# 507355738 06/27/2022

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7402659

06/14/2022

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	
CONVEYING PARTY DATA		
	Name	Execution Date
GUANGSU SHAO		06/09/2022
DEYUAN XIAO		06/13/2022
YUNSONG QIU		06/20/2022
YOUMING LIU		06/13/2022
YI JIANG		06/13/2022
XINGSONG SU		06/24/2022

YUHAN ZHU

### **RECEIVING PARTY DATA**

Name:	CHANGXIN MEMORY TECHNOLOGIES, INC.
Street Address:	NO. 388, XINGYE AVENUE, AIRPORT INDUSTRIAL PARK
Internal Address:	ECONOMIC AND TECHNOLOGICAL DEVELOPMENT AREA
City:	HEFEI CITY, ANHUI
State/Country:	CHINA
Postal Code:	230000

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

Property Type	Number
Application Number:	17809092

#### **CORRESPONDENCE DATA**

Fax Number:	(216)3	373-3450
		e-mail address first; if that is unsuccessful, it will be sent at is unsuccessful, it will be sent via US Mail.
Phone:	12166	6540090
Email:	docke	ting@cooperlegalgroup.com
Correspondent Name:	COOF	PER LEGAL GROUP LLC
Address Line 1:	1388	RIDGE ROAD, UNIT 1
Address Line 4:	HINC	KLEY, OHIO 44233
ATTORNEY DOCKET NUMBER:		BOXP484WOUS
NAME OF SUBMITTER:		MARCUS A. FISCHER
SIGNATURE:		/Marcus A. Fischer/

DATE SIGNED:	06/27/2022
Total Attachments: 14	
source=DeclarationAssignment#page1.t	if
source=DeclarationAssignment#page2.t	if
source=DeclarationAssignment#page3.t	if
source=DeclarationAssignment#page4.t	if
source=DeclarationAssignment#page5.t	if
source=DeclarationAssignment#page6.t	if
source=DeclarationAssignment#page7.t	if
source=DeclarationAssignment#page8.t	if
source=DeclarationAssignment#page9.t	if
source=DeclarationAssignment#page10	tif
source=DeclarationAssignment#page11	tif
source=DeclarationAssignment#page12	tif
source=DeclarationAssignment#page13	tif
source=DeclarationAssignment#page14	.tif

#### DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

Title of	SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD
Invention	THEREOF

As the below named inventor, I, hereinafter referred to as the undersigned, hereby declare that:

This declaration is directed to:

- the attached application, or
- United States Application or PCT International Application No. <u>PCT/CN2022/092947</u> filed on <u>May 16, 2022;</u>
- Claims priority to Chinese Application No. 202210404911.5 filed on April 18, 2022, all applications listed above being hereinafter referred to as the "application(s)";

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.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 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 application.

Whereas, I have invented certain new and useful improvements in the application identified above; and

Whereas,

#### CHANGXIN MEMORY TECHNOLOGIES, INC. No. 388, Xingye Avenue, Airport Industrial Park, Economic And Technological Development Area, Hefei City, Anhui 230000, China

hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in the application identified above, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned has sold and assigned, and by these presents hereby sells

LEGAL02/39437660v1

Page 1 of 14

and assigns, unto said assignce its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the invention identified above, including said application for United States Letters Patent, all divisional, renewal, substitute, continuation, nonprovisionals, continuation-inparts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignce being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignce all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignce, to furnish said Assignce with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

LEGAL NAME OF INVENTORS:

\_\_\_\_\_\_(Signature) Inventor: Guangsu SHAO

(Signature) Date: <u>2011.06.09</u>

Page 2 of 14

#### Attorney Docket No.: BOXP484WOUS Client Ref. No. P20212928US1 DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

 
 Title of Invention
 SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD

As the below named inventor, I, hereinafter referred to as the undersigned, hereby declare that:

This declaration is directed to:

- □ the attached application, or
- United States Application or PCT International Application No. <u>PCT/CN2022/092947</u> filed on <u>May 16, 2022;</u>
- Claims priority to Chinese Application No. 202210404911.5 filed on April 18, 2022, all applications listed above being hereinafter referred to as the "application(s)";

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.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 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 application.

