

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
5 October 2006 (05.10.2006)

PCT

(10) International Publication Number
WO 2006/105076 A3

(51) International Patent Classification:
C07D 213/73 (2006.01) C08G 73/18 (2006.01)

(74) Agents: CALDWELL, John, W. et al.; Woodcock Washburn LLP, 2929 Arch Street - Suite 1200, Philadelphia, PA 19104-2891 (US).

(21) International Application Number:
PCT/US2006/011262

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

(22) International Filing Date: 27 March 2006 (27.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/665,776 28 March 2005 (28.03.2005) US

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

(71) Applicants (for all designated States except US): E.I. DU PONT DE NEMOURS AND COMPANY [US/US]; 1007 Market Street, Wilmington, Delaware 19898 (US). MAGELLAN SYSTEMS INTERNATIONAL, LLC [US/US]; 8310 Shell Road, Richmond, Virginia 23237 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SIKKEMA, Doetze, Jakob [NL/US]; 9807 Old Cannon Road, Richmond, Virginia 23237 (US). RODINI, David, J. [US/US]; 1401 Lady Ashley Court, Midlothian, Virginia 23114 (US). DINDI, Hasan [US/US]; 119 New Granville Road, Wilmington, Delaware 19808-1108 (US). SCHULTZ, James, Arnold [US/US]; 1358 Oldmans Creek Road, Woolwich Township, New Jersey 08085 (US). MARTIN, Georg, Valentin [DE/DE]; Von-galen-strasse 2, D-40764 Langenfeld (DE). DEMUTH, Ralf [DE/DE]; Wohlauerstrasse 13, 40721 Hilden (DE). SCHELHAAS, Michael [DE/DE]; Togostr. 3, 50733 Koln (cologne) (DE).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv))

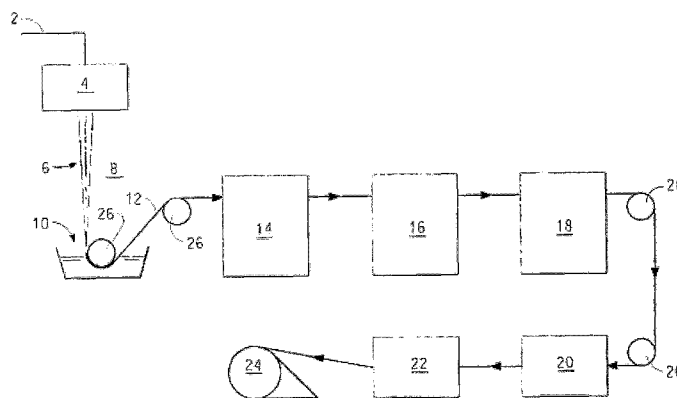
Published:

— with international search report

(88) Date of publication of the international search report:
10 May 2007

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: PROCESSES FOR PREPARING MONOMER COMPLEXES



(57) Abstract: Disclosed are processes for preparing monomer complexes that include contacting 2,3,5,6-tetraaminopyridine free base in water with 2,5-dihydroxy terephthalic acid dipotassium salt to form an aqueous mixture, and adjusting the pH of the aqueous mixture to within the range of from about (3) to about (5) to precipitate the monomer complex. Processes of polymerizing the monomer complexes, polyareneazoles, filaments and yarns are also disclosed.

WO 2006/105076 A3

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/011262

A. CLASSIFICATION OF SUBJECT MATTER
INV. C07D213/73 C08G73/18

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)
C07D C08G

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, BEILSTEIN Data, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SIKKEMA D J: "Design, synthesis and properties of a novel rigid rod polymer, PIPD or 'M5': high modulus and tenacity fibres with substantial compressive strength" POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 39, no. 24, November 1998 (1998-11), pages 5981-5986, XP004132824 ISSN: 0032-3861 page 5983, left-hand column	1-17
A	US 5 674 969 A (SIKKEMA ET AL) 7 October 1997 (1997-10-07) cited in the application claims 10,11; examples B,IV	1,11

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

31 August 2006

Date of mailing of the international search report

06/09/2006

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

van Laren, M

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2006/011262

Patent document cited in search report	A	Publication date	Patent family member(s)	Publication date
US 5674969	A	07-10-1997	AT 169317 T	15-08-1998
			CA 2161663 A1	10-11-1994
			CN 1121728 A	01-05-1996
			DE 69412250 D1	10-09-1998
			DE 69412250 T2	11-02-1999
			DK 696297 T3	10-05-1999
			WO 9425506 A1	10-11-1994
			EP 0696297 A1	14-02-1996
			ES 2120042 T3	16-10-1998
			JP 3527740 B2	17-05-2004
			JP 8509516 T	08-10-1996
			MX PA94003094 A	18-11-2003
			ZA 9402967 A	19-01-1995
