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(54) Title: FLOW CYTOMETER APPARATUS FOR THREE DIMENSIONAL DIFFRACTION IMAGING AND RELATED METHODS

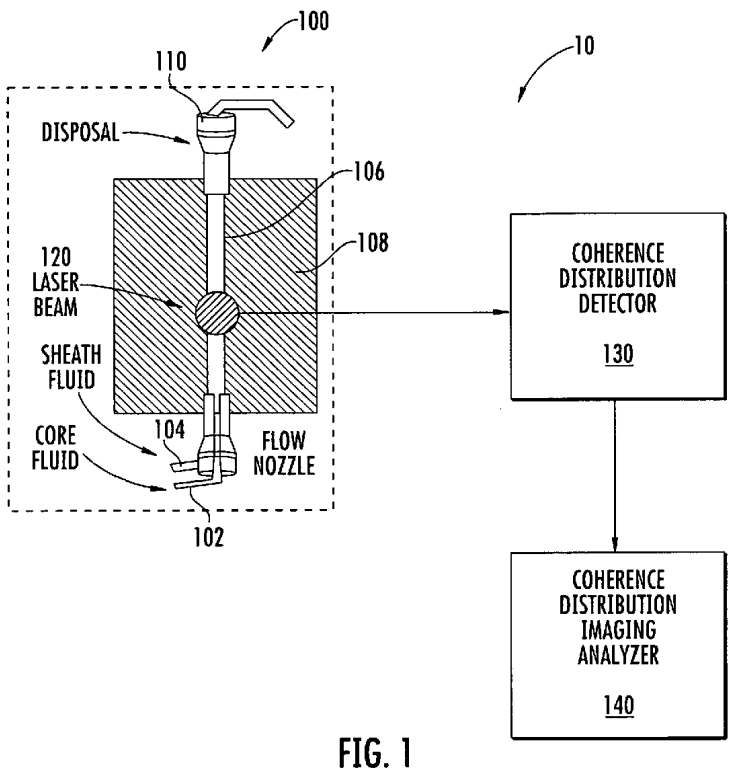

FIG. 1

(57) Abstract: A flow cytometer assembly includes a fluid controller configured to form a hydrodynamically focused flow stream including an outer sheath fluid and an inner core fluid. A coherent light source is configured to illuminate a particle in the inner core fluid. A detector is configured to detect a spatially coherent distribution of elastically scattered light from the particle excited by the coherent light source. An analyzing module configured to extract a three-dimensional morphology parameter of the particle from a spatially coherent distribution of the elastically scattered light.

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B. FIELDS SEARCHED

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

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5017497 A1 (BERNARD GERARD DE GROOTH et al.) 21 May 1991 See Abstract and Claims 1-8.	1-36
A	US 2002-0141625 A1 (ALAN C. NELSON) 03 October 2002 See Abstract and Claims 1-10.	1-36
A	US 4500641 A1 (GERRIT J. VAN DEN ENGH et al.) 19 February 1985 See Abstract and Claims 1-5.	1-36
A	US 2005-0110996 A1 (JONATHAN SHARPE et al.) 26 May 2005 See Abstract.	1-36

☐ Further documents are listed in the continuation of Box C.

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