

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT4281370

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JUNICHI KOEZUKA	09/30/2013
YUKINORI SHIMA	09/30/2013
HAJIME TOKUNAGA	10/03/2013
TOSHINARI SASAKI	10/15/2013
KEISUKE MURAYAMA	10/02/2013
DAISUKE MATSUBAYASHI	10/10/2013
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SEMICONDUCTOR ENERGY LABORATORY CO., LTD.
<b>Street Address:</b>	398, HASE
<b>City:</b>	ATSUGI-SHI, KANAGAWA-KEN
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	243-0036
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15389846
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(877)769-7945
<i>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.</i>	
<b>Phone:</b>	(202) 783-5070
<b>Email:</b>	APSI@fr.com
<b>Correspondent Name:</b>	JOHN F. HAYDEN
<b>Address Line 1:</b>	FISH & RICHARDSON P.C.
<b>Address Line 2:</b>	P.O.BOX 1022
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55440-1022
<b>ATTORNEY DOCKET NUMBER:</b>	12732-1255002
<b>NAME OF SUBMITTER:</b>	JANELLE A. JACKSON
<b>SIGNATURE:</b>	/Janelle A. Jackson/
<b>DATE SIGNED:</b>	02/17/2017

**Total Attachments: 6**

source=12732-1255002 Assignment#page1.tif

source=12732-1255002 Assignment#page2.tif

source=12732-1255002 Assignment#page3.tif

source=12732-1255002 Assignment#page4.tif

source=12732-1255002 Assignment#page5.tif

source=12732-1255002 Assignment#page6.tif

## ASSIGNMENT

For valuable consideration, We, Junichi KOEZUKA of Tochigi, Tochigi, Japan, Yukinori SHIMA of Tatebayashi, Gunma, Japan, Hajime TOKUNAGA of Gureisuwadamachi505, 3-9-6, Hoshikawa, Hodogaya-ku, Yokohama-shi, Kanagawa-ken, 240-0006, Japan, Toshinari SASAKI of C/O Tomita, 5-8-15-405, Kitashinagawa, Shinagawa-ku, Tokyo-to, 141-0001, Japan, Keisuke MURAYAMA of GurankasaII103, 7-3-46, Kagawa, Chigasaki-shi, Kanagawa-ken, 253-0082, Japan and Daisuke MATSUBAYASHI of Atsugi, Kanagawa, Japan hereby assign to Semiconductor Energy Laboratory Co., Ltd., a Japanese corporation having a place of business at:

398, Hase, Atsugi-shi, Kanagawa-ken, 243-0036 Japan

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us this day, entitled SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME, filed October 24, 2013, and assigned U.S. Serial Number 14/062,481, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

Signature Junichi KOEZUKA  
Name: Junichi KOEZUKA  
Date: 09/30/2013

Signature Yukinori Shima  
Name: Yukinori SHIMA  
Date: 09/30/2013

Signature \_\_\_\_\_  
Name: Hajime TOKUNAGA  
Date: \_\_\_\_\_

Signature \_\_\_\_\_  
Name: Toshinari SASAKI  
Date: \_\_\_\_\_

Signature Keisuke Murayama  
Name: Keisuke MURAYAMA  
Date: 10 / 02 / 2013

Signature Daisuke Matsubayashi  
Name: Daisuke MATSUBAYASHI  
Date: 10 / 10 / 2013

ASSIGNMENT

For valuable consideration, We, Junichi KOEZUKA of Tochigi, Tochigi, Japan, Yukinori SHIMA of Tatebayashi, Gunma, Japan, Hajime TOKUNAGA of Gureisuwadamachi505, 3-9-6, Hoshikawa, Hodogaya-ku, Yokohama-shi, Kanagawa-ken, 240-0006, Japan, Toshinari SASAKI of C/O Tomita, 5-8-15-405, Kitashinagawa, Shinagawa-ku, Tokyo-to, 141-0001, Japan, Keisuke MURAYAMA of Gurankasall103, 7-3-46, Kagawa, Chigasaki-shi, Kanagawa-ken, 253-0082, Japan and Daisuke MATSUBAYASHI of Atsugi, Kanagawa, Japan hereby assign to Semiconductor Energy Laboratory Co., Ltd., a Japanese corporation having a place of business at:

398, Hase, Atsugi-shi, Kanagawa-ken, 243-0036 Japan

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us this day, entitled SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME, filed October 24, 2013, and assigned U.S. Serial Number 14/062,481, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

Signature \_\_\_\_\_  
Name: Junichi KOEZUKA  
Date: \_\_\_\_\_

Signature \_\_\_\_\_  
Name: Yukinori SHIMA  
Date: \_\_\_\_\_

Signature Hajime Tokunaga  
Name: Hajime TOKUNAGA  
Date: 10/03/2013

Signature \_\_\_\_\_  
Name: Toshinari SASAKI  
Date: \_\_\_\_\_

Signature \_\_\_\_\_  
Name: Keisuke MURAYAMA  
Date: \_\_\_\_\_

Signature \_\_\_\_\_  
Name: Daisuke MATSUBAYASHI  
Date: \_\_\_\_\_

**ASSIGNMENT**

For valuable consideration, We, Junichi KOEZUKA of Tochigi, Tochigi, Japan, Yukinori SHIMA of Tatebayashi, Gunma, Japan, Hajime TOKUNAGA of Gureisuwadamachi505, 3-9-6, Hoshikawa, Hodogaya-ku, Yokohama-shi, Kanagawa-ken, 240-0006, Japan, Toshinari SASAKI of C/O Tomita, 5-8-15-405, Kitashinagawa, Shinagawa-ku, Tokyo-to, 141-0001, Japan, Keisuke MURAYAMA of Gurankasa1103, 7-3-46, Kagawa, Chigasaki-shi, Kanagawa-ken, 253-0082, Japan and Daisuke MATSUBAYASHI of Atsugi, Kanagawa, Japan hereby assign to Semiconductor Energy Laboratory Co., Ltd., a Japanese corporation having a place of business at:

398, Hase, Atsugi-shi, Kanagawa-ken, 243-0036 Japan

and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us this day, entitled SEMICONDUCTOR DEVICE AND METHOD FOR MANUFACTURING THE SAME, filed October 24, 2013, and assigned U.S. Serial Number 14/062,481, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

Signature \_\_\_\_\_  
Name: Junichi KOEZUKA  
Date: \_\_\_\_\_

Signature \_\_\_\_\_  
Name: Yukinori SHIMA  
Date: \_\_\_\_\_

Signature \_\_\_\_\_  
Name: Hajime TOKUNAGA  
Date: \_\_\_\_\_

Signature Toshinari Sasaki  
Name: Toshinari SASAKI  
Date: 10/15/2013

Signature \_\_\_\_\_  
Name: Keisuke MURAYAMA  
Date: \_\_\_\_\_

Signature \_\_\_\_\_  
Name: Daisuke MATSUBAYASHI  
Date: \_\_\_\_\_