PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5491540

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CARL ZEISS AG	02/15/2019

RECEIVING PARTY DATA

Name:	CARL ZEISS SMT GMBH
Street Address:	RUDOLF-EBER-STRASSE 2
City:	OBERKOCHEN
State/Country:	GERMANY
Postal Code:	73447

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	16269771	

CORRESPONDENCE DATA

Fax Number: (877)769-7945

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.

Phone: (617) 542-5070 Email: apsi@fr.com **Correspondent Name: REX I. HUANG**

Address Line 1: FISH & RICHARDSON P.C.

Address Line 2: P.O.BOX 1022

Address Line 4: MINNEAPOLIS, MINNESOTA 55440-1022

ATTORNEY DOCKET NUMBER:	24609-0077001
NAME OF SUBMITTER:	CHERYL A. FORREST
SIGNATURE:	/Cheryl A. Forrest/
DATE SIGNED:	04/25/2019

Total Attachments: 2

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PATENT REEL: 048989 FRAME: 0178 505444739

Assignment

Whereas, I/We, Carl Zeiss AG, having a place of business at Carl-Zeiss-Strasse 22, 73447 Oberkochen, Germany, hereinafter called assignor, is/will become the assignee of record of the entire right, title and interest in an application for Letters Patent of the United States entitled

Optical system and method for correcting mask defects using the system and of the invention disclosed therein; and

Whereas, Carl Zeiss SMT GmbH, having a place of business at Rudolf-Eber-Str. 2, 73447 Oberkochen, hereinafter called assignee, desires to acquire the entire right, title, and interest in the application and the invention disclosed therein, and to any United States patents to be obtained therefor;

Therefore, for valuable consideration, receipt whereof is hereby acknowledged, I/We, the above named assignor, hereby state as follows:

To the extent that my/our entire right, title and interest in the application and the invention disclosed therein have not transferred to the assignee by virtue of applicable law and/or contract, I/we hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire/remaining, present/expectant right, title and interest in the application and the invention disclosed therein for the United States of America, including all divisionals and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, including the right to claim priority under 35 U.S.C. §119; and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.

I/We hereby authorize and request the attorneys of Fish & Richardson Attn.: Rex I. Huang One Marina Park Drive Boston, Massachusetts 02210 U.S.A to insert here in

> PATENT REEL: 048989 FRAME: 0179

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	ryped or printed name(s)	
	Director Palents Director Palents Title of person(s) signing	
	Carl Zeiss AG	
	Assignor name	
Witnessed by:		
	Signature Date	
	Typed or printed name	
Witnessed by:		
	Signature Date	
	Typed or printed name	

(Legalization not required for recording but is prima facie evidence of execution under 35 U.S.C. §261)

PATENT REEL: 048989 FRAME: 0180

RECORDED: 04/25/2019