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

(19) World Intellectual Property Organization
International Bureau

PCT

(43) International Publication Date
25 September 2008 (25.09.2008)

(10) International Publication Number
WO 2008/115781 A3

(51) **International Patent Classification:**
C03B 23/207 **(2006.01)** ***C03B 37/028*** **(2006.01)**
C03B 37/012 **(2006.01)** ***C03B 37/15*** **(2006.01)**

(21) **International Application Number:**
PCT/US2008/056978

(22) International Filing Date: 14 March 2008 (14.03.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/687,201 16 March 2007 (16.03.2007) US

(71) **Applicant** *(for all designated States except US):* **UT-BATTELLE, LLC** [US/US]; Ome Bethel Valley Road, P.O.box 2008, Oak Ridge, TN 37831 (US).

(72) Inventor; and
(75) Inventor/Applicant *(for US only):* **D'URSO, Brian, R.** [US/US]; 728 Skyline Drive, Clinton, TN 37716 (US).

(74) Agent: BRUNOVSKIS, Peter; Brinks Hofer Gilson & Lione, P.O. Box 10087, Chicago, IL 60610 (US).

(81) **Designated States** *(unless otherwise indicated, for every kind of national protection available):* AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, **BR,** BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, **HR,** HU, **ID,** IL, IN, IS, **JP,** KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, 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*
— *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:
20 November 2008

(54) Title: METHOD OF PRODUCING MICROCHANNEL AND NANOCHANNEL ARTICLES

(57) Abstract: A method of making an article having channels therethrough includes the steps of: providing a ductile structure defining at least one macro-channel, the macro-channel containing a salt; drawing the ductile structure in the axial direction of the at least one macro-channel to reduce diameter of the macro-channel; and contacting the salt with a solvent to dissolve the salt to produce an article having at least one microchannel.

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INTERNATIONAL SEARCH REPORT

International application No
PCT/US2008/056978

A. CLASSIFICATION OF SUBJECT MATTER
INV. C03B23/207 C03B37/012 C03B37/028 C03B37/15

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)
C03B

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 , WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	TONUCCI R J ET AL: "NANOCHANNEL ARRAY GLASS" SCIENCE, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, US, WASHINGTON, DC, vol. 258, no. 5083, 30 October 1992 (1992-10-30), pages 783-785, XP001024859 ISSN:. 0036-8075 page 784, column 1, paragraph 1 page 784, column 3, paragraph 2	1-8
A	US 5 234 594 A (TONUCCI RONALD J [US] ET AL) 10 August 1993 (1993-08-10) claim 1	1-8

-/-

[X] Further documents are listed in the continuation of Box C.

[X] 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	Date of mailing of the international search report
15 September 2008	24/09/2008

Name and mailing address of the ISA/	Authorized officer
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	Marti nek, K

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 016 636 A (HOYA CORP [OP]) 5 July 2000 (2000-07-05) paragraphs [0024], [0041], [0042], [0044], [0045] claim 1	1-8
A	US 2 752 731 A (HEINO ALTOSAAR) 3 July 1956 (1956-07-03) claim 1	1-8

FURTHER INFORMATION CONTINUED FROM PCTΛSA/ 210

Continuation of Box II. 2

Claims Nos.: 1-8 (partially)

The present claims 1 and 5 relate to an extremely large number of possible methods. Support and disclosure in the sense of Article 6 and 5 PCT is to be found however for only a very small proportion of the methods claimed, see examples 1 and 2 on page 7 which are related to a ductile structure being glass compositions. The non-compliance with the substantive provisions is to such an extent, that the search was performed taking into consideration the non-compliance in determining the extent of the search of claims 1 to 8 (PCT Guidelines 9.19 and 9.23).

The search of claims 1 to 8 was restricted to those claimed methods which appear to be supported by the examples and their generalisation concerning the glass compositions-.

The applicant's attention is drawn to the. fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report *or* during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.2), should the problems which led to the Article 17(2)PCT declaration be overcome.

INTERNATIONAL SEARCH REPORT

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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established In respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.: „
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☒ claims NOS.: 1-8 (parti al ly)
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

see FURTHER INFORMATION sheet PCT/ISA/210

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchabie claims.

2. ☐ As all searchable claims could be searched without effort Justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fses were timely paid by the applicant, this international search reportcovers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the .applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2008/056978

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		DE 4392738 B4	29-06-2006
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EP 1016636 A	05-07-2000	DE 69921080 D1	18-11-2004
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