

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5156978

<b>SUBMISSION TYPE:</b>	CORRECTIVE ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	Corrective Assignment to correct the 3RD INVENTOR'S EXECUTION DATE previously recorded on Reel 046942 Frame 0939. Assignor(s) hereby confirms the ASSIGNMENT.
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SONG GUO	07/30/2018
SANH D. TANG	08/15/2018
VLAD TEMCHENKO	08/28/2018
SHIVANI SRIVASTAVA	08/23/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MICRON TECHNOLOGY, INC.
<b>Street Address:</b>	8000 SOUTH FEDERAL WAY
<b>Internal Address:</b>	MAILSTOP 1-507
<b>City:</b>	BOISE
<b>State/Country:</b>	IDAHO
<b>Postal Code:</b>	83707-0006
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16111499
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(801)531-9168
<i>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.</i>	
<b>Phone:</b>	8015321922
<b>Email:</b>	djpfeil@traskbritt.com
<b>Correspondent Name:</b>	TRASK BRITT, P.C
<b>Address Line 1:</b>	P.O. BOX 2550
<b>Address Line 4:</b>	SALT LAKE CITY, UTAH 84110
<b>ATTORNEY DOCKET NUMBER:</b>	2269-14271(2016-0775.00)
<b>NAME OF SUBMITTER:</b>	JESSE M. FLORES
<b>SIGNATURE:</b>	/Jesse M. Flores/
<b>DATE SIGNED:</b>	09/25/2018
<b>Total Attachments: 9</b>	

source=Sept-25-2018-Corrective-Recording-14271US#page1.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page2.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page3.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page4.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page5.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page6.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page7.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page8.tif  
source=Sept-25-2018-Corrective-Recording-14271US#page9.tif

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5108896

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SONG GUO	07/30/2018
SANH D. TANG	08/15/2018
VLAD TEMCHENKO	<u>08/28/2018</u> <del>08/18/2018</del>
SHIVANI SRIVASTAVA	08/23/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	MICRON TECHNOLOGY, INC.
<b>Street Address:</b>	8000 SOUTH FEDERAL WAY
<b>Internal Address:</b>	MAILSTOP 1-507
<b>City:</b>	BOISE
<b>State/Country:</b>	IDAHO
<b>Postal Code:</b>	83707-0006
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	16111499
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(801)531-9168
<i>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.</i>	
<b>Phone:</b>	801-532-1922
<b>Email:</b>	djpfeil@traskbritt.com
<b>Correspondent Name:</b>	TRASK BRITT, P.C./ MICRON TECHNOLOGY
<b>Address Line 1:</b>	P.O. BOX 2550
<b>Address Line 4:</b>	SALT LAKE CITY, UTAH 84110
<b>ATTORNEY DOCKET NUMBER:</b>	2269-14271(2016-0775.00)
<b>NAME OF SUBMITTER:</b>	JESSE M. FLORES
<b>SIGNATURE:</b>	/Jesse M. Flores/
<b>DATE SIGNED:</b>	08/24/2018
<b>Total Attachments: 8</b>	
source=Aug-24-2018-Assignment-14271US#page1.tif	

**ASSIGNMENT**

**FOR GOOD AND VALUABLE CONSIDERATION**, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned ASSIGNOR does hereby:

**SELL, ASSIGN AND TRANSFER** to MICRON TECHNOLOGY, INC. ("ASSIGNEE"), a Corporation of the State of Delaware, having a place of business at 8000 South Federal Way, Mailstop 1-507, Boise, ID 83707-0006, the entire right, title and interest for the United States and all foreign countries in and to any and all improvements that are disclosed in the **Application for United States Letters Patent** that has been executed by each undersigned ASSIGNOR concurrently herewith, and titled **METHODS OF FORMING SEMICONDUCTOR DEVICES USING ASPECT RATIO DEPENDENT ETCHING EFFECTS, AND RELATED SEMICONDUCTOR DEVICES, MEMORY DEVICES, AND ELECTRONIC SYSTEMS**, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent or the legal equivalent thereof that have been or may be filed in the United States and all foreign countries relating to any of such improvements; all original, reexamined and reissued patents that have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States;

