

12.20.05

A/D 581/110

10/561594

Substitute for Form PTO-1595

12-29-2005

COVER SHEET

U.S. DEPARTMENT OF COMMERCE  
U.S. Patent and Trademark Office



AP9 Rec'd PCT/PTO 20 DEC 2005

Attorney's Docket No. 034279-011

To the Director of the United States Patent and Trademark Office, please record the attached original documents or copy thereof.

103145664

1. Name of conveying party(ies):

David Philip WILLIAMS; Timothy Adam BIRKS; and  
Hendrik SABERT

Additional name(s) of conveying party(ies) attached?  Yes  No

3. Nature of conveyance:

- Assignment  Merger
- Security Agreement  Change of Name
- Other

Execution Date: 06/02/05; 06/01/05; and 06/01/05

2. Name and address of receiving party(ies):

Name: Crystal Fibre A/S

Address:  
Blokken 84, DK-3460, Birkerød, Denmark

Additional name(s) & addresses attached?  Yes  No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: 06/02/05; 06/01/05; and 06/01/05

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: William C. Rowland

Address:

Buchanan Ingersoll PC  
Including attorneys from Burns, Doane, Swecker & Mathis  
Customer Number 2 1 8 3 9  
P.O. Box 1404  
Alexandria, VA 22313-1404

6. Total number of applications and patents involved:

7. Total fee (37 CFR 3.41).....\$ 40.00 (8021)

- Enclosed
- Authorized to be charged to deposit account
- Credit card. Form PTO-2038 is attached.

8. Deposit account number:

02-4800

(Attach duplicate copy of this page if paying by deposit account.)

9. Statement and Signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

William C. Rowland

30,888  
Reg. No.

Signature

December 20, 2005

Date

Total number of pages including cover sheet, attachments, and documents:

Mail documents to be recorded with required cover sheet information to:

Director of the United States Patent and Trademark Office / Mail Stop Assignment Recordation Services  
P.O. Box 1450 / Alexandria, VA 22313-1450

PATENT  
REEL: 017395 FRAME: 0940

### JOINT ASSIGNMENT

THIS ASSIGNMENT, by David Philip Williams, Timothy Adam Birks and Hendrik Sabert

residing at Bath, Great Britain; Bath, Great Britain; and Bath, Great Britain

(hereinafter referred to as "the Assignors"), witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in the application for Letters Patent of the United States, entitled:

**BIREFRINGENT PHOTONIC BANDGAP OPTICAL WAVEGUIDE**

- (1)  which is a provisional application
  - (a)  bearing Application No. \_\_\_\_\_, filed on \_\_\_\_\_;
  - (b)  to be filed herewith; or
- (2)  which is a non-provisional application
  - (a)  bearing Application No. \_\_\_\_\_, filed on \_\_\_\_\_;
  - (b)  having an oath or declaration executed on even date herewith prior to filing of application;
  - (c)  having an oath or declaration executed on a different date than this Assignment; and

WHEREAS, Crystal Fibre A/S,  
a corporation duly organized under and pursuant to the laws of Denmark,  
and having its principal place of business at Blokken 84, DK-3460, Birkerød, Denmark

(hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including provisional applications for Letters Patent of the United States or other countries claiming priority to said application, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behoof and the use and behoof of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made:

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement, and defense of Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;


AND the Assignors hereby authorize and request the attorneys of Burns, Doane, Swecker & Mathis, L.L.P. to insert in the spaces provided above the title of the invention, filing date, application number, and attorney docket number of said application when known.

AND the Assignors hereby request the Director of the United States Patent and Trademark Office to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns.

Date: <u>2/6/05</u>	Signature of Assignor <u><i>DP Williams</i></u> David Philip Williams
Date: _____	Signature of Assignor _____ Timothy Adam Birks
Date: _____	Signature of Assignor _____ Hendrik Sabert
Date: _____	Signature of Assignor _____
Date: _____	Signature of Assignor _____
Date: _____	Signature of Assignor _____
Date: _____	Signature of Assignor _____
Date: _____	Signature of Assignor _____
Date: _____	Signature of Assignor _____

AND the Assignors hereby request the Director of the United States Patent and Trademark Office to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns.

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_  
David Philip Williams

Date: 1/6/05 Signature of Assignor \_\_\_\_\_  
  
Timothy Adam Birks

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_  
Hendrik Sabert

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

AND the Assignors hereby request the Director of the United States Patent and Trademark Office to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behoof of the Assignee, its successors, legal representatives, and assigns.

Date: \_\_\_\_\_ Signature of Assignor David Philip Williams

Date: \_\_\_\_\_ Signature of Assignor Timothy Adam Birks

Date: 40 01/06/05 Signature of Assignor *Hendrik Sabert*  
Hendrik Sabert

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_

Date: \_\_\_\_\_ Signature of Assignor \_\_\_\_\_