

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT6491498

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MICHAL LIPSON	01/11/2021
MIN CHUL SHIN	10/29/2020
ASEEMA MOHANTY	06/24/2020
KYLE WATSON	08/11/2020
RECEIVING PARTY DATA	
Name:	THE TRUSTEES OF COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK
Street Address:	535 WEST 116TH STREET
Internal Address:	412 LOW MEMORIAL LIBRARY
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10027
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16872107
CORRESPONDENCE DATA	
Fax Number:	(215)564-3439
<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>	
Phone:	2155683100
Email:	patents@bakerlaw.com
Correspondent Name:	BAKERHOSTETLER
Address Line 1:	2929 ARCH STREET
Address Line 2:	12TH FLOOR
Address Line 4:	PHILADELPHIA, PENNSYLVANIA 19104
ATTORNEY DOCKET NUMBER:	101879.000117 / CU19330
NAME OF SUBMITTER:	FAITH A. POORE
SIGNATURE:	/Faith A. Poore/
DATE SIGNED:	01/12/2021
Total Attachments: 12	

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ASSIGNMENT

WHEREAS, I, Michal Lipson, a citizen of United States, residing at New York, New York, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number 101879.000117 ("the invention"), assigned application number 16/872,107 filed on May 11, 2020, entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT** ("the subject application"); and which claims priority to patent application number 62/845,552 filed May 9, 2019 ("the priority application").

AND WHEREAS, The Trustees of Columbia University in the City of New York, ASSIGNEE, having a place of business at 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, the ASSIGNOR, hereby 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 Invention entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT**, and any and all improvements thereto, and in and to the application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues or re-exams thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements, including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY represent and warrant that I have the full power to make this assignment and that the rights, titles, and interests assigned are not encumbered by any grant, license, or right heretofore given; and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the

invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this _____ day of _____, year of 20__.

DocuSigned by:
Michal Lipson
...296206A4DB294F2...

1/11/2021 | 1:03 PM EST

Signature – Michal Lipson

STATEMENT OF WITNESS

SIGNED at _____
(City) (State) (Country)

This _____ day of _____, 20__.

I, _____ whose full residence address is

was personally present and did see Michal Lipson execute the above assignment on the _____ day of _____, 20__, and such assignor is personally known to me to be the person described in such document.

Signature of Witness

ACCEPTANCE BY ASSIGNEE

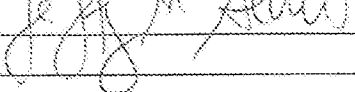
In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of The Trustees of Columbia University in the City of New York. I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

I am an officer of the above-identified ASSIGNEE,

I have signed this document on behalf of ASSIGNEE with the full authority of the ASSIGNEE.

and that all the foregoing is true and correct.

Dated: 1/12/21

By: 
Name: _____

Title: **Jeffrey M. Seare, Ph.D.**
Associate General Counsel
Columbia University

ASSIGNMENT

WHEREAS, I, **Min Chul Shin**, a citizen of South Korea, residing at New York, New York, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number 101879.000117 ("the invention"), assigned application number 16/872,107 filed on May 11, 2020, entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT** ("the subject application"); and which claims priority to patent application number 62/845,552 filed May 9, 2019 ("the priority application").

AND WHEREAS, **The Trustees of Columbia University in the City of New York**, ASSIGNEE, having a place of business at 412 Low Memorial Library, 535 West 116th Street, New York, New York 10027, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, the ASSIGNOR, hereby 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 Invention entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT**, and any and all improvements thereto, and in and to the application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues or re-exams thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements, including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

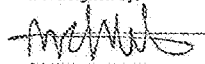
AND I HEREBY represent and warrant that I have the full power to make this assignment and that the rights, titles, and interests assigned are not encumbered by any grant, license, or right heretofore given; and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the

invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this _____ day of _____, year of 20____.

DocuSigned by:

D09B2E03CEC742F

10/29/2020 | 12:48 PM EDT

Signature – Min Chul Shin

STATEMENT OF WITNESS

SIGNED at _____
(City) (State) (Country)

This ____ day of _____, 20____.

I, _____ whose full residence address is

_____ was personally present and did see Min Chul Shin execute the above assignment on the _____ day of _____, 20____, and such assignor is personally known to me to be the person described in such document.

Signature of Witness

ACCEPTANCE BY ASSIGNEE

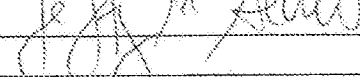
In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of The Trustees of Columbia University in the City of New York. I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

I am an officer of the above-identified ASSIGNEE,

I have signed this document on behalf of ASSIGNEE with the full authority of the ASSIGNEE.

and that all the foregoing is true and correct.

Dated: 1/12/21

By: 
Name: _____

Title: **Jeffrey M. Sears, Ph.D.**
Associate General Counsel
Columbia University

ASSIGNMENT

WHEREAS, I, **Aseema Mohanty**, a citizen of **United States**, residing at **New York, New York**, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number **101879.000117** ("the invention"), assigned application number **16/872,107** filed on **May 11, 2020**, entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT** ("the subject application"); and which claims priority to patent application number **62/845,552** filed **May 9, 2019** ("the priority application").

