

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SHIN HIROTSU	06/01/2015
YOSHIKI IGARASHI	05/01/2015
TOMONORI MIWA	05/01/2015
HIROSHI OKADA	05/12/2015
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<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14709534
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<b>ATTORNEY DOCKET NUMBER:</b>	4030-0510US
<b>NAME OF SUBMITTER:</b>	STEVEN P. WEIHROUCH
<b>SIGNATURE:</b>	/Steven P. Weihrouch/
<b>DATE SIGNED:</b>	06/03/2015
	This document serves as an Oath/Declaration (37 CFR 1.63).
<b>Total Attachments: 2</b>	

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## DECLARATION AND ASSIGNMENT

Title of Invention: **METHOD FOR ETCHING ETCHING TARGET LAYER**

As a below named inventor, I hereby declare that:

This declaration is directed to:

the attached application (Attorney Docket Number \_\_\_\_\_), or

United States application or PCT international application number  
\_\_\_\_\_ filed on \_\_\_\_\_.

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 application.

I have reviewed and understand the contents of the 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 CFR Section 1.56.

Whereas, each undersigned inventor has made certain inventions, improvements, and discoveries (herein referred to as the "INVENTION") disclosed in the above-identified patent application (herein referred to as the ("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 "ASSIGNEE"), desires to acquire, and each undersigned inventor desires to grant to 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 (herein referred to 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 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, continuations-in-part, 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 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 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, the APPLICATION, and all related patents and applications, in ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by ASSIGNEE, its successors, legal representatives, and assigns.

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: **Shin HIROTSU**

Signature: Shin Hirotsu Date: June. 1. 2015

Legal Name of Inventor: **Yoshiki IGARASHI**

Signature: Toshiki Igarashi Date: May. 1. 2015

Legal Name of Inventor: **Tomonori MIWA**

Signature: Tomonori Miwa Date: May. 1, 2015

Legal Name of Inventor: **Hiroshi OKADA**

Signature: Hiroshi Okada Date: May. 12. 2015