**AUTHORIZE** the ASSIGNEE to apply for and receive any and all United States and foreign patents relating to such improvements in its own name;

**AUTHORIZE AND REQUEST** the issuing authority to issue any and all United States and foreign patents granted on such improvements to and in the name of the ASSIGNEE;

**WARRANT AND COVENANT** that no assignment, grant, mortgage, license or other agreement or encumbrance affecting the rights and property herein conveyed has been or will be made or entered into by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

**COVENANT**, when requested and at the expense of the ASSIGNEE, to carry out in good faith the intent and purpose of this Assignment, to execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications relating to any and all such improvements, to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to the ASSIGNEE all facts and provide to the ASSIGNEE all documents and things known and accessible to the undersigned relating to such improvements and the history thereof, and testify as to the same in any interference, litigation or other proceeding relating thereto; and generally to do everything possible that the ASSIGNEE shall

consider desirable for vesting title to such improvements in the ASSIGNEE, and to secure, maintain, defend and enforce valid and enforceable patent protection for such improvements;

**AGREE AND ACKNOWLEDGE** that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon the heirs, assigns, representatives and successors of each undersigned ASSIGNOR and EXTEND to the successors, assigns and nominees of the ASSIGNEE.

ASSIGNORS:

  
\_\_\_\_\_  
Song Guo  
Residing at: 10814 West Alfina Drive, Boise, ID 83709

Date: 07/30/2018

\_\_\_\_\_  
Sanh D. Tang  
Residing at: 2725 E. Deer Flat Rd., Kuna, ID 83634

Date: \_\_\_\_\_

\_\_\_\_\_  
Vlad Temchenko  
Residing at: 100 East Parkway Drive, Boise, ID 83706

Date: \_\_\_\_\_

\_\_\_\_\_  
Shivani Srivastava  
Residing at: 4068 S. Federal Way, Apt. #J-107, Boise, ID 83716

Date: \_\_\_\_\_

**ASSIGNMENT**

**FOR GOOD AND VALUABLE CONSIDERATION**, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned ASSIGNOR does hereby:

**SELL, ASSIGN AND TRANSFER to MICRON TECHNOLOGY, INC.** ("ASSIGNEE"), a Corp[oration of the State of Delaware, having a place of business at 8000 South Federal Way, Mailstop 1-507, Boise, ID 83707-0006, the entire right, title and interest for the United States and all foreign countries in and to any and all improvements that are disclosed in the **Application for United States Letters Patent** that has been executed by each undersigned ASSIGNOR concurrently herewith, and titled **METHODS OF FORMING SEMICONDUCTOR DEVICES USING ASPECT RATIO DEPENDENT ETCHING EFFECTS, AND RELATED SEMICONDUCTOR DEVICES, MEMORY DEVICES, AND ELECTRONIC SYSTEMS**, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent or the legal equivalent thereof that have been or may be filed in the United States and all foreign countries relating to any of such improvements; all original, reexamined and reissued patents that have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States;

**AUTHORIZE** the ASSIGNEE to apply for and receive any and all United States and foreign patents relating to such improvements in its own name;

**AUTHORIZE AND REQUEST** the issuing authority to issue any and all United States and foreign patents granted on such improvements to and in the name of the ASSIGNEE;

**WARRANT AND COVENANT** that no assignment, grant, mortgage, license or other agreement or encumbrance affecting the rights and property herein conveyed has been or will be made or entered into by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

**COVENANT**, when requested and at the expense of the ASSIGNEE, to carry out in good faith the intent and purpose of this Assignment, to execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications relating to any and all such improvements, to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to the ASSIGNEE all facts and provide to the ASSIGNEE all documents and things known and accessible to the undersigned relating to such improvements and the history thereof, and testify as to the same in any interference, litigation or other proceeding relating thereto; and generally to do everything possible that the ASSIGNEE shall

