PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6181148

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| ARTYOM SEMYONOV | 05/10/2020 |
| EHUD SHAVIV | 05/12/2020 |

RECEIVING PARTY DATA

| Name: | MERCK PATENT GMBH | |
|--------------------|-------------------------|--|
| Street Address: | FRANKFURTER STRASSE 250 | |
| City: | DARMSTADT | |
| State/Country: | GERMANY | |
| Postal Code: 64293 | | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 16755179 |

CORRESPONDENCE DATA

Fax Number: (703)243-6410

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: 703-243-6333 Email: mail@mwzb.com

Correspondent Name: MILLEN, WHITE, ZELANO & BRANIGAN - AMB

Address Line 1: 2200 CLARENDON BLVD.

Address Line 2: SUITE 1400

Address Line 4: ARLINGTON, VIRGINIA 22201

| ATTORNEY DOCKET NUMBER: | MERCK-4928 | |
|-------------------------|--|--|
| NAME OF SUBMITTER: | AUBREY M. BROOKS | |
| SIGNATURE: | /Aubrey M. Brooks/ | |
| DATE SIGNED: | 07/01/2020 | |
| | This document serves as an Oath/Declaration (37 CFR 1.63). | |

Total Attachments: 2

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PATENT 506134421 REEL: 053115 FRAME: 0560

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

| Title of Invention | SEMICONDUCTOR LIGHT EMITTING NANOPARTICLE | |
|--|--|--|
| As the below nan | ed inventor, I hereby declare that: | |
| This declaration | The attached application, or | |
| is directed to: | United States Application or PCT International Application number PCT/EP2018/077546 filed on October 10, 2018 | |
| The above-identif | ied 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. | |
| AND WHEREAS | | |
| an a co | Merck Patent GmbH Frankfurter Strasse 250 64293 Darmstadt DE | |
| au paiemus) usted | d to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof. | |
| ASSISTINON hereit right, title and interest and all Letters Pat thereof, and in and to accrue with responsible to accrue with responsible to accrue with responsible to such and which may be grantight to sue for day arising from or ap renewals, reissues representatives, in enjoyed the same, | VITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive trest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any ent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or sect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and employ said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent ated therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the mages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and if the assignment had not been made. | |
| AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with securing Letters Patents thereon. | | |
| AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on any and all divisions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith. | | |
| The undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this assignment information which may be necessary or desirable in order for the United States Patent and Trademark Office to properly record this document. | | |
| | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR | |
| 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. I consent to the publication, and retention for purposes of obtaining a patent, of the information herein. | | |
| LEGAL NAME O | | |
| Inventor: A | tyom SEMYONOV / Date: イン、ウンスク | |
| Signature: | | |

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
ATTORNEYS AT LAW
ARLINGTON COUNTHOUSE PLAZA
2200 CLARENDON BOLLEVARD | SUITE 1400 | ARLINGTON VA 22201
TELEPHONE: 703.243.6333 | FAX: 703.243.6410
EMAIL: MAIL@MWZB.COM

DOCKET NO.: MERCK-4928

PATENT REEL: 053115 FRAME: 0561

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

| Title of Invention | SEMICONDUCTOR LIGHT EMITTING NANOPARTICLE | |
|---|--|--|
| As the below nam | acd inventor, I hereby declare that: | |
| This declaration | The attached application, or | |
| is directed to: | United States Application or PCT International Application number <u>PCT/EP2018/077546</u> filed on October 10, 2018 | |
| The above-identif | led 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. | |
| AND WHEREAS | | |
| | Merck Patent GmbH | |
| | Frankfurter Strasse 250 64293 Darmstadt DE | |
| an patent(s) usied | d to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof. | |
| NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged. ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, and in and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or to accrue with respect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said invention, SAID ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations thereof, including the right to sue for damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all renewals, reissues, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and employed the same, if the assignment had not been made. | | |
| AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with securing Letters Patents thereon. | | |
| AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on any and all divisions and continuations thereof, to ASSIGNBE, its assigns and legal representatives, in accordance herewith. | | |
| The undersigned hereby grant(s) the law firm of Millen. White, Zelano & Branigan, P.C. the power to insert on this assignment information which may be necessary or desirable in order for the United States Patent and Trademark Office to properly record this document. | | |
| | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR | |
| 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. I consent to the publication, and retention for purposes of obtaining a patent, of the information herein. | | |
| LEGAL NAME OF | FINVENTOR and SHAVIV Date: 2/6/2 s | |
| Inventor: El | | |
| Signature: | | |

Millen, White, Zelano & Branigan, P.C. Attorneys at Law Arlington Courthouse Plaza 2200 Clarendon Boulevard | Suite 1400 | Arlington V A 22201 Telephone: 703.243.6333 | Fax: 703.243.6410 Email: mail@mwzb.com

DOCKET NO.: MERCK-4928

PATENT REEL: 053115 FRAME: 0562

RECORDED: 07/01/2020