(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
10 March 2005 (10.03.2005)

PCT

(10) International Publication Number
WO 2005/021156 A2

(51) International Patent Classification[7]: B01L

(21) International Application Number:
PCT/US2004/026337

(22) International Filing Date: 13 August 2004 (13.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/645,306 21 August 2003 (21.08.2003) US

(71) Applicants *(for all designated States except US)*: **MOLECULAR IMPRINTS, INC.** [US/US]; P.O. Box 81536 (US). **CHOI, Byung-Jin** [US/US]; 11512 Medallion Ln., Austin, TX 78750 (US). **SREENIVASAN, Sidlgata, V.** [US/US]; 10502 Grand Oak Drive, Austin, TX 78750 (US). **WATTS, Michael, P., C.** [US/US]; 9404 Bell Mountain Drive, Austin, TX 78730 (US).

(74) Agent: **BROOKS, Kenneth, C.**; Molecular Imprints, Inc., Legal Department, P.O. Box 81536, Austin, TX 78708-1536 (US).

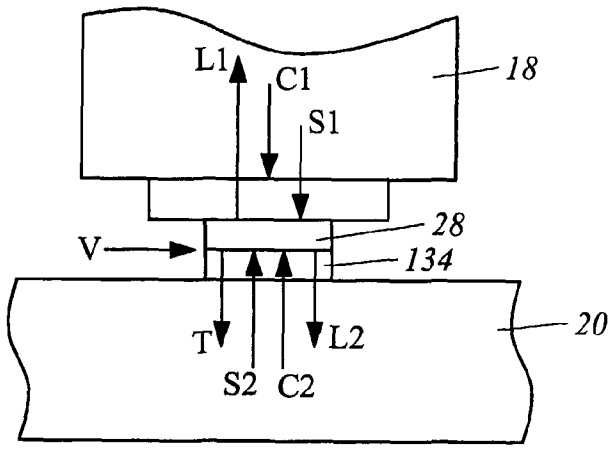
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, IT, LU, MC, 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:
— *without international search report and to be republished upon receipt of that report*

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: CAPILLARY IMPRINTING TECHNIQUE



(57) Abstract: The present invention provides a method for patterning a substrate with a template having a mold that features positioning conformable material between the substrate and the mold and filling a volume defined between the mold and the substrate with the conformable material through capillary action between the conformable material and one of the mold and the substrate. Thereafter, the conformable material is solidified. Specifically, the distance between the mold and the substrate is controlled to a sufficient degree to attenuate, if not avoid, compressive forces between the mold and the substrate. As a result, upon initial contact of the mold with the conformable material, spontaneous capillary filling of the volume between the mold and the substrate occurs.

WO 2005/021156 A2