

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 March 2002 (28.03.2002)

PCT

(10) International Publication Number
WO 02/024760 A3

(51) International Patent Classification⁷: C08F 2/44, C08K 3/34

(21) International Application Number: PCT/US01/28994

(22) International Filing Date:
17 September 2001 (17.09.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/234,263 21 September 2000 (21.09.2000) US

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(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, 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, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA,
ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,
CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
4 July 2002

*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.*

(54) Title: AQUEOUS NANOCOMPOSITE DISPERSIONS: PROCESSES, COMPOSITIONS, AND USES THEREOF

(57) Abstract: Processes for utilizing various emulsion polymerization procedures for preparing aqueous nanocomposite dispersion are disclosed. The disclosed processes include both insitu polymerization in the presence of at least partially exfoliated unmodified clays as well as admixtures of polymer dispersions with at least partially exfoliated unmodified clay dispersions. The disclosed nanocomposite dispersion are useful for preparing a variety of materials, such as coatings, adhesives, caulks, sealant, plastic additives, and thermoplastic resins. Processes for preparing polymer clay nanocomposite powders and use of these powders as plastic resin and plastics additives are also disclosed.



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 01/28994

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C08F2/44 C08K3/34

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C08F C08K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data, COMPENDEX, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KIM J W ET AL: "SYNTHESIS AND ELECTROHEOLOGICAL CHARACTERIZATION OF EMULSION POLYMERIZED SAN-CLAY NANOCOMPOSITE SUSPENSIONS", MACROMOLECULAR SYMPOSIA, WILEY VCH, WEINHEIM, DE, NR. 155, PAGE(S) 229-237 XP000991968 ISSN: 1022-1360 the whole document	1,10,11, 16-18
X	DONG CHOO LEE, LEE WOOK JANG: "Preparation and characterization of PMMA-Clay Hybrid composite by emulsion polymerization." JOURNAL APPLIED POLYMER SCIENCE, vol. 61, 1996, pages 117-1122, XP002193909 the whole document	1,10,11, 16-18,45
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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- *Z* document member of the same patent family

Date of the actual completion of the international search

19 April 2002

Date of mailing of the international search report

03/05/2002

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INTERNATIONAL SEARCH REPORT

Int. Application No

PCT/US 01/28994

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 01/28994

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