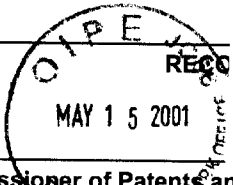


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05-22-2001



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U.S. Department of Commerce  
Patent and Trademark Office  
Attorney Docket No. 07033.0008-00  
Attorney Customer Number: 22,852

To the Honorable Commissioner of Patents and Trademarks  
Please record the attached original documents or copy thereof.

1. BOX ASSIGNMENTS

1. Name of conveying party(ies):  
**Robert A. NORWOOD, Anthony F. GARITO,  
and Anna PANACKAL**

2. Name and address of receiving party(ies):  
Name: **Photon-X, Inc.**

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

3. Nature of conveyance: Street Address: **291 Great Valley Parkway**

Assignment  Merger City: **Malvern**

Security Agreement  Change of Name State: **Pennsylvania** Zip Code: **19355**

Other: Additional name(s) & Address(es) attached?

Execution Date: **May 10, 2001**  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:

A. Patent Application Number(s):  
**09/722,821**

B. Patent Number(s):

Additional numbers attached?  Yes  No

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

Name:

Internal Address: **FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.**

Street Address: **1300 I Street, N.W.**

City: **Washington, D.C.**

State: Zip: **20005-3315**

6. Total number of applications and registrations involved: **1**

7. Total fee (37 CFR 3.41): **\$40**

Enclosed (Please charge deficiency to deposit account)

Authorized to be charged to deposit account

8. Deposit Account No.: **06-0916**

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.

Jonathan A. Hack

Signature

May 15, 2001

Date

Total number of pages including cover sheet, attachments and documents: **2**

05/16/2001 HNDOR1 00000039 09722821  
02 P01361 40.00 05

**ASSIGNMENT**

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

**CODOPANT POLYMERS FOR EFFICIENT OPTICAL AMPLIFICATION**

for which I/WE executed an application for United States Letters Patent concurrently herewith or filed an application for United States Letters Patent on November 28, 2000 (Application No. 09/722,821); and

WHEREAS, Photon-X, Inc.  
a corporation of United States

whose post office address is 291 Great Valley Parkway, Malvern, Pennsylvania 19355

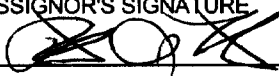
(hereinafter referred to as Assignee), is desirous of securing the entire right, title, and interest in and to this invention, the application for United States Letters Patent on this invention and the Letters Patent to be issued upon this application;

NOW THEREFORE, be it known that, for good and valuable consideration the receipt of which from Assignee is hereby acknowledged, I/WE, as Assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the Assignee, its lawful successors and assigns, my/our entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof; and I/WE hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I/WE HEREBY authorize and request the attorneys I/we have empowered in the Declaration and Power of Attorney in this application, to insert here in parentheses (Application No. 09/722,821, filed November 28, 2000) the filing date and application number of said application when known.

IN TESTIMONY WHEREOF, I/We have hereunto set our hand(s).

1. FULL NAME OF SOLE OR FIRST ASSIGNOR Robert A. NORWOOD	ASSIGNOR'S SIGNATURE 	DATE 051001
ADDRESS 114 Waterwillow Road, West Chester, Pennsylvania 19380		CITIZENSHIP United States
2. FULL NAME OF SECOND ASSIGNOR, IF ANY Anthony F. GARITO <i>A. F. G. - fo</i>	ASSIGNOR'S SIGNATURE <i>A. F. G. - fo</i>	DATE 051001
ADDRESS 106 Rock Rose Lane, Radnor, Pennsylvania 19087		CITIZENSHIP United States
3. FULL NAME OF THIRD ASSIGNOR, IF ANY Anna PANACKAL	ASSIGNOR'S SIGNATURE <i>Anna Panackal</i>	DATE 051001
ADDRESS 9203 Pine Road, Philadelphia, Pennsylvania 19115		CITIZENSHIP United States
4. FULL NAME OF FOURTH ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
ADDRESS		CITIZENSHIP

**PATENT**