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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:		NEW ASSIGNMENT		
NATURE OF CONVEYANCE:		ASSIGNMENT	ASSIGNMENT	
CONVEYING PARTY	ΔΑΤΑ			
		Name	Execution Date	
HEINZ SCHMID			06/15/2018	
BENEDIKT F. MAYER			06/15/2018	
STEPHAN WIRTHS			06/14/2018	
KIRSTEN EMILIE MOS	SELUND		06/15/2018	
RECEIVING PARTY D	ΑΤΑ			
Name:	INTER	INTERNATIONAL BUSINESS MACHINES CORPORATION		
Street Address:	NEW C	NEW ORCHARD ROAD		
City:	ARMO	ARMONK		
State/Country:	NEW Y	NEW YORK		
Postal Code:	10504	10504		
Property Type Application Number:		Number 16010865		
CORRESPONDENCE	DATA			
Fax Number:		(516)742-4366	accelul it will be cont	
Fax Number: Correspondence will	be sent to	(516)742-4366 o the e-mail address first; if that is unsuc d; if that is unsuccessful, it will be sent v		
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Fax Number: <i>Correspondence will using a fax number, i</i> Phone: Email:	be sent to f provideo	o the e-mail address first; if that is unsuc d; if that is unsuccessful, it will be sent v 516-742-4343 mgroth@ssmp.com	ia US Mail.	
Fax Number: <i>Correspondence will using a fax number, i</i> Phone: Email: Correspondent Name	be sent to f provideo	o the e-mail address first; if that is unsuc d; if that is unsuccessful, it will be sent v 516-742-4343 mgroth@ssmp.com SCULLY, SCOTT, MURPHY & PRESSER,	ia US Mail.	
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Fax Number: <i>Correspondence will</i> <i>using a fax number, i</i> Phone: Email: Correspondent Name Address Line 1: Address Line 2: Address Line 4:	be sent to f provideo	o the e-mail address first; if that is unsuc d; if that is unsuccessful, it will be sent v 516-742-4343 mgroth@ssmp.com SCULLY, SCOTT, MURPHY & PRESSER, 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NEW YORK 11530	ia US Mail.	
Fax Number: <i>Correspondence will</i> <i>using a fax number, i</i> Phone: Email: Correspondent Name Address Line 1: Address Line 2: Address Line 4: ATTORNEY DOCKET N	be sent to f provided : IUMBER:	o the e-mail address first; if that is unsuc d; if that is unsuccessful, it will be sent v 516-742-4343 mgroth@ssmp.com SCULLY, SCOTT, MURPHY & PRESSER, 400 GARDEN CITY PLAZA SUITE 300 GARDEN CITY, NEW YORK 11530 CH820170002US01 (36263)	ia US Mail.	
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DECLARATION (37 C.F.R. § 1.63) FOR UTILITY PATENT APPLICATION USING AN APPLICATION DATA SHEET (37 C.F.R. § 1.76) AND ASSIGNMENT

Title of Invention: PLASMONIC QUANTUM WELL LASER

As a below named and undersigned inventor, I hereby declare that:

This declaration is directed to the attached application, or (if following box is checked):

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.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. § 1.56.

Whereas, I ("ASSIGNOR") have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

Whereas, International Business Machines Corporation (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by me had this Assignment not been made; and I agree to execute any and all documents and instruments and perform alllawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

> PATENT REEL: 046120 FRAME: 0792

IBM DOCKET NUMBER, CH820170002U801

Tack new ledge assigned and ongoing obligations to cell, arsign, and transfer my rights inder the Assignment to the ASSRANEE and an unaware of any reason why I may not have the full and uncocombered right totall. assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will extereme any decompanies or involument to conduct herewith. I also hereby grant the ASSIGNEE, its successory legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not lumied to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any displaces will be resolved in a New York state court or federal court wind in New York.

Thereby acknowledge that any willful false statement made in this declaration is partishable under TALL S.C. & HOL by here or imprisonment of nor more than free (5) years, or both

(1) Legal Nome of Inventor: Heinz Schmid

Sugnation <u>2004</u>

Signature

en Leen Name of Inventor Stephan Wirths

on Legal Name of Incentiff Benedikt F. Mayer

Same Classed

a Legal Marke of Josepher Kirsten Lutilie Moselund

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2411=1 REEL: 046120 FRAME: 0793

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I have reviewed and understand the contents of the application, including the claims.

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Whereas, I ("ASSIGNOR") have made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application and further identified by the IBM Docket Number provided above in the header of this document;

Whereas, International Business Machines Corporation (herein referred to as the "ASSIGNEE"), a corporation of New York having a place of business at Armonk, New York, desires to acquire, and I desire to grant to the ASSIGNEE, my entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

Now, therefore, for good and valuable consideration, the receipt and sufficiency thereof being hereby acknowledged, I hereby sell or have sold, assign or have assigned, and otherwise transfer or have transferred to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the Invention, the above-identified United States patent application, and any and all other patent applications and patents for the Invention which may be applied for or granted therefor in the United States and in all foreign countries and jurisdictions, including all divisions, continuations, reissues, reexaminations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents. In addition, I hereby authorize and request the Director of the United States Patent and Trademark Office to issue any United States Patent, and foreign patent authorities to issue any foreign patent, granted for the Invention, to the ASSIGNEE, its successors, legal representatives, and assigns, my entire worldwide right, title, and interest in and to the same to be held and enjoyed by the ASSIGNEE, its successors, legal representatives, and assigns to the full end of the terms for which any and all such patents may be granted, as fully and entirely as would have been held and enjoyed by me had this Assignment not been made; and I agree to execute any and all documents and instruments and perform alllawful acts reasonably related to recording this Assignment or perfecting title to the Invention and all related patents and applications, in the ASSIGNEE, its successors, legal representatives, and assigns, whenever requested by the ASSIGNEE, its successors, legal representatives, or assigns.

> PATENT REEL: 046120 FRAME: 0794

IBM DOCKET NUMBER: CH820170002US01

I acknowledge my prior and ongoing obligations to sell, assign, and transfer my rights under this Assignment to the ASSIGNEE and am unaware of any reason why I may not have the full and unencumbered right to sell, assign, and transfer my rights hereby sold, assigned, and transferred, and have not executed, and will not execute, any document or instrument in conflict herewith. I also hereby grant the ASSIGNEE, its successors, legal representatives, and assigns, the right to insert in this Assignment any further identification (including, but not limited to, patent Application Number) which may be necessary or desirable for recordation of this Assignment. This Assignment is governed by the substantive laws of the State of New York, and any disputes will be resolved in a New York state court or federal court sited in New York.

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.

Signature:	Date:
(1) Legal Name of Inventor: Heinz Schmid	
Signature:	Date:
(2) Legal Name of Inventor: Benedikt F. Mayer	
Signature: UGALOUL AND	Date: <u>14.06.</u> <u>18</u>
(3) Legal Name of Inventor: Stephan Wirths	
Signature:	Date:

(4) Legal Name of Inventor: Kirsten Emilie Moselund

RECORDED: 06/18/2018