

<b>PATENT ASSIGNMENT COVER SHEET</b>
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EPAS ID: PAT3505345

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
WEN-CHU HSIAO	06/10/2015
JU WEN HSIAO	06/15/2015
YING-LANG WANG	06/11/2015
YING-MIN CHOU	06/11/2015
HSIANG-HSIANG KO	06/24/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
<b>Street Address:</b>	NO. 8, LI-HSIN ROAD 6,
<b>Internal Address:</b>	SCIENCE-BASED INDUSTRIAL PARK
<b>City:</b>	HSIN-CHU
<b>State/Country:</b>	TAIWAN
<b>Postal Code:</b>	300-77
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14745233
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(214)651-5940
<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>	
<b>Phone:</b>	214-651-5000
<b>Email:</b>	ipdocketing@haynesboone.com
<b>Correspondent Name:</b>	HAYNES AND BOONE, LLP IP SECTION
<b>Address Line 1:</b>	2323 VICTORY AVENUE
<b>Address Line 2:</b>	SUITE 700
<b>Address Line 4:</b>	DALLAS, TEXAS 75219
<b>ATTORNEY DOCKET NUMBER:</b>	24061.2804US02
<b>NAME OF SUBMITTER:</b>	LADONNA JOHNSON
<b>SIGNATURE:</b>	/LaDonna Johnson/
<b>DATE SIGNED:</b>	08/29/2015

**Total Attachments: 5**

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Docket No.: P20110750US01 / 24061.2804US02  
Customer No.: 000042717

### ASSIGNMENT

WHEREAS, we,

- |     |                         |    |   |
|-----|-------------------------|----|---|
| (1) | <b>Wen-Chu Hsiao</b>    | of | No.2, Aly. 338, Yongda 1st Rd., Yongkang Dist., Tainan City 710, Taiwan (R.O.C.)                  |
| (2) | <b>Hsiang-Hsiang Ko</b> | of | 22F.-1, No.378, Gongyuan S. Rd., North Dist., Tainan City 704, Taiwan (R.O.C.)                    |
| (3) | <b>Ju Wen Hsiao</b>     | of | No.15, Ln. 198, Wenhua 2nd St., East Dist., Tainan City 701, Taiwan (R.O.C.)                      |
| (4) | <b>Ying-Lang Wang</b>   | of | No.37-10, Lung-Pei Road, Tien-Chung Village, Lung-Jing Country, Tai-Chung County, Taiwan (R.O.C.) |
| (5) | <b>Ying-Min Chou</b>    | of | No.66, Ln. 290, Sec. 1, Anji Rd., Annan Dist., Tainan City 709, Taiwan (R.O.C.)                   |

have invented certain improvements in

### SEMICONDUCTOR DEVICES UTILIZING PARTIALLY DOPED STRESSOR FILM PORTIONS

for which we have executed an application for Letters Patent of the United States of America,

  X   of even date filed herewith; and  
       filed on        and assigned application number       ; and

WHEREAS, we authorize the attorney of record to update this document to include Patent Office information as deemed necessary (i.e., filing date, serial number, etc.);

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

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and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to 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.

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: **Wen-Chu Hsiao**

Residence Address: No.2, Aly. 338, Yongda 1st Rd., Yongkang Dist., Tainan City 710, Taiwan (R.O.C.)

Dated: 2015/6/10

Wen-Chu Hsiao  
Inventor Signature

Inventor Name: **Hsiang-Hsiang Ko**

Residence Address: 22F.-1, No.378, Gongyuan S. Rd., North Dist., Tainan City 704, Taiwan (R.O.C.)

Dated: \_\_\_\_\_

\_\_\_\_\_  
Inventor Signature

Inventor Name: **Ju Wen Hsiao**

Residence Address: No.15, Ln. 198, Wenhua 2nd St., East Dist., Tainan City 701, Taiwan (R.O.C.)

Dated: 2015/6/15

Ju Wen Hsiao  
Inventor Signature

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Inventor Name: **Ying-Lang Wang**

Residence Address: No.37-10, Lung-Pei Road, Tien-Chung Village, Lung-Jing Country,  
Tai-Chung County, Taiwan (R.O.C.)

Dated: \_\_\_\_\_

2015/6/11

Inventor Signature

*Ying-Lang Wang*

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Inventor Name: **Ying-Min Chou**

Residence Address: No.66, Ln. 290, Sec. 1, Anji Rd., Annan Dist., Tainan City 709,  
Taiwan (R.O.C.)

Dated: \_\_\_\_\_

2015/6/11

Inventor Signature

*Ying-Min Chou*

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- (1) **Wen-Chu Hsiao** of No.2, Aly. 338, Yongda 1st Rd., Yongkang Dist., Tainan City 710, Taiwan (R.O.C.)
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- (3) **Ju Wen Hsiao** of No.15, Ln. 198, Wenhua 2nd St., East Dist., Tainan City 701, Taiwan (R.O.C.)
- (4) **Ying-Lang Wang** of No.37-10, Lung-Pei Road, Tien-Chung Village, Lung-Jing Country, Tai-Chung County, Taiwan (R.O.C.)
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and request the Commissioner of Patents of the United States of America, and any official of any country or countries foreign to 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.

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Inventor Name: **Wen-Chu Hsiao**

Residence Address: No.2, Aly. 338, Yongda 1st Rd., Yongkang  
Dist., Tainan City 710, Taiwan (R.O.C.)

Dated: \_\_\_\_\_

\_\_\_\_\_  
Inventor Signature

---

Inventor Name: **Hsiang-Hsiang Ko**

Residence Address: 22F.-1, No.378, Gongyuan S. Rd., North Dist., Tainan City 704,  
Taiwan (R.O.C.)

Dated: 2015/06/24

Hsiang Hsiang Ko  
\_\_\_\_\_  
Inventor Signature

---

Inventor Name: **Ju Wen Hsiao**

Residence Address: No.15, Ln. 198, Wenhua 2nd St., East Dist., Tainan City 701,  
Taiwan (R.O.C.)

Dated: \_\_\_\_\_

\_\_\_\_\_  
Inventor Signature