

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Miki OKAMURA</td> <td>03/15/2012</td> </tr> <tr> <td>Ryo SHIMIZU</td> <td>03/15/2012</td> </tr> <tr> <td>Yasuhiro ISHIKAWA</td> <td>03/15/2012</td> </tr> </tbody> </table>		Name	Execution Date	Miki OKAMURA	03/15/2012	Ryo SHIMIZU	03/15/2012	Yasuhiro ISHIKAWA	03/15/2012
Name	Execution Date								
Miki OKAMURA	03/15/2012								
Ryo SHIMIZU	03/15/2012								
Yasuhiro ISHIKAWA	03/15/2012								
RECEIVING PARTY DATA									
Name:	SUMITOMO OSAKA CEMENT CO., LTD.								
Street Address:	6-28, Rokuban-cho								
City:	Chiyoda-ku, Tokyo								
State/Country:	JAPAN								
Postal Code:	102-8465								
PROPERTY NUMBERS Total: 1									
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13498589</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13498589				
Property Type	Number								
Application Number:	13498589								
CORRESPONDENCE DATA									
Fax Number:	(612)332-9081								
Phone:	612-332-5300								
Email:	cmanthie@merchantgould.com								
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>									
Correspondent Name:	Dianna G. El Hioum								
Address Line 1:	P.O. BOX 2903								
Address Line 2:	Merchant & Gould P.C.								
Address Line 4:	MINNEAPOLIS, MINNESOTA 55402-0903								
ATTORNEY DOCKET NUMBER:	13869.82FPWO								
NAME OF SUBMITTER:	Dianna G. El Hioum								
Total Attachments: 2 source=Signed Assignment#page1.tif source=Signed Assignment#page2.tif									

OP \$40.00 13498589

INSTRUCTIONS

U.S. ASSIGNMENT TO CORPORATION

WHEREAS,

Inventor(s) Name,  
Address, Citizenship

1. Miki OKAMURA residing at Tokyo, Japan and a citizen of Japan;
2. Ryo SHIMIZU residing at Tokyo, Japan and a citizen of Japan;
3. Yasuhiro ISHIKAWA residing at Tokyo, Japan and a citizen of Japan

Check the appropriate box and fill in the requested information: (herein called "THE UNDERSIGNED") have made an invention and have executed an application for Letters Patent of the United States entitled

- select the first check box if the application is a national stage of a PCT application and provide the international application number and filing date before sending the assignment for execution;
- select the second check box if the application will be filed without the executed assignment - once the assignment is executed and the serial number and filing date of the U.S. application are known, provide this information before recordation;
- select the third check box if the application was previously filed and provide the serial number and filing date before sending the assignment for execution; or
- select the fourth check box if the application will be filed with the application.

OPTICAL WAVEGUIDE DEVICE

and which:

- is the national stage application of International Application No. PCT/JP2010/066580 filed on September 24, 2010;
- will be filed without this executed PATENT ASSIGNMENT. THE UNDERSIGNED hereby authorizes, and requests, ASSIGNEE'S legal representatives, of Merchant & Gould PC, who are associated with customer number 23552, to insert here in parenthesis (U.S. Serial No. \_\_\_\_\_, filed \_\_\_\_\_) this application's U.S. Serial Number and filing date, when known;
- was filed on \_\_\_\_\_ and was given U.S. Serial No. \_\_\_\_\_; or
- is filed concurrently herewith;

Name of Corporation

AND WHEREAS SUMITOMO OSAKA CEMENT CO., LTD. (herein called "ASSIGNEE"), a corporation organized under the laws of Japan, and having an office and place of business at 6-28, Rokuban-cho, Chiyoda-ku, Tokyo 102-8465 Japan

State or Country of  
Incorporation and Address

wishes to acquire the entire right, title and interest in and to said invention and patent application and any Letters Patent to be obtained therefor;

NOW, THEREFORE, for and in consideration of the sum of One Dollar and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, THE UNDERSIGNED hereby sell, assign and transfer to the ASSIGNEE, its successors and assigns, the entire right, title and interest for the United States in and to the invention disclosed in the aforesaid application, and in and to the said application, all divisions, continuations, or renewals thereof, all Letters Patent which may be granted therefrom, and all reissues or extensions of such patents, and THE UNDERSIGNED hereby authorize and request the Commissioner of Patents to issue any and all United States Letters Patent for the aforesaid invention to the ASSIGNEE of the entire right, title and interest in and to the same, for the use of the ASSIGNEE, its successors and assigns.

THE UNDERSIGNED hereby agree that THE UNDERSIGNED, their

