

<b>PATENT ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
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EPAS ID: PAT5557764

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.	05/15/2019
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ILLUMINA, INC.
<b>Street Address:</b>	5200 ILLUMINA WAY
<b>City:</b>	SAN DIEGO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	92122
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14156641
<b>CORRESPONDENCE DATA</b>	
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<b>Correspondent Name:</b>	ILLUMINA, INC.
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<b>ATTORNEY DOCKET NUMBER:</b>	IP-1848-US
<b>NAME OF SUBMITTER:</b>	SARA HARE
<b>SIGNATURE:</b>	/Sara Hare/
<b>DATE SIGNED:</b>	06/05/2019
<b>Total Attachments: 2</b>	
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source=TSMC-ILMN Assignment#page2.tif	

**ASSIGNMENT FROM BUSINESS ENTITY**

WHEREAS, TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD., a company duly incorporated under the laws of the Republic of China, having a place of business at No. 8, Li-Hsin Rd. 6, Hsin-Chu Science Park, Hsin-Chu, Taiwan 300-77, R.O.C. (hereinafter "ASSIGNOR"), represents and warrants that it has received an assignment or assignments of right, title, and interest to certain new and useful improvements for which the following application(s) for Letters Patents (hereinafter "the Patent Application(s)") have been filed:

Serial No.	Patent/Pub. No.	Filing Date	Title
US 14/040,303	US 9,352,315 B2	2013-09-27	Method to produce chemical pattern in micro-fluidic structure
CN 201310689189 A	CN 104515737 B	2013-12-12	在微流体结构中产生化学物图案的方法   Method of generating chemical thing pattern in a microfluidic structure
US 15/187,764	US 9,656,260 B2	2016-05-27	Method to produce chemical pattern in micro-fluidic structure
US 15/603,128	US 2017/0326548 A1	2017-05-23	Method to Produce Chemical Pattern In Micro-Fluidic Structure
US 14/156,641	US 9,114,396 B2	2014-01-16	Method of making flowcell with micro-fluid structure

WHEREAS, ILLUMINA, INC., a Delaware corporation, having a place of business at 5200 Illumina Way, San Diego, California 92122 USA (hereinafter "ASSIGNEE") is desirous of acquiring the entire right, title, and interest in and to the inventions disclosed in the Patent Application(s);

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR hereby further acknowledges that it has sold, assigned, and transferred, and by these presents does hereby sell, assign, and transfer, unto ASSIGNEE, its successors, legal representatives, and assigns, the entire right, title, and interest throughout the world in, to, and under the said improvements, and the Patent Application(s) and all Patents (hereinafter "the Patents") that may be granted thereon, and all divisions, continuations, reissues, reexaminations, renewals, and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent that may hereafter be filed for said improvements or for the Patent Application(s) in any country or countries foreign to the United States; and ASSIGNOR hereby authorizes and requests the Commissioner of Patents of the United States, and any Official of any country foreign to the United States, whose duty it is

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**ASSIGNMENT FROM BUSINESS ENTITY**

to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements and all Letters Patents resulting from the Patent Application(s) to ASSIGNEE, its successors, legal representatives, and assigns, in accordance with the terms of this Agreement.

ASSIGNOR does hereby sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of the Patents before or after issuance;

At ASSIGNEE's request and expense, ASSIGNOR will provide further cooperation reasonably necessary (such as executing and delivering additional assignments, affidavits, and other documents and providing information and materials) to obtain, perfect, and defend the assignment of the Patents in the United States or any foreign country.

IN TESTIMONY WHEREOF, I hereunto set my hand this 15<sup>th</sup> day of May, 2019.

TAIWAN SEMICONDUCTOR MANUFACTURING CO., LTD.  
No. 8, Li-Hsin Rd. 6, Hsin-Chu Science Park,  
Hsin-Chu, Taiwan 300-77  
R.O.C.

By: Donald R. McKenna  
Name: Donald R. McKenna  
Title: Director, R&D Legal Division

RECEIVED AND HEREBY ACCEPTED BY ILLUMINA, INC., a Delaware corporation

Date: May 24, 2019

Roland Schwillinski  
Name: Roland Schwillinski  
Title: Vice President, Global IP and Litigation