Whereas, I have invented certain new and useful improvements in the application identified above; and

Whereas,

#### CHANGXIN MEMORY TECHNOLOGIES, INC. No. 388, Xingye Avenue, Airport Industrial Park, Economic And Technological Development Area, Hefei City, Anhui 230000, China

hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in the application identified above, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned has sold and assigned, and by these presents hereby sells

LEGAL02/39437660v1

Page 3 of 14

and assigns, unto said assignee its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the invention identified above, including said application for United States Letters Patent, all divisional, renewal, substitute, continuation, nonprovisionals, continuation-inparts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignce being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignce or otherwise as said Assignce may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignce in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignce all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignce, to furnish said Assignce with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignce the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

LEGAL NAME OF INVENTORS:

Deffuen Kind (Signature) Date: June 13, 2022

LEGAL02/39437660v1

Page 4 of 14

#### DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

Title of	SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD
Invention	THEREOF

As the below named inventor, I, hereinafter referred to as the undersigned, hereby declare that:

This declaration is directed to:

- $\square$  the attached application, or
- United States Application or PCT International Application No. <u>PCT/CN2022/092947</u> filed on <u>May 16, 2022;</u>
- Claims priority to Chinese Application No. 202210404911.5 filed on April 18, 2022, all applications listed above being hereinafter referred to as the "application(s)";

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.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 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 application.

Whereas, I have invented certain new and useful improvements in the application identified above; and

Whereas,

#### CHANGXIN MEMORY TECHNOLOGIES, INC. No. 388, Xingye Avenue, Airport Industrial Park, Economic And Technological Development Area, Hefei City, Anhui 230000, China

bereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in the application identified above, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned has sold and assigned, and by these presents hereby sells

LEGAL02/39437660v1

Page 5 of 14

and assigns, unto said assignee its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the invention identified above, including said application for United States Letters Patent, all divisional, renewal, substitute, continuation, nonprovisionals, continuation-inparts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent: said Assignce being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignce may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignce in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignce as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignce, to furnish said Assignce with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions. patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

LEGAL NAME OF INVENTORS:

<u>Jun cong</u> Qin (Signature) Date: June 29, 2022 Inventor: Yunsong OIU

LEGAL02/39437660v1

Page 6 of 14

#### Attorney Docket No.: BOXP484WOUS Client Ref. No. P2021 2928US1 DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

Title of	SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD
Invention	THEREOF

As the below named inventor, I, hereinafter referred to as the undersigned, hereby declare that:

This declaration is directed to:

- the attached application, or
- United States Application or PCT International Application No. <u>PCT/CN2022/092947</u> filed on <u>May 16, 2022;</u>
- Claims priority to Chinese Application No. 202210404911.5 filed on April 18, 2022, all applications listed above being hereinafter referred to as the "application(s)";

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.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 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 application.

Whereas, I have invented certain new and useful improvements in the application identified above; and

Whereas,

#### CHANGXIN MEMORY TECHNOLOGIES, INC. No. 388, Xingye Avenue, Airport Industrial Park, Economic And Technological Development Area, Hefei City, Anhui 230000, China

hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in the application identified above, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned has sold and assigned, and by these presents hereby sells

LEGAL02/39437660v1

Page 7 of 14

and assigns, unto said assignee its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the invention identified above, including said application for United States Letters Patent, all divisional, renewal, substitute, continuation, nonprovisionals, continuation-inparts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent: said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignce or otherwise as said Assignce may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignce as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignce, to furnish said Assignce with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignce the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

LEGAL NAME OF INVENTORS:

lin Jourist

(Signature) Date: 12.2.6.13

Inventor: YOUMING LIU

LEGAL02/39437650v1

Page 8 of 14

#### Attorney Docket No.: BOXP484WOUS Client Ref. No. P2021 2928US1 DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

Title of	SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD
3.34 Y & 36 *X 56X	THEREOF

As the below named inventor, I, hereinafter referred to as the undersigned, hereby declare that:

This declaration is directed to:

- □ the attached application, or
- United States Application or PCT International Application No. <u>PCT/CN2022/092947</u> filed on <u>May 16, 2022</u>;
- Claims priority to Chinese Application No. <u>202210404911.5</u> filed on <u>April 18, 2022</u>, all applications listed above being hereinafter referred to as the "application(s)";

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.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 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 application.

