

(20060383197)

29.05.06

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
21 July 2005 (21.07.2005)

PCT

(10) International Publication Number
WO 2005/066225 A1

(51) International Patent Classification⁷: **C08F 210/00**,
212/00, 214/00, 216/00, 218/00, 220/00

(21) International Application Number:
PCT/US2004/040677

(22) International Filing Date: 3 December 2004 (03.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/748,582 30 December 2003 (30.12.2003) US

(71) Applicant: **EQUISTAR CHEMICALS, LP** [US/US];
One Houston Center, 1221 McKinney Street, Houston, TX
77010 (US).

(72) Inventors: **LIU, Jia-Chu**; 9643 Sparrow Place, Mason,
OH 45040 (US). **GUO, Shao-Hua**; 316 Horizon Court,
Exton, PA 19341 (US).

(74) Agents: **GUO, Shao-Hua** et al.; Lyondell Chemical Com-
pany, 3801 West Chester Pike, Newtown Square, PA 19073
(US).

(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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SI, 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, 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).

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*



162162



ACTION

WO 2005/066225 A1

(54) Title: LTMC POLYMERIZATION OF UNSATURATED MONOMERS

(57) **Abstract:** A process for polymerizing unsaturated monomers is disclosed. The process comprises polymerizing, in the presence of a late transition metal catalyst (LTMC), a variety of unsaturated monomers which are traditionally, some of which are exclusively, made by free radical polymerizations. The LTMC polymerization provides the polymer with improved properties such as no free radical residue and narrow molecular weight distribution.