

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6773489

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Hui-Hsin Hsu	06/16/2021
Huan-Chi Ma	06/16/2021
Chien-Wen Yu	06/16/2021
Shih-Min Chou	06/16/2021
Nien-Ting Ho	06/16/2021
Ti-Bin Chen	06/16/2021
RECEIVING PARTY DATA	
Name:	UNITED MICROELECTRONICS CORP.
Street Address:	No.3, Li-Hsin Road 2, Science-Based Industrial Park
City:	Hsin-Chu City
State/Country:	TAIWAN
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17353830
CORRESPONDENCE DATA	
Fax Number:	
<i>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.</i>	
Phone:	3027291562
Email:	Patent.admin.uspto.cr@naipo.com
Correspondent Name:	WINSTON HSU
Address Line 1:	5F., NO.389, FUHE RD., YONGHE DIST.,
Address Line 4:	NEW TAIPEI CITY, TAIWAN
ATTORNEY DOCKET NUMBER:	NAUP3863USA
NAME OF SUBMITTER:	SIBYL YU
SIGNATURE:	/SIBYL YU/
DATE SIGNED:	06/22/2021
Total Attachments: 12	
source=4247590#page1.tif	

source=4247590#page2.tif
source=4247590#page3.tif
source=4247590#page4.tif
source=4247590#page5.tif
source=4247590#page6.tif
source=4247590#page7.tif
source=4247590#page8.tif
source=4247590#page9.tif
source=4247590#page10.tif
source=4247590#page11.tif
source=4247590#page12.tif

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

Title of Invention:

SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

As the below named inventor, I hereby declare that:

This declaration is directed to:

☒ The attached application, or

☐ United States application number _____ filed on _____, or

☐ PCT international application number _____ filed on _____

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.

In consideration of the payment by **UNITED MICROELECTRONICS CORP.** having a postal address of _____

No.3, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City 300, Taiwan, R.O.C.

(referred to as "ASSIGNEE" below) to I of the sum of One Dollar (\$ 1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration.

I hereby sell, assign and transfer to ASSIGNEE and the successors and assignees of the ASSIGNEE the entire right, title and interest in and to any and all improvements which are disclosed in the invention as above-identified application and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuations, continuation-in-part, divisions, renewals, substitutes, or extensions thereof, and as to Letters Patent any reissue or re-examination thereof.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to I and will testify as to the same in any interference, litigation proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal

representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I have hereunto set hand and seal this on the date(s) indicated.

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for each additional inventor.

Docket No NAUP3863USA

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: Hui-Hsin Hsu

Date: JUN 16 2021

Signature: Hui-Hsin Hsu

NPO#NAU-P3863-USA:0
CUST#UMCD-2020-0535

Page 2 of 12

F#NPO-P0002E-US1201
DSB0-110U011671

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

Title of Invention:

SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

As the below named inventor, I hereby declare that:
This declaration is directed to:

- ☒ The attached application, or
☐ United States application number _____ filed on _____, or
☐ PCT international application number _____ filed on _____

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.

In consideration of the payment by **UNITED MICROELECTRONICS CORP.** having a postal address of _____

No.3, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City 300, Taiwan, R.O.C.

(referred to as "ASSIGNEE" below) to I of the sum of One Dollar (\$ 1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration.

I hereby sell, assign and transfer to ASSIGNEE and the successors and assignees of the ASSIGNEE the entire right, title and interest in and to any and all improvements which are disclosed in the invention as above-identified application and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuations, continuation-in-part, divisions, renewals, substitutes, or extensions thereof, and as to Letters Patent any reissue or re-examination thereof.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to I and will testify as to the same in any interference, litigation proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal

representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.
IN WITNESS WHEREOF, I have hereunto set hand and seal this on the date(s) indicated.

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for each additional inventor.

Docket No NAUP3863USA

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: Huan-Chi Ma

Date: JUN 16. 2021

Signature: Huan Chi Ma

NPO#NAU-P3863-USA.0
CUST#UMCD-2020-0535

Page 4 of 12

F#NPO-P0002E-US1201
DSB0-110U011671

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

Title of Invention:

SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

As the below named inventor, I hereby declare that:

This declaration is directed to:

☒ The attached application, or

☐ United States application number _____ filed on _____, or

☐ PCT international application number _____ filed on _____

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.

In consideration of the payment by **UNITED MICROELECTRONICS CORP.** having a postal address of _____

No.3, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City 300, Taiwan, R.O.C.

(referred to as "ASSIGNEE" below) to I of the sum of One Dollar (\$ 1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration.

I hereby sell, assign and transfer to ASSIGNEE and the successors and assignees of the ASSIGNEE the entire right, title and interest in and to any and all improvements which are disclosed in the invention as above-identified application and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuations, continuation-in-part, divisions, renewals, substitutes, or extensions thereof, and as to Letters Patent any reissue or re-examination thereof.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to I and will testify as to the same in any interference, litigation proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal

representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I have hereunto set hand and seal this on the date(s) indicated.

