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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 June 2001 (07.06.2001)

PCT

(10) International Publication Number
WO 01/40319 A3

(51) International Patent Classification[7]: C07D 211/94, C07B 63/04, C09K 15/20

(21) International Application Number: PCT/US00/30566

(22) International Filing Date:
28 November 2000 (28.11.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/453,099 2 December 1999 (02.12.1999) US

(71) Applicant: **CROMPTON CORPORATION** [US/US]; 199 Benson Road, Middlebury, CT 06749 (US).

(72) Inventors: **BENAGE, Brigitte**; 79 Richard Avenue, Wolcott, CT 06716 (US). **EDWARDS, Angela, M.**; Apartment #28H, 925 Oronoke Road, Waterbury, CT 06708 (US). **KOSOVER, Vilen**; 202 Curve Hill Road, Cheshire, CT 06410 (US). **WANG, Gan**; Unit 62, 480 Oak Avenue, Cheshire, CT 06410 (US). **GENTILE, Anthony**; 90 Mapleridge Drive, Waterbury, CT 06705 (US). **FABIAN, Jesus**; Apartment #1, 90 Folly Brook Boulevard, Wethersfield, CT 06109 (US). **ABRUSCATO, Gerald, J.**; 571 Churchill Street, Southington, CT 06489 (US).

(74) Agent: **REITENBACH, Daniel**; Crompton Corporation, 199 Benson Road, Middlebury, CT 06749 (US).

(81) Designated States *(national)*: BR, CA, CN, ID, JP, KR, MX, SG.

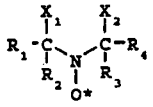
(84) Designated States *(regional)*: European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

Published:
— *with international search report*

(88) Date of publication of the international search report:
6 December 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INHIBITION OF POLYMERIZATION OF UNSATURATED MONOMERS



(I)

(57) Abstract: Disclosed herein is a method for inhibiting the premature polymerization of ethylenically unsaturated monomers comprising adding to said monomers an effective amount of a mixture comprising at least two different inhibitors having structural formula ((I). In this formula, R_1 and R_4 are independently selected from the group consisting of hydrogen, alkyl, and heteroatom-substituted alkyl and R_2 and R_3 are independently selected from the group consisting of alkyl and heteroatom-substituted alkyl; and X_1 and X_2 (1) are independently selected from the group consisting of halogen, cyano, $COOR_{11}$ (wherein R_{11} is alkyl or aryl) amido, $-S-C_6H_5$, $-S-COCH_3$, $-OCOC_2H_5$, carbonyl, alkenyl (where the double bond is not conjugated with the nitroxide moiety), or alkyl of 1 to 15 carbon atoms, or (2) taken together, form a ring structure with the nitrogen.

WO 01/40319 A3