503216220 03/12/2015

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ANTON J. DEVILLIERS	03/12/2015

RECEIVING PARTY DATA

Name:	TOKYO ELECTRON LIMITED	
Street Address:	et Address: 3-1 AKASAKA 5-CHOME	
Internal Address:	AKASAKA BIZ TOWER	
City:	MINATO-KU, TOKYO	
State/Country:	JAPAN	
Postal Code:	107-6325	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14605396

CORRESPONDENCE DATA

Fax Number: (512)424-1040

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.

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Correspondent Name: TOKYO ELECTRON U.S. HOLDINGS, INC.

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ATTORNEY DOCKET NUMBER:	TTCA-466US1-0RD
NAME OF SUBMITTER:	JOSHUA D. MATHER
SIGNATURE:	/Joshua D. Mather/
DATE SIGNED:	03/12/2015

Total Attachments: 2

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PATENT 503216220 REEL: 035150 FRAME: 0720

DECLARATION (37 CFR 1.63) AND ASSIGNMENT FOR NONPROVISIONAL UTILITY OR DESIGN PATENT APPLICATION

Title of Invention: METHOD FOR SELF-ALIGNED DOUBLE PATTERNING WITHOUT ATOMIC LAYER DEPOSITION

As a below named inventor, I hereby declare that:

	This declaration and assignment is direct	ed to:	
	The attached application having a X United States application number 14605396		
	The above-identified application was made	de or autho	rized to be made by me.
in the a	I believe that I am the original inventor or above-identified application.	an original	I joint inventor of a claimed invention
includir	I have reviewed and understand the cont ng the claims.	ents of the	above-identified application,
informa	l am aware of the duty to disclose to the ation known to me to be material to patent		
punish both.	I hereby acknowledge that any willful fals able under 18 U.S.C. 1001 by fine or impr		
has/ha	nor(s): The Assignor(s) is/are the undersion made certain inventions, improvement tion") disclosed in the above-identified pat	s, and/or d	iscoveries (herein referred to as the
Assign	nee: The Assignee is Tokyo Electron Lin	nited, a co the "ASSIC	rporation of Japan having a place of SNEE"). The term "ASSIGNEE" used

As an undersigned inventor, I hereby assign to the ASSIGNEE my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefrom in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, granted for the invention, to the ASSIGNEE, and I authorize and request foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE. The entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, to the full end of the terms for which any and all such patents may be granted, as fully and

Invention and in and to any and all patent applications and patents obtained from the Invention.

herein includes successors, legal representatives, and assigns of the ASSIGNEE. The ASSIGNEE desires to acquire the entire worldwide right, title, and interest in and to the

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entirely as would have been held and enjoyed by the undersigned had this Assignment not been made. I agree to execute any and all documents and instruments and perform all lawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, for the ASSIGNEE, whenever requested by the ASSIGNEE.

As an undersigned inventor, I acknowledge prior and ongoing obligations to sell, assign, and/or transfer my rights in the Invention to the ASSIGNEE. I have not sold, assigned, or otherwise transferred my rights in the Invention to another, and I am under no obligation to sell, assign, or otherwise transfer my rights in the Invention to another. I also hereby grant the ASSIGNEE, the right to insert in this Declaration and Assignment any further identification (including, but not limited to, patent application number and filing date) which may be necessary or desirable for recording this Declaration and Assignment.

(1) Legal name of Inventor:	Anton J.,deVilliers
Inventor's Signature:	Cliftot Park, NY, US Date: 03/12/2013
Residence City/State/Country:	Clifton Park, NY, US
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