



(51) International Patent Classification:

C08F 299/00 (2006.01) *C08H 7/00* (2011.01)
C08F 220/56 (2006.01) *C08L 51/00* (2006.01)

(21) International Application Number:

PCT/SG2015/050267

(22) International Filing Date:

19 August 2015 (19.08.2015)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10201405015U 19 August 2014 (19.08.2014) SG

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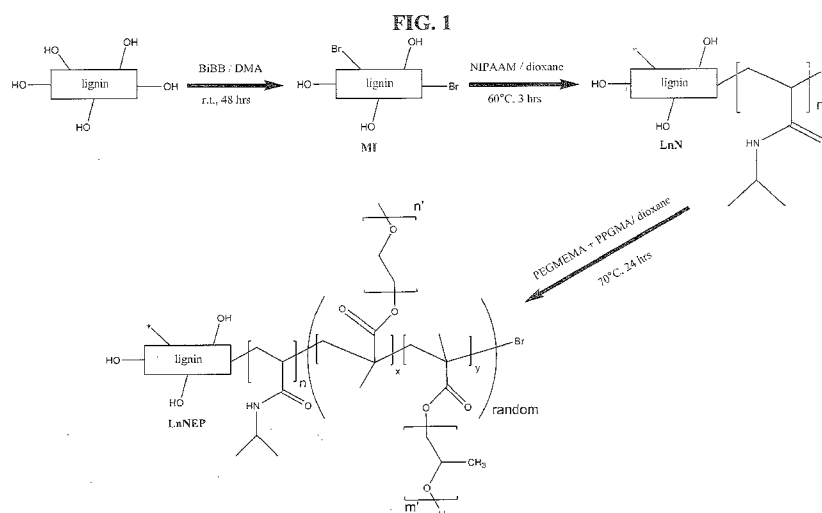
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, 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).

Published:

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

(54) Title: THERMOGELLING GRAFT COPOLYMER AND METHOD OF PREPARATION THEREOF



(57) Abstract: A thermogelling graft copolymer is provided. The copolymer is obtainable by (a) polymerizing, in a first step, an activated lignin-based polymer with N-isopropylacrylamide (NIPAAm) to form a lignin/poly(N-isopropylacrylamide) (PNIPAAm) graft copolymer, and (b) polymerizing, in a second step, the lignin/poly(N-isopropylacrylamide) (PNIPAAm) graft copolymer with a monomer mixture comprising (i) poly(ethylene glycol) (meth)acrylate and/or a C₁₋₁₀ alkyl ether thereof, and (ii) poly(propylene glycol) (meth)acrylate and/or a C₁₋₁₀ alkyl ether thereof, to obtain a lignin-poly(N-isopropylacrylamide)-block-poly(ethylene glycol)/poly(propylene glycol) graft copolymer. Method of preparing the thermogelling graft copolymer is also provided.