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for each additional inventor.

Docket No NAUP3863USA

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: Chien-Wen Yu

Date: JUN 16 2021

Signature: Chien-Wen Yu

NPO#NAU-P3863-USA:0
CUST#UMCD-2020-0535

Page 6 of 12

F#NPO-P0002E-US1201
DSB0-110U011671

PATENT
REEL: 056610 FRAME: 0784

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

Title of Invention:

SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

As the below named inventor, I hereby declare that:
This declaration is directed to:

- ☒ The attached application, or
☐ United States application number _____ filed on _____, or
☐ PCT international application number _____ filed on _____

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.

In consideration of the payment by **UNITED MICROELECTRONICS CORP.** having a postal address of _____

No.3, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City 300, Taiwan, R.O.C.

(referred to as "ASSIGNEE" below) to I of the sum of One Dollar (\$ 1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration.

I hereby sell, assign and transfer to ASSIGNEE and the successors and assignees of the ASSIGNEE the entire right, title and interest in and to any and all improvements which are disclosed in the invention as above-identified application and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuations, continuation-in-part, divisions, renewals, substitutes, or extensions thereof, and as to Letters Patent any reissue or re-examination thereof.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to I and will testify as to the same in any interference, litigation proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal

representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.
IN WITNESS WHEREOF, I have hereunto set hand and seal this on the date(s) indicated.

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for each additional inventor.

Docket No NAUP3863USA

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor Shih-Min Chou

Date: JUN 16, 2021

Signature Shih-Min Chou

NPO/NAU-P3863-USA-0
CUSTOMCD-2020-0535

Page 8 of 12

F#NPO-P0002E-US1201
DSB0-1101011671

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

Title of Invention:

SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

As the below named inventor, I hereby declare that:

This declaration is directed to:

☒ The attached application, or

☐ United States application number _____ filed on _____, or

☐ PCT international application number _____ filed on _____

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.

In consideration of the payment by **UNITED MICROELECTRONICS CORP.** having a postal address of _____

No.3, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City 300, Taiwan, R.O.C.

(referred to as "ASSIGNEE" below) to I of the sum of One Dollar (\$ 1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration.

I hereby sell, assign and transfer to ASSIGNEE and the successors and assignees of the ASSIGNEE the entire right, title and interest in and to any and all improvements which are disclosed in the invention as above-identified application and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuations, continuation-in-part, divisions, renewals, substitutes, or extensions thereof, and as to Letters Patent any reissue or re-examination thereof.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to I and will testify as to the same in any interference, litigation proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal

representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I have hereunto set hand and seal this on the date(s) indicated.

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for each additional inventor.

Docket No NAUP3863USA

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: Nien-Ting Ho

Date:

JUN 16, 2021

Signature:

Nien-Ting Ho

NPO#NAU-P3863-USA:0
CUST#UMCD-2020-0535

Page 10 of 12

F#NPO-P0002E-US1201
DSB0-110U011671

**COMBINE DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION
USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

Title of Invention:

SEMICONDUCTOR DEVICE AND MANUFACTURING METHOD THEREOF

As the below named inventor, I hereby declare that:
This declaration is directed to:

- ☒ The attached application, or
☐ United States application number _____ filed on _____, or
☐ PCT international application number _____ filed on _____

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.

In consideration of the payment by **UNITED MICROELECTRONICS CORP.** having a postal address of _____

No.3, Li-Hsin Road 2, Science-Based Industrial Park, Hsin-Chu City 300, Taiwan, R.O.C.

(referred to as "ASSIGNEE" below) to I of the sum of One Dollar (\$ 1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration.

I hereby sell, assign and transfer to ASSIGNEE and the successors and assignees of the ASSIGNEE the entire right, title and interest in and to any and all improvements which are disclosed in the invention as above-identified application and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuations, continuation-in-part, divisions, renewals, substitutes, or extensions thereof, and as to Letters Patent any reissue or re-examination thereof.

I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment;

I further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to I and will testify as to the same in any interference, litigation proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal

representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.
IN WITNESS WHEREOF, I have hereunto set hand and seal this on the date(s) indicated.

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Use this form for each additional inventor.

Docket No NAUP3863USA

LEGAL NAME OF INVENTOR(ASSIGNOR)

Inventor: Ti-Bin Chen

Date:

JUN 16 2021

Signature: Ti Bin Chen

NPO#NAU-P3863-USA:0
CUST#UMCD-2020-0535

Page 12 of 12

F#NPO-P0002E-US1201
DSB0-110U011671

RECORDED: 06/22/2021

PATENT
REEL: 056610 FRAME: 0790