### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4840203

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

#### **CONVEYING PARTY DATA**

| Name              | Execution Date |
|-------------------|----------------|
| HARALD HIRSCHMANN | 02/12/2018     |
| MARTINA WINDHORST | 02/12/2018     |
| CHRISTIAN HOCK    | 02/12/2018     |
| ANDREAS POHLE     | 02/12/2018     |
| AXEL JANSEN       | 02/16/2018     |

#### **RECEIVING PARTY DATA**

| Name:           | MERCK PATENT GMBH       |
|-----------------|-------------------------|
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| City:           | DARMSTADT               |
| State/Country:  | GERMANY                 |
| Postal Code:    | 64293                   |

### **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 15755328 |

### **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.

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Address Line 2: SUITE 1400

Address Line 4: ARLINGTON, VIRGINIA 22201

| ATTORNEY DOCKET NUMBER: | MERCK-4690   |
|-------------------------|--|
| NAME OF SUBMITTER:      | ASHLEY BROOKSHIRE  |
| SIGNATURE:              | /Ashley Brookshire/  |
| DATE SIGNED:            | 02/26/2018   |
|                         | This document serves as an Oath/Declaration (37 CFR 1.63). |

PATENT REEL: 045038 FRAME: 0771

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## **Total Attachments: 5** source=EXECUTED\_DUAL\_DEC\_ASSIGNMENT#page1.tif

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PATENT REEL: 045038 FRAME: 0772

P151265

# 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<br>Invention   | LIQUID CRYSTALLINE MEDIUM   |
|---|---|
|   |   |
| As the below nan  | ned inventor, I hereby declare that:  |
| This declaration  | The attached application, or  |
| is directed to:   | United States Application or PCT International Application number PCT/EP2016/001311 filed on July 28, 2016  |
| The above-identi  | fied application was made or authorized to be made by me.   |
| I believe that I an   | n the original inventor or an original joint inventor of a claimed invention in the application.  |
| AND WHEREAS   | S   |
| all motoratic) liete  | MERCK PATENT GMBH FRANKFURTER STRASSE 250 64293, DARMSTADT, GERMANY red to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and dabove, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof,  |
| NOW, ASSIGNOR here right, title and in and all Letters P. thereof, and in a to accrue with re invention, SAID including any an which may be gr right to sue for of arising from or a renewals, reissur representatives, enjoyed the sam | WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, eby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive sterest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any attent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or espect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said of ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent ranted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the lamages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise appertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all es, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and se, if the assignment had not been made. |
| and foreign cou<br>execute any oth  | ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States ntries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to er papers that may be needed in connection with securing Letters Patents thereon.  |
| any and all divi  | ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on sions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.   |
| assignment info   | undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this primation which may be necessary or desirable in order for the United States Patent and Trademark Office to this document.   |
|   | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR  |
| I here  | eby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by nment of not more than five (5) years, or both.   |
| LEGAL NAMI  | E OF INVENTOR Martina WINDHORST Date: 12, 166, 2018   |
| Cionature:  | larian Dudhorst   |

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
ATTORNEYS AT LAW
ARLINGTON COURTHOUSE PLAZA
2200 CLARENDON BOULEVARD I SUITE 1400 I ARLINGTON V A 22201
TELEPHONE: 703.243.6333 I FAX: 703.243.6410
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Effective, September 16, 2012

**PATENT** 

P1571165

# 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<br>Invention  | LIQUID CRYSTALLINE MEDIUM   |
|--|---|
| As the below nam   | ned inventor, I hereby declare that:  |
|  |   |
| This declaration   |   |
| is directed to:  | United States Application or PCT International Application number PCT/EP2016/001311 filed on July 28, 2016  |
|  | fied application was made or authorized to be made by me.   |
| I believe that I an  | n the original inventor or an original joint inventor of a claimed invention in the application.  |
| AND WHEREAS  |   |
| all natent(s) lister   | MERCK PATENT GMBH FRANKFURTER STRASSE 250 64293, DARMSTADT, GERMANY  ed 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, ASSIGNOR here right, title and int and all Letters Pattereof, and in arto accrue with reinvention, SAID including any anwhich may be gright to sue for darising from or a renewals, reissue representatives, i enjoyed the same   | WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, shy assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive terest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any attent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or spect 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 enjoy said invention and patent, and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent anted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the amages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise ppertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all so, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and 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. |   |
| any and all divis  | ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on ions and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.  |
| The ur<br>assignment infor<br>properly record  | ndersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this mation which may be necessary or desirable in order for the United States Patent and Trademark Office to this document.   |
| 200  | IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR  |
| I heret<br>fine or imprison  | by acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by ment of not more than five (5) years, or both.   |
| LEGAL NAME<br>Inventor:  | OF INVENTOR Andreas POHLE Date: 17. Feb. 2018   |
| Signature  | alle  |

