### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5790211

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
MARTIN ENGEL	09/04/2019
SEBASTIAN HOFMEYER	09/09/2019
CHRISTOPH MARTEN	09/04/2019
LARS LIETZAU	10/02/2019

#### **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:	16583622

#### **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: brooks@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-4891
NAME OF SUBMITTER:	AUBREY M. BROOKS
SIGNATURE:	/Aubrey M. Brooks/
DATE SIGNED:	10/28/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

**Total Attachments: 4** 

PATENT REEL: 050838 FRAME: 0369

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### 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	LIQUID-CRYSTAL MEDIUM
In Cheion	
As the below nam	ed inventor, I hereby declare that:
This declaration	The attached application, or
is directed to:	United States Application or PCT International Application number filed on
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	
	Merck Patent GmbH Frankfurter Strasse 250
	Darmstadt 64293 DE
all patent(s) listed	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.
ASSIGNOR herel right, title and into and all Letters Part thereof, and in and to accrue with resinvention, SAID a including any and which may be graright to sue for da arising from or aprenewals, reissues representatives, in enjoyed the same,	WITNESSETH 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 erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions do any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or pect 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, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent neted 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 a reexaminations and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal is 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 foreign count	SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States ries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to papers that may be needed in connection with securing Letters Patents thereon.
	SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.
	lersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this nation which may be necessary or desirable in order for the United States Patent and Trademark Office to is document.
	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR
	acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by tent of not more than five (5) years, or both. I consent to the publication, and retention for purposes of obtaining formation herein.
LEGAL NAME C	OF INVENTOR Martin ENGEL Date: 4.500 . 2019
Signature:	uach Opel
	VeX

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. ATTORNEYS AT LAW ARLINGTON COURTHOUSE PLAZA 2200 CLARENDON BOULEVARD | SUITE 1400 | ARLINGTON VA 22201 TELEPHONE: 703.243.63331FAX: 703.243.6410

EMAIL: MAIL@MWZB.COM

DOCKET NO.: MERCK-4891

# 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	LIQUID-CRYSTAL MEDIUM
As the below nam	ned inventor, I hereby declare that:
This declaration	The attached application, or
is directed to:	United States Application or PCT International Application numberfiled on
The above-identif	ied application was made or authorized to be made by me.
I believe that I an	the original inventor or an original joint inventor of a claimed invention in the application.
AND WHEREAS	
	Merck Patent GmbH Frankfurter Strasse 250 Darmstadt 64293 DE
all patent(s) listed	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.
ASSIGNOR herel right, title and into and all Letters Parthereof, and in an to accrue with resinvention, SAID a including any and which may be graright to sue for da arising from or aprenewals, reissues representatives, ir	WITNESSETH 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 erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions of to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or pect 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, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent inted 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 a reasonable and extensions thereof, for the use and benefit of ASSIGNEE and its assigns and legal as 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 A any and all division	SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one 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 C Inventor: S	OF INVENTOR ebastian HOFMEYER Date: 03.01.2019
Signature:	S. House

Millen, White, Zelano & Branigan, P.C.
Attorneys at Law
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EMAIL: MAIL@MWZB.COM

DOCKET NO.: MERCK-4891

## 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	LIQUID-CRYSTAL MEDIUM
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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 filed on
The above-identif	ied application was made or authorized to be made by me.
I believe that I an	the original inventor or an original joint inventor of a claimed invention in the application.
AND WHEREAS	
	Merck Patent GmbH Frankfurter Strasse 250
	Darmstadt 64293 DE
all patent(s) listed	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.
ASSIGNOR herei right, title and into and all Letters Parthereof, and in an to accrue with res invention, SAID a including any and which may be graright to sue for da arising from or aprenewals, reissues representatives, ir enjoyed the same.  AND A and foreign count execute any other	WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, selfs, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions do any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or pect 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, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent inted 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 as a sample and beneficial a manner to all intents and purposes as the 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.  SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States ries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to papers that may be needed in connection with securing Letters Patents thereon.  SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one and continuations thereof, to ASSIGNEE, its assigns and legal representatives, in accordance herewith.
The uncassignment inform properly record the	dersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this nation which may be necessary or desirable in order for the United States Patent and Trademark Office to is document.
	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR
I hereby fine or imprisonm a patent, of the ini	acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by ent of not more than five (5) years, or both. I consent to the publication, and retention for purposes of obtaining formation herein.
LEGAL NAME (	
Inventor: C	hristoph MARTEN Date: (X+-Str) / ACC)
Signature:	Landy .

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
Email: mail@mwzb.com

DOCKET NO.: MERCK-4891

## 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-CRYSTAL MEDIUM
Invention	
As the below nam	ned inventor, I hereby declare that:
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The above-identif	led application was made or authorized to be made by me.
I believe that I an	the original inventor or an original joint inventor of a claimed invention in the application.
AND WHEREAS	Merck Patent GmbH
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	Darmstadt 64293 DE
all patent(s) listed	ad 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.
ASSIGNOR here right, title and int and all Letters Pa thereof, and in an to accrue with res invention, SAID including any and which may be graright to sue for darrising from or agreenewals, reissues representatives, in enjoyed the same	WITNESSETH 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 erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions d to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or pect 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, all carlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent unted 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 opertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all s, 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 if the assignment had not been made.
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LEGAL NAME ( Inventor: I	DE INVENTOR  ars LIETZAU Date: 구구한 구에도
Signature:	Lery Me

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
ATTORNEYS AT LAW
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DOCKET NO.: MERCK-4891

PATENT REEL: 050838 FRAME: 0374

**RECORDED: 10/28/2019**