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[Continued on next page]

(54) Title: HIGH-RESOLUTION MICROSCOPY AND PHOTOLITHOGRAPHY DEVICES USING FOCUSING MICROMIRRORS

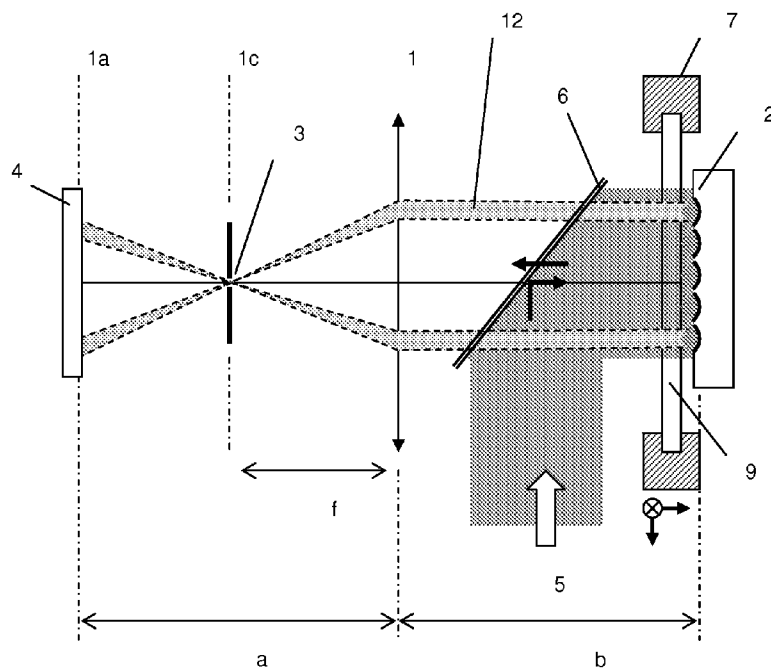


Fig. 1

(57) Abstract: The invention relates to large-field high-resolution microscopy and photolithography setups operating with polychromatic light. It includes the use of a plurality of focusing micromirrors.



TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2010/050300

A. CLASSIFICATION OF SUBJECT MATTER
INV. G02B21/00

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

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, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2008/012767 A2 (ECOLE POLYTECH [CH]; MERENDA FABRICE [CH]; ROHNER JOHANN [CH]; SALATHE) 31 January 2008 (2008-01-31) figures 1a-1c, 6	1-4, 8, 9
Y	page 2, line 19 - line 27 page 8, line 12 - page 12, line 15 page 15, line 1 - page 16, line 6	10-12
Y	H.J. TIZIANI, H.-M. UHDE: "Three-dimensional analysis by a microlens-array confocal arrangement" APPLIED OPTICS, vol. 33, no. 4, 1 February 1994 (1994-02-01), pages 567-572, XP002582935 the whole document ----- -/--	10-12



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

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"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

"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

"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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search

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10/09/2010

Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2010/050300

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 6 133 986 A (JOHNSON KENNETH C [US]) 17 October 2000 (2000-10-17) cited in the application abstract	10-12
A	----- WO 2007/042989 A1 (ECOLE POLYTECH [CH]; BOER GERBEN [CH]; MERENDA FABRICE [CH]; DELACRETA) 19 April 2007 (2007-04-19) abstract; figure 1 -----	1

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2010/050300

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-4, 8-12

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4, 8-12

High-resolution microscopy device comprising a plurality of focusing micromirrors wherein the device is based on the confocal microscopy principle.

2. claims: 5-7, 13-15

High-resolution microscopy device comprising a plurality of focusing micromirrors wherein the device is based on the interference microscopy principle.

3. claims: 16-18

High-resolution photolithography device comprising a plurality of focusing micromirrors wherein the device is used to focus light on a photo-sensitive material.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2010/050300

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
WO 2008012767	A2	31-01-2008	EP	2047479 A2	15-04-2009
US 6133986	A	17-10-2000	NONE		
WO 2007042989	A1	19-04-2007	EP	1934645 A1	25-06-2008
			US	2009190221 A1	30-07-2009