PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT8377739

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
II-VI DELAWARE, INC.	11/24/2023

RECEIVING PARTY DATA

Name:	II-VI ADVANCED MATERIALS, LLC
Street Address:	20 CHAPIN RD
City:	PINE BROOK
State/Country:	NEW JERSEY
Postal Code:	07058

PROPERTY NUMBERS Total: 1

Property Type	Number
Patent Number:	8741413

CORRESPONDENCE DATA

Fax Number: (917)332-3733

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: 2128855000
Email: patents@blankrome.com, judy.yeddo@blankrome.com
Correspondent Name: BLANK ROME LLP
Address Line 1: 1271 AVENUE OF THE AMERICAS, 15TH FLOOR
Address Line 4: NEW YORK, NEW YORK 10020

ATTORNEY DOCKET NUMBER:	150287-03689
NAME OF SUBMITTER:	JUDY YEDDO
SIGNATURE:	/Judy Yeddo/
DATE SIGNED:	01/11/2024

Total Attachments: 14
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INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT

This INTELLECTUAL PROPERTY ASSIGNMENT AGREEMENT ("**IP Assignment**"), dated as of November 24, 2023, is made by II-VI DELAWARE, INC., a Delaware Corporation ("**Assignor**"), in favor of II-VI ADVANCED MATERIALS, LLC, a Pennsylvania limited liability company ("**Assignee**"), the transferee of certain assets of Assignor pursuant to an Intellectual Property Purchase Agreement between Assignor and Assignee, dated as of November 24, 2023 (the "**Purchase Agreement**").

WHEREAS, under the terms of the Purchase Agreement, Assignor has conveyed, transferred, and assigned to Assignee certain intellectual property of Assignor, and has agreed to execute and deliver this IP Assignment, for recording with the United States Patent and Trademark Office, and corresponding entities or agencies in any applicable jurisdictions.

NOW THEREFORE, the parties agree as follows:

1. Assignment. For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor hereby irrevocably sells, conveys, transfers, and assigns to Assignee, and Assignee hereby accepts, all of Assignor's right, title, and interest in and to the following (collectively, the "**Assigned IP**"):

(a) the patents and patent applications set forth on Schedule 1 hereto and all issuances, divisions, continuations, continuations-in-part, reissues, extensions, reexaminations, and renewals thereof (the "**Patents**");

(b) the trademark registrations set forth on Schedule 2 hereto and all issuances, extensions, and renewals thereof (the "**Trademarks**"), together with the goodwill of the business connected with the use of, and symbolized by, the Trademarks;

(c) all rights of any kind whatsoever of Assignor accruing under any of the foregoing provided by applicable law of any jurisdiction, by international treaties and conventions, and otherwise throughout the world;

(d) any and all royalties, fees, income, payments, and other proceeds now or hereafter due or payable with respect to any and all of the foregoing; and

(e) any and all claims and causes of action with respect to any of the foregoing accruing on or after the date hereof, including all rights to and claims for damages, restitution, and injunctive and other legal and equitable relief for infringement, dilution, misappropriation, violation, misuse, breach, or default, with the right but no obligation to sue for such legal and equitable relief and to collect, or otherwise recover, any such damages.

2. Recordation and Further Actions.

(a) Assignor hereby authorizes the Commissioner for Patents and the Commissioner for Trademarks in the United States Patent and Trademark Office, and the

officials of corresponding entities or agencies in any applicable foreign jurisdictions, upon request by Assignee, to record and register this IP Assignment, or any assignment deeds or other documents, executed by Assignor in accordance with Section 2(b).

(b) Following the date hereof, upon Assignee's reasonable request, and at Assignee's sole cost and expense, Assignor shall take such steps and actions, and provide such cooperation and assistance to Assignee and its successors, assigns, and legal representatives, including the execution and delivery of any affidavits, declarations, oaths, exhibits, assignments, assignment deeds, powers of attorney, or other documents, as may be reasonably necessary to effect, evidence, or perfect the assignment of the Assigned IP to Assignee.

