### 502639677 01/16/2014

#### PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
FENG CHEN	10/02/2013
TSUNG-HAN YANG	08/21/2013
JUWEN GAO	08/23/2013
ROEY SHAVIV	08/25/2013
RAASHINA HUMAYUN	08/22/2013
DEQI WANG	08/21/2013

#### RECEIVING PARTY DATA

Name:	Novellus Systems, Inc.
Street Address:	4650 Cushing Parkway
City:	FREMONT
State/Country:	CALIFORNIA
Postal Code:	94538

### PROPERTY NUMBERS Total: 2

Property Type	Number	
Application Number:	13928216	
Application Number:	61666466	

#### **CORRESPONDENCE DATA**

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ATTORNEY DOCKET NUMBER: NOVLP469/NVLS003757

REEL: 031989 FRAME: 0291

**PATENT** 

NAME OF SUBMITTER:	DENISE BERGIN	
Signature:	/dsb/	
Date:	01/16/2014	
Total Attachments: 4 source=NVLS003757-1US_NOVLP469 Assignment Executed#page1.tif source=NVLS003757-1US_NOVLP469 Assignment Executed#page2.tif source=NVLS003757-1US_NOVLP469 Assignment Executed#page3.tif source=NVLS003757-1US_NOVLP469 Assignment Executed#page4.tif		

PATENT REEL: 031989 FRAME: 0292

#### ASSIGNMENT OF PATENT APPLICATIONS

Whereas I, an undersigned named inventor, possess the right, title and interest for and in the Invention(s) as set forth in the following patent applications:

METHODS OF FORMING TENSILE TUNGSTEN FILMS AND COMPRESSIVE TUNGSTEN FILMS (Atty. Docket No. NOVLP469/ NVLS003757-1US) for which I have executed a U.S. patent application the same having been filed on June 26, 2013, as Application No. 13/928,216; and

METHODS OF FORMING TENSILE TUNGSTEN FILMS AND COMPRESSIVE TUNGSTEN FILMS (Atty. Docket No. NOVLP469P/NVLS003757P) which is a U.S. Provisional Patent Application filed on June 29, 2012, Application No. 61/666,466;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, an undersigned named inventor, hereby:

- 1) Sell, assign and transfer to **Novellus Systems, Inc.**, a California corporation having a place of business at <u>4650 Cushing Parkway</u>, <u>Fremont</u>, <u>CA 94538</u> ("ASSIGNEE"), the entire right, title and interest in the above-referenced applications including any and all improvements and inventions disclosed therein, and in applications based upon, and patents (including foreign patents and the right to claim priority) granted upon, the above-referenced applications.
- 2) Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said applications or any division, continuation, substitute, renewal, re-examination or reissue thereof to the ASSIGNEE.
- 3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
- 4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the ASSIGNEE, its successors, assigns and other legal representative, and shall be binding upon the named inventor, as well as the named inventor's heirs, legal representatives and assigns.
- 5) Warrant and represent that I have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.

Assign US or Foreign Patent Application (No Notary)

PATENT REEL: 031989 FRAME: 0293

## Signed on the date indicated beside my signature.

1)	Signature: Typed Name:	Feng Chen	Date: <u>10/02/30</u> ()
2)	Signature: Typed Name:	Tsung-Han Yang	Date:
3)	Signature: Typed Name:	Juwen Gao	Date:
4)	Signature: Typed Name:	Roey Shaviv	Date:
5)	Signature: Typed Name:	Raashina Humayun	Date:
6)	Signature: Typed Name:	Deqi Wang	Date:

# Signed on the date indicated beside my signature.

1)	Signature:		Date:	
**	Typed Name:	Feng Chen		A CONTRACTOR OF THE PROPERTY O
2)	Signature: Typed Name:	Tsung-Han Yang	Date:	<u> 1444</u>
3)	Signature: Typed Name:	Juwen Gae	Date:	08/23/20/3
4)	Signature: Typed Name:	Rocy Shaviv	Date:	<u>,</u>
5)	Signature: Typed Name:	Raashina Humayun	Date:	<u> 12212013</u>
6)	Signature: Typed Name:	Deqi Wang	Date:	08/21/13

## Signed on the date indicated beside my signature.

1)	Signature: Typed Name:	Feng Chen	_ Date:	
2)	Signature: Typed Name:	Tsung-Han Yang	Date:	
3)	Signature: Typed Name:	Juwen Gao	_ Date:	
4)	Signature: Typed Name:	Roey Shaviv	Date:	3/52/5017
5)	Signature: Typed Name:	Raashina Humayun	_ Date:	
6)	Signature: Typed Name:	Deqi Wang	_ Date:	

Assign US or Foreign Patent Application (No Notary)

**RECORDED: 01/16/2014** 

PATENT REEL: 031989 FRAME: 0296