506011955 04/13/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6058667

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
I-HSIEH WONG	03/20/2020
WEI-YANG LEE	03/20/2020
FENG-CHENG YANG	03/24/2020
YEN-MING CHEN	03/20/2020

RECEIVING PARTY DATA

Name:	TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.
Street Address:	8, LI-HSIN RD. 6
Internal Address:	HSINCHU SCIENCE PARK
City:	HSINCHU
State/Country:	TAIWAN
Postal Code:	300-78

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16847116

CORRESPONDENCE DATA

Fax Number: (214)200-0853

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.

Phone: 214-651-5000

Email: ipdocketing@haynesboone.com

Correspondent Name: HAYNES AND BOONE, LLP (24061) IP SECTION

Address Line 1: 2323 VICTORY AVENUE

Address Line 2: SUITE 700

Address Line 4: DALLAS, TEXAS 75219

Total Attachments, 0	
DATE SIGNED:	04/13/2020
SIGNATURE:	/Marcy Ogado/
NAME OF SUBMITTER:	MARCY OGADO
ATTORNEY DOCKET NUMBER:	2019-1104/24061.3986US01

Total Attachments: 2

PATENT REEL: 052381 FRAME: 0389

506011955

source=3986US01Assignment#page1.tif source=3986US01Assignment#page2.tif

PATENT REEL: 052381 FRAME: 0390



Docket No.: P20191104US00/24061.3986US01 Customer No.: 000042717

ASSIGNMENT

WHEREAS, we,

(1)	I-Hsieh Wong	of	Hsinchu, Taiwan (R.O.C.)
(2)	Wei-Yang Lee	of	Taipei City, Taiwan (R.O.C.)
(3)	Feng-Cheng Yang	of	Zhudong Township Taiwan (R.O.C.)
(4)	Yen-Ming Chen	of	Chu-Pei City, Taiwan (R.O.C.)

have invented certain improvements in

HYBRID SRAM DESIGN WITH NANO-STRUCTURES

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

of even date filed herewith; and		
 filed on April 13, 2020 and assigned application number	16/847,116 ;	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 Co., Ltd., ("TSMC"), 8, Li-Hsin Rd. 6, Hsinchu Science Park, Hsinchu, Taiwan 300-78, 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, 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,

~] -.

Docket No.: P20191104US00/24061.3986US01

Customer No.: 000042717

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:

I-Hsieh Wong

Residence Address:

8, Li-Hsin Rd. 6,

Hsinchu, Taiwan (R.O.C.)

Dated: 93/20/2020

Z-Hsteh Wing

Inventor Name:

Wei-Yang Lee

Residence Address:

3F, No. 39, Ln. 10, Shuangcheng St., Zhongshan Dist.,

Taipei City 104, Taiwan (R.O.C.)

Dated: 3/20/20x0

Merganj Lee Inventor Signature

Inventor Name:

Feng-Cheng Yang

Residence Address:

No. 7, Aly. 8, Ln. 315, Xuefu E. Rd., Zhudong Township,

Hsinchu County 310, Taiwan (R.O.C.)

Dated: 195/プル/ つの200

Inventor Signature

Inventor Name:

Yen-Ming Chen

Residence Address:

6F, No. 33, Sheng-Li 5th Rd., Chu-Pei City,

Hsin-Chu County, Taiwan (R.O.C.)

Dated: 13/240 1 200

Inventor Signature

0024061.03986US01 | 4853-0676-1655 v.1

-2-