505902104 02/06/2020

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5948805

SUBMISSION TYPE:	CORRECTIVE ASSIGNMENT
	Corrective Assignment to correct the RECEIVING PARTY DATA TO INCLUDE THE 2ND ASSIGNEE "WEIHUA GUO" THAT WAS MISSING IN THE COVER SHEET previously recorded on Reel 051382 Frame 0191. Assignor(s) hereby confirms the SALE, ASSIGNMENT, AND TRANSFER.

#### **CONVEYING PARTY DATA**

Name	Execution Date
WEIHUA GUO	12/23/2019
CAN LIU	12/23/2019
PENGFEI ZHANG	12/23/2019
QIAOYIN LU	12/23/2019

#### **RECEIVING PARTY DATA**

Name:	HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
name:	HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
Street Address:	NO. 1037 LUOYU ROAD, HONGSHAN DISTRICT
City:	WUHAN
State/Country:	CHINA
Postal Code:	430074
Name:	WEIHUA GUO
Street Address:	NO. 1037 LUOYU ROAD, HONGSHAN DISTRICT
City:	WUHAN
State/Country:	CHINA
Postal Code:	430074

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16729322

#### **CORRESPONDENCE DATA**

**Fax Number:** (888)259-9223

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:** 888-259-9211 X2330

Email: USPTORECEIPT@GMAIL.COM

Correspondent Name: MATTHIAS SCHOLL Address Line 1: 1321 UPLAND DR

Address Line 2: SUITE 1319

Address Line 4: HOUSTON, TEXAS 77043

505902104 PATENT REEL: 051834 FRAME: 0138

ATTORNEY DOCKET NUMBER:	WHHG-00402-UUS
NAME OF SUBMITTER:	SUZANNE SCHOLL
SIGNATURE:	/Suzanne Scholl/
DATE SIGNED:	02/06/2020
Total Attachments: 5 source=WHHG-00402-UUS_coversheet&assignment_printed#page1.tif	

source=WHHG-00402-UUS\_coversheet&assignment\_printed#page1.tif source=WHHG-00402-UUS\_coversheet&assignment\_printed#page2.tif source=WHHG-00402-UUS\_coversheet&assignment\_printed#page3.tif source=WHHG-00402-UUS\_coversheet&assignment\_printed#page4.tif source=WHHG-00402-UUS\_coversheet&assignment\_printed#page5.tif

PATENT REEL: 051834 FRAME: 0139

#### 505840175 12/28/2019

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5887109

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
WEIHUA GUO	12/23/2019
CAN LIU	12/23/2019
PENGFEI ZHANG	12/23/2019
QIAOYIN LU	12/23/2019

#### **RECEIVING PARTY DATA**

Name:	HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
Street Address:	NO. 1037 LUOYU ROAD, HONGSHAN DISTRICT
City:	WUHAN
State/Country:	CHINA
Postal Code:	430074

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16729322

#### CORRESPONDENCE DATA

**Fax Number:** (888)259-9223

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**Phone:** 888-259-9211 X2330

Email: USPTORECEIPT@GMAIL.COM

Correspondent Name: MATTHIAS SCHOLL Address Line 1: 1321 UPLAND DR.

Address Line 2: SUITE 1319

Address Line 4: HOUSTON, TEXAS 77043

ATTORNEY DOCKET NUMBER:	WHHG-00402-UUS
NAME OF SUBMITTER:	SUZANNE SCHOLL
SIGNATURE:	/Suzanne Scholl/
DATE SIGNED:	12/28/2019

#### **Total Attachments: 4**

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PATENT REEL: 051834 FRAME: 0140

