## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5163771

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
YISHAN FU	08/09/2018
JUN FAN	08/09/2018
FUQIANG LI	08/09/2018
JIGUO WANG	08/09/2018
YUE SHAN	08/09/2018
TAIYANG LIU	08/09/2018

## **RECEIVING PARTY DATA**

BOE TECHNOLOGY GROUP CO., LTD.
NO. 10 JIUXIANQIAO RD.
CHAOYANG DISTRICT
BEIJING
CHINA
100015
ORDOS YUANSHENG OPTOELECTRONICS CO., LTD.
ORDOS EQUIPMENT MANUFACTURING BASE
DONGSHENG DISTRICT, ORDOS
INNER MONGOLIA
INNER MONGOLIA
CHINA

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16145396

## **CORRESPONDENCE DATA**

**Fax Number:** (216)363-9001

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:** 216.363.9000

Email: lkalemba@faysharpe.com

Correspondent Name: FAY SHARPE LLP

Address Line 1: 1228 EUCLID AVENUE, 5TH FLOOR

505117010 REEL: 047002 FRAME: 0938

<u>PATFNT</u>

Address Line 2: THE	HALLE BUILDING
Address Line 4: CLE\	/ELAND, OHIO 44115
ATTORNEY DOCKET NUMBER:	SANG 200114US01
NAME OF SUBMITTER:	RICHARD M. KLEIN
SIGNATURE:	/ Richard M. Klein /
DATE SIGNED:	09/28/2018
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 12	
source=Executed_Dec_Assign#page1.t	if
source=Executed_Dec_Assign#page2.t	if
source=Executed_Dec_Assign#page3.t	if
source=Executed_Dec_Assign#page4.tif	
source=Executed_Dec_Assign#page5.tif	
source=Executed_Dec_Assign#page6.tif	
source=Executed_Dec_Assign#page7.tif	
source=Executed_Dec_Assign#page8.tif	
source=Executed_Dec_Assign#page9.t	if
source=Executed_Dec_Assign#page10	tif
source=Executed_Dec_Assign#page11	tif

source=Executed\_Dec\_Assign#page12.tif

Title of Invention	SHIFT REGISTER CIRCUIT, SCAN DRIVING CIRCUIT, DISPLAY DEVICE AND METHOD FOR DRIVING SCAN DRIVING CIRCUIT
	v named inventor, I hereby declare that:
This decla	ration
is directed	to: The attached application, or
	United States application or PCT international application numberfiled on
	identified application was made or authorized to be made by me.
I believe that in the applic	at I am the original inventor or an original joint inventor of a claimed invention cation.
l hereby acl punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to BOE Technology Group Co., Ltd. having a place of business at No.10 Jiuxianqiao Rd., Chaoyang District, Beijing ,100015, P.R. China , and ORDOS YUANSHENG OPTOELECTRONICS CO., LTD. , having a place of business at Ordos Equipment Manufacturing Base, Dongsheng District, Ordos, Inner Mongolia,017020, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which claims priority to 201711351459.6 filed on Dec.15.2017; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions:

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

Fay Sharpe LLP

ASSIGNOR HEREBY GRANTS to the agents and attorneys of \_\_\_\_\_\_the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filling date of the first filed of said patent applications.

## **STATEMENTS**

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: Yishan FU	Date: Aug. 09 Jol 8
Signature: Yidm FU	U

Title of Invention	SHIFT REGISTER CIRCUIT, SCAN DRIVING CIRCUIT, DISPLAY DEVICE AND METHOD FOR DRIVING SCAN DRIVING CIRCUIT
mvenuon	
As a below	named inventor, I hereby declare that:
This decla	
is directed	to:  The attached application, or
	United States application or PCT international application number filed on filed by me
The above-	identified application was made or authorized to be made by me.
l believe the	at I am the original inventor or an original joint inventor of a claimed invention cation,
I hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.
C	

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to BOE Technology Group Co., Ltd., having a place of business at No.10 Jiuxiangiao Rd., Chaoyang District, Beijing ,100015, P.R. China, and ORDOS YUANSHENG OPTOELECTRONICS CO., LTD., having a place of business at Ordos Equipment Manufacturing Base, Dongsheng District, Ordos, Inner Mongolia,017020, P.R.China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which claims priority to\_\_\_\_\_ 201711351459.6 Dec.15,2017; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

Fay Sharpe LLP

ASSIGNOR HEREBY GRANTS to the agents and attorneys of the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

## **STATEMENTS**

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

Invenior: Jun FAN Date: Ay . 09 , 2018	EGAL NAME OF INVENTOR	
	weniar Jua FAN	Date: Aw. of Sals
Signature: 1 , MAN	innatura: 1 . PAN	

Title of Invention	SHIFT REGISTER CIRCUIT, SCAN DRIVING CIRCUIT, DISPLAY DEVICE AND METHOD FOR DRIVING SCAN DRIVING CIRCUIT
	named inventor, I hereby declare that:
This decla	ration
is directed	to: The attached application, or
	United States application or PCT international application numberfiled on
The above-	identified application was made or authorized to be made by me.
believe the	at I am the original inventor or an original joint inventor of a claimed invention cation.
l hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to BOE Technology Group Co., Ltd. having a place of business at No.10 Jiuxianqiao Rd., Chaoyang District, Beijing ,100015, P.R. China, and ORDOS YUANSHENG OPTOELECTRONICS CO., LTD., having a place of business at Ordos Equipment Manufacturing Base, Dongsheng District, Ordos, Inner Mongolia,017020, P.R.China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which claims priority to 201711351459.6 filed on Dec.15,2017; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States:

