

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5843886

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
THOMAS BAEHR-JONES	03/08/2015
YI ZHANG	12/30/2014
MICHAEL J. HOCHBERG	01/26/2016
ARI NOVACK	11/29/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CORARIANT ADVANCED TECHNOLOGY, LLC
<b>Street Address:</b>	171 MADISON AVENUE
<b>Internal Address:</b>	SUITE 1100
<b>City:</b>	NEW YORK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10016
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16699363
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
<b>Phone:</b>	858-519-2319
<b>Email:</b>	ipadmin@stratfordmanagers.com
<b>Correspondent Name:</b>	STRATFORD MANAGERS CORPORATION C/O JORDA
<b>Address Line 1:</b>	11790 CARMEL CREEK RD
<b>Address Line 2:</b>	UNIT 301
<b>Address Line 4:</b>	SAN DIEGO, CALIFORNIA 92130
<b>ATTORNEY DOCKET NUMBER:</b>	0200-5USC6
<b>NAME OF SUBMITTER:</b>	MEHDI ZAMANPOUR
<b>SIGNATURE:</b>	/Mehdi Zamanpour/
<b>DATE SIGNED:</b>	11/29/2019
<b>Total Attachments: 9</b>	

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## JOINT ASSIGNMENT

WE, **Thomas Baehr-Jones** and **Yi Zhang**, believe that we are the inventors of the subject matter disclosed in the application for patent (hereinafter "the invention or inventions") identified herein as

### GERMANIUM METAL-CONTACT-FREE NEAR-IR PHOTODETECTOR

and further identified by Attorney Docket Numbers **COR-005US** and **COR-005PCT**.

In consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration paid to each of the undersigned, the receipt and sufficiency of which is hereby acknowledged, each of the undersigned agrees to assign, and hereby does assign, transfer and set over to **Coriant Advanced Technology, LLC**, having a place of business at 116 W 23rd Street, Suite 500, New York NY 10011 (hereinafter designated as the Assignee) his or her entire right, title and interest in the invention or inventions as represented by the application for patent identified herein (the 'application') in the United States, its territories, dependencies and possessions, his or her entire right, title, and interest in the application, and his or her entire right, title and interest in the invention or inventions as regards all other national jurisdictions and international entities that have the power to grant patents, wherever situated, including without limitation all applications for patent which claim priority to and/or the benefit of the subject matter disclosed in the application for patent identified herein, including any provisional application, utility application, design application, and/or plant application, as well as any continuation application, divisional application, continuation-in-part application, reissue application, reexamination application, patent interference proceeding, foreign national application and/or any application filed or to be filed under a patent treaty such as the International Convention for Protection of Industrial Property and/or the Patent Cooperation Treaty, and any Letters Patent which may be granted therefor in any jurisdiction.

In addition to the above assignment, each of the undersigned agrees to execute all papers necessary in connection with the application and any continuing applications, divisional applications, or continuations-in-part thereof, and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

Each of the undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference.

Each of the undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

Each of the undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee.

Each of the undersigned hereby authorizes and requests the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from said application or any divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he or she has full right to convey the entire interest herein

Joint Assignment

Date Filed:

Attorney Docket No.: COR-005US, COR-005PCT

assigned, and that he or she has not executed and will not execute, any agreement in conflict herewith.

Each of the undersigned hereby grants to any duly empowered legal representative, including all patent practitioners associated with Customer Number 88993, the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or with the rules of any other national or international Patent Office for recordation of this document or a true copy thereof.

Each of the undersigned hereby states that:

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 hereby acknowledge 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, this instrument has been executed by the undersigned on the date opposite the respective name of the undersigned.

This assignment should preferably be signed before: (a) a Notary Public if within the U.S.A. or (b) a U.S. Consul if outside the U.S.A. If neither is available, then it should be signed before at least two witnesses.

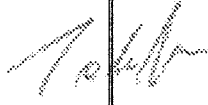
*[Signature pages are appended hereto]*

Joint Assignment

Date Filed:

Attorney Docket No.: COR-005US, COR-005PCT

Date: March 8 2015

Signature:  (SEAL)

**Thomas Baehr-Jones**

STATE OF CALIFORNIA  
COUNTY OF \_\_\_\_\_

)  
)ss.:

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me personally came Thomas Baehr-Jones to me known and known to me to be the person described in and who executed the within instrument and he/she acknowledged to me that he/she executed the same.

\_\_\_\_\_  
Notary Public

Yi Zhang has signed a separate document.

