## 503649856 01/14/2016

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3696491

| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name           | Execution Date |
|----------------|----------------|
| STEVE S. CHUNG | 12/23/2015     |
| E-RAY HSIEH    | 12/23/2015     |
| YU-BIN ZHAO    | 12/23/2015     |
| SAMUEL C. PAN  | 12/29/2015     |

#### **RECEIVING PARTY DATA**

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| City:           | HSINCHU                                      |
| State/Country:  | TAIWAN                                       |
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| City:           | HSINCHU                                      |
| State/Country:  | TAIWAN                                       |
| Postal Code:    | 300  |

## **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |  |  |  |
|---------------------|----------|--|--|--|
| Application Number: | 14994718 |  |  |  |

### **CORRESPONDENCE DATA**

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ATTORNEY DOCKET NUMBER: 0941-3252PUS2

NAME OF SUBMITTER: ANALIZA STEPINA

PATENT 503649856 REEL: 037493 FRAME: 0685

| SIGNATURE:   | /analiza stepina/ |  |  |
|--|-------------------|--|--|
| DATE SIGNED:   | 01/14/2016        |  |  |
| Total Attachments: 2                                 |                   |  |  |
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| source=2016-01-14-Assignment-0941-3252PUS2#page2.tif |                   |  |  |

PATENT REEL: 037493 FRAME: 0686 **S/N:** 14/994,718

Filing Date: JAN-13-2016

## **ASSIGNMENT**

Attorney Docket No.: 0941-3252PUS2

WHEREAS, Steve S. CHUNG E-Ray HSIEH, Yu-Bin ZHAO, and Samuel C. PAN hereafter referred to as ASSIGNOR, has/have invented certain new and useful improvements as described and set forth in the below identified application for United States Letters Patent:

| Title:_ | STRUC         | CTURE    | AND    | FORMATION       | METHOD        | OF    | SEMICONI             | DUCTOR     | DEVICE     |
|---------|---------------|----------|--------|-----------------|---------------|-------|----------------------|------------|------------|
| STRU    | <u>JCTURI</u> | <u>C</u> |        |                 |               |       |                      |            |            |
| Filed:  |               |          |        |                 | Serial No.    |       |                      |            |            |
| Execu   | ited on:_     |          |        |                 |               |       |                      |            |            |
| WHE     | REAS, ]       | aiwan S  | emico  | nductor Manufac | turing Co., I | Ltd., | of <u>No. 8, Li-</u> | Hsin Rd. ( | 6, Hsinchu |
| Scienc  | ce Park.      | Hsinch   | u 300- | 78. Taiwan R.O  | .C. and Nat   | ional | Chiao Tung           | Universit  | v of 1001  |

WHEREAS, Taiwan Semiconductor Manufacturing Co., Ltd., of No. 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu 300-78, Taiwan R.O.C. and National Chiao Tung University of 1001 University Road, Hsinchu 300, Taiwan, R.O.C. hereinafter referred to as ASSIGNEES, are desirous of acquiring ASSIGNOR'S interest in the said invention and application and in any U.S. Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has/have sold, assigned and transferred, and by these presents does/do sell, assign and transfer unto the said Assignee, and Assignee's successors and assigns, all his/her/their rights, title and interest in and to the said invention and application and all future improvements thereon, and in and to any Letters Patent which may hereafter be granted on the same in the United States, the said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignor had this Assignment and transfer not been made, to the full end and term of any Letters Patent which may be granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees/agree that he/she/they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignor has/have signed his/her/their name(s) on the date(s) indicated.

P20151057US00/0503-B30520-US

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PATENT

REEL: 037493 FRAME: 0687

# **ASSIGNMENT**

Attorney Docket No.: 0941-3252PUS2

| 2015/12/23         | Sten Chy                                |  |
|--------------------|---|--|
| Date               | Name: Steve S. CHUNG (Last name: CHUNG) |  |
| 2015/12/23         | E-Day I Siel                            |  |
| Date               | Name: E-Ray HSIEH (Last name: ĤSIEH)    |  |
| 2015/12/23<br>Date | Name: Yu-Bin ZHAO (Last name: ZHAO)     |  |
| Doc 29, 2015       | V Samuel C. Re                          |  |

Name: Samuel C. PAN

(Last name: PAN)

Date