### PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
Shinichi KAWAZOE	09/11/2013
Yasuhito NARUSHIMA	09/12/2013
Toshimichi KUBOTA	09/12/2013
Fukuo OGAWA	09/04/2013

### **RECEIVING PARTY DATA**

Name:	SUMCO TECHXIV CORPORATION		
Street Address:	1324-2, Masuragahara-machi		
City:	Omura-shi, Nagasaki		
State/Country:	JAPAN		
Postal Code:	856-8555		

## PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	14038136	

### **CORRESPONDENCE DATA**

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Correspondent Name: HOLTZ, HOLTZ, GOODMAN & CHICK PC

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ATTORNEY DOCKET NUMBER:	09712D
NAME OF SUBMITTER:	David Dunbar
Signature:	/David Dunbar/

502511019 REEL: 031291 FRAME: 0282

OP \$40,00 14038136

Date:	09/26/2013
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 4 source=09712D_declaration#page1.tif source=09712D_declaration#page2.tif source=09712D_declaration#page3.tif source=09712D_declaration#page4.tif	

Combined Declaration and Assignment						
Title of Invention		DDUCTION OF SILICON SINGLE CRYSTAL, AND HIGHLY DOPED UCTOR SUBSTRATE				
As the belo	w named inventor, I here	eby declare that:				
This declaration [ ] The attached application, or is directed to:						
is directed t	[ ] United	States application or PCT internation rfiled on	nal application			
The above-	identified application wa	s made or authorized to be made by	me.			
I believe the application.		itor or an original joint inventor of a c	laimed invention in the			
In consideration of value received, I sell and assign to <u>SUMCO TECHXIV CORPORATION</u> , having a business address at <u>1324-2</u> , <u>Masuragahara-machi</u> , <u>Omura-shi</u> , <u>Nagasaki</u> 856-8555, <u>Japan</u> , its successors, assigns or nominees, hereinafter referred to as "Assignee", my entire right, title and interest in and to said invention, and in and to all applications for patent and patents for said invention, in all countries of the world, including all divisions, reissues, continuations, substitutions and extensions thereof and all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of intellectual property, including rights of priority, resulting from the filing of any of said applications.						
I authorize said Assignee to file and prosecute an application or applications for patent for said invention as the applicant, and I request any official whose duty it is to issue patents, to issue any patent on said invention to said Assignee.						
I agree that on request and without further consideration, but at the expense of said Assignee, I will communicate to said Assignee or its representatives all facts known to me respecting said invention and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue, or other applications, make all rightful oaths and declarations, and generally do everything possible to aid said Assignee to obtain and enforce proper patent protection for said invention in all countries.						
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	ichi KAWAZOE	Shinicht Hawazoe . 9,11,20/3				
Invent	or (printed name)	Signature Date				

Holtz, Holtz, Goodman & Chick PC 220 Fifth Avenue, 16th Floor, New York, NY 10001-7708 Tel. (212) 319-4900 Fax. (212) 319-5101

Combined Declaration and Assignment					
Title of Invention	PROCESS FOR PRO N-TYPE SEMICONDU	DDUCTION OF SILICON SINGLE CRYSTAL, AND HIGHLY DOPED UCTOR SUBSTRATE			
As the belov	v named inventor, I her	eby declare that:			
This declara		ached application, or			
is uncolor .	[] United	States application	n or PCT internation d on	nal application	
The above-i	dentified application wa	as made or autho	rized to be made by	me.	
I believe that application.	at I am the original inver	ntor or an original	joint inventor of a c	laimed invention in the	
In consideration of value received, I sell and assign to <u>SUMCO TECHXIV CORPORATION</u> , having a business address at <u>1324-2</u> , <u>Masuragahara-machi</u> , <u>Omura-shi</u> , <u>Nagasaki</u> 856-8555. <u>Japan</u> , its successors, assigns or nominees, hereinafter referred to as "Assignee", my entire right, title and interest in and to said invention, and in and to all applications for patent and patents for said invention, in all countries of the world, including all divisions, reissues, continuations, substitutions and extensions thereof and all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of intellectual property, including rights of priority, resulting from the filing of any of said applications.					
I authorize said Assignee to file and prosecute an application or applications for patent for said invention as the applicant, and I request any official whose duty it is to issue patents, to issue any patent on said invention to said Assignee.					
I agree that on request and without further consideration, but at the expense of said Assignee, I will communicate to said Assignee or its representatives all facts known to me respecting said invention and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue, or other applications, make all rightful oaths and declarations, and generally do everything possible to aid said Assignee to obtain and enforce proper patent protection for said invention in all countries.					
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		
Yasuh	ito NARUSHIMA	Yasuhito	Kanishima	9/12/2013	
Invento	entor (printed name) Signature Date			Date	

