503668417 01/28/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT

NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
AGOSTINO PIROVANO	06/24/2014
FABIO PELLIZZER	06/25/2014
ANNA MARIA CONTI	06/06/2014
DAVIDE FUGAZZA	06/18/2014
JOHANNES A KALB	07/02/2014

RECEIVING PARTY DATA

Name:	MICRON TECHNOLOGY, INC.
Street Address:	8000 SO. FEDERAL WAY
City:	BOISE
State/Country:	IDAHO
Postal Code:	83716-9632

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14328536

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 303.F04US1

NAME OF SUBMITTER: JULIE A NELSON

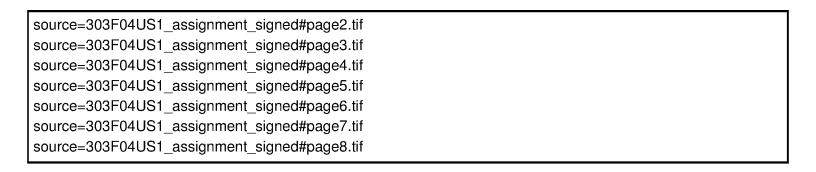
SIGNATURE: / Julie A. Nelson /

DATE SIGNED: 01/28/2016

Total Attachments: 8

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PATENT 503668417 REEL: 037607 FRAME: 0017



RECORDATION FORM COVER SHEET PATENTS ONLY

Atty Ref/Docket No.: 303.F04US1 Patent and Trademark Office To the Director of the U.S. Patent and Trademark Office: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies): 1. Name of conveying party(ies): Name: Micron Technology, Inc. Agostino Pirovano, Fabio Pellizzer, Anna Maria Conti, Street Address: 8000 So. Federal Way Davide Fugazza, Johannes A. Kalb Additional name(s) of conveying party(ies) attached? City: <u>Boise</u> State: <u>ID</u> Zip: <u>83716-9632</u> Country: United States of America []Yes [X]No Additional name(s) & address(es) attached? []Yes [X]No 3. Nature of conveyance: [X] Assignment [] Merger [] Security Agreement [] Change of Name [] Other Execution Date: <u>June 25, 2014</u>, <u>June 25, 2014</u>, <u>June 6, 2014</u>, <u>June 18, 2014</u>, <u>July 2, 2014</u> 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Serial No. 14/328,536 Additional numbers attached? []Yes [X]No 6. Total number of applications and patents involved: 1 5. Name and address of party to whom correspondence 7. Total fee (37 CFR 3.41):\$ 0.00 concerning document should be mailed: Name: Bradley W. Scheer []Enclosed [Authorized to be charged to deposit account 19-Address: 0743 Schwegman Lundberg & Woessner, P.A. P.O. Box 2938 8. Please charge any additional fees or credit any over Minneapolis, MN 55402--0938 payments to our Deposit Account No.: 19-0743 DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. January 28, 2016 Bradley W. Scheer/Reg. No. 47,059 Name of Person Signing Signature Total number of pages including cover sheet: 8

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450

ASSIGNMENT

WHEREAS, Agostino Pirovano, Fabio Pellizzer, Anna Maria Conti, Davide Fugazza and Johannes A. Kalb (hereinafter the "Undersigned") have made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention") which are described in a patent application filed on $\underline{July 10, 2014}$, which application was assigned US patent application serial number $\underline{14/328,536}$, and which is titled ENHANCING NUCLEATION IN PHASE-CHANGE MEMORY CELLS.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Micron Technology, Inc. (the "Assignee"), a corporation of the State of Delaware, having a place of business at 8000 So. Federal Way, Boise, ID 83716-9632, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such Invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such Invention to the Assignee;

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office (USPTO) Customer No. 73115 may (directly or through his/her designee) delete, insert, or alter any information related to the above-identified patent application or applications or any of the foregoing, after execution of this Assignment;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or shall be made to others by the Undersigned, and that the full right to convey the same as herein expressed is possessed by the Undersigned;

COVENANT, that when requested and without compensation, but at the expense of the Assignee, in order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations, assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining and enforcing proper patent protection for the Invention:

COVENANT, that should any provision of this agreement be held unenforceable by an authority of competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when requested and without compensation shall act in good faith to substitute for such provision a new provision with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Assignor:
(Signature): A A A A A A A A A A A A A A A A A A A
City/State: Milano, MI, Italy WITNESSES: Dated 48/06/2014 Signature I Toura F. Paula Address 870 S. Ederal Way Tours, ID
Dated Le 34-12 Signature Marco Allagara Printed Name Marco Allagara Address 800 S Ecderal Way Consorting to the second

Assignor:	
(Signature):	Take Cill
	Name: <u>Fabio Pellizzer</u> City/State: <u>Boise, ID</u>
Date:	06/75/7016
STATE OF <u></u>	Calio
COUNTY OF)ss <u>Ada</u>)
<u>Pellizzer,</u> to me nstrument, and	to any of Suppose the person described in and who executed the foregoing the helps and the same for the uses and the same for the uses and the set forth.
SEAL)	447
SEAL)	Notary Public

Assignor:

(Signature):

Name: Anna Maria Conti
City/State: Miliano, MI, Italy

WITNESSES:

Dated 6/6/2014 Signature ALCSSANCO SEBASTIAN |
Address VIA BERTAN | 4
29121 PIACENZA - PC - ITALY

Dated 6/6/2014 Signature ALORGA REPARLL

Address VIA S GLOVANN BOSCO 2

CASATTAONO

Assignment

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Assignors: Agostino Pirovano et si. Tino: Enhancing nucleation in Phase-Change memory cells

> PATENT REEL: 037607 FRAME: 0024

Docket No. 303, F04US1

Chem Ref. No. 2013-0585.00/US

Assignor:		
(Signature):	Soide Jegasson	
	Name: <u>Davide Fugazza</u>	
	City/State: Sunnyvale, CA	
Date:	June 18 2014	
STATE OF Cali	fornia)	
COUNTY OF _S	ianta Clara	
fludry M. Graphoved to me of within instrumed that by his signal executed the in	under PENALTY OF PERJURY under the laws of the State of California that the foregoing	
WITNES	SS my hand and official seal.	
[SEAL]	dudiey M. gotti	
Commi Notary Sant	Notary Public REY M. GRIFFIN Ission # 1950928 Public - California ta Clara County Expires Oct 1 2015	

Assignors: Agostino Piroyano et al.
Title: ENHANCING NUCLEATION IN PHASE-CHANGE MEMORY CELLS

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Assignor:
(Signature):
Name: Johannes A. Kalb
City/State: Beaverton, OR
Date: 34/4 2, 2014
STATE OF OVEGUN
)ss
COUNTY OF WAShing TON
On this day of 20 M_ before me personally appeared <u>Johannes A.</u> <u>Kalb.</u> to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and

OFFICIAL STAMP JERICHA VIERNES FUNTANILLA NOTARY PUBLIC-OREGON COMMISSION NO. 920696 MY COMMISSION EXPIRES OCTOBER 23, 2017

purposes therein set forth.

[SEAL]

Notary Public

RECORDED: 01/28/2016