**ASSIGNMENT – MULTIPLE MATTERS**

I, Yi Zhang, believe that I am an inventor of the subject matter disclosed in the application(s) for patent and/or invention disclosures (hereinafter "the invention(s)") identified herein as:

Reference	Title	Serial No.
COR-005PRO	HIGH-RESPONSIVITY FLOATING GERMANIUM PHOTODETECTOR	US 61/950,816
COR-011PRO	PHOTONIC CHIP STABILIZATION USING A BANDGAP TEMPERATURE SENSOR	US 62/075,763
COR-012CIP	SAGNAC LOOP MIRROR BASED LASER CAVITY ON SILICON PHOTONICS PLATFORM	
COR-012PCT	SAGNAC LOOP MIRROR BASED LASER CAVITY ON SILICON PHOTONICS PLATFORM	PCT/US14/66657
COR-012PRO	SAGNAC LOOP MIRROR BASED LASER CAVITY ON SILICON PHOTONICS PLATFORM	US 61/906,529
COR-012US	SAGNAC LOOP MIRROR BASED LASER CAVITY ON SILICON PHOTONICS PLATFORM	US 14/549,130
COR-013US	A COMPACT AND LOW LOSS Y-JUNCTION FOR SUBMICRON SILICON WAVEGUIDE	US 14/093,263
COR-015	HIGH LINEARITY PHOTODETECTOR WITH WAVELENGTH INSENSITIVE RESPONSIVITY	
COR-016	LATERAL GE/SI AVALANCHE PHOTODETECTOR	
COR-017	ULTRA-COMPACT WAVEGUIDE TAPER	
COR-018	ZERO-BIAS GE-ON-SI PHOTODETECTOR FOR LOW OPTICAL POWER MONITORING	

For valuable consideration given to the undersigned, the receipt and sufficiency of which is hereby acknowledged, the undersigned agrees to assign, and hereby does assign, transfer and set over to **Coriant Advanced Technology, LLC**, having a place of business at 116 W 23rd Street, Suite 500, New York NY 10011, (hereinafter "Assignee") his or her entire right, title and interest in the invention(s) identified herein in the United States, its territories, dependencies and possessions, and his or her entire right, title and interest in the invention(s) as regards all other national jurisdictions and international entities that have the power to grant patents, wherever situated, including without limitation all applications for patent which include some or all of the

disclosure of, and/or claim priority to and/or the benefit of the subject matter disclosed in the invention(s) identified herein, including any provisional application, utility application, and/or design application, as well as any continuation application, divisional application, continuation-in-part application, reissue application, reexamination application, patent interference proceeding, foreign national application and/or any application filed or to be filed under a patent treaty such as the International Convention for Protection of Industrial Property and/or the Patent Cooperation Treaty, and any Letters Patent which may be granted therefor in any jurisdiction.

In addition to the above assignment, the undersigned agrees to execute all papers necessary in connection with the invention(s), any patent application and any continuing applications, divisional applications, or continuations-in-part thereof, and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient to further memorialize the assignment herein of all right, title and interest.

The undersigned agrees to execute all papers necessary in connection with any interference or derivation proceeding which may be declared concerning any application or continuation or division thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or derivation proceeding.

The undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

The undersigned agrees to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent and/or valid patents in other jurisdictions to the Assignee.

The undersigned hereby authorizes and requests the Commissioner of Patents to issue any and all Letters Patents of the United States resulting from any application or any divisions or continuing applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he or she has full right to convey the entire interest herein assigned, and that he or she has not executed and will not execute, any agreement in conflict herewith.

As to the invention(s) identified herein, to the extent that the undersigned has the power to do so, the undersigned hereby revokes all prior Powers of Attorney and grants a new Power of Attorney to each of:

Joseph B. Milstein, Reg. No. 42897,

Kenneth J. Rudofski, Reg. No. 35997, and

Jae-Hu Kim, Reg. No. 59648,

and hereby grants them the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or with the rules of any other national or international Patent Office for recordation of this document or a true copy thereof.

The undersigned hereby states that:

I hereby irrevocably grant the Assignee the right to file in the future one or more patent applications based on the identified invention(s) in which I am a named inventor.

Any patent application based on the identified invention(s) was made or authorized to be made by me.

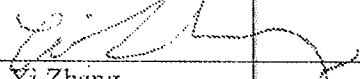
I believe that I am the original inventor or an original joint inventor of a claimed invention in any such patent application.

