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PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
LINGYUN JIA	09/19/2018
VILJAMI J. PORE	09/10/2018
MARKO TUOMINEN	09/14/2018
SUN JA KIM	09/10/2018
ORESTE MADIA	09/10/2018
EVA TOIS	09/12/2018
SUVI HAUKKA	09/17/2018
TOSHIYA SUZUKI	09/19/2018

RECEIVING PARTY DATA

Name:	ASM IP HOLDING B.V.
Street Address:	VERSTERKERSTRAAT 8
City:	ALMERE
State/Country:	NETHERLANDS
Postal Code:	1322 AP

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15971601

CORRESPONDENCE DATA

Fax Number: (949)760-9502

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using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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ATTORNEY DOCKET NUMBER:	ASMMC.145AUS
NAME OF SUBMITTER:	ANDREW N. MERICKEL
SIGNATURE:	/ANDREW N. MERICKEL/

DATE SIGNED:	09/25/2018			
	This document serves as an Oath/Declaration (37 CFR 1.63).			
Total Attachments: 9				
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COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

Application Data Sheet filed previously or concurrently

Docket No.: ASMMC.145AUS Page 1 of 9

Title: PLASMA ENHANCED DEPOSITION PROCESSES FOR CONTROLLED FORMATION OF METAL

OXIDE THIN FILMS

Inventors: Lingyun Jia, Viljami J. Pore, Marko Tuominen, Sun Ja Kim, Oreste Madia, Eva Tois, Suvi

Haukka, Toshiya Suzuki

Declaration

This Declaration is directed to the application identified above that:

Was filed **May 4, 2018** as U.S. or International Application No. **15/971,601** and incorporating any amendments made thereto prior to the signature date of this Declaration.

As a named inventor, I declare that:

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 hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

Assignment from Inventors

WHEREAS, above-identified inventors (individual(s) hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, ideas, ornamental designs, or discoveries, and hereby assign or are under an obligation to assign to the below identified Assignee the above-titled application (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States (identified above) has been prepared for filing with the United States Patent and Trademark Office (hereinafter the "Application").

AND WHEREAS, **ASM IP HOLDING B.V.**, with its principal place of business at Versterkerstraat 8, Almere, 1322 AP, The Netherlands (hereinafter the "ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the Application and the Work.

NOW, THEREFORE, for good and valuable consideration of which receipt is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in the Application and the Work, including all Patent Properties filed or issued upon the Application and the Work; where "Patent Properties" include, but are not limited to:

all provisional applications relating thereto (including but not limited to U.S. Provisional Application No(s). 62/502,118, filed May 5, 2017, and 62/507,078, filed May 16, 2017 (respectively if plural applications));

all nonprovisional applications claiming priority to aforementioned provisional(s) and/or the present Application, including, all divisions, continuations, continuations-in-part, and reissues, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof; and

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

Application Data Sheet filed previously or concurrently

Docket No.: ASMMC.145AUS

Page 2 of 9

Title: PLASMA ENHANCED DEPOSITION PROCESSES FOR CONTROLLED FORMATION OF METAL

OXIDE THIN FILMS

Inventors: Lingyun Jia, Viljami J. Pore, Marko Tuominen, Sun Ja Kim, Oreste Madia, Eva Tois, Suvi

Haukka, Toshiya Suzuki

all rights of priority under International Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof.

ASSIGNOR hereby acknowledges the ASSIGNEE as the Applicant for all aforementioned Patent Properties, and authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other Patent Property relating to the Application and the Work or any improvements made thereto, sign/execute all lawful papers, authorize the filing of and execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filed therefrom, and any continuing application filed from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

Signature:

Witnessed by:

Witness Name (printed):

Legal Name of inventor: Lingyun Jia

Date: 20/8-09-/9

Witness Name (printed): Junya Movi mole

COME	BINED DECLARATION & AS Application Data Sheet filed p		
Docket No.; ASMMC	145AUS		Page 3 of 9
Title: PLASMA ENHA OXIDE THIN FILMS	ANCED DEPOSITION PROCESS	ES FOR CONTROLLED	FORMATION OF METAL
Inventors: Lingyun J Haukka, Tos	a, Viljami J. Pore, Marko Tuomine hiya Suzuki	n, Sun Ja Kim, Oreste M	adia, Eva Tois, Suvi
Legal Name of inver	ntor: Viljami J. Pore		
Signature:	<u> </u>	Date:	Sept 10 2018
	Witnessed by:	Marie Carried	Marine Ma

