

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2019/108463

A. CLASSIFICATION OF SUBJECT MATTER		
H01J 49/42(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)		
H01J		
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)		
CNABS; CNTXT; DWPI; SIPOABS; CNKI; IEEE: 质谱仪, 离子, 检测, 线性, 导线, 孔, 拉伸, 张力, 绝缘板, mass spectrograph, ions, detect, linear, wire, hole, via, stretch, tension, insulation plate		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 109937465 A (UNIV OF WARWICK) 25 June 2019 (2019-06-25) entire document	1-9
A	CN 104487209 A (MU, Tai et al.) 01 April 2015 (2015-04-01) entire document	1-9
A	CN 105247654 A (BEIJING INSTITUTE OF TECHNOLOGY) 13 January 2016 (2016-01-13) entire document	1-9
A	US 4328420 A (FRENCH JOHN B) 04 May 1982 (1982-05-04) entire document	1-9
A	Qinghao Wu et al. "Miniaturized Linear Wire Ion Trap Mass Analyzer" <i>Analytical Chemistry</i> , Vol. 88, No. 15, 02 July 2016 (2016-07-02), ISSN: 0003-2700, pp. 7800-7806	1-9
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 "E" earlier application or patent but published on or after the international filing date "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) "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		Date of mailing of the international search report
22 June 2020		01 July 2020
Name and mailing address of the ISA/CN		Authorized officer
China National Intellectual Property Administration (ISA/CN) No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088 China		
Facsimile No. (86-10)62019451		Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	109937465	A	25 June 2019	JP	2019530155	A	17 October 2019
				EP	3510629	A1	17 July 2019
				WO	2018046968	A1	15 March 2018
				IN	201947014393	A	17 May 2019
CN	104487209	A	01 April 2015	KR	101348404	B1	09 January 2014
				CN	104487209	B	24 August 2016
				WO	2013180352	A1	05 December 2013
				KR	20130133418	A	09 December 2013
CN	105247654	A	13 January 2016	WO	2014075204	A1	22 May 2014
				CN	105247654	B	07 December 2016
US	4328420	A	04 May 1982	CA	1134956	A	02 November 1982
				EP	0024149	B1	04 July 1984
				DE	3068430	D1	09 August 1984
				EP	0024149	A1	25 February 1981