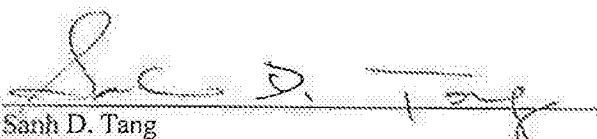
consider desirable for vesting title to such improvements in the ASSIGNEE, and to secure, maintain, defend and enforce valid and enforceable patent protection for such improvements;

**AGREE AND ACKNOWLEDGE** that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon the heirs, assigns, representatives and successors of each undersigned ASSIGNOR and EXTEND to the successors, assigns and nominees of the ASSIGNEE.

ASSIGNORS:

\_\_\_\_\_  
Song Guo  
Residing at: 10814 West Alfina Drive, Boise, ID 83709

Date: \_\_\_\_\_

  
\_\_\_\_\_  
Sanh D. Tang  
Residing at: 2725 E. Deer Flat Rd., Kuna, ID 83634

Date: 08-15-2018

\_\_\_\_\_  
Vlad Temchenko  
Residing at: 100 East Parkway Drive, Boise, ID 83706

Date: \_\_\_\_\_

\_\_\_\_\_  
Shivani Srivastava  
Residing at: 4068 S. Federal Way, Apt. #1-107, Boise, ID 83716

Date: \_\_\_\_\_

**ASSIGNMENT**

**FOR GOOD AND VALUABLE CONSIDERATION**, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned ASSIGNOR does hereby:

**SELL, ASSIGN AND TRANSFER** to MICRON TECHNOLOGY, INC. ("ASSIGNEE"), a Corporation of the State of Delaware, having a place of business at 8000 South Federal Way, Mailstop 1-507, Boise, ID 83707-0006, the entire right, title and interest for the United States and all foreign countries in and to any and all improvements that are disclosed in the **Application for United States Letters Patent** that has been executed by each undersigned ASSIGNOR concurrently herewith, and titled **METHODS OF FORMING SEMICONDUCTOR DEVICES USING ASPECT RATIO DEPENDENT ETCHING EFFECTS, AND RELATED SEMICONDUCTOR DEVICES, MEMORY DEVICES, AND ELECTRONIC SYSTEMS**, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent or the legal equivalent thereof that have been or may be filed in the United States and all foreign countries relating to any of such improvements; all original, reexamined and reissued patents that have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States;

**AUTHORIZE** the ASSIGNEE to apply for and receive any and all United States and foreign patents relating to such improvements in its own name;

**AUTHORIZE AND REQUEST** the issuing authority to issue any and all United States and foreign patents granted on such improvements to and in the name of the ASSIGNEE;

**WARRANT AND COVENANT** that no assignment, grant, mortgage, license or other agreement or encumbrance affecting the rights and property herein conveyed has been or will be made or entered into by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

**COVENANT**, when requested and at the expense of the ASSIGNEE, to carry out in good faith the intent and purpose of this Assignment, to execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications relating to any and all such improvements; to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to the ASSIGNEE all facts and provide to the ASSIGNEE all documents and things known and accessible to the undersigned relating to such improvements and the history thereof, and testify as to the same in any interference, litigation or other proceeding relating thereto; and generally to do everything possible that the ASSIGNEE shall



consider desirable for vesting title to such improvements in the ASSIGNEE, and to secure, maintain, defend and enforce valid and enforceable patent protection for such improvements;

**AGREE AND ACKNOWLEDGE** that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon the heirs, assigns, representatives and successors of each undersigned ASSIGNOR and EXTEND to the successors, assigns and nominees of the ASSIGNEE.


