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(74) Agent: **ROLFES, Johannes, G., A.**; Prof. Holstlaan 6,  
NL-5656 AA Eindhoven, (NL).

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(71) Applicant (for DE only): **PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH** [DE/DE]; Lübeckertordamm 5, 20099 Hamburg (DE).

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(71) Applicant (for all designated States except DE, US): **KONINKLIJKE PHILIPS ELECTRONICS N. V.** [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

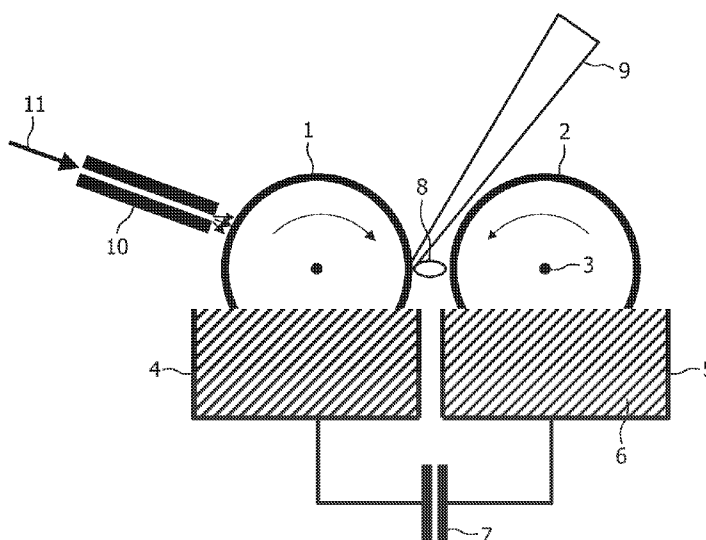
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(75) Inventors/Applicants (for US only): **JONKERS, Jeroen** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **VAUDREVANGE, Dominik, Marcel** [DE/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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(54) Title: A METHOD OF INCREASING THE CONVERSION EFFICIENCY OF AN EUV AND/OR SOFT X-RAY LAMP AND A CORRESPONDING APPARATUS



(57) Abstract: The present invention relates to a method of increasing the conversion efficiency of an EUV and/or soft X-ray lamp, in which a discharge plasma (8) emitting EUV radiation or soft X-rays is generated in a gaseous medium formed by an evaporated liquid material in a discharge space, said liquid material being provided on a surface in the discharge space and being at least partially evaporated by an energy beam (9). The invention also refers to a corresponding apparatus for producing EUV radiation and/or soft X-rays. In the method, a gas (11) composed of chemical elements having a lower mass number than chemical elements of the liquid material is supplied through at least one nozzle (10) in a directed manner to the discharge space and/or to the liquid material on a supply path to the discharge space in order to reduce the density of the evaporated liquid material in the discharge space. With the present method and corresponding apparatus the conversion efficiency of the lamp is increased.

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# INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. H05G2/00

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)  
H05G

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

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Y	page 8, line 28 - page 9, line 10; figure 1 page 9, line 24 - page 10, line 2 page 13, line 26 - page 14, line 12	4
X	US 6 084 198 A (BIRX DANIEL [US]) 4 July 2000 (2000-07-04) column 10, lines 12-55; figure 3 column 12, lines 28-47; figure 4	1,2,6,7
Y	US 2005/178985 A1 (MCGEOCH MALCOLM W [US]) 18 August 2005 (2005-08-18) paragraph [0032]	4
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Further documents are listed in the continuation of Box C.

See patent family annex.

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European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Krauss, Jan

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
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