3. Terms of the Purchase Agreement. The parties hereto acknowledge and agree that this IP Assignment is entered into pursuant to the Purchase Agreement, to which reference is made for a further statement of the rights and obligations of Assignor and Assignee with respect to the Assigned IP. The representations, warranties, covenants, agreements, and indemnities contained in the Purchase Agreement shall not be superseded hereby but shall remain in full force and effect to the full extent provided therein. In the event of any conflict or inconsistency between the terms of the Purchase Agreement and the terms hereof, the terms of the Purchase Agreement shall govern. The transactions under this IP Assignment are intended to constitute a value-for-value exchange for U.S. federal income tax purposes.

4. Counterparts. This IP Assignment may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed one and the same agreement. A signed copy of this IP Assignment delivered by facsimile, e-mail, or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this IP Assignment.

5. Successors and Assigns. This IP Assignment shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors and assigns.

6. Governing Law. This IP Assignment and any claim, controversy, dispute, or cause of action (whether in contract, tort, or otherwise) based upon, arising out of, or relating to this IP Assignment and the transactions contemplated hereby shall be governed by, and construed in accordance with, the laws of the United States and the State of Delaware, without giving effect to any choice or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction).

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, Assignor has duly executed and delivered this IP Assignment as of the date first above written.

ASSIGNOR:

II-VI DELAWARE, INC.

By: _____
Name: William K. Langan
Title: Chairman & Vice President

ACKNOWLEDGMENT

STATE OF Delaware)
) ss.
COUNTY OF New Castle)

On this 20th day of November, 2023, before me a Notary Public, personally appeared William K. Langan, who acknowledged himself to be an officer of II-VI Delaware, Inc., a Delaware corporation, and that he, as such officer, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of II-VI Delaware, Inc., by himself as such officer.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

Mary Ann Stewart
Notary Public

MARY ANN STEWART
Notary Public
STATE OF DELAWARE
My Commission Expires 01/04/2024

My Commission Expires: 01/04/2024
Print Name: Mary Ann Stewart

ASSIGNEE:

II-VI ADVANCED MATERIALS, LLC

By: 

Name: Walter R. Bashaw II

Title: President

SCHEDULE 1

ASSIGNED PATENTS AND PATENT APPLICATIONS

Patents

Title	Jurisdiction	Patent Number	Issue Date
"Method for Synthesizing Ultrahigh-Purity Silicon Carbide"	United States of America	9388509	Jul 12, 2016
"Silicon Carbide Crystal Growth by Silicon Chemical Vapor Transport"	Japan	6491484	Mar 8, 2019
Vanadium-doped single crystal and growth method thereof	Japan	6272360	Jan 12, 2018
METHOD FOR SYNTHESIZING ULTRAHIGH-PURITY SILICON CARBIDE	Japan	6438951	Nov 22, 2018
METHOD FOR SYNTHESIZING ULTRAHIGH-PURITY SILICON CARBIDE	Republic of Korea	1933069	Dec 20, 2018
"Vanadium Compensated, SI SiC Single Crystals of NU and PI Type and the Crystal ...	United States of America	RE48378	Jan 5, 2021
Large-diameter silicon carbide single crystal and apparatus, and manufacturing m...	Japan	6373443	Jul 27, 2018
"Substrate Including a Diamond Layer and a Composite Layer of Diamond and Silico...	Republic of Korea	2198330	Dec 28, 2020
"SiC Single Crystal Sublimation Growth Apparatus"	United States of America	11149359	Oct 19, 2021
"Large Diameter Silicon Carbide Single Crystals and Apparatus and Method of Manu...	United States of America	11035054	Jun 15, 2021
SiC single crystal sublimation growth method and apparatus	United States of America	10294584	May 21, 2019
Improved axial gradient transport (AGT) growth method and apparatus utilizing re...	Japan	5406936	Nov 8, 2013
Method of and system for forming SiC crystals having spatially uniform doping im...	Germany	602006020427.2	Mar 2, 2011
Method of and system for forming sic crystals having spatially uniform doping im...	European Patent Office	1874985	Mar 2, 2011
Method and system for forming SiC crystals with spatially uniform doping impurit...	Japan	5033788	Jul 6, 2012

