504806683 03/06/2018

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4853415

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ALEX CABLE	01/30/2018
VIJAYSEKHAR JAYARAMAN	02/28/2018
JAMES JIANG	02/06/2018
BENJAMIN POTSAID	01/30/2018

RECEIVING PARTY DATA

Name:	THORLABS, INC.
Street Address:	56 SPARTA AVENUE
City:	NEWTON
State/Country:	NEW JERSEY
Postal Code:	07860
Name:	PRAEVIUM RESEARCH, INC.
Street Address:	5330 DEBBIE ROAD
Internal Address:	SUITE 100
City:	SANTA BARBARA
State/Country:	CALIFORNIA
Postal Code:	93111

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15885754

CORRESPONDENCE DATA

Fax Number: (866)864-3947

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 973-401-7157

Email: patent@grahamcurtin.com

Correspondent Name: HARRIS A. WOLIN
Address Line 1: GRAHAM CURTIN, P.A.

Address Line 2: 4 HEADQUARTERS PLAZA, P.O. BOX 1991
Address Line 4: MORRISTOWN, NEW JERSEY 07962-1991

PATENT 504806683 REEL: 045122 FRAME: 0405

ATTORNEY DOCKET NUMBER:	3797-12 (THOR 5945A)
NAME OF SUBMITTER:	HARRIS A. WOLIN
SIGNATURE:	/Harris A. Wolin/
DATE SIGNED:	03/06/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 5	

Total Attachments: 5

source=3797_12_thor_5945a_20180306_dec_assign#page1.tif source=3797_12_thor_5945a_20180306_dec_assign#page2.tif source=3797_12_thor_5945a_20180306_dec_assign#page3.tif source=3797_12_thor_5945a_20180306_dec_assign#page4.tif source=3797_12_thor_5945a_20180306_dec_assign#page5.tif

PATENT REEL: 045122 FRAME: 0406 Customer Number: 61624 Attorney Docket: 3797-12 (THOR 5945A)

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

As a below named inventor (designated as "the undersigned"), I hereby declare that:

This declaration is directed to the application attached hereto and entitled APPARATUS AND METHODS FOR ONE OR MORE WAVELENGTH SWEPT LASERS AND THE DETECTION OF SIGNALS THEREOF. If the application is not attached hereto, the application is as identified by the attorney docket number as set forth above.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, including the claims.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Address all correspondence to CUSTOMER NUMBER 61624.

ASSIGNMENT

WHEREAS, Thorlabs, Inc., having an address at 56 Sparta Avenue, Newton, NJ 07860 and Praevium Research, Inc., having an address at 5330 Debbie Road, Suite 100, Santa Barbara, CA, 93111 (hereinafter "ASSIGNEES"), is desirous of acquiring the entire right, title and interest in, to and under the above identified application and invention, and to any Letters Patent(s) that may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the said ASSIGNEES, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventor's certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

The undersigned authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEES, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

The undersigned covenants and agrees that he has full right to convey the entire interest herein assigned, and has not executed, and will not execute, any agreement in conflict herewith.

Page 1 of 2

Customer Number: 61624 Attorney Docket: 3797-12 (THOR 5945A)

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

The undersigned further covenants and agrees that he will communicate to the said ASSIGNEES, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEES, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

The undersigned hereby grants the law firm of **Graham Curtin**, **P.A.** the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

5 th and a Court of the Court o	
. //	Date: 1/30118
Residence: Newton, NJ	
Post Office Address: c/o Thorlabs, Inc., 56 Sparta A	venue, Newton, NJ 07860
Full name of joint inventor: Vijaysekhar Jayaram	an
Inventor's Signature:	Date:
Residence: Goleta, CA	
Post Office Address: c/o Praevium Research, Inc., 5330 [
Full name of joint inventor:	
Inventor's Signature:	Date:
Residence: Hackettstown, NJ	
Post Office Address: c/o Thorlabs, Inc., 56 Sparta A	
Full name of joint inventor: Benjamin Potsaid	
Inventor's Signature:	
Residence: Cambridge, MA	
Post Office Address: c/o Thorlabs, Inc., 56 Sparta A	

Attorney Docket: 3797-12 (THOR 5945A)

Customer Number: 61624

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

The undersigned further covenants and agrees that he will communicate to the said ASSIGNEES, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, relssue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEES, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

The undersigned hereby grants the law firm of **Graham Curtin, P.A.** the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both.

in witness whereof, executed by the undersigned on the date opposite the undersigned name.