Whereas, I have invented certain new and useful improvements in the application identified above; and

Whereas,

#### CHANGXIN MEMORY TECHNOLOGIES, INC. No. 388, Xingye Avenue, Airport Industrial Park, Economic And Technological Development Area, Hefei City, Anhui 230000, China

hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in the application identified above, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned has sold and assigned, and by these presents hereby sells

LEGAL02/39437660v1

Page 9 of 14

and assigns, unto said assignee its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the invention identified above, including said application for United States Letters Patent, all divisional, renewal, substitute, continuation, nonprovisionals, continuation-inparts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignce or otherwise as said Assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignce all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignce, to furnish said Assignce with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions. patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignce the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

LEGAL NAME OF INVENTORS:

 $\frac{\int_{i}a_{n}g}{\sigma_{1}} \frac{V_{i}}{\sigma_{2}}$  (Signature) Inventor: YI

Date:\_\_\_\_\_6/13 - 2022

LEGAL02/39437660v1

Page 10 of 14

#### Attorney Docket No.: BOXP484WOUS Client Ref. No. P2021 2928US1 DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

Title of	SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD
Invention	THEREOF

As the below named inventor, I, hereinafter referred to as the undersigned, hereby declare that:

This declaration is directed to:

- □ the attached application, or
- United States Application or PCT International Application No. <u>PCT/CN2022/092947</u> filed on <u>May 16, 2022;</u>
- Claims priority to Chinese Application No. <u>202210404911.5</u> filed on <u>April 18, 2022</u>, all applications listed above being hereinafter referred to as the "application(s)";

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.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 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 application.

Whereas, I have invented certain new and useful improvements in the application identified above; and

Whereas,

#### CHANGXIN MEMORY TECHNOLOGIES, INC. No. 388, Xingye Avenue, Airport Industrial Park, Economic And Technological Development Area, Hefei City, Anhui 230000, China

hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in the application identified above, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned has sold and assigned, and by these presents hereby sells

LEGAL02/39437660v1

Page 11 of 14

and assigns, unto said assignce its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the invention identified above, including said application for United States. Letters Patent, all divisional, renewal, substitute, continuation, nonprovisionals, continuation-inparts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignce being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignce may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignce as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignce all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignce, to furnish said Assignce with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions. patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

LEGAL NAME OF INVENTORS:

LEGAL02/39437660v1

Page 12 of 14

#### DECLARATION AND ASSIGNMENT FOR PATENT AND DESIGN APPLICATIONS

Title of	SEMICONDUCTOR STRUCTURE AND MANUFACTURING METHOD
Invention	THEREOF

As the below named inventor, I, hereinafter referred to as the undersigned, hereby declare that:

This declaration is directed to:

- $\Box$  the attached application, or
- United States Application or PCT International Application No. <u>PCT/CN2022/092947</u> filed on <u>May 16, 2022;</u>
- Claims priority to Chinese Application No. <u>202210404911.5</u> filed on <u>April 18, 2022</u>, all applications listed above being hereinafter referred to as the "application(s)";

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.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 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 application.

Whereas, I have invented certain new and useful improvements in the application identified above; and

Whereas,

#### CHANGXIN MEMORY TECHNOLOGIES, INC. No. 388, Xingye Avenue, Airport Industrial Park, Economic And Technological Development Area, Hefei City, Anhui 230000, China

hereinafter referred to as Assignee, is desirous of acquiring the entire right, title, and interest in and to said invention as described in the application identified above, and in and to any and all Letters Patent which shall be granted therefor in the United States of America and all foreign countries;

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned has sold and assigned, and by these presents hereby sells

LEGAL02/39437660v1

Page 13 of 14

and assigns, unto said assignce its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the invention identified above, including said application for United States Letters Patent, all divisional, renewal, substitute, continuation, nonprovisionals, continuation-inparts, and Convention applications based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and reissues, reexaminations, and extensions of Letters Patent granted for said inventions or upon said applications and every priority right that is or may be predicated upon or arise from said inventions, said applications, and said Letters Patent; said Assignce being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said Assignee or otherwise as said Assignce may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America being hereby authorized to issue or transfer all said Letters Patent to said Assignee in accordance herewith: this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right theretofore given, and that the undersigned will do all acts reasonably serving to ensure that the said inventions, patent applications and Letters Patent shall be held and enjoyed by said Assignce as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said Assignce all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, declarations, and lawful affidavits in form and substance which may be requested by said Assignce, to furnish said Assignce with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may embody said inventions, and to testify in any proceedings relating to said inventions, patent applications, and/or Letters Patent.

This Assignment is deemed to be effective at least as early as the earliest priority date.

The undersigned hereby grant(s) an authorized representative of Assignee the power to insert in this Assignment the application number and filing date and any further identification that may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

LEGAL NAME OF INVENTORS:

<u>Yuhan Zhu</u> (Signature) Date: <u>b/14 2022</u> Inventor: Yuhan ZHU

Page 14 of 14

LEOAL02/39437660v1

## **RECORDED: 06/27/2022**