



(51) International Patent Classification:

*C08F 36/04* (2006.01)      *C08F 4/44* (2006.01)  
*C08F 36/06* (2006.01)      *C08F 4/52* (2006.01)  
*C08F 136/04* (2006.01)    *C08F 4/54* (2006.01)  
*C08F 136/06* (2006.01)

(21) International Application Number:

PCT/US2013/030349

(22) International Filing Date:

12 March 2013 (12.03.2013)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/610,536      14 March 2012 (14.03.2012)      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*): **McCAULEY, Kevin Michael**  
[US/US]; 2390 Amesbury Road, Akron, Ohio 44313 (US).  
**QIN, Zengquan** [CA/US]; 5126 Shillings Way, Copley,  
Ohio 44321 (US). **LUO, Steven** [US/US]; 4453 Hillside  
Drive, Copley, Ohio 44321 (US).

(74) Agents: **WOOD, Jon** et al.; 10 East Firestone Blvd., Ak-  
ron, 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: PROCESS FOR PRODUCING POLYDIENES

(57) Abstract: A method for producing a polydiene, the method comprising the steps of (i) forming an active catalyst by combining a lanthanide-containing compound, an alkylating agent, and a halogen source in the substantial absence of an organosulfide; and (ii) polymerizing conjugated diene monomer in the presence of the active catalyst and an organosulfide.