I hereby acknowledge 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, this instrument has been executed by the undersigned on the date opposite the name of the undersigned.

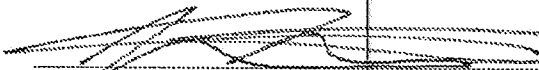
Please sign in the presence of either a Notary Public or two witnesses.

Date: 12/30/2014

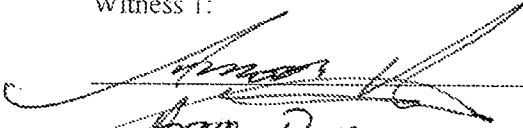
Signature:  (SEAL)  
Yi Zhang

State of ~~New York~~ New Jersey )  
County of ~~New York~~ Hudson )ss.:

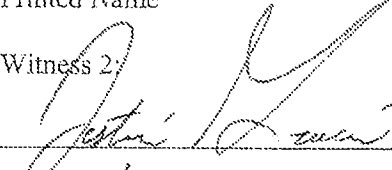
On this 30<sup>th</sup> day of December, 2014, before me personally came Yi Zhang to me known and known to me to be the person described in and who executed the within instrument and he/she acknowledged to me that he/she executed the same.

  
Notary Public

Witness 1:

  
Atom Dass  
Printed Name

Witness 2:

  
Justin Gracia  
Printed Name



**ASSIGNMENT**

**WHEREAS**, we, **MICHAEL J. HOCHBERG and ARI NOVACK**, have invented certain new and useful improvements in the following: **"GERMANIUM METAL-CONTACT-FREE NEAR-IR PHOTODETECTOR,"** for which we have made an application for United States Letters Patent; and

**WHEREAS**, Coriant Advanced Technology, LLC, a limited liability company organized and existing under the laws of the State of Delaware, having its principal place of business at 171 Madison Avenue, Suite 1100, New York NY 10016 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring our entire right, title and interest in and to the invention, and in and to the said application and any Letters Patent that may issue thereon.

**NOW, THEREFORE**, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we do hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives our entire right, title and interest in and to said invention and in and to said applications and all patents which may be granted therefore, and all provisionals, divisionals, reissues, substitutions, continuations, continuations-in-part and extensions thereof; and we hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patents resulting therefrom, insofar as our interest is concerned, to the said ASSIGNEE of our entire right, title and interest.

We also hereby sell and assign to said ASSIGNEE, its successors, assigns and legal representatives the full and exclusive rights, title and interest to the invention disclosed in said applications throughout the world, including the right to file applications and obtain patents, utility models, industrial models and designs for said invention in its own name throughout the world including all rights of priority, all rights to publish cautionary notices reserving ownership of said invention and all rights to register said invention in appropriate registries; and

We further agree to execute any and all powers of attorney, applications, assignments, declarations, affidavits, and any other papers in connection therewith necessary to perfect such rights, title and interest in ASSIGNEE, its successors, assigns and legal representatives.

We hereby further agree that we will communicate to said ASSIGNEE, or its successors, assigns and legal representatives, any facts known to us respecting any improvements; and, at the expense of said ASSIGNEE, to testify in any legal proceedings, sign all lawful papers, execute all provisional, divisional, continuation, continuation-in-part, reissue, and substitute applications, make all lawful oaths, and generally do everything possible to vest title in said ASSIGNEE and to aid said ASSIGNEE, its successors, assigns, and legal representatives to obtain and enforce proper protection for said invention in all countries.

We further authorize and direct the ASSIGNEE's attorneys to insert below\* the serial number and filing date of said application now identified as Docket No. 074381-000005USPT as soon as the same shall have been made known to them by the United States Patent Office.

\*Serial Number: 14/644,122

Filing Date: March 10, 2015

Customer No.: 70001

**ASSIGNMENT**  
Atty. Docket No. 074381-000005USPT

Executed this 26 day of January, 2016.

DocuSigned by:  
*Michael Hochberg*  
7E8D5EB68D964F  
Name: Michael J. Hochberg

Witnessed by:  
DocuSigned by:  
*Whitney Hardin*  
30088FB07F4B463...

Customer No.: 70001

**ASSIGNMENT**  
Atty. Docket No. 074381-000005USPT

Executed this 29 day of November, 2016.

DocuSigned by:  
*Ari Novack*  
CTCF60A0C9944B9...  
Name: Ari Novack

Witnessed by:

DocuSigned by:  
*Whitney Hardin*  
30088FB07F4B463...