#### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5029384

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
URSULA PATWAL	06/20/2018
MICHAEL JUNGE	05/24/2018
PEER KIRSCH	06/07/2018

#### **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:	16066953

#### **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.

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-AEW

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Address Line 2: SUITE 1400

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ATTORNEY DOCKET NUMBER:	MERCK-4740
NAME OF SUBMITTER:	ASHLEY BROOKSHIRE
SIGNATURE:	/Ashley Brookshire/
DATE SIGNED:	06/28/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).

#### **Total Attachments: 3**

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PATENT 504982638 REEL: 046231 FRAME: 0019

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PATENT REEL: 046231 FRAME: 0020

## 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	\$ \$6\\$7\$\$\$ 6°9\$\$\$\$\$\$ 4.8.8.\$	
Invention	LIQUID-CRYSTALLINE MIXTURES	
As the below nan	red inventor. I hereby declare that:	
This declaration	The strached application, or	
is directed to:	United States Application or PCT International Application number <u>PCT/EP2016A002091</u> filed on Occumber 12, 3016	
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 GMBB	
	Frankfuter Strasse 250 64293, Darmstadt, Germany	
bereinafter referre	d to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and	
all patent(s) listed above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, including any and all renewals, reissues, reexaminations and extensions thereof.		
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 carlier 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 and extensions 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 appearaining 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 henefit of ASSIGNOR might or could have held and enjoyed 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 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 WHEREAF 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.		
LEGAL NAME O	FINVENTOR 20 CV 20.D	
Inventor: U	rinda PATWAL Date: 26-06-2018	
Sionature	1. Partie	

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
ATTORNEYS AT LAW
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MERCK-4740

PATENT REEL: 046231 FRAME: 0021

# 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 MIXTURES	
Invention	MAN ONE WAS SERVICE AND A COMMON OF THE PARTY OF THE PART	
As the below nam	ned inventor, I hereby declare that:	
This declaration		
is directed to:	United States Application or PCT International Application number PCT/EP2016/002091 filed on December 12, 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		
MERCK PATENT GMBH Frankfuter Strasse 250 64293. Darmstadt, Germany		
hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and all patent(s) listed above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, including any and 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 filling 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 and extensions 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 enjoyed 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 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.		
	OF INVENTOR Michael UINGE Date: (4.1.48	
Inventor: Signature:	Michael JUNGE Date: (3, 3, 3)	
-		

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MERCK-4740

### 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 MIXTURES
Invention	
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 <a href="PCT/EP2016/002091">PCT/EP2016/002091</a> (iled on December 12, 2016
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
	Frankfuter Strasse 250 64293, Darmstadt, Germany
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 inte- and all Letters Pate thereof, and in and to accrue with respinyention, SAID A including any and which may be gran- right to sue for dar arising from or apprenewals, reissues, representatives, in	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 arest 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 filling 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 need 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.	
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	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.	
LEGAL NAME O	FINVENTOR
Inventor: Po	ger KIRSCH Date: Secret 24 1
Signature:	

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PATENT REEL: 046231 FRAME: 0023