

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
15 November 2001 (15.11.2001)

PCT

(10) International Publication Number  
**WO 01/85637 A3**

(51) International Patent Classification<sup>7</sup>: **G02B 6/16**,  
1/04, C08G 63/08, C03B 37/00, B29D 11/00, A61M  
31/00, G01N 21/63

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(21) International Application Number: PCT/US01/14923

(22) International Filing Date: 8 May 2001 (08.05.2001)

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(25) Filing Language: English

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

(26) Publication Language: English

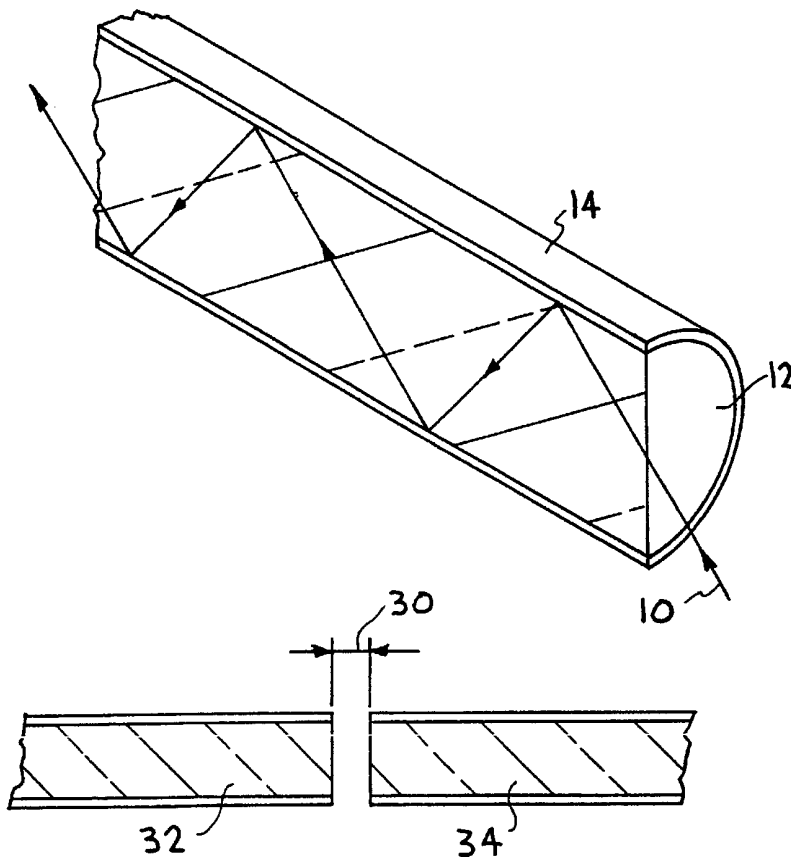
(30) Priority Data:  
09/568,796 9 May 2000 (09.05.2000) US

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(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian

[Continued on next page]

(54) Title: BIODEGRADABLE FIBER OPTIC



(57) Abstract: An optical fiber includes a biodegradable core (12) with an index of refraction that is larger than the index of refraction of its surrounding medium or cladding (14). The biodegradable optical fiber may be formed from a variety of materials such as clear absorbable monofilamentous suture materials. The optical fiber (32) may include a biodegradable and biocompatible means for connecting to at least one other fiber optic (34). Embodiments of the core and cladding materials are given that will biodegrade when activated by heat, moisture, electromagnetic radiation, microbes, plants, animals and their enzymes, fluids or microbial or germ secretions. Many medical uses are provided, such as the inclusion of therapeutic agents embedded within the material of the core and/or the cladding where such agents will be released when the fiber begins to dissolve. An embodiment of the invention utilizes a medium of lower index of refraction through which the core passes to enable total internal reflection.



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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, GW, ML, MR, NE, SN, TD, TG).

**(88) Date of publication of the international search report:**  
25 April 2002

**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*

*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.*

INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 01/14923

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 G02B6/16 G02B1/04 C08G63/08 C03B37/00 B29D11/00  
 A61M31/00 G01N21/63

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 G02B C08G A61L C03B B29D A61M G01N

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, PAJ, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4 867 531 A (PARKER THEODORE L ET AL) 19 September 1989 (1989-09-19) figures 1,2 column 1, line 8 - line 14 column 2, line 2 - line 14 claims abstract	1, 30
A	idem	26, 31, 54-56
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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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Date of the actual completion of the international search  22 February 2002	Date of mailing of the international search report  06/03/2002
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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  Mathyssek, K
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INTERNATIONAL SEARCH REPORT

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