Holtz, Holtz, Goodman & Chick PC 220 Fifth Avenue, 16th Floor, New York, NY 10001-7708 Tel. (212) 319-4900 Fax. (212) 319-5101

# **Combined Declaration and Assignment** Title of PROCESS FOR PRODUCTION OF SILICON SINGLE CRYSTAL, AND HIGHLY DOPED Invention N-TYPE SEMICONDUCTOR SUBSTRATE As the below named inventor, I hereby declare that: This declaration [ ] The attached application, or is directed to: [ ] 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. In consideration of value received, I sell and assign to SUMCO TECHXIV CORPORATION, having a business address at 1324-2, Masuragahara-machi, Omura-shi, Nagasaki 856-8555, Japan, its successors, assigns or nominees, hereinafter referred to as "Assignee", my entire right, title and interest in and to said invention, and in and to all applications for patent and patents for said invention, in all countries of the world, including all divisions, reissues, continuations, substitutions and extensions thereof and all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of intellectual property, including rights of priority, resulting from the filing of any of said applications. I authorize said Assignee to file and prosecute an application or applications for patent for said invention as the applicant, and I request any official whose duty it is to issue patents, to issue any patent on said invention to said Assignee. I agree that on request and without further consideration, but at the expense of said Assignee, I will communicate to said Assignee or its representatives all facts known to me respecting said invention and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue, or other applications, make all rightful oaths and declarations, and generally do everything possible to aid said Assignee to obtain and enforce proper patent protection for said invention in all countries. 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 Toshimichi KUBOTA 20/3 Date Inventor (printed name) Signature

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Combined Declaration and Assignment						
Title of Invention		DDUCTION OF SILICON SINGLE CRYSTAL, AND HIGHLY DOPED UCTOR SUBSTRATE				
As the belov	w named inventor, I her	eby declare that:				
This declaration [ ] The attached application, or is directed to:						
10 03: 00:00 1	[ ] United	States applicatio	n or PCT internation I on	nal application		
The above-	identified application wa	is made or autho	rized to be made by	me.		
I believe the application.	at I am the original inver	itor or an original	joint inventor of a c	laimed invention in th	е	
In consideration of value received, I sell and assign to <u>SUMCO TECHXIV CORPORATION</u> , having a business address at <u>1324-2</u> , <u>Masuragahara-machi</u> , <u>Omura-shi</u> , <u>Nagasaki 856-8555</u> , <u>Japan</u> , its successors, assigns or nominees, hereinafter referred to as "Assignee", my entire right, title and interest in and to said invention, and in and to all applications for patent and patents for said invention, in all countries of the world, including all divisions, reissues, continuations, substitutions and extensions thereof and all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of intellectual property, including rights of priority, resulting from the filing of any of said applications.						
I authorize said Assignee to file and prosecute an application or applications for patent for said invention as the applicant, and I request any official whose duty it is to issue patents, to issue any patent on said invention to said Assignee.						
I agree that on request and without further consideration, but at the expense of said Assignee, I will communicate to said Assignee or its representatives all facts known to me respecting said invention and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue, or other applications, make all rightful oaths and declarations, and generally do everything possible to aid said Assignee to obtain and enforce proper patent protection for said invention in all countries.						
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						
Fu	kuo OGAWA	Fukuo	Ogawa	9. 4.	20/3	
Invent	ntor (printed name) Signature Date					

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**RECORDED: 09/26/2013**