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(54) Title: SORTING COLLOIDAL PARTICLES INTO MULTIPLE CHANNELS WITH OPTICAL FORCES: PRISMATIC OPTICAL FRACTIONATION

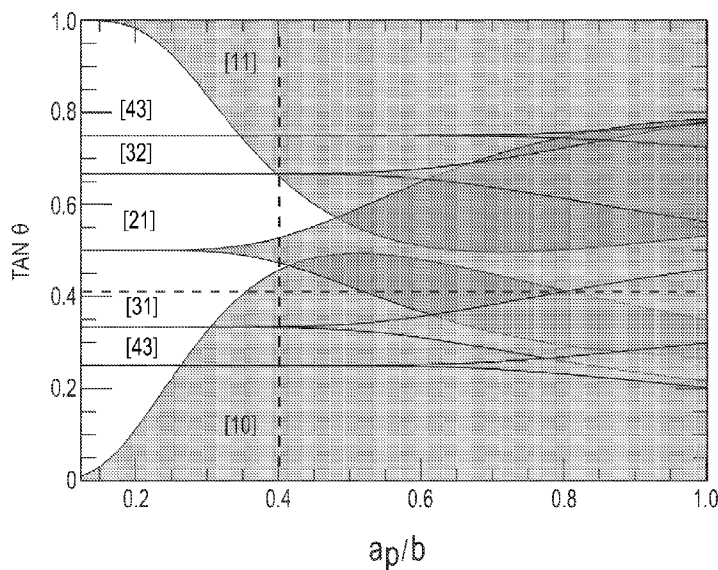


FIG. 1

(57) Abstract: A method and system for controlled fractionation of particles. A sample having a plurality of particles of different size distributions. A uniform array for the preparing of optical traps having a selected array lattice constant. The plurality of particles for inputting the plurality of particles to the uniform array of optical traps at a driving direction angle and the plurality of particles separating along different directions based on variable particle attributes.



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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

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: fractionation, colloidal particles, optical trap, lattice constant, deflection.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,797,942 B2 (GRIER et al.) 28 September 2004 See the abstract; figures 1A-1C, 3-4, and 6; and col.1, lines 14-19, col.1, lines 44-46, col.3, lines 8-16, col.3, lines 29-35, col.3, lines 46-48, col.4, lines 32-35, col.5, lines 28-32, col.5, lines 45-50, col.6, lines 34-37, and col.6, lines 45-49.	1,8-9, 11-13, 15, 18-19
A		2-7, 10, 14, 16-17
PX	XIAO et al. Sorting colloidal particles into multiple channels with optical forces: Prismatic optical fractionation. Phys. Rev. 30 Nov. 2010, E82, Issue 5, pp.051407(1-9). See the whole document.	1-19
A	US 6,995,351 B2 (CURTIS et al.) 07 February 2006 See the abstract; figures 1 and 6-7; and col.1, lines 64-67, col.2, lines 27-36, and col.4, lines 47-63.	1-19
A	US 7,276,170 B2 (OAKLEY et al.) 02 October 2007 See the abstract; figures 5-16; col.5, lines 57-64, col.6, lines 38-50, and col.8, lines 12-20; and claims 1 and 4.	1-19

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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.
A	US 6,815,664 B2 (WANG et al.) 09 November 2004 See the abstract; figures 14A-18, 20-21, 27A-28, and 30; and col.14, lines 40-44 and col.23, line 63 - col.24 line 11.	1-19

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