



(51) International Patent Classification:
A61K 9/00 (2006.01)

(21) International Application Number:

PCT/US2011/000593

(22) International Filing Date:

2 April 2011 (02.04.2011)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/341,824

3 April 2010 (03.04.2010)

US

(72) Inventor; and

(71) Applicant : DOSHI, Praful [US/US]; 12285 World Trade Drive, Suite I, San Diego, CA 92128 (US).

(74) Agent: PRESTON, David, R.; David R. Preston & Associates, 10765 Wallingford Road, San Diego, CA 92126 (US).

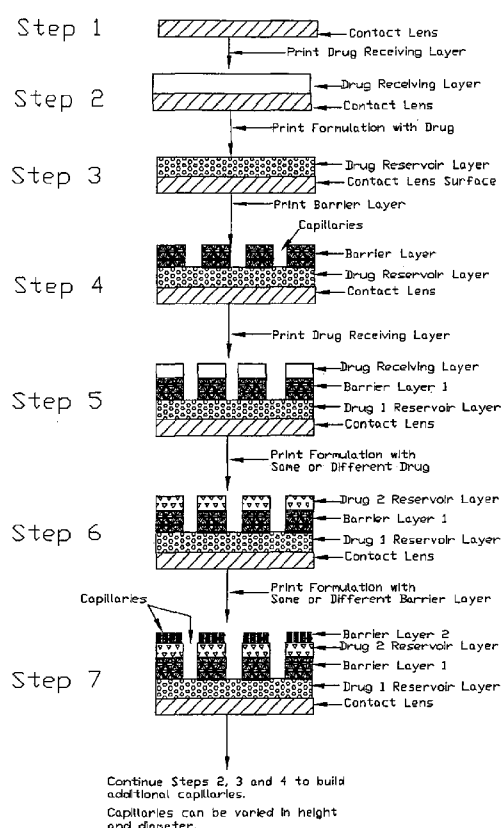
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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,

[Continued on next page]

(54) Title: MEDICAL DEVICES INCLUDING MEDICAMENTS AND METHODS OF MAKING AND USING SAME

Printing of 3D Structures
for Modulation of Drug Release



(57) Abstract: The present invention recognizes that medical devices, such as but not limited to contact lenses, can be made having a coating made at least in part using printing technologies to provide drug storage and drug release structures. The coating preferably includes at least one drug reservoir layer and a least one barrier layer, and can include structures, such as but not limited to capillary structures, that alone or in combination modulate the release of the drug from the coating. One aspect of the present invention is a medical device that incorporates a drug in at least one coating. A second aspect of the present invention is a method of making a medical device that incorporates a drug in at least one coating. A third aspect of the present invention is a method of using a medical device of the present invention to treat or prevent a disease, disorder or condition.



WO 2011/123180 A4



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, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, 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).

Published:

- *with international search report (Art. 21(3))*
- *with amended claims (Art. 19(1))*

Date of publication of the amended claims: 16 February 2012