		<u> </u>
Attorney Docket Number	WHHG-00402-UUS	
Title of Invention	SURFACE-EMMITING LASER COMPRISING S	SURFACE GRATINGS
	<ol> <li>I believe that I am the original inventor or an original joint inventor or an original joint inventor application identified by the title above.</li> </ol>	entor (referred to as ASSIGNOR below) of a claimed
WHEREAS	Huazhong University of Science and Technology	
having a po	ostal address of: No.1037, Luoyu Rd, Hongshan District, N	Wuhan, Hubei,China, 430074
and	Weihua GUO	
having a po	ostal address of: No.1037, Luoyu Rd, Hongshan District, \	Nuhan, Hubel,China, 430074
	as ASSIGNEES below) desire to acquire the entire right, title undivided amounts;	, and interest in and to the same in the United States in
ASSIGNOF undivided States of A	W, THEREFORE, for good and valuable consideration, the re R, by these presents does sell, assign and transfer unto so amount, the entire right, title, and interest in and to said in America, including any and all patents granted on any division said application, whether granted in an initial or supplemental of	aid ASSIGNEES, for each to hold in an equal and nvention and application throughout the United , continuation, continuation-in-part, reexamination, and
prosecution additional of without furt communica ASSIGNOF may be req encompass	SIGNOR hereby agrees to execute any documents that legally in and maintenance of said application or any other patent application or any other patent application or any other patent application. ASSIGNOR also agrees, without further consideration. ASSIGNOR also agrees, without further content to ASSIGNEES at ASSIGNEES request documents and in its possession or control, and to provide further assurances at uired of ASSIGNOR in respect of the prosecution, maintenanced within the terms of this instrument. ASSIGNOR's obligation utors, administrators and other legal representatives.	lications in the United States for said invention, includin SIGNEES in and to said invention and application, all insideration and at ASSIGNEES' expense, to identify an formation concerning the invention that are within and testimony on behalf of said ASSIGNEES that lawfull are and defense of any patent application or patent
referred to a an equal ar representat	SIGNOR hereby authorizes and requests the Commissioner of above to said ASSIGNEES, as the ASSIGNEES of the entire indictional undivided amount, for the ASSIGNEES' sole use and behavives and successors, to the full end of the term for which such that have been held by ASSIGNOR had this assignment and sale	ight, title and interest in and to the same, each holding of, and for the use and behoof of said ASSIGNEES' leg patent may be granted, as fully and entirely as the
	SIGNOR authorizes Practitioners associated with the Custome ment needed to effect its recordal in the U.S. Patent and Trad	
LEGAL N	AME OF ASSIGNOR	
Assignor	Weihua GUO	Date: 12/23/2019
Signature:	Weilma Euro	

PAGE 1 OF 4

Attorney Docket Number	WHHG-00402-UUS	
Title of Invention	SURFACE-EMMITING LASER COMPRISING SURFACE GRATINGS	
WHEREAS invention in	, I believe that I am the original inventor or an original joint inventor (referred to as ASSIGNOR below) of a claimed the application identified by the title above.	
WHEREAS	Huazhong University of Science and Technology	
having a po	stal address of: No.1037, Luoyu Rd, Hongshan District, Wuhan, Hubei, China, 430074	
and having a po	Weihua GUO ostal address of: No. 1037, Luoyu Rd, Hongshan District, Wuhan, Hubei,China, 430074	
	as ASSIGNEES below) desire to acquire the entire right, title, and interest in and to the same in the United States in andivided amounts;	
NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged.  ASSIGNOR, by these presents does sell, assign and transfer unto said ASSIGNEES, for each to hold in an equal and undivided amount, the entire right, title, and interest in and to said invention and application throughout the United States of America, including any and all patents granted on any division, continuation, continuation-in-part, reexamination, and reissue of said application, whether granted in an initial or supplemental examination thereof.		
prosecution additional of without fur communic ASSIGNO may be rec encompas	SIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing; in and maintenance of said application or any other patent applications in the United States for said invention, including documents that may be required to affirm the rights of said ASSIGNEES in and to said invention and application, all their consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEES' expense, to identify and ate to ASSIGNEES at ASSIGNEES' request documents and information concerning the invention that are within R's possession or control, and to provide further assurances and testimony on behalf of said ASSIGNEES that lawfully quired of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent sed within the terms of this instrument. ASSIGNOR's obligations under this instrument shall extend to ASSIGNOR's autors, administrators and other legal representatives.	
ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all patents referred to above to said ASSIGNEES, as the ASSIGNEES of the entire right, title and interest in and to the same, each holding an equal and undivided amount, for the ASSIGNEES' sole use and behoof; and for the use and behoof of said ASSIGNEES' legs representatives and successors, to the full end of the term for which such patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.		
AS In this doc	SIGNOR authorizes Practitioners associated with the Customer Number 33,794 to insert or complete any information urnent needed to effect its recordal in the U.S. Patent and Trademark Office and to record the same.	
LEGAL N	IAME OF ASSIGNOR	
Assignor	Can LIU Date: 12/23/2019	
Signatur	. <u>Can LIV</u>	

