505150584 10/19/2018

PATENT ASSIGNMENT COVER SHEET

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 SUBMISSION TYPE:
 NEW ASSIGNMENT

 NATURE OF CONVEYANCE:
 ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XIANZHOU LIU	09/27/2018

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16164758

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NAME OF SUBMITTER: KELLY J SMITH

SIGNATURE: /Kelly J. Smith/

DATE SIGNED: 10/19/2018

Total Attachments: 3

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PATENT 505150584 REEL: 047274 FRAME: 0945

Attorney No.: 15157-000603-US

ASSIGNMENT

Each person signing below ("Assignor") has made or authorized to be made the following patent applications ("Patent Applications"):

U.S. Application No. 16 / 164 , 758 , filed October 18, 2018 titled SEMICONDUCTOR STRUCTURE AND METHOD FOR MANUFACTURING THE SAME.

The Patent Applications disclose, whether claimed or unclaimed, inventions ("Inventions"), of which Assignor believes Assignor is an original inventor or an original joint inventor.

Shanghai Huahong Grace Semiconductor Manufacturing Corporation ("Assignee"), having a place of business at 1399 Zuchongzhi Road, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201203, PEOPLE'S REPUBLIC OF CHINA, desires to acquire all right, title, and interest in and to "Intellectual Property" as defined below.

Assignor acknowledges and confirms any prior assignment(s) or obligation(s) of assignment from Assignor to Assignee of any part of the Intellectual Property.

For good and valuable consideration, the receipt and adequacy of which is acknowledged. Assignor irrevocably assigns, sells, and transfers all legal and equitable right, title, and interest in and to the Intellectual Property to Assignee. Assignee acknowledges and accepts the assignment, sale, and transfer. The right, title, and interest shall be held and enjoyed by Assignee and Assignee's successors in interest to the full end of any term, and to the full extent, as the Intellectual Property would have been held and enjoyed by Assignor if no assignment had been made to Assignee.

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- b. the Patent Applications;
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- d. any application that claims or could have claimed priority to or benefit of one of the Patent Applications directly or indirectly (including divisionals, continuations, continuations-in-part, patents of addition, and non-U.S. applications);
- any application, whether or not linked by priority/benefit claim to the Patent Applications, that describes or claims at least one of the Inventions;
- f. any official grant (including a United States Patent) arising from any application identified in parts (a)–(e);

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 g. any modification or extension of any official grant, including reissues, reexaminations, renewals, substitutes, patents of addition, and extensions;

- any improvements to the Inventions that were conceived by Assignor prior to execution of this Assignment; and
- i. all interest in works of authorship by Assignor related to the Inventions, whether reproduced in the Patent Applications or not, and including computer code, user interfaces, graphic works, and the Patent Applications themselves, including the written descriptions, the drawings, and the claims.

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 execution of this Assignment.

Assignor requests, in each country in which an application encompassed by the Intellectual Property is filed, that any official whose duty it is to make an official grant (such as the Director of the country's Patent Office) issue the official grant to Assignee

Assignor represents that Assignor has not, and agrees that Assignor will not, enter into any assignment, sale, license, agreement, transfer, or encumbrance that would conflict with this Assignment. Assignor further agrees not to challenge, or assist in any challenge to, the Intellectual Property.

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For any reason, including by operation of law, in any respect and in any jurisdiction:

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- to the extent that the exclusive license fails, the exclusive license shall operate as a non-exclusive license; and
- c. to the extent that the non-exclusive license fails, Assignor grants Assignee, Assignee's successors in interest, and each of their respective direct and indirect customers, a covenant not-to-sue, binding on Assignor's successors in interest.

If any provision of this Assignment is determined to be invalid or unenforceable for any reason, including by operation of law, all other provisions shall remain in full force and effect, and the court or tribunal making such a finding shall substitute an enforceable provision that most closely reflects the original.

Assignor grants Harness, Dickey & Pierce, P.L.C. the power and authority to insert the corresponding application numbers, filing dates, and titles in the spaces provided above for any of the Patent Applications after execution of this Assignment.

Xianzlou Uu	Witness 1 Signature: }kuaning Zkuang	
Xianzhou Liu 2017, 9, 27	Witness 1 Printed Name: <u>Hyajing Zhuan</u> ต	
Dated	Witness 2 Signature: Yao Xu	
	Witness 2 Printed Name: Yao Xix	100 C