

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
KOSUKE OGASAWARA	05/13/2013
RECEIVING PARTY DATA	
Name:	TOKYO ELECTRON LIMITED
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Internal Address:	MINATO-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	107-6325
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	13893917
CORRESPONDENCE DATA	
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<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>	
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Correspondent Name:	Tokyo Electron U.S. Holdings, Inc.
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Address Line 2:	Suite 1
Address Line 4:	Chandler, ARIZONA 85224
ATTORNEY DOCKET NUMBER:	TTCA-412
NAME OF SUBMITTER:	MANUEL B. MADRIAGA
Signature:	/Manuel B. Madriaga/
Date:	07/01/2013

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Total Attachments: 4

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

**Title of Invention:** SIDEWALL IMAGE TRANSFER METHOD FOR LOW ASPECT RATIO PATTERNS

As a 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  
13893917 filed on 14 MAY 2013

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.

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.

**Assignor(s):** The Assignor(s) is/are the undersigned inventor(s). The undersigned inventor(s) has/have made certain inventions, improvements, and/or discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application.

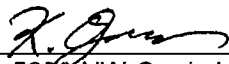
**Assignee:** The Assignee is **Tokyo Electron Limited**, a corporation of Japan having a place of business at Tokyo, Japan (herein referred to as the "ASSIGNEE"). The term "ASSIGNEE" used herein includes successors, legal representatives, and assigns of the ASSIGNEE. The ASSIGNEE desires to acquire the entire worldwide right, title, and interest in and to the invention and in and to any and all patent applications and patents obtained from the invention.

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

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: Akiteru Ko  
Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Residence City/State/Country: 98 Cambridge Court, Schenectady, NY 12303  
Mailing Address: \_\_\_\_\_  
Citizenship: JP

(2) Legal name of Inventor: Kosuke Ogasawara,  
Inventor's Signature:  Date: 05.13.2013  
Residence City/State/Country: 5258 NW Crady Ln., Portland, OR 97229  
Mailing Address: \_\_\_\_\_  
Citizenship: JP

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**Assignee:** The Assignee is **Tokyo Electron Limited**, a corporation of Japan having a place of business at Tokyo, Japan (herein referred to as the "ASSIGNEE"). The term "ASSIGNEE" used 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 Invention and in and to any and all patent applications and patents obtained from the Invention.

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

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.

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(1) Legal name of Inventor: Akiteru Ko  
 Inventor's Signature: *Akiteru Ko* Date: May 14, 2013  
 Residence City/State/Country: 98 Cambridge Court, Schenectady, NY 12303  
 Mailing Address: \_\_\_\_\_  
 Citizenship: JP

(2) Legal name of Inventor: Kosuke Ogasawara,  
 Inventor's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Residence City/State/Country: 5258 NW Crady Ln., Portland, OR 97229  
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 Citizenship: JP