



(51) International Patent Classification:

C08F 36/04 (2006.01) *C08F 4/629* (2006.01)
C08F 30/02 (2006.01) *C08F 230/02* (2006.01)
C08F 4/44 (2006.01) *C08F 236/04* (2006.01)
C08F 4/48 (2006.01) *C08F 4/649* (2006.01)
C08F 4/609 (2006.01)

(21) International Application Number:

PCT/US2013/034774

(22) International Filing Date:

1 April 2013 (01.04.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/617,973 30 March 2012 (30.03.2012) US

(71) Applicant: **BRIDGESTONE CORPORATION** [JP/JP];
10-1, Kyobashi 1-Chome, Chuo-Ku, Tokyo 104 (JP).

(72) Inventors; and

(71) Applicants (*for US only*): **HOGAN, Terrence E.** [US/US]; 4393 Castlegate Blvd., Uniontown, Ohio 44685 (US). **HERGENROTHER, William L.** [US/US]; 195 Dorchester Road, Akron, Ohio 44313 (US). **ROGGE-MAN, David M.** [US/US]; 4971 Corkwood Drive, North Royalton, Ohio 44133 (US).

(74) Agents: **WOOD, Jon** et al.; 10 East Firestone Blvd., Akron, Ohio 44317 (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, 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, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, 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, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: PREPARATION OF FUNCTIONAL POLYMERS USING PHOSPHIDE INITIATORS

(57) Abstract: A method of preparing a polymer, the method comprising: metalating an organophosphine compound in the substantial absence of monomer to form a metalated organophosphine; and introducing the metalated organophosphine to monomer including conjugated diene monomer to form a reactive polymer.

