstract; page 4, line 14–page 10, line 2; figures 1–5.	1–13
A	US 2009-0225409 A1 (ILEV IIKO K. et al.) 10 September 2009 See abstract; paragraph [0027]–[0049]; figures 1–3, 5, 9–10.	1–13
A	US 2002-0122246 A1 (GUILLERMO J. TEARNEY et al.) 05 September 2002 See abstract; paragraph [0036]–[0061]; figures 1–11.	1–13



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See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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