Method of and system for forming sic crystals having spatially uniform doping im...	Sweden	1874985	Mar 2, 2011
Method of and system for forming SiC crystals having spatially uniform doping im...	United States of America	7608524	Oct 27, 2009
Method and apparatus for sublimation growth of SiC single crystal	Japan	5779171	Jul 17, 2015
SiC PVT crystal growth method	Japan	5577095	Jul 11, 2014
SiC PVT crystal growth method	United States of America	8216369	Jul 10, 2012
Low doping semi-insulating SiC crystal and method	Japan	4987707	May 11, 2012
Microwave plasma chemical vapour deposition reactors and methods for depositing ...	United Kingdom	2548980	Aug 19, 2020
LARGE DIAMETER, HIGH QUALITY SIC SINGLE CRYSTALS, METHOD AND APPARATUS	Republic of Korea	1731239	Apr 24, 2017
Large diameter, high quality SiC single crystals, method and apparatus	United States of America	RE46315	Feb 21, 2017
Large diameter high quality SiC single crystal, method and apparatus	Japan	6226959	Oct 20, 2017
A METHOD FOR PRODUCING A MICROSTRUCTURE OF CRYSTALLINE SIC	Germany	602009006488.60	Apr 25, 2012
A METHOD FOR PRODUCING A MICROSTRUCTURE OF CRYSTALLINE SIC	France	2258655	Apr 25, 2012
A METHOD FOR PRODUCING A MICROSTRUCTURE OF CRYSTALLINE SIC	United Kingdom	2258655	Apr 25, 2012
A METHOD FOR PRODUCING A MICROSTRUCTURE OF CRYSTALLINE SIC	Sweden	2258655	Apr 25, 2012
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	European Patent Office	3682467	Dec 28, 2022
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	Switzerland	3682467	Dec 28, 2022
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	Germany	3682467	Dec 28, 2022
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	Spain	3682467	Dec 28, 2022
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	France	3682467	Dec 28, 2022

A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	United Kingdom	3682467	Dec 28, 2022
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	Italy	3682467	Dec 28, 2022
SIC SUPER-JUNCTIONS	Sweden	538783	Nov 22, 2016
A CONCEPT FOR SILICON CARBIDE POWER DEVICES	Sweden	541466	Oct 8, 2019
Concept for silicon carbide power devices	United States of America	11276681	Mar 15, 2022
MOSFET IN SIC WITH SELF-ALIGNED LATERAL MOS CHANNEL	Sweden	542607	Jun 16, 2020
CRYSTAL EFFICIENT SIC DEVICE WAFER PRODUCTION	Sweden	543075	Sep 29, 2020
MOSFET IN SIC WITH SELF-ALIGNED LATERAL MOS CHANNEL	United States of America	11444192	Sep 13, 2022
"Vanadium Doped SiC Single Crystals and Method Thereof"	United States of America	9322110	Apr 26, 2016
"Intra-Cavity Gettering of Nitrogen in SiC Crystal Growth"	United States of America	9017629	Apr 28, 2015
"Silicon Carbide with Low Nitrogen Content and Method for Preparation"	United States of America	8858709	Oct 14, 2014
"Halosilane Assisted PVT Growth of SiC"	United States of America	8512471	Aug 20, 2013
"Silicon Carbide Single Crystals with Low Boron Content"	United States of America	8361227	Jan 29, 2013
"Guided Diameter SiC Sublimation Growth with Multi-Layer Growth Guide"	United States of America	8313720	Nov 20, 2012
"Axial Gradient Transport Growth Process and Apparatus Utilizing Resistive Heati...	United States of America	9228274	Jan 5, 2016
"Vanadium Compensated, SI SiC Single Crystals of NU and PI Type and the Crystal ...	United States of America	9090989	Jul 28, 2015
"Vanadium Compensated, SI SiC Single Crystals of NU and PI Type and the Crystal ...	Germany	602013081514.3	Apr 27, 2022
"Vanadium Compensated, SI SiC Single Crystals of NU and PI Type and the Crystal ...	France	2855741	Apr 27, 2022
"Vanadium Compensated, SI SiC Single Crystals of NU and PI Type and the Crystal ...	Switzerland	2855741	4/27/2022

