506289131 10/05/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------------|----------------|
| YOU-RU LIN | 08/24/2011 |
| CHENG-HSIEN WU | 08/24/2011 |
| CHIH-HSIN KO | 08/24/2011 |
| CLEMENT HSINGJEN WANN | 08/30/2011 |

RECEIVING PARTY DATA

| Name: | TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD. | | |
|-------------------|--|--|--|
| Street Address: | NO. 8, LI-HSIN RD. 6 | | |
| Internal Address: | ernal Address: SCIENCE-BASED INDUSTRIAL PARK | | |
| City: | HSIN-CHU | | |
| State/Country: | TAIWAN | | |
| Postal Code: | 300-77 | | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 17063459 |

CORRESPONDENCE DATA

Fax Number: (214)200-0853

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| ATTORNEY DOCKET NUMBER: | 2011-0432/24061.2987US05 |
|-------------------------|--------------------------|
| NAME OF SUBMITTER: | MARCY OGADO |
| SIGNATURE: | /Marcy Ogado/ |
| DATE SIGNED: | 10/05/2020 |
| | |

Total Attachments: 3

PATENT REEL: 053977 FRAME: 0113

EPAS ID: PAT6335879

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> PATENT REEL: 053977 FRAME: 0114

Docket No.: 2011-0432 / 24061.1838

Customer No.: 42717

ASSIGNMENT

WHEREAS, we,

| (1) | You-Ru Lin | of | 1F, No. 51, Lanc 36, Anping Road, Zhonghe District New Taipei City 235, Taiwan, R.O.C. |
|-----|-----------------------|----|---|
| (2) | Cheng-Hsien Wu | of | 7F-2, No. 18, Lane 107, Kexueyuan Road, East District Hsinchu City 300, Taiwan, R.O.C. |
| (3) | Chih-Hsin Ko | of | No. 1, Lane 200, Wunheng Road Fongshan City, Kaohsiung City 830, Tawian, R.O.C. |
| (4) | Clement Hsingjen Wann | of | 1179 Barrett Circle West Carmel, NY 10512, USA |

have invented certain improvements in

FINFET DEVICE HAVING A CHANNEL DEFINED IN A DIAMOND-LIKE SHAPE SEMICONDUCTOR STRUCTURE

for which we have executed an application for Letters Patent of the United States of America, filed on August 30, 2011 and assigned application number 13/220,979; and

WHEREAS, Taiwan Semiconductor Manufacturing Company, Ltd., ("TSMC"), No. 8, Li-Hsin Rd. 6, Science-Based Industrial Park Hsin-Chu, Taiwan 300-77, Republic of China. is desirous of obtaining the entire right, title, and interest in, to and under the said invention and the said application in the United States of America and in any and all countries foreign thereto;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and other good and valuable consideration, we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said TSMC, its successors, legal representatives, and assigns, the entire right, title, and interest in, to and under the said invention, and the said application, and all divisional, renewal, substitutional, and continuing applications thereof, and all Letters Patent of the United States of America which may be granted thereon and all reissues and extensions thereof, and all applications for Letters Patent which may be filed for said invention in any country or countries foreign to the United States of America, and all extensions, renewals, and reissues thereof, and all prior patents and patent applications from which a filing priority of the above-described patent application may be obtained, including the right to collect past damages; and we hereby authorize and request the Commissioner of Patents of the United States of America, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said invention to the said TSMC, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant that we have full right to convey the entire interest herein assigned, and that we have not executed, and will not execute, any agreement in conflict herewith.

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AND WE HEREBY further covenant and agree that we will communicate to said TSMC, its successors, legal representatives and assigns, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, renewal, substitutional, continuing, and reissue applications, make all rightful declarations and/or oaths and generally do everything possible to aid the said TSMC, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said invention in all countries.

| Inventor Name: | You-Ru Lin | | |
|----------------------------|--|--|--|
| Residence Address: Dated: | 1F, No. 51, Lane 36, Anping Road, Zhonghe District New Taipei City 235, Taiwan, R.O.C. To U - Ru L7u V 30H/8/V Inventor Signature | | |
| Inventor Name: | Cheng-Hsien Wu | | |
| Residence Address: | sidence Address: 7F-2, No. 18, Lane 107, Kexueyuan Road, East District Hsinchu City 300, Taiwan, R.O.C. | | |
| Dated! <u>✓ >01/8</u> | V Cheng-Hsien Wy Inventor Signature | | |
| Inventor Name: | Chih-Hsin Ko | | |
| Residence Address: | No. 1, Lane 200, Wunheng Road Fongshan City, Kaohsiung City 830, Tawian, R.O.C. | | |
| Dated: V 2011/8/ | V Chil-Hsin Ko Inventor Signature | | |

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Inventor Name:

Clement Hsingjen Wann

Residence Address:

1179 Barrett Circle West Carmel, NY 10512, USA

Dated: \ 8/30 / 2011

Inventor Signature

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