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Effective, September 16, 2012

### 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   | LIQUID CRYSTALLINE MEDIUM   |
|--|---|
| Invention  |   |
| As the helow nun   | ned inventor, I hereby declare that:  |
| We the neigh itan  |   |
| This declaration   | The attached application, or  |
| is directed to:  | United States Application or PCT International Application number PCT/EP2016/001311 filed on Mly 28, 2016   |
| The above-identi   | fied application was made or authorized to be made by me.   |
| I believe that I ar  | n the original inventor or an original joint inventor of a claimed invention in the application.  |
| AND WHEREA   | S   |
| Manutagette \ licto  | MERCK PATENT GMBH FRANKFURTER STRASSE 250 64293, DARMSTADT, GERMANY  red to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and d above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, d all renewals, reissues, reexaminations and extensions thereof.   |
| ASSIGNOR her right, title and in and all Letters P thereof, and in a to accrue with re invention, SAID including any ar which may be gright to sue for a arising from or a renewals, reissu tepresentatives, enjoyed the sam | WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, eby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive atterest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any attent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or espect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said of ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent ranted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise appertaining thereto, for and during the term or terms of any and all such Letters Patens, including any and all less, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and the, if the assignment had not been made. |
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| assignment info  | indersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this ormation which may be necessary or desirable in order for the United States Patent and Trademark Office to this document.  |
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| There  | by acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by nment of not more than five (5) years, or both.  |
| LEGAL NAMI   | e of inventor  Date: 16 / 02 / 20 / 8   |
| Inventor:  | E OF INVENTOR Axel JANSEN Date: /6/02/20/8  |
| Signature:   | Speed Jane  |

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. ATTORNEYS AT LAW ARLINGTON COURTHOUSE PLAZA 2200 CLARENDON BOULEVARD | SUITE 1400 | ARLINGTON VA 22201 TELEPHONE: 703.243.6333 | FAX: 703.243.6410

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| Title of<br>Invention  | LIQUID CRYSTALLINE MEDIUM  |
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| As the below nan   | ned inventor, I hereby declare that:   |
| This declaration   | The attached application, or   |
| is directed to:  | United States Application or PCT International Application number PCT/EP2016/001311 filed on  July 28, 2016  |
| 7  | fied application was made or authorized to be made by me.  |
|  | n the original inventor or an original joint inventor of a claimed invention in the application.   |
| AND WHEREAS  |  |
| hereinafter referr   | MERCK PATENT GMBH FRANKFURTER STRASSE 250 64293, DARMSTADT, GERMANY ed to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and d above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, d all renewals, reissues, reexaminations and extensions thereof.  |
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| I hereb  | by acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by ment of not more than five (5) years, or both.  |
| 2  | OF INVENTOR Christian HOCK Date:   |
| Inventor:  | Christian HOCK Date:Date:  |
| Signature:   | NES (S   |

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

Effective, September 16, 2012

PATENT

P/5/165

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

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| As the below nan   | ned inventor, I hereby declare that:   |
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| ASSIGNOR here right, title and in and all Letters Pathereof, and in a to accrue with reinvention, SAID including any anyhich may be gright to sue for carising from or a renewals, reissurpresentatives, enjoyed the same  | WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, eby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive atterest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any attent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions and to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or espect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said of ASSIGNEE, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent ranted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise appertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all es, reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and the if the assignment had not been made. |
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| LEGAL NAME   | E OF INVENTOR 12/02/20/P   |
| Inventor:  | Haraid HIRSCHMANN Bac.   |
| Cincoture  | Heard Hilena   |

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**PATENT** 

REEL: 045038 FRAME: 0777

**RECORDED: 02/26/2018**