503060527 11/13/2014

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3107129

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
XUNYUAN ZHANG	10/03/2014
RUILONG XIE	10/31/2014
XIUYU CAI	10/30/2014
SEOWOO NAM	11/10/2014
HYUN-JIN CHO	11/04/2014

RECEIVING PARTY DATA

Name:	GLOBALFOUNDRIES INC.
Street Address:	MAPLES CORPORATE SERVICES LIMITED P.O. BOX 309 UGLAND HOUSE
City:	GRAND CAYMAN
State/Country:	CAYMAN ISLANDS
Postal Code:	KY1-1104

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14540504

CORRESPONDENCE DATA

Fax Number: (703)519-9958

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: 703.519.9951

Email: docket@dcpatent.com

Correspondent Name: DITTHAVONG & STEINER, P.C. Address Line 1: 44 CANAL CENTER PLAZA

Address Line 2: SUITE 322

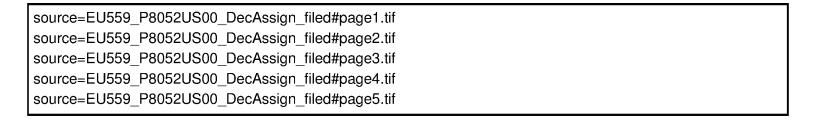
Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	P8052US00
NAME OF SUBMITTER:	ANITA PELLMAN GROSS
SIGNATURE:	/Anita Pellman Gross/
DATE SIGNED:	11/13/2014

Total Attachments: 5

PATENT REEL: 034165 FRAME: 0796

503060527



GF Ref. No.: EU559

COMBINED DECLARATION and ASSIGNMENT (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Inventor	A TOPOLOGICAL METHOD TO BUILD SELF-ALIGNED MTJ WITHOUT A MASK
	DECLARATION
As the below	named inventor. Uhereby declare that:
This declaration	
10 1014 001 0010	United States application or PCT international application numberfirst on
	······································
The above-ab	mtified application was made or authorized to be made by me.
1 believe that	I am the original inventor or an original jour inventor of a claused invention in the application.
	owiedge that any willful false statement made in this declaration is panishable under 18 U.S.C. 1001 by onment of not more than five (5) years, or both.
I have reviewed and understand the contents of the application and an aware of the duty to disclose to the US Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR § 1.56.	
For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged. I hereby sell, assign, transfer, to GLOBALFOLNDRIES has having a business address of PO Box 309, Ugland House, Grand Cayman KY1-1104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to the invention tisted above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any ressues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or extensions thereof that may be issued or grained, and all right, title and interest to the inventions contained in said Patents and Applications, for the United States and all foreign countries, and all the rights and privileges relating thereto including but not limited to the priority rights arising from said Applications, the right to recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and filture in fringement, and the right to apply for, take and maintain patents on said inventions. If any portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof shall nevertheless remain in full force and effect.	
LEGAE NAS	IE OF INVENTOR
inventer:	<u>Xuasyuan ZHANG</u> Date: <u>(0/3//2014</u>
Signature	
Note: An appl	cation data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form.

848256660

Use an additional form for each additional inventor.

GF Ref. No.: EUS59

COMBINED DECLARATION and ASSIGNMENT (37 CFR L63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	A TOPOLOGICAL METHOD TO BUILD SELF-ALIGNED MTJ WITHOUT A MASK
	DECLARATION
As the below	named inventor, I hereby declare that:
This declarati	ISONE CALL
	United States application or PCT international application numberfiled on
The above-ide	ntified application was made or authorized to be made by me.
I believe that	am the original inventor or an original joint inventor of a claimed invention in the application.
I bereby acknotine or imprise	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by onment of not more than five (5) years, or both,
I have reviewe Trademark Of	ad and understand the contents of the application and am aware of the duty to disclose to the US Patent and fice all information known to me to be material to patentability as defined in 37 CFR § 1.56.
	ASSIGNMENT
hereby sell, as Grand Cayman the invention of any foreign or extensions the and Application including but proceedings as	and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I sign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO Box 309, Ugland House, a KY1-1104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to isted above, together with the Application, any and all Patents that may issue in the United States and/or sumiries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or reof that may be issued or granted, and all right, title and interest to the inventions contained in said Patents ons, for the United States and all foreign countries, and all the rights and privileges relating thereto not limited to the priority rights arising from said Applications, the right to recover and take all such a may be necessary for the recovery of damages or otherwise in respect of past, present and future in differing to apply for, take and maintain patents on said inventions.
If any portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof shall nevertheless remain in full force and effect.	
LEGAL NAM	E OF INVENTOR
Inventor:	Ruilong XIE Date: 3 OC 2019
Signature:	
Note: An applic Use an addition:	ation data sheet (PTO/SR/14 or equivalent), including naming the entire inventive entity, must accompany this form. If form for each additional inventor.