Witness Name (printed): ルチャンン けいこて入地(

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e)) Application Data Sheet filed previously or concurrently Docket No.: ASMMC.145AUS Page 4 of 9 Title: PLASMA ENHANCED DEPOSITION PROCESSES FOR CONTROLLED FORMATION OF METAL OXIDE THIN FILMS Inventors: Lingyun Jia, Viljami J. Pore, Marko Tuominen, Sun Ja Kim, Oreste Madia, Eva Tois, Suvi Haukka, Toshiya Suzuki Legal Name of inventor: Marko Tuominen

Signature Witnessed by:

Witness Name (printed):

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e)) Application Data Sheet filed previously or concurrently

Docket No.: ASMMC.145AUS				Page 5 of 9
Title: PLASMA ENHANCED DOXIDE THIN FILMS	EPOSITION PROCE	SSES FOR CONTI	ROLLED FO	RMATION OF METAL
Inventors: Lingyun Jia, Viljami Haukka, Toshiya Suzu		ninen, Sun Ja Kim, I	Oreste Madia	a, Eva Tois, Suvi
Legal Name of inventor: Sur	ı Ja Kim		a com cel com com ce com cel c	anti a matematema in prima propria propria propria propria prima propria prima propria prima propria prima pro
Signature:	A		Date:	10-Sep-2018
٧	Vitnessed by:	parting and the second		
Witness Na	me (printed):	MAKON	AU O	7 4-2 1

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(Application Data Sheet filed previously or concurrently	9))
Docket No.: ASMMC.145AUS	Page 6 of 9
Title: PLASMA ENHANCED DEPOSITION PROCESSES FOR CONTROLLED FORMAT OXIDE THIN FILMS	TION OF METAL
Inventors: Lingyun Jia, Viljami J. Pore, Marko Tuominen, Sun Ja Kim, Oreste Madia, Eva Haukka, Toshiya Suzuki	Tois, Suvi
Legal Name of inventor: Oreste Madia	
Signature:	58/2018
Wildenson Names Incidently 10 109 115	

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e)) Application Data Sheet filed previously or concurrently

Docket No.: ASMMC.	145AUS			Page 7 of 9
Title: PLASMA ENHA OXIDE THIN FILMS	NCED DEPOSITION F	PROCESSES FOR	R CONTROLLED	FORMATION OF METAL
Inventors: Lingyun Jia Haukka, Tosh	a, Viljami J. Pore, Marki iya Suzuki	o Tuominen, Sun	Ja Kim, Oreste M	ladia, Eva Tois, Suvi
			V	
Legal Name of inven	tor: Eva Tois			
Signature:	an our		Date:	12-Spt, 2018
	Witnessed by:	Branch		•
Wi	tness Name (printed):	Varun	Sharmo	Xu

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

Application Data Sheet filed previously or concurrently

Docket No.: ASMMC.145AUS

Page 8 of 9

Title: PLASMA ENHANCED DEPOSITION PROCESSES FOR CONTROLLED FORMATION OF METAL

OXIDE THIN FILMS

Inventors: Lingyun Jia, Viljami J. Pore, Marko Tuominen, Sun Ja Kim, Oreste Madia, Eva Tois, Suvi

Haukka, Toshiya Suzuki

Legal Name of Inventor: Suvi Haukka

Signature:

Date: September 17, 2018

Witness Name (printed):

COMBINED DECLARATION & ASSIGNM Application Data Sheet liled previously	
Docket No.: ASMMC.145AUS	Page 9 of 9
Title: PLASMA ENHANCED DEPOSITION PROCESSES FOR COXIDE THIN FILMS	CONTROLLED FORMATION OF METAL
Inventors: Lingyun Jia, Viljami J. Pore, Marko Tuominen, Sun Jia Haukka, Toshiya Suzuki	Kim, Oreste Madia, Eva Tois, Suvi
Legal Name of Inventor: Toshiya Suzuki	
Summer Some Same So	9 19 314

Witness Name (printed): YA SVO SUZUK

PATENT REEL: 046961 FRAME: 0073

RECORDED: 09/25/2018