AND WHEREAS, **The Trustees of Columbia University in the City of New York**, ASSIGNEE, having a place of business at **412 Low Memorial Library, 535 West 116th Street, New York, New York 10027**, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, the ASSIGNOR, hereby 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 Invention entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT**, and any and all improvements thereto, and in and to the application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues or re-exams thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements, including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

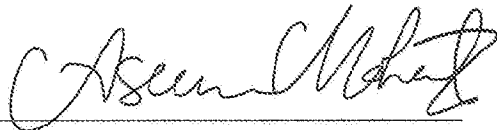
AND I HEREBY represent and warrant that I have the full power to make this assignment and that the rights, titles, and interests assigned are not encumbered by any grant, license, or right heretofore given; and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the

invention, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 24 day of June, year of 2020.



Signature -- Aseema Mohanty

STATEMENT OF WITNESS

SIGNED at New York New York USA
(City) (State) (Country)

This 24 day of June, 2020.

I, SHRIDHA CHAITANYA whose full residence address is
414 West 120th Street, Apt 102B, New York,
NY 10027

was personally present and did see Aseema Mohanty execute the above assignment on the 24 day of June, 2020, and such assignor is personally known to me to be the person described in such document.



Signature of Witness

ACCEPTANCE BY ASSIGNEE

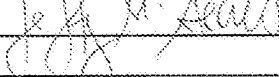
In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of The Trustees of Columbia University in the City of New York. I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

I am an officer of the above-identified ASSIGNEE,

I have signed this document on behalf of ASSIGNEE with the full authority of the ASSIGNEE.

and that all the foregoing is true and correct.

Dated: 06/24/20

By: 
Name: _____

Title: Jeffrey M. Sears, Ph.D.
Associate General Counsel
Columbia University

ASSIGNMENT

WHEREAS, I, **Kyle Watson**, a citizen of **United States**, residing at **Solana Beach, California**, ASSIGNOR, am an inventor of one or more inventions disclosed, described and/or claimed in the application referred to as Docket Number **101879.000117 / CU19330** (“the invention”), assigned application number **16/872,107** filed on **May 11, 2020**, entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT** (“the subject application”); and which claims priority to patent application number **62/845,552** filed **May 9, 2019** (“the priority application”);

AND WHEREAS, **The Trustees of Columbia University in the City of New York**, ASSIGNEE (or “Columbia”), having a place of business at **535 West 116th Street, 412 Low Memorial Library, New York, New York 10027**, is desirous of obtaining my entire right, title, and interest in, to, and under the invention:

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, the ASSIGNOR, hereby 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 invention entitled **CHIP-SCALE OPTICAL PHASED ARRAY FOR PROJECTING VISIBLE LIGHT**, and in and to the application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues or re-exams thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements, including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing; and the right to claim for such applications in any country the priority rights derived from the priority application and the subject application under the International Convention for the Protection of Industrial Property, the Patent Laws of the United States, any other international agreement or protection, or the domestic laws of any country in which any such application is filed, as may be applicable.

AND I HEREBY represent and warrant that I have the full power to make this assignment and that the rights, titles, and interests assigned are not encumbered by any grant, license, or right heretofore given; and that I have not executed, and will not execute, any agreement in conflict herewith.

AND I HEREBY further covenant and agree that I will communicate to the ASSIGNEE, its successors, legal representatives, and assigns, any facts known to me respecting the invention, and testify in any legal proceeding, sign all lawful papers, execute all disclaimers and all divisional, continuing, reissue, and foreign applications, make all rightful oaths, deliver upon request all papers, documents, affidavits, or other instruments that may be necessary or helpful in the prosecution of any application for industrial property protection describing and/or claiming the

invention, and generally do everything reasonable to aid the ASSIGNEE, its successors, legal representatives, and assigns, to obtain and enforce proper protection for the invention in all countries.

FURTHER, as part of the consideration that I have received from Columbia for my foregoing assignments, agreements, and other undertakings, I understand that Columbia will treat me as a Columbia inventor for purposes of sharing revenue arising from Columbia's commercialization of this invention according to Columbia's Statement of Policy on Proprietary Rights in the Intellectual Property of Faculty Activity.

IN TESTIMONY WHEREOF, I have signed my name below on the date indicated above my signature.

Executed this 11th day of August, year of 2020.



Signature - Kyle Watson

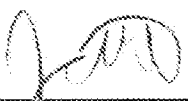
STATEMENT OF WITNESS

SIGNED at Solana Beach CA USA
(City) (State) (Country)

This 11th day of August, 2020.

I, Wei Fong Watson whose full residence address is
1775 Weatherwood Ct., San Marcos, CA 92078

was personally present and did see Kyle Watson execute the above assignment on the 11th day of August, 2020, and such assignor is personally known to me to be the person described in such document.



Signature of Witness

ACCEPTANCE BY ASSIGNEE

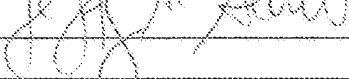
In connection with an assignment in any jurisdiction in which an acceptance by ASSIGNEE is required, I hereby accept this assignment on behalf of The Trustees of Columbia University in the City of New York. I declare under penalty of perjury under the laws of the United States of America, and under penalty of the laws of any other jurisdiction before which this document may be presented, that (check all that apply):

I am an officer of the above-identified ASSIGNEE,

I have signed this document on behalf of ASSIGNEE with the full authority of the ASSIGNEE.

and that all the foregoing is true and correct.

Dated: 08/11/20

By: 
Name: _____

Title: **Jeffrey M. Sears, Ph.D.**
Associate General Counsel
Columbia University