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

Ĭ

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

Fay Sharpe LLP

ASSIGNOR HEREBY GRANTS to the agents and attorneys of \_\_\_\_\_ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

#### STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

Inventor: Fugiang LI Date: Aug 09, 2018	
Signature. Fugiano LI	

Title of	SHIFT REGISTER CIRCUIT, SCAN DRIVING CIRCUIT, DISPLAY DEVICE AND METHOD FOR DRIVING SCAN DRIVING CIRCUIT
Invention	t (Carlo
As a below	named inventor, I hereby declare that:
This decla	ration
is directed	to: For The attached application, or
	United States application or PCT international application numberfiled on
The above-	identified application was made or authorized to be made by me.
believe the	at I am the original inventor or an original joint inventor of a claimed invention cation.
l hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to BOE Technology Group Co.. Ltd. having a place of business at No.10 Jiuxianqiao Rd.. Chaoyang District, Beijing 100015, P.R. China, and ORDOS YUANSHENG OPTOELECTRONICS CO.. LTD., having a place of business at Ordos Equipment Manufacturing Base, Dongsheng District, Ordos, Inner Mongolia,017020, P.R. China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which claims priority to 201711351459.6 filed on Dec.15,2017; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

1

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the agents and attorneys of \_\_\_\_\_ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

## STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: Jiguo WANG	Date: Aug . 09 7018
Signature: Jiguo WANG	\(\frac{1}{2}\)

Title of Invention	SHIFT REGISTER CIRCUIT, SCAN DRIVING CIRCUIT, DISPLAY DEVICE AND METHOD FOR DRIVING SCAN DRIVING CIRCUIT				
As a below	named inventor, I hereby declare that:				
This decla	ration				
is directed	to:  The attached application, or				
Section 2015	United States application or PCT international application number filed on				
The above-	dentified application was made or authorized to be made by me.				
believe that	at I am the original inventor or an original joint inventor of a claimed invention cation.				
I hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) ath.				

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to BOE Technology Group Co., Ltd., having a place of business at No.10 Jiuxianqiao Rd., Chaoyang District, Beijing ,100015, P.R. China , and ORDOS YUANSHENG OPTOELECTRONICS CO., LTD., having a place of business at Ordos Equipment Manufacturing Base, Dongsheng District, Ordos, Inner Mongolia,017020, P.R.China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States Letters Patent, which claims priority to\_\_\_\_ 201711351459.6 Dec.15.2017; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States:

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

ì

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions;

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

Fay Sharpe LLP

ASSIGNOR HEREBY GRANTS to the agents and attorneys of \_\_\_\_\_ the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

### **STATEMENTS**

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR	
Inventor: Yue SHAN	Date: Aug. 09. 2018
Signature: Yue SHAN	0

Title of Invention	SHIFT REGISTER CIRCUIT, SCAN DRIVING CIRCUIT, DISPLAY DEVICE AND METHOD FOR DRIVING SCAN DRIVING CIRCUIT
As a below	v named inventor, I hereby declare that:
This decla	noites
is directed	to:   The attached application, or
The above-	United States application or PCT international application numberfiled on identified application was made or authorized to be made by me.
	at I am the original inventor or an original joint inventor of a claimed invention
hereby ac punishable years, or bo	knowledge that any willful false statement made in this declaration is under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) oth.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned inventor (hereinafter referred to as "ASSIGNOR"), do hereby:

SELL, ASSIGN AND TRANSFER to BOE Technology Group Co., Ltd. having a place of business at No.10 Jiuxianqiao Rd., Chaoyang District, Beijing , 100015, P.R. China , and ORDOS YUANSHENG OPTOELECTRONICS CO., LTD., having a place of business at Ordos Equipment Manufacturing Base, Dongsheng District, Ordos, Inner Mongolia,017020, P.R.China (each hereinafter referred to as "ASSIGNEE"), the entire right, title and interest for the United States and all foreign countries in and to any and all inventions which are disclosed in the above-identified application for United States 201711351459.6 Letters Patent, which claims priority to\_ Dec. 15.2017; such applications and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such inventions; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such inventions; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such inventions to the Assignee;

I

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such inventions; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such inventions and the history thereof; and generally do everything possible which the Assignee shall consider desirable for vesting title to such inventions in the Assignee, and for securing, maintaining and enforcing proper patent protection for such inventions:

TO BE BINDING on the heirs; assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

Fay Sharpe LLP

ASSIGNOR HEREBY GRANTS to the agents and attorneys of \_\_\_\_\_\_the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

The assignment of said invention is effective as of the earlier of (1) the date of execution shown below or (2) the filing date of the first filed of said patent applications.

#### STATEMENTS

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent Office all information known to me to be material to patentability as defined in 37 C.F.R. 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part.

LEGAL NAME OF INVENTOR		
Inventor: Taiyang LIU	Date:	Aug. 09, 2018
Signature: Taiyong LIU		U

2