GF Ref. No.: EU559

COMBINED DECLARATION and ASSIGNMENT (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	A TOPOLOGICAL METHOD TO BUILD SELF-ALIGNED MTJ WITHOUT A MASK
	DECLARATION
As the below	named inventor, I hereby declare that:
This declaration The attached application, or is directed to:	
	United States application or PCT international application numberfiled on
The above-id	entified application was made or authorized to be made by me.
I believe that	I am the original inventor or an original joint inventor of a claimed invention in the application.
	owledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by comment of not more than five (5) years, or both.
I have reviewed and understand the contents of the application and am aware of the duty to disclose to the US Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR § 1.56.	
	ASSIGNMENT
For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I hereby sell, assign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO Box 309, Ugland House, Grand Cayman KY1-1104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to the invention listed above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the inventions contained in said Patents and Applications, for the United States and all foreign countries, and all the rights and privileges relating thereto including but not limited to the priority rights arising from said Applications, the right to recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and future in fringement, and the right to apply for, take and maintain patents on said inventions.	
If any portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions hereof shall nevertheless remain in full force and effect.	
LEGAL NAME OF INVENTOR	
Inventor:	Xiuyu CAI Date: (0/36/2014
Signature	
	lication data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. nal form for each additional inventor.

84825460v1

COMMUNED DECLARATION AND ASSIGNMENT OF CFR LEG FOR LIBERTY OR DESIGN APPLICATION CONTRACTOR PROCESSING AS APPLICATION PART SHEET OF CFRETS.

PROPERTY OF THE PROPERTY OF TH
DELARATION
At the formation and the design of the desig
Constraint (C) Access on the con-
Contact states agree sentative. Prof. in a restaure agree sentation and in the con-
Described in the springer on a sense or control or services to a majority or
Entire that can the objects inventor is an expansion of a connection experience in a section of the contract o
To demand Office all information grows in the quarter of productions as officed in 10 CFR (1.5)
ASSICNATED
For each of the gas and committee of the state of the sta
the appropriate of the control of the professional and the control of the control
en space the of the major to often point one of the ofference of the control control of the Pall of and Applications for the state of the property of the control of the property of the control of the control of the odding forms of the control of
It any portion of this Combined Decisestion or Assignment is local unenforceable, then remaining portions bereat
shall precentle loss remain in full force and effect
LONG STANDARD STANDARD
torial services (Application of the Company of the
and the second of the second o

COMBINED DECLARATION and ASSIGNMENT (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

	A TOPOLOGICAL METHOD TO BUILD SELF-ALIGNED MTJ WITHOUT A
Title of Invention	MASK
	DECLARATION
As the below	named inventor. I hereby deciare that:
This declarates to the direction of the	\cdots
	United States application or PCT international application numberfiled on
1000000000	
The above-ic	lentified application was made or suthorized to be made by me.
I believe that	t I am the original inventor or an original joint inventor of a claimed invention in the application.
	nowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by summent of not more than five (5) years, or both.
	ved and understand the contents of the application and am aware of the duty to disclose to the US Patent and Office all information known to me to be material to patentability as defined in 37 CFR § 1.56.
	ASSICNMENT
For good and valuable consideration, the receipt, sufficiency and adequacy of which are hereby acknowledged, I hereby soll, assign, transfer, to GLOBALFOUNDRIES Inc. having a business address of PO Box 309, Ugland House, Grand Cayman KYI-1104 its successors and assigns, absolutely and forever, my entire right, title and interest in and to the invention listed above, together with the Application, any and all Patents that may issue in the United States and/or any foreign countries, and any reissues, re-examinations, renewals, continuations, continuation-in-parts, divisionals or extensions thereof that may be issued or granted, and all right, title and interest to the inventions contained in said Patents and Applications, for the United States and all foreign countries, and all the rights and privileges relating thereto including but not limited to the priority rights arising from said Applications, the right to recover and take all such proceedings as may be necessary for the recovery of damages or otherwise in respect of past, present and future in fringement, and the right to apply for, take and maintain patents on said inventions.	
If any portion of this Combined Declaration or Assignment is held unenforceable, then remaining portions bereof shall nevertheless remain in full force and effect.	
LEGAL NAME OF INVENTOR	
Inventor:	Hyun-Jin CHO Date : 1/ /04 / 2.01 4
Signature	
	lication data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form. Mal form for each additional inventor.

84625460v1

RECORDED: 11/13/2014