

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
1 November 2007 (01.11.2007)

PCT

(10) International Publication Number  
**WO 2007/123806 A3**

(51) International Patent Classification:  
*B05D 5/00* (2006.01)

(21) International Application Number:  
PCT/US2007/008076

(22) International Filing Date: 2 April 2007 (02.04.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/788,810 3 April 2006 (03.04.2006) US  
60/788,809 3 April 2006 (03.04.2006) US

(71) Applicant (for all designated States except US): **MOLECULAR IMPRINTS, INC.** [US/US]; 1807 West Braker Ln, Bldg. C-100, Austin, Texas 78758-3605 (US).

(72) Inventors: **NIMMAKAYALA, Pawan K.**; 3201 Duval Road #525, Austin, Texas 78759 (US). **CHOI, Byung-Jin**; 11512 Medallion Lane, Austin, Texas 78750 (US). **RAFFERTY, Tom H.**; 1906 Stamford Ln, Austin, Texas 78703 (US). **SCHUMAKER, Philip D.**; 7600 Sandia Loop, Austin, Texas 78735 (US).

(74) Agent: **CARTER, Michael D.**; P. O. Box 81536, Austin, Texas 78708-1536 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

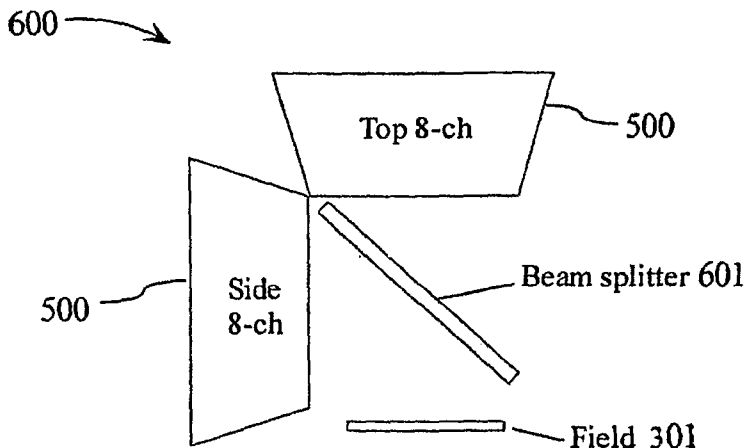
**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
27 December 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: IMPRINT LITHOGRAPHY SYSTEM



(57) Abstract: A imprint lithography system operable for imprinting a pattern into a material deposited between an imprint mold and a substrate, the system including, inter alia, a first set of imaging units positioned at a first angle relative to normal of the substrate; and a second set of imaging units positioned at a second angle relative to normal of the substrate, wherein the first and second angles are not equal to each other.

WO 2007/123806 A3

**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/US 07/08076

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC(8) - B05D 5/00 (2007.01)  
 USPC - 427/256  
 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)  
 USPC - 427/256

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 USPC - 427/256,355; 356/139.04; 349/4; 977/887 (text search - see search terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 PubWEST (PGPB,USPT,USOC,EPAB,JPAB); DialogPro (General Research); Google Scholar  
 Lithography, mold, imaging unit, camera, microscope, set, angle, incline, degree, align, mark, light, four, channel, direct beam, actuator, positioning, edge, prism, mirror

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,954,275 B2 (CHOI et al.) 11 October 2005 (11.10.2005), abstract, Fig. 39, 40 and 46, col 1, ln 26-62, col 5, ln 45 - col 6, ln 16, col 7, ln 60-64, col 15, ln 47 - col 16, ln 21-38, col 24, ln 53 - col 25, ln 29, col 27 - col 28, ln 35, col 30, ln 43-64 and col 32, ln 22-52.	1-10
Y	US 2004/0032581 A1 (NIKOONAHAD et al.) 19 February 2004 (19.02.2004), Fig. 5-7, 20, 23 and 24, para [0006], [0010], [0071]-[0078],[0083], [0092], [0099], [0105], [0126], [0141], [0149]-[0153], [0156], [0159], [0161], [0165], [0170]-[0175] and [0181].	1-10
Y	US 2004/0257571 A1 (MIEHER et al.) 23 December 2004 (23.12.2004), Fig. 9b, para [0027]-[0029], [0115], [0131], [0139]-[0143], [0182], [0210], [0225]-[0228], [0233] and [0280].	5 and 6
A	US 6,580,505 B1 (BAREKET) 17 June 2003 (17.06.2003), entire document.	1-10
A	US 2004/0207836 A1 (CHHIBBER et al.) 21 October 2004 (21.10.2004), entire document.	1-10

Further documents are listed in the continuation of Box C.

* 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 25 September 2007 (25.09.2007)	Date of mailing of the international search report <b>13 NOV 2007</b>
---------------------------------------------------------------------------------------------	--------------------------------------------------------------------------

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young  PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------