"Vanadium Compensated, SI SiC Single Crystals of NU and PI Type and the Crystal ...	United Kingdom	2855741	Apr 27, 2022
"Large Diameter, High Quality SiC Single Crystals, Method and Apparatus"	United States of America	8741413	Jun 3, 2014
"Method for Silicon Carbide Crystal Growth by Reacting Elemental Silicon Vapor w...	United States of America	9580837	Feb 28, 2017
High Quality Silicon Carbide Crystals and Method of Making the Same	United States of America	10793972	Oct 6, 2020
CONCEPT FOR SILICON FOR CARBIDE POWER DEVICES	United States of America	11652099	May 16, 2023
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	Japan	7295866	Jun 13, 2023
"SiC Single Crystal Sublimation Growth Apparatus"	United States of America	11761117	Sep 19, 2023
INTEGRATION OF A SCHOTTKY DIODE WITH A MOSFET	Sweden	541402	Sep 17, 2019
INTEGRATION OF A SCHOTTKY DIODE WITH A MOSFET	United States of America	11114557	Sep 7, 2021
INTEGRATION OF A SCHOTTKY DIODE WITH A MOSFET	United States of America	11581431	Feb 14, 2023
A SEMICONDUCTOR DEVICE	European Patent Office	2058854	Dec 3, 2014
A SEMICONDUCTOR DEVICE	Switzerland	2058854	Dec 3, 2014
A SEMICONDUCTOR DEVICE	France	2058854	Dec 3, 2014
A SEMICONDUCTOR DEVICE	United Kingdom	2058854	Dec 3, 2014
FILLING OF DEEP RECESSES	Sweden	539665	Oct 24, 2017
AVALANCHE PHOTODIODE FOR ULTRAVIOLET PHOTON DETECTION	European Patent Office	2175497	11/20/2019
AVALANCHE PHOTODIODE FOR ULTRAVIOLET PHOTON DETECTION	France	2175497	11/20/2019
AVALANCHE PHOTODIODE FOR ULTRAVIOLET PHOTON DETECTION	Germany	602009060468.6	11/20/2019
AVALANCHE PHOTODIODE FOR ULTRAVIOLET PHOTON DETECTION	United Kingdom	2175497	11/20/2019
A DOUBLE GRID STRUCTURE	Sweden	541571	11/5/19
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	Sweden	541290	6/11/19

FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	Sweden	541291	6/11/19
FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	United States of America	11158706	10/6/21
FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	Japan	7295867	6/13/23
FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	United States of America	11575007	2/7/23
BURIED GRID WITH SHIELD IN A WIDE BAND GAP MATERIAL	Sweden	542709	6/30/20
BURIED GRID WITH SHIELD IN A WIDE BAND GAP MATERIAL	United States of America	11626478	4/11/23
METHOD FOR MANUFACTURING A GRID	United States of America	11342423	5/14/22

Patent Applications

Title	Jurisdiction	Application/ Publication Number	Filing Date
SIC SINGLE CRYSTAL(S) DOPED FROM GAS PHASE	United States of America	17/444,863	Aug 11, 2021
Optical grade vanadium compensation of 4 H single crystal and 6 H single crystal...	China	202110232966.8	Mar 2, 2021
VANADIUM-COMPENSATED 4H AND 6H SINGLE CRYSTALS OF OPTICAL GRADE, AND SILICON CAR...	United States of America	17/249,395	Mar 1, 2021
SILICON CARBIDE CRYSTALS AND METHODS FOR PRODUCING SAME	United States of America	17/029,746	Sep 23, 2020
Large Diameter Silicon Carbide Single Crystals and Apparatus and Method of Manu...	United States of America	17/249,597	Mar 5, 2021
Vanadium-doped SiC monocrystal and process therefor	Germany	112013006709.9	Nov 12, 2013
SIC SUPERJUNCTION STRUCTURES	European Patent Office	16728959.4	Jun 14, 2016
A method for manufacturing a P-Doped grid in an N-Doped Sic Layer	European Patent Office	22216033.5	Sep 14, 2018
Method for producing a P-doped grid in an N-doped SiC layer	China	201880059862.8	Sep 14, 2018
A method for manufacturing a P-Doped grid in an N-Doped SiC Layer	Japan	2020-537040	Sep 14, 2018
MOSFET IN SIC WITH SELF-ALIGNED LATERAL MOS CHANNEL	United States of America	17/817,384	Aug 4, 2022
Crystal efficient SIC device wafer production	China	202080037993.3	May 20, 2020
CRYSTAL EFFICIENT SIC DEVICE WAFER PRODUCTION	United States of America	17/595,173	May 20, 2020
Silicon carbide crystal and method for producing the same	China	202110237647.6	Mar 1, 2021
SILICON CARBIDE CRYSTALS AND THE PROCESS FOR THEIR MANUFACTURING	Germany	102021104292.5	Feb 23, 2021
VANADIUM COMPENSATED SINGLE CRYSTAL OF 4H AND 6H IN OPTICAL GRADE	Japan	2021-031418	Mar 1, 2021
SILICON CARBIDE CRYSTALS AND METHODS FOR PRODUCING SAME	Republic of Korea	10-2021-0027574	Mar 2, 2021