Full name of first inventor: Alex Cable	
Inventor's Signature:	Date:
Residence: Newton, NJ	and the second of the second
Post Office Address: c/o Thorlabs, Inc., 56 Sparta Av	enue, Newton, NJ 07860
Full name of joint inventor: Vijavsekhar Javarama	n / /
Inventor's Signature:	Date: 2/26/18
Residence: Goleta, CA	
Post Office Address: c/o Praevium Research, Inc., 5330 D	ebbie Road, Suite 100, Santa Barbara, CA 93111.
Full name of joint inventor:	
Inventor's Signature:	
Residence: Hackettstown, NJ	
Post Office Address: c/o Thorlabs, Inc., 56 Sparta A	
Full name of joint inventor: Benjamin Potsaid	
Inventor's Signature:	Date:
Residence: Cambridge, MA	•
Post Office Address: c/o Thorlabs, Inc., 56 Sparta A	venue, Newton, NJ 07860

Page 2 of 2

Customer Number: 61624 Attorney Docket: 3797-12 (THOR 5945A)

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

The undersigned further covenants and agrees that he will communicate to the said ASSIGNEES, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEES, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

The undersigned hereby grants the law firm of **Graham Curtin**, **P.A.** the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

Full name of first inventor: Alex Cable	
Inventor's Signature:	Date:
Residence: Newton, NJ	
Post Office Address: <u>c/o Thorlabs, Inc., 56 Spart</u>	ta Avenue, Newton, NJ 07860
Full name of joint inventor: Vijaysekhar Jayar	aman
Inventor's Signature:	Date:
Residence: Goleta, CA	
Post Office Address: c/o Praevium Research, Inc., 533	30 Debbie Road, Suite 100, Santa Barbara, CA 93111
Full name of joint inventor: Inventor's Signature: Residence: Hackettstown, NJ	Date: 2/6/1018
Post Office Address: <u>c/o Thorlabs, Inc., 56 Spart</u>	la Avenue, Newton, NJ 07860
Full name of joint inventor: Benjamin Potsaid	
Inventor's Signature:	Date:
Residence: Cambridge, MA	
Post Office Address: c/o Thorlabs, Inc., 56 Spart	ta Avenue, Newton, NJ 07860

Customer Number: 61624

Attorney Docket: 3797-12 (THOR 5945A)

DECLARATION AND ASSIGNMENT FOR PATENT APPLICATIONS

The undersigned further covenants and agrees that he will communicate to the said ASSIGNEES, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEES, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

The undersigned hereby grants the law firm of **Graham Curtin**, **P.A.** the power to insert any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The undersigned hereby acknowledges that any willful false statement made in this declaration is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date opposite the undersigned name.

Full name of first inventor:Alex	Cable
Inventor's Signature:	Date:
Residence: Newton, NJ	
Post Office Address: c/o Thorlabs.	Inc., 58 Sparta Avenue, Newton, NJ 07860
	sekhar Jayaraman
Inventor's Signature:	Date:
Residence: Goleta, CA	
	arch, Inc., 5330 Debbie Road, Suite 100, Santa Barbara, CA 93111.
	es Jiang
Inventor's Signature:	Date:
Residence: Hackettstown, NJ	
Post Office Address: c/o Thorlabs.	Inc., 56 Sparta Avenue, Newton, NJ 07860
Full name of joint inventor:Beni	amin Potsaid
Inventor's Signature:	Page: 1/30/2018
Residence: Cambridge MA	
Post Office Address: c/o Thorlabs.	Inc., 56 Sparta Avenue, Newton, NJ 07860

Page 2 of 2

REEL: 045122 FRAME: 0411