PATENT ASSIGNMENT

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SUBMISSION TYPE:		NEW ASSIGNMENT			
NATURE OF CONVEYANCE:		ASSIGNMENT			
CONVEYING PARTY DATA					
		Name	Execution Date		
Jun-ichi HASHIMOTO			08/21/2013		
Takashi KATO			08/21/2013		
Hiroshi INADA			08/21/2013		
Reiko MURATA			08/26/2013		
RECEIVING PARTY DATA					
Name:	SUMITOMO ELECTRIC INDUSTRIES, LTD.				
Street Address:	5-33, Kitahama 4-chome, Chuo-ku				
City:	Osaka-shi, Osaka				
State/Country:	JAPAN				
Postal Code:	541-0041				
PROPERTY NUMBERS Total: 1					
Property Type		Number			
Application Number:)7059		13907059	
CORRESPONDENCE DATA					
Fax Number:	2022634329			ОР \$	
		when the fax attempt is unsuccess	ful.	Ρ	
Phone: 2022634300					
Email: AROBERTS@SGRLAW.COM					
Correspondent Name: Michael A. Makuch					
Address Line 1: 1055 Thomas Jefferson Street, Ste 400 Address Line 2: SMITH, GAMBRELL & RUSSELL, LLP					
Address Line 2:SMITH, GAMBRELL & RUSSELL, LLPAddress Line 4:Washington, DISTRICT OF COLUMBIA 20007					
ATTORNEY DOCKET NUMBER:		033035 M 423			
NAME OF SUBMITTER		Ayisha M. Roberts			
Signature:		/Ayisha M. Roberts/	PATENT		
502502172			REEL : 031242 ERAME: 0333	=1	

Data	
Date	

Total Attachments: 2 source=033035M423_Assignment#page1.tif source=033035M423_Assignment#page2.tif

ASSIGNMENT

This assignment agreement is applicable to an invention entitled:

QUANTUM CASCADE SEMICONDUCTOR LASER

The PATENT RIGHTS referred to in this agreement are:

- a patent application for this invention, executed by the ASSIGNOR(S) concurrently with (check one) this assignment.
 - \boxtimes U.S. patent application Serial No. <u>13/907,059</u>, filed <u>May 31, 2013</u>.
 - a U.S. patent application based on PCT International Application No. _______filed on (date) _______, (U.S. patent application Serial No. ______, if known).
 U.S. patent No. ______, issued ______.

The PATENT RIGHTS also include all divisions, reissues, continuations and extensions of the patents and patent applications identified above.

The PATENT RIGHTS assigned under this agreement are:

- \boxtimes U.S. patent rights only. (check one)
 - U Worldwide patent rights. In this case, the assignee shall have the right to claim the benefit of the filing date of any U.S. or foreign patent application for this invention.

The ASSIGNOR(S) referred to in this agreement is (or are) the inventor(s) whose signatures appear on page 2 of this Assignment and any Supplemental Sheet(s).

The ASSIGNEE referred to in this agreement is:

(Name of Assignee)		SUMITOMO ELECTRIC INDUSTRIES, LTD.		
(Address)		5-33, Kitahama 4-chome, Chuo-ku,		
		Osaka-shi, Osaka 541-0041, JAPAN		
The ASSIGNEE is:				
(check one)	🗆 An] An Individual.		
	$\Box A F$	🗆 A Partnership.		
	⊠ A (A Corporation of <u>JAPAN</u> . (specify state or country)		
	🗌 (oth	er)		

The ASSIGNOR(S), in consideration of \$10.00 paid by the ASSIGNEE, and other good and valuable consideration, receipt of which is acknowledged, hereby assign(s) the following rights to the ASSIGNEE, its successors and assigns:

the full and exclusive right to the invention;

the entire right, title and interest in and to the PATENT RIGHTS;

the right to sue and recover for any past infringement; and,

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the right to claim priority under 35 USC 119, 35 USC 120, or any other applicable provisions, based on any earlier patent applications for this invention.

As to all U.S. patent applications assigned under this agreement, the ASSIGNOR(S) hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue all Letters Patent to the ASSIGNEE as the assignce of the entire right, title and interest, for the sole use and enjoyment of said ASSIGNEE, its successors and assigns.

Further, the ASSIGNOR(S) agree(s) to communicate to said ASSIGNEE, or its representatives, any facts known to the ASSIGNOR(S) respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause any and all Letters Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention.

The ASSIGNORS authorize any attorneys and agents who have a power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filing date in this document after it has been executed.

Jun-ichi HASHIMOTO (Name)

(Name)

Takashi KATO

(Name) Itiroshi Inada Hiroshi INADA

Jahashi Kato

(Name) Reiho murata

Reiko MURATA, acting on behalf of herself and as legal representative of deceased inventor Michio MURATA

Citizenship: Japan

Residence: Yokohama-shi, Kanagawa, JAPAN

Mailing Address: <u>c/o: Yokohama Works of Sumitomo Electric Industries, Ltd.</u>

1, Taya-cho, Sakae-ku, Yokohama-shi, Kanagawa, JAPAN

(Date) August 21,2013

(Date) Aug., 21. 20/3

(Date) Ang. 21, 20/3

(Date) August. 26. 2013

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RECORDED: 09/19/2013