

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
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AKITERU KO	12/21/2017
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Property Type	Number
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NAME OF SUBMITTER:	RYAN ORME
SIGNATURE:	/Ryan Orme/
DATE SIGNED:	12/22/2017
Total Attachments: 3	
source=TTCA-617US2-Executed_Declaration_Assignment#page1.tif	
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source=TTCA-617US2-Executed_Declaration_Assignment#page3.tif	

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

Title of Invention: SPACER FORMATION FOR SELF-ALIGNED MULTI-PATTERNING
TECHNIQUE

As the below named inventor, I hereby declare that:

This Declaration is directed to:

☐ The attached application

OR

☒ United States Application Number or PCT International Application
Number 15/708,264 filed on September 19, 2017 .

The above-identified 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 above-identified application.

I have reviewed and understand the contents of the above-identified application,
including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark
Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56.

Whereas, the undersigned inventor(s) has/have made certain inventions,
improvements and discoveries (herein referred to as the "Invention") disclosed in the above-
identified patent application;

Whereas, Tokyo Electron Limited , a Corporation of Japan, having a place of
business at 3-1 Akasaka 5-Chome, Minato-Ku, Tokyo, 107-6325, JAPAN (herein referred to as
the "ASSIGNEE"), desires to acquire, and each undersigned inventor desires to grant to the
ASSIGNEE, the entire worldwide right, title, and interest in and to the Invention and in and to
any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency
thereof being hereby acknowledged, each undersigned inventor ("ASSIGNOR") hereby sells or
has sold, assigns or has assigned, and otherwise transfers or has transferred to the ASSIGNEE,
its successors, legal representatives, and assigns, the 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 therefor 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, each undersigned inventor hereby authorizes and requests
the Director of the United States Patent and Trademark Office to issue any United States Patent,

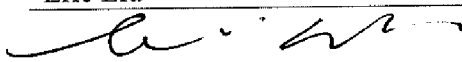
and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, the entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made; and each undersigned inventor agrees 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, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

Each undersigned inventor acknowledges their prior and ongoing obligations to sell, assign, and transfer the rights under this Assignment to the ASSIGNEE and is unaware of any reason why they may not have the full and unencumbered right to sell, assign, and transfer the rights hereby sold, assigned, and transferred, and has not executed, and will not execute, any document or instrument in conflict herewith. Each undersigned inventor also hereby grants the ASSIGNEE, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment.

I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Legal name of Inventor: Eric Liu

Inventor's Signature:



Date: 12.21.2017

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