Optical grade vanadium compensated 4 H single crystal and 6 H single crystal	China	202110232426.X	Mar 2, 2021
VANADIUM-COMPENSATED 4H AND 6H SINGLE CRYSTALS OF OPTICAL GRADE, AND SILICON CAR...	Germany	102021104981.4	Mar 2, 2021
Vanadium-compensated 4H and 6H single crystals of optical quality	Germany	102021104875.3	Mar 1, 2021
VANADIUM COMPENSATED 4H AND 6H SINGLE CRYSTALS OF OPTICAL QUALITY AND SILICON CA...	Germany	102021003909.2	Mar 2, 2021
Vanadium-compensated 4H and 6H single crystals of optical quality	Germany	102021004531.9	Mar 1, 2021
SILICON CARBIDE CRYSTAL AND METHOD FOR MANUFACTURING THE SAME	Japan	2021-029778	Feb 26, 2021
VANADIUM COMPENSATED 4H AND 6H SINGLE CRYSTALS OF OPTICAL GRADE	Republic of Korea	10-2021-0027388	Mar 2, 2021
VANADIUM COMPENSATED 4H AND 6H SINGLE CRYSTALS OF OPTICAL GRADE, AND SILICON CAR...	Republic of Korea	10-2021-0027602	Mar 2, 2021
"Method for Synthesizing Ultrahigh-Purity Silicon Carbide"	European Patent Office	14829345.9	May 28, 2014
"Large Diameter, High Quality SiC Single Crystals, Method and Apparatus"	European Patent Office	13778046.6	Apr 22, 2013
CONCEPT FOR SILICON FOR CARBIDE POWER DEVICES	United States of America	18/295,743	Apr 4, 2023
INTEGRATION OF A SCHOTTKY DIODE WITH A MOSFET	European Patent Office	18769700.8	Sep 14, 2018
INTEGRATION OF A SCHOTTKY DIODE WITH A MOSFET	China	201880059802.6	Sep 14, 2018
INTEGRATION OF A SCHOTTKY DIODE WITH A MOSFET	Japan	2020-537041	Sep 14, 2018
INTEGRATION OF A SCHOTTKY DIODE WITH A MOSFET	United States of America	18/155,394	Jan 17, 2023
FILLING OF DEEP RECESSES	European Patent Office	16729551.8	Jun 14, 2016
FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	European Patent Office	18769701.6	9/14/18
FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	China	201880059799.8	9/14/18

FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	United States of America	18/150,611	1/5/23
FEEDER DESIGN WITH HIGH CURRENT CAPABILITY	Japan	2023-095432	6/9/23
BURIED GRID WITH SHIELD IN WIDE BAND GAP MATERIAL	China	201980043030.1	5/22/19
BURIED GRID WITH SHIELD IN WIDE BAND GAP MATERIAL	United States of America	18/182,621	3/13/23
METHOD FOR MANUFACTURING A GRID	United States of America	17/660,888	4/27/22
METHOD FOR MANUFACTURING A P-DOPED GRID IN AN N-DOPED SIC LAYER	Japan	2023-095491	9/14/18
BURIED GRID DOUBLE JUNCTION BARRIER SCHOTTKY DIODE	China	1805842	10/30/23
BURIED GRID DOUBLE JUNCTION BARRIER SCHOTTKY DIODE	European Patent Office	1805843	10/30/23
BURIED GRID DOUBLE JUNCTION BARRIER SCHOTTKY DIODE	United States of America	18/303,617	4/20/23

SCHEDULE 2

ASSIGNED TRADEMARK REGISTRATIONS

Trademark Registrations

Mark	Jurisdiction	Registration Number	Registration Date
3DSIC	Sweden	520013	Jul 4, 2014