

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
9 November 2006 (09.11.2006)

PCT

(10) International Publication Number
WO 2006/118547 A1

(51) International Patent Classification:

C08G 63/685 (2006.01) A61K 47/30 (2006.01)
A61K 47/34 (2006.01) A61K 47/48 (2006.01)
C08G 73/02 (2006.01)

(21) International Application Number:

PCT/SG2006/000109

(22) International Filing Date: 28 April 2006 (28.04.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/676,451 29 April 2005 (29.04.2005) US

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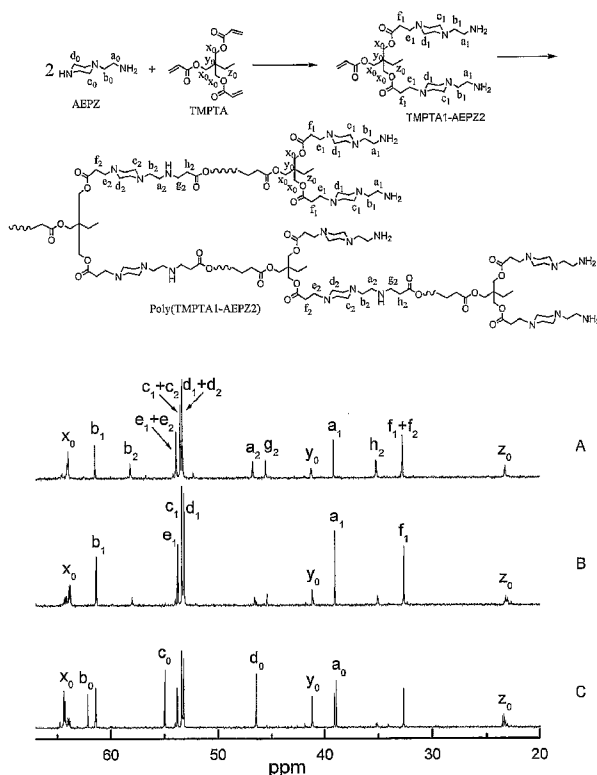
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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI,

[Continued on next page]

(54) Title: HYPERBRANCHED POLYMERS AND THEIR APPLICATIONS



(57) Abstract: The present invention provides a-branched, a dendritic, or a hyperbranched poly(amino ester) having a polymer backbone comprising a plurality of branches, wherein the polymer backbone has at least one secondary and at least one tertiary amine linkage. Branched poly(amino ester)s are prepared via a Michael addition reaction of a tris(acrylate ester) monomer or a tetrakis(acrylate ester) monomer with a diamine monomer. In one aspect, the diamine monomer has a primary amino group and a secondary amino group. The poly(amino ester) compounds can be end-capped by reacting with a suitable agent. The present invention also provides applications include, but are not limited to, the delivery of bioactive agents, such as drugs, DNA or RNA; or biocompatible imaging.



NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

Published:

— with international search report

(48) Date of publication of this corrected version:

6 December 2007

- (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, 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).

(15) Information about Correction:

see PCT Gazette No. 49/2007 of 6 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.