

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 December 2004 (09.12.2004)

PCT

(10) International Publication Number  
WO 2004/107045 A3

(51) International Patent Classification<sup>7</sup>: B05D 3/10, B29C 33/00, B32B 31/20, B44C 3/08, C03C 17/30

(21) International Application Number:  
PCT/US2004/016016

(22) International Filing Date: 21 May 2004 (21.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
10/444,505 23 May 2003 (23.05.2003) US

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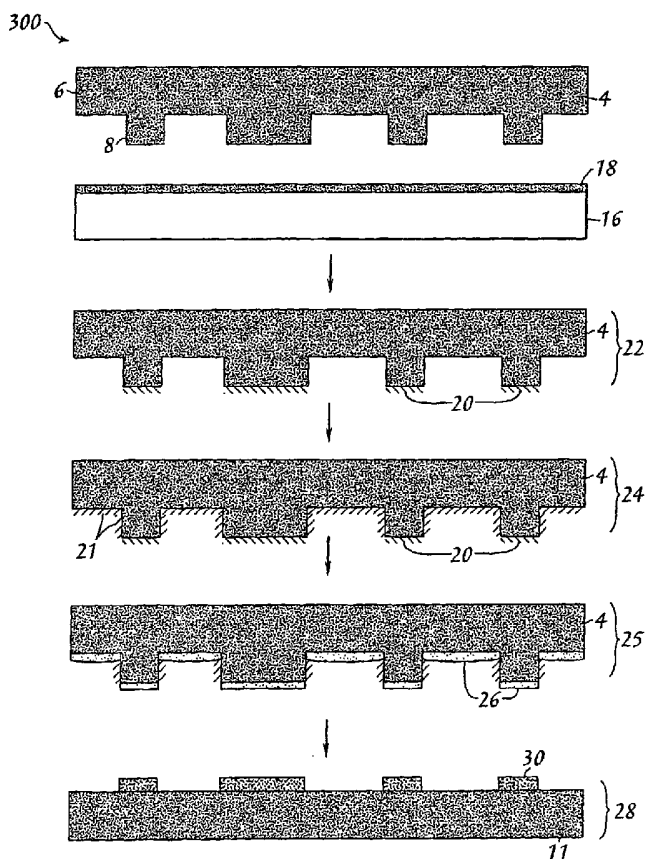
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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

[Continued on next page]

(54) Title: METHODS OF CREATING PATTERNS ON SUBSTRATES AND ARTICLES OF MANUFACTURE RESULTING THEREFROM



(57) Abstract: Methods of creating patterns on substrates are presented, and articles of manufacture resulting therefrom. One method comprises applying a first surface energy modifier (18) to an applicator (16) to form a coating on the applicator; contacting the coating (18) with a receiving member (4), the receiving member having a topography, the coating only contacting and remaining on at least some protrusions (8); exposing the first modified receiving member (22) to a second surface energy modifier (21), thereby forming a second modified receiving member (24) having surface modified recesses; applying a composition (26) comprising a polymeric material to the second modified receiving member (24), the composition substantially conforming to the topography of the surface modified protrusion's (8) and the surface modified recesses; and contacting the composition-coated, surface modified protrusions with a substrate (11) for a time and under conditions sufficient to transfer the polymeric material (26) on protrusions to the substrate (11). Because the surface energy of the sidewalls is lower than that on the protrusions, polymer dewetting from the sidewalls is promoted, which makes the polymer film discontinuous along the edges of patterns. Therefore, inked polymer patterns from the protrusions of the mold show very smooth edges and smaller dimensions compared to that of the mold.

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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.

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*

**(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,

**(88) Date of publication of the international search report:**  
20 January 2005

*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.*

**INTERNATIONAL SEARCH REPORT**

International application No.  
PCT/US04/16016

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC(7) : B05D 3/10; B29C 33/00; B32B 31/20; B44C 3/08; C03C 17/30  
 US CL : 156/232,240,247,273.3,289; 427/133,146,402,407.1,444; 264/219; 216/41,49  
 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)  
 U.S. : 156/232,240,247,273.3,289; 427/133,146,402,407.1,444; 264/219; 216/41,49

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 practicable, search terms used)  
 Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A,P	US 6,673,287 A (BREEN et al) 06 January 2004 (06.01.2004), see entire document, especially column 1, line 66 to column 2, line 22.	1-25
A	US 6,413,587 A (HAWKER et al) 02 July 2002 (02.07.2002), see entire document, especially Figure 2, column 64 to column 12, line 17.	1-24
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Y		25
A	US 6,380,101 A (BREEN et al) 30 April 2002 (30.04.2002), see entire document especially Figures 1a-1e, column 3, line 34 column 4, line 6.	1-24
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Y		25
X	US 6,027,595 A (SULESKI) 22 February 2000 (25.02.2000), see entire document, especially Figure 1, column 5, line 59 to column 6, line 28.	23 and 24
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Y		25
A	US 5,512,131 A (KUMAR et al) 30 April 1996 (30.04.1996), see entire document, especially Figure 1a.	1-25
A	US 5,425,848 A (HAISMA et al) 20 June 1995 (25.06.1995), see entire document, especially Figure.	1-25

Further documents are listed in the continuation of Box C.  See patent family annex.

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"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  
10 November 2004 (10.11.2004)

Date of mailing of the international search report  
**01 DEC 2004**

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**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US04/16016

Continuation of B. FIELDS SEARCHED Item 3:

EAST: USPAT, USPGPUB, EPO, JPO, Derwent, IBM-TDB

search terms: silane, transfer, transferred, transferable , transferring, stamp, stamped, stamping, mold, mould, microcontact, micro-contact, micro, contact, print, printed, printing, hydrophil\$5, hydrophob\$5