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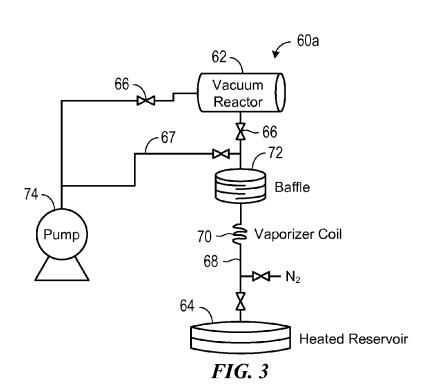
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- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,

[Continued on next page]

(54) Title: VAPOR DELIVERY SYSTEM FOR USE IN IMPRINT LITHOGRAPHY



(57) Abstract: Described are systems and method of using a vapor delivery system for enabling delivery of an adhesion promoter material during an imprint lithography process.



EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, Published: LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

- with international search report (Art. 21(3))
- (88) Date of publication of the international search report: 16 August 2012

International application No. PCT/US2011/050874

A. CLASSIFICATION OF SUBJECT MATTER

B29C 33/38(2006.01)i, B29C 33/42(2006.01)i, B29C 33/04(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)

B29C 33/38; C10K 1/00; F22B 1/28; C23C 16/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6409839 B1 (SUN, J.J. et al.) 25 June 2002 See claims 1, 4-8	1-3,10-12
Y	Schift, H. et al. "Controlled co-evaporation of silanes for nanoimprint stamps", Nanotechnology. 21 Feb. 2005, Vol. 16, pp S171-S175. See abstract; experimental details in page 172	1-3,10-12
A	US 2006-0207503 A1 (PAUL MENEGHINI et al.) 21 September 2006 See the whole document	1-3,10-12
A	US 2003-0021595 A1 (MINDI XU et al.) 30 January 2003 See the whole document	1-3,10-12
A	Li, J. et al. "Engineering the spatial selectivity of surfaces at the nanoscale using particle lithography combined with vapor deposition of organosilanes", ACS Nano, 28 July 2009, Vol. 3(7), pp 2023-2035 See the whole document	1-3,10-12

		Further documents are listed in the continuation of Box C.	
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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 citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other
- "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 mailing of the international search report

Date of the actual completion of the international search

20 APRIL 2012 (20.04.2012)

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Name and mailing address of the ISA/KR



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2011/050874

Box No. II	Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This interna	tional search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1 1	nims Nos.: cause they relate to subject matter not required to be searched by this Authority, namely:
bec	nims Nos.: 9, 16 cause they relate to parts of the international application that do not comply with the prescribed requirements to such an ent that no meaningful international search can be carried out, specifically:
	laims 9 and 16 refer to claims 4-8 or 13-15 which are not drafted in accordance with the second and third sentences of Rule 5.4(a), rendring the said claims too unclear to be searched.
	nims Nos.: 4-8, 13-15, 17-19 cause they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box No. III	Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This Interna	tional Searching Authority found multiple inventions in this international application, as follows:
	all required additional search fees were timely paid by the applicant, this international search report covers all searchable ims.
	all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment any additional fee.
	only some of the required additional search fees were timely paid by the applicant, this international search report covers y those claims for which fees were paid, specifically claims Nos.:
	required additional search fees were timely paid by the applicant. Consequently, this international search report is tricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark or	The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee. The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation. No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2011/050874

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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