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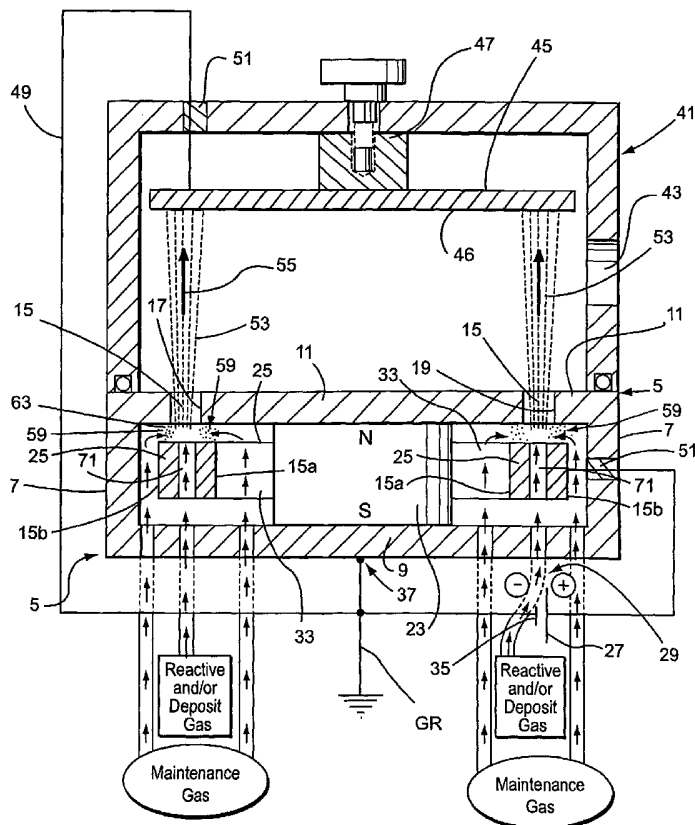
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[Continued on next page]

(54) Title: COLD CATHODE ION BEAM DEPOSITION APPARATUS WITH SEGREGATED GAS FLOW



(57) Abstract: A cold cathode closed drift ion source is provided with segregated gas flow. The first gas may be caused to flow through or along a path around a peripheral portion of the anode so as to pass through the electric gap between the anode and cathode. A second gas (different from the first gas) may be caused to flow toward the ion emitting slit, without much of the second gas having to pass through the electric gap(s). If it is desired to utilize a gas which produces insulative material (e.g., an organosilicon gas), this gas may be used as the second gas. Accordingly, insulative material build-up in the electric gap between the anode and cathode may be reduced, and changes in beam chemistry can be achieved without unduly altering ion beam characteristics.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01J37/08

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)

IPC 7 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 practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 037 717 A (MAISHEV YURI ET AL) 14 March 2000 (2000-03-14) cited in the application abstract; figures	1
A	US 5 973 447 A (DANIELS BRIAN KENNETH ET AL) 26 October 1999 (1999-10-26) cited in the application abstract; figures	1



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6037717	A	14-03-2000	NONE	
US 5973447	A	26-10-1999	JP 2001511580 T	14-08-2001
			WO 9905417 A1	04-02-1999
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