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PATENT ASSIGNMENT COVER SHEET

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RALD HIRSCHMANN 05/28/2015 DREAS POHLE 05/28/2015 DREAS POHLE 05/28/2015 IRISTIAN SCHOENEFELD 06/12/2015 VIRA MONTENEGRO 06/22/2015 VIRA MONTENEGRO 06/22/2015 VIRA MONTENEGRO 06/22/2015 VIRA MONTENEGRO 06/22/2015 VIRA REIFFENRATH 07/14/2015 CEIVING PARTY DATA me: MERCK PATENT GMBH eet Address: FRANKFURTER STRASSE 250 y: DARMSTADT tele/Country: GERMANY stal Code: 64293 OPERTY NUMBERS Total: 1 Property Type Number plication Number: 14654069 RRESPONDENCE DATA kNumber: (703)243-6410 rrespondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail. one: 703-243-6333 Mail@mwzb.com			NEW ASSIGNMENT		
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ALBREY M. BROOKS NATURE: /Aubrey M. Brooks/ TE SIGNED: 07/27/2015	Correspondent Name: Address Line 1:		MILLEN, WHITE, ZELANO & BRANIC 2200 CLARENDON BLVD.	GAN - AMB	
NATURE: /Aubrey M. Brooks/ TE SIGNED: 07/27/2015	Correspondent Name: Address Line 1: Address Line 2:		MILLEN, WHITE, ZELANO & BRANIC 2200 CLARENDON BLVD. SUITE 1400	GAN - AMB	
E SIGNED: 07/27/2015	Address Line 1: Address Line 2: Address Line 4:	UMBER:	MILLEN, WHITE, ZELANO & BRANIG 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VIRGINIA 22201	BAN - AMB	
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This document serves as an Oath/Declaration (37 CEB 1 63)	Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	UMBER:	MILLEN, WHITE, ZELANO & BRANIG 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VIRGINIA 22201 MERCK-4347 AUBREY M. BROOKS	GAN - AMB	
	Correspondent Name: Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET N IAME OF SUBMITTER:	UMBER:	MILLEN, WHITE, ZELANO & BRANIG 2200 CLARENDON BLVD. SUITE 1400 ARLINGTON, VIRGINIA 22201 MERCK-4347 AUBREY M. BROOKS /Aubrey M. Brooks/	BAN - AMB	

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Title of Invention	LIQUID CRYSTAL MEDIUM			
As the below nan	ned in	vent	or, I hereby declare that:	
This declaration		Π	The attached application, or	
is directed to:		8	United States Application or PCT International Application number <u>PCT/EP2013/003713</u> filed on 09.12.2013	
The above-identified 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	\$	5	Construction Constant	

Merck Patent GmbH
Frankfurter Strasse 250
64293 Darmstadt / DE

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 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, including the right to sue for damages occurring before the assignment, with all the rights, powers, privileges and advantages in any wise 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.

2007 201 20	1E OF INVENTOR Harald Hirschmann	Date: 28.05.2015
Inventor:	Haraici Hirsenmann	
Signature:	Hereld	Hindiana and and a second and a

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. Attorneys at Law Arlington Courtbouse Plaza 2200 Clarendon Boulevard | Suite 1400 | Arlington VA 22201 Telephone: 703.243.6333 | Fax: 703.243.6410 Email: mail@mwzb.com

Effective, September 16, 2012

Title of Invention	LIQUID CRYSTAL MEDIUM		
As the below nan	ied inver	stor, I hereby declare that:	
This declaration		The attached application, or	
is directed to:	Ø	United States Application or PCT International Application number <u>PCT/EP2013/003713</u> filed on 09.12.2013	
The above-identif	fied appl	ication was made or authorized to be made by me.	
I believe that I an	r the orig	inal inventor or an original joint inventor of a claimed invention in the application.	

AND WHEREAS

	Aerck Patent GmbH
I	rankfurter Strasse 250
16	4293 Darmstadt / DE

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 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 cartier 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 effort damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise arising from or appenaining 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.

LEGAL NAME OF INVENTOR				2 & rom and some
Inventor:	Andreas Pohle		Date:	$\sim c \approx \omega s \sim c \omega / \alpha$
Signature:	_lebci,	1 Lunion		

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

Effective, September 16, 2012

Title of Invention	LIQUID CRYSTAL MEDIUM		
As the below nan	ied inv	ventor, I hereby declare that:	
This declaration	£	The attached application, or	
is directed to:	ş	United States Application or PCT International Application number <u>PCT/EP2013/003713</u> filed on 09.12.2013	
The above-identif	fied ap	oplication 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	3		

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Frankfurter Strasse 250	
64293 Darmstadt / DE	

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 suid 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, including the right to sue for damages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise arising from or appenaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all renewals, reissues, reexaminations and extensions and extensions and extensions arising from or appenaining 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.

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LEGAL NAM	ME OF INVENTOR		1 mart the second
Inventor:	Markus Czanta	Date:	<u> </u>
Signature:	May Gark		

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all patent(s) liste	S Merck Patent GmbH Frankfurter Strasse 250 <u>64293 Darmstadt / DE</u> 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.		
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LEGAL NAM	E OF INVENTOR
Inventor:	Christian Schoenefeld Date: 2.03.2073
	1 December 201
Signature:	

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I believe that I an	n the c	nigi	nal inventor or an original joint inventor of a claimed invention in the application.
AND WHEREAS	\$.		Arrel: Patent Combil

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§	
LEGAL NAME OF INVENTOR Inventor: Elvira Montenegro	Date: 22.06.2015
HITCHNEL.	
Signature:	

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. ATTORNEYS AT LAW ARLINGTON COURTHOUSE PLAZA 2200 CLARENDON BOULEVARD | SLITE 1400 | ARLINGTON VA 22201 TELEPHONE: 703.243.6333 | PAX: 703.243.6410 Email: MAIL@MW2B.COM

Effective, September 16, 2012.

Title of Invention	LIQUID CRYSTAL MEDIUM			
As the below nar	l ned inven	tor, I hereby declare that:		
This declaration		The attached application, or		
is directed to:	ß	United States Application or PCT International Application number <u>PCT/EP2013/003713</u> filed on 09.12.2013		
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I believe that I ar	n the orig	inal inventor or an original joint inventor of a claimed invention in the application.		
AND WHEREA	s E	Merck Patent GmbH Frankfurter Strasse 250		

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LEGAL NAM	IE OF INVENTOR		Au or Drive
Inventor:	Volket REIFFENRATH	Date:	<u>_/17-_/4-08/10</u>
Signature:	Verter Riskange		······································

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Effective, September 16, 2012

PATENT REEL: 036193 FRAME: 0810

RECORDED: 07/27/2015

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