

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/JP2019/005366

**A. CLASSIFICATION OF SUBJECT MATTER**

Int. Cl. G01N27/62 (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)

Int. Cl. G01N27/62, H01J40/00-49/48, G01N33/48-33/98

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

Published examined utility model applications of Japan 1922-1996

Published unexamined utility model applications of Japan 1971-2019

Registered utility model specifications of Japan 1996-2019

Published registered utility model applications of Japan 1994-2019

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

JSTPlus/JMEDPlus/JST7580 (JDreamIII)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2017/002226 A1 (SHIMADZU CORPORATION) 05 January 2017, paragraphs [0009]-[0049] & US 2018/0197726 A1, paragraphs [0014]-[0086] & EP 3318866 A1 & CN 107850567 A	1-6
Y	WO 2016/103312 A1 (SHIMADZU CORPORATION) 30 June 2016, paragraphs [0014]-[0036] & US 2017/0352525 A1, paragraphs [0016]-[0050] & EP 3239704 A1	1-6
Y	WO 2017/195271 A1 (SHIMADZU CORPORATION) 16 November 2017, paragraph [0035] (Family: none)	1-6

Further documents are listed in the continuation of Box C.  See patent family annex.

* Special categories of cited documents:	“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
“A” document defining the general state of the art which is not considered to be of particular relevance	“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
“E” earlier application or patent but published on or after the international filing date	“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
“L” document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	“&” document member of the same patent family
“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	

Date of the actual completion of the international search 16.04.2019	Date of mailing of the international search report 07.05.2019
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Name and mailing address of the ISA/ Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer  Telephone No.
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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.
Y	JP 2014-215043 A (SHIMADZU CORPORATION) 17	6
A	November 2014, paragraph [0027] & US 2014/0316717 A1, paragraph [0036] & EP 2797104 A2 & CN 104112643 A	1-5
A	WO 2018/037569 A1 (SHIMADZU CORPORATION) 01 March 2018 (Family: none)	1-6
A	JP 2013-257282 A (CANON KABUSHIKI KAISHA) 26 December 2013 (Family: none)	1-6
A	JP 2012-181022 A (CANON KABUSHIKI KAISHA) 20 September 2012 (Family: none)	1-6
A	JP 2013-68565 A (SHIMADZU CORPORATION) 18 April 2013 & US 2013/0080072 A1	1-6
A	US 2012/0016598 A1 (DEININGER SOREN-OLIVER) 19 January 2012 & EP 2388797 A1	1-6