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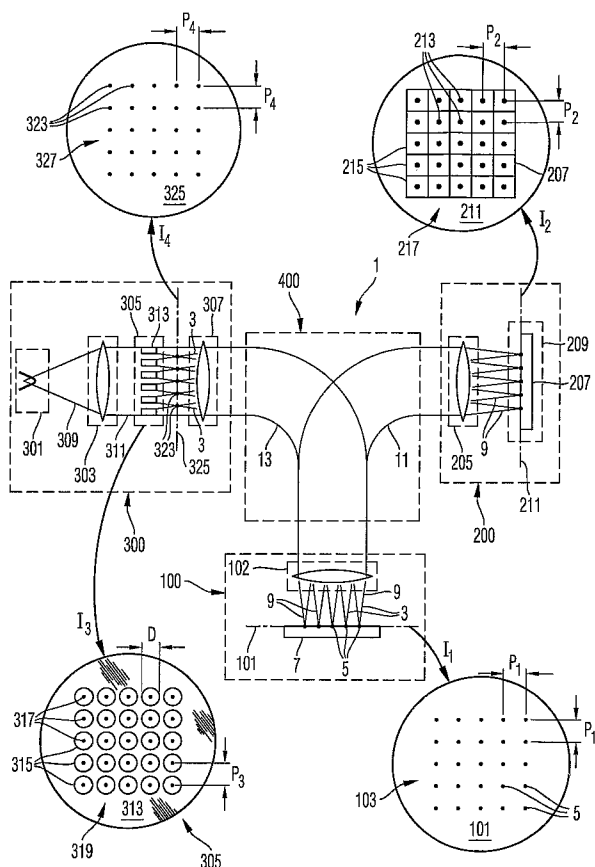
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(54) Title: PARTICLE-OPTICAL SYSTEMS, COMPONENTS AND ARRANGEMENTS



(57) Abstract: A particle-optical arrangement comprises a charged-particle source for generating a beam of charged particles; a multi-aperture plate arranged in a beam path of the beam of charged particles, wherein the multi-aperture plate has a plurality of apertures formed therein in a predetermined first array pattern, wherein a plurality of charged-particle beamlets is formed from the beam of charged particles downstream of the multi-aperture plate, and wherein a plurality of beam spots is formed in an image plane of the apparatus by the plurality of beamlets, the plurality of beam spots being arranged in a second array pattern; and a particle-optical element for manipulating the beam of charged particles and/or the plurality of beamlets; wherein the first array pattern has a first pattern regularity in a first direction, and the second array pattern has a second pattern regularity in a second direction electron-optically corresponding to the first direction, and wherein the second regularity is higher than the first regularity.

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A. CLASSIFICATION OF SUBJECT MATTER

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B. FIELDS SEARCHED

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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 practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	USPGPUB 2002/0033344 A1 (MABUCHI et al.) 21 March 2002 (21.03.2002), sections [0351],[0125],[0053],[0576]	8-12,123,124,128-134
Y	USPGPUB 2002/0033344 A1 (MABUCHI et al.) 21 March 2002 (21.03.2002), section [0351]	21-30, 106-111
Y	US 5,808,310 (YAMASHITA et al.) 15 September 1998 (15.09.1998), column 4, lines 48-51	21-30
Y	USPGPUB 2002/019090 A1 (NAKASUJI et al.) 15 August 2002 (15.08.2002), section [270]	106-111
&	USPGPUB 2002/0036264 A1 (NAKASUJI et al.) 28 March 2002 (28.03.2002)	8-12,21-30,123,124,106-111,128-134
&	USPGPUB 2003/0155509 A1 (NAKASUJI et al.) 21 August 2003 (21.08.2003)	8-12,21-30,106-111,123,124,128-134

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"O" document referring to an oral disclosure, use, exhibition or other means		
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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.
P	USPGPUB 2004/0113092 A1 (KNIPPELMAYER et al.) 17 June 2004 (17.06.2004)	1-162
P	US 6,891,168 B2 (KNIPPELMAYER et al.) 10 May 2005 (10.05.2005)	1-162
E	USPGPUB 20060289804 A1 (KNIPPELMAYER et al.) 28 December 2006 (28.12.2006)	1-162