PAGE 2 OF 4

Attorney Docket Number	WHHG-00402-UUS	
Title of Invention	SURFACE-EMMITING LASER COMPRISING SURFACE GRATINGS	
WHEREAS, I believe that I am the original inventor or an original joint inventor (referred to as ASSIGNOR below) of a claimed invention in the application identified by the title above.		
WHEREAS, Huazhong University of Science and Technology		
having a postal address of: No.1037, Luoyu Rd, Hongshan District, Wuhan, Hubei, China, 430074		
and	Weihua GUO	
having a po	ostal address of: No.1037, Luoyu Rd, Hongshan District, Wuhan, Hubel, China, 430074	
(referred to as ASSIGNEES below) desire to acquire the entire right, title, and interest in and to the same in the United States in equal and undivided amounts;		
NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged.  ASSIGNOR, by these presents does sell, assign and transfer unto said ASSIGNEES, for each to hold in an equal and undivided amount, the entire right, title, and interest in and to said invention and application throughout the United States of America, including any and all patents granted on any division, continuation, continuation-in-part, reexamination, and reissue of said application, whether granted in an initial or supplemental examination thereof.		
ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent applications in the United States for said invention, including additional documents that may be required to affirm the rights of said ASSIGNEES in and to said invention and application, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEES' expense, to identify and communicate to ASSIGNEES at ASSIGNEES' request documents and information concerning the invention that are within ASSIGNOR's possession or control, and to provide further assurances and testimony on behalf of said ASSIGNEES that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR's obligations under this instrument shall extend to ASSIGNOR's heirs, executors, administrators and other legal representatives.		
ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all patents referred to above to said ASSIGNEES, as the ASSIGNEES of the entire right, title and interest in and to the same, each holding an equal and undivided amount, for the ASSIGNEES' sole use and behoof; and for the use and behoof of said ASSIGNEES' legal representatives and successors, to the full end of the term for which such patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.		
AS in this doc	SSIGNOR authorizes Practitioners associated with the Customer Number 33,794 to insert or complete any information tument needed to effect its recordal in the U.S. Patent and Trademark Office and to record the same.	
LEGAL NAME OF ASSIGNOR		
Assigno	Pengfei ZHANG Date: 12/23/2019	
Signature: Peng fei ZHWG		

Attorney Docket Number	WHHG-00402-UUS	
Title of Invention	SURFACE-EMMITING LASER COMPRISING SURFACE GRATINGS	
WHEREAS, I believe that I am the original inventor or an original joint inventor (referred to as ASSIGNOR below) of a claimed invention in the application identified by the title above.		
WHEREAS. Huazhong University of Science and Technology		
having a postal address of: No.1037, Luoyu Rd. Hongshan District, Wuhan, Hubei, China, 430074		
and	Weihua GUO:	
having a po	stal address of: No.1037, Luoyu Rd, Hongshan District, Wuhan, Hubei,China, 430074	
(referred to as ASSIGNEES below) desire to acquire the entire right, title, and interest in and to the same in the United States in equal and undivided amounts;		
NOW. THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, ASSIGNOR, by these presents does sell, assign and transfer unto said ASSIGNEES, for each to hold in an equal and undivided amount, the entire right, title, and interest in and to said invention and application throughout the United States of America, including any and all patents granted on any division, continuation, continuation-in-part, reexamination, and reissue of said application, whether granted in an initial or supplemental examination thereof.		
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ASSIGNOR authorizes Practitioners associated with the Customer Number 33,794 to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office and to record the same.		
LEGAL NAME OF ASSIGNOR		
Assignor: _	Qiaoyin LU Date: 12/23/2019	
Signature: Qiaog do		

PAGE 4 OF 4

**RECORDED: 02/06/2020**