

CORRECTED VERSION

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
8 May 2008 (08.05.2008)

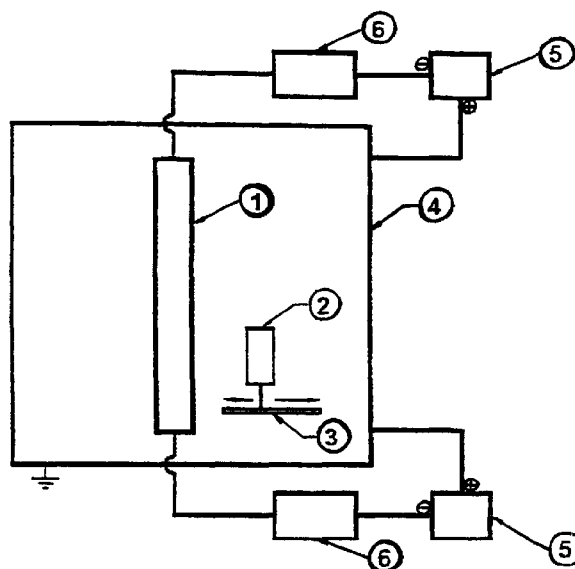
PCT

(10) International Publication Number  
WO 2008/054408 A3

- (51) International Patent Classification:  
A61L 27/40 (2006.01) A61L 27/42 (2006.01)
- (21) International Application Number:  
PCT/US2006/045314
- (22) International Filing Date:  
21 November 2006 (21.11.2006)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
60/786,118 27 March 2006 (27.03.2006) US  
11/603,436 20 November 2006 (20.11.2006) US
- (71) Applicant (for all designated States except US):  
CHAMELEON SCIENTIFIC CORPORATION  
[US/US]; 13355 10th Avenue North, Suite 108, Plymouth,  
MN 55441 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): STOREY, Daniel,  
M. [US/US]; 605 7th Street Southeast, Minneapolis, MN
- 55414 (US). MCGRATH, Terrence, S. [US/US]; 2005  
Calico Court, Longmont, CO 80503 (US). REISING,  
Alexander, B. [US/US]; 2222 Willowbrook Drive, Apt.  
175, West Lafayette, IN 47906 (US).
- (74) Agents: KITCHELL, Barbara, S. et al.; Chameleon Sci-  
entific Corporation, 13355 10th Avenue North, Suite 108,  
Plymouth, MN 55441 (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, GT, HN, HR, HU, ID, IL, IN, IS,  
JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS,  
LT, LU, LV, LY, MA, MD, ME, 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,

[Continued on next page]

(54) Title: MODIFIED SURFACES FOR ATTACHMENT OF BIOLOGICAL MATERIALS



(57) Abstract: The invention relates to bioactive surface coatings deposited on selected substrates. Surface nanostructured film coatings deposited on most metal or nonmetal substrates to provide surfaces can be engineered to promote enhanced tissue/cell adhesion. Attached cells, including osteoblasts, fibroblasts and endothelial cells, retain viability and will readily differentiate and proliferate under appropriate conditions. Fibroblasts and endothelial cells exhibit good attachment and growth on most coated substrates, except on nano surfaced structured silicone.

WO 2008/054408 A3



FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, 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).

**(88) Date of publication of the international search report:**  
3 July 2008

**(48) Date of publication of this corrected version:**  
11 December 2008

**Published:**

— *with international search report*

**(15) Information about Correction:**  
see Notice of 11 December 2008