505762175 11/07/2019

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JUNG-HAO CHANG	09/27/2019
LI-TE LIN	09/27/2019
PINYEN LIN	09/27/2019

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
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City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16676057

CORRESPONDENCE DATA

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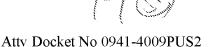
ATTORNEY DOCKET NUMBER:	0941-4009PUS2
NAME OF SUBMITTER:	MICHAEL A CLEMENTI
SIGNATURE:	/Michael A Clementi/
DATE SIGNED:	11/07/2019

Total Attachments: 2

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PATENT REEL: 050947 FRAME: 0041 505762175

ASSIGNMENT



WHEREAS, Jung-Hao CHANG, Li-Te LIN and Pinyen LIN 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: STRUCTURE AND FORMATION METHOD OF SEMICONDUCTOR DEVICE WITH METAL GATE STACK

Filed: 11/6/2019	Serial No.	16/676.057	***************************************
Executed on: 9/27/2019		10/070,037	

WHEREAS, Taiwan Semiconductor Manufacturing Co., Ltd., of No. 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu 300-78, Taiwan R.O.C., hereinafter referred to as ASSIGNEE, is 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 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.

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PATENT REEL: 050947 FRAME: 0042

ASSIGNMENT

9/27/2019	Jung Haa, Chang.	
Date	Name: Jung-Hao CHANG	
9/27/2019	Lite La.	
Date	Name: Li-Te LIN	***************************************

9/27/2019 Purp