ASSIGNORS:

\_\_\_\_\_  
Song Guo  
Residing at: 10814 West Alfina Drive, Boise, ID 83709

Date: \_\_\_\_\_

\_\_\_\_\_  
Sanh D. Tang  
Residing at: 2725 E. Deer Flat Rd., Kuna, ID 83634

Date: \_\_\_\_\_

  
\_\_\_\_\_  
Vlad Tepchenko  
Residing at: 100 East Parkway Drive, Boise, ID 83706

Date: 28/08/2018

\_\_\_\_\_  
Shivani Srivastava  
Residing at: 4068 S. Federal Way, Apt #1-107, Boise, ID 83716

Date: \_\_\_\_\_

**ASSIGNMENT**

**FOR GOOD AND VALUABLE CONSIDERATION**, the receipt, sufficiency and adequacy of which are hereby acknowledged, each undersigned ASSIGNOR does hereby:

**SELL, ASSIGN AND TRANSFER to MICRON TECHNOLOGY, INC.** (“ASSIGNEE”), a Corp[oration of the State of Delaware, having a place of business at 8000 South Federal Way, Mailstop 1-507, Boise, ID 83707-0006, the entire right, title and interest for the United States and all foreign countries in and to any and all improvements that are disclosed in the **Application for United States Letters Patent** that has been executed by each undersigned ASSIGNOR concurrently herewith, and titled **METHODS OF FORMING SEMICONDUCTOR DEVICES USING ASPECT RATIO DEPENDENT ETCHING EFFECTS, AND RELATED SEMICONDUCTOR DEVICES, MEMORY DEVICES, AND ELECTRONIC SYSTEMS**, such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent or the legal equivalent thereof that have been or may be filed in the United States and all foreign countries relating to any of such improvements; all original, reexamined and reissued patents that have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application made in the United States;

**AUTHORIZE** the ASSIGNEE to apply for and receive any and all United States and foreign patents relating to such improvements in its own name;

**AUTHORIZE AND REQUEST** the issuing authority to issue any and all United States and foreign patents granted on such improvements to and in the name of the ASSIGNEE;

**WARRANT AND COVENANT** that no assignment, grant, mortgage, license or other agreement or encumbrance affecting the rights and property herein conveyed has been or will be made or entered into by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

**COVENANT**, when requested and at the expense of the ASSIGNEE, to carry out in good faith the intent and purpose of this Assignment, to execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications relating to any and all such improvements; to execute all rightful oaths, declarations, assignments, powers of attorney and other papers; to communicate to the ASSIGNEE all facts and provide to the ASSIGNEE all documents and things known and accessible to the undersigned relating to such improvements and the history thereof, and testify as to the same in any interference, litigation or other proceeding relating thereto; and generally to do everything possible that the ASSIGNEE shall

consider desirable for vesting title to such improvements in the ASSIGNEE, and to secure, maintain, defend and enforce valid and enforceable patent protection for such improvements;

**AGREE AND ACKNOWLEDGE** that the SALE, ASSIGNMENT AND TRANSFER of rights and property set forth herein is and shall be IRREVOCABLE and BINDING upon the heirs, assigns, representatives and successors of each undersigned ASSIGNOR and EXTEND to the successors, assigns and nominees of the ASSIGNEE.

ASSIGNORS:

\_\_\_\_\_  
Song Guo  
Residing at: 10814 West Alfina Drive, Boise, ID 83709

Date: \_\_\_\_\_

\_\_\_\_\_  
Sanh D. Tang  
Residing at: 2725 E. Deer Flat Rd., Kuna, ID 83634

Date: \_\_\_\_\_

\_\_\_\_\_  
Vlad Temchenko  
Residing at: 100 East Parkway Drive, Boise, ID 83706

Date: \_\_\_\_\_

*Shivani*  
\_\_\_\_\_  
Shivani Srivastava  
Residing at: 4068 S. Federal Way, Apt. #1-107, Boise, ID 83716

Date: 2/23/2018