



(51) International Patent Classification:

C08F 2/38 (2006.01) *C08F 20/10* (2006.01)
C08F 4/04 (2006.01) *A61K 47/32* (2006.01)
C08F 20/06 (2006.01)

(21) International Application Number:

PCT/SG2014/000479

(22) International Filing Date:

10 October 2014 (10.10.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2013076179 11 October 2013 (11.10.2013) SG

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(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, BN, 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, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))

(54) Title: DIRECT SYNTHESIS OF PH-RESPONSIVE POLYMER PARTICLES AND APPLICATION IN CONTROL RELEASE OF HYDROPHOBIC THERAPEUTIC COMPOUNDS

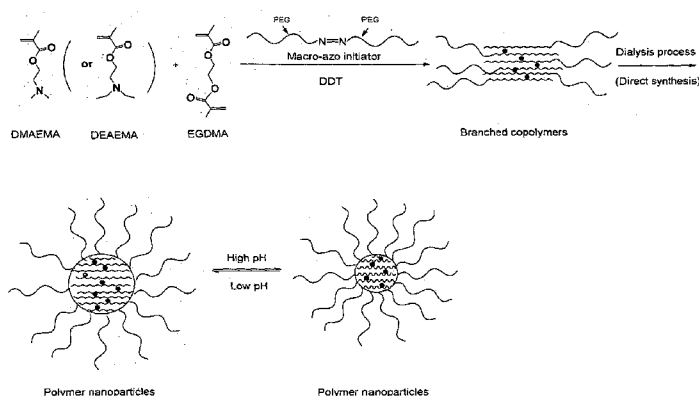


Fig. 1

(57) Abstract: The present disclosure relates to a process for making a branched copolymer comprising reacting polymer monomers with macro-azo polyethylene glycol (PEG) initiators and cross-linkers, in the presence of a chain transfer agent, wherein said process comprises the step of traditional radical polymerization. The process further comprises a step of dialysis to obtain polymer nanoparticles. The process further comprises the step of loading the polymer nanoparticles with a hydrophobic compound. The present disclosure also relates to the use of the polymer nanoparticles for the slow release of a hydrophobic compound in a neutral or alkaline environment or the fast release of a hydrophobic compound in an acidic environment.

