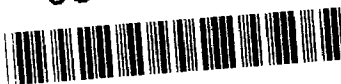


22287

U.S. PTO
11/710652
02/22/2007

03-15-2007

ASSIGNM



HEET

103384313

Commissioner of Patents:

Please record the attached document.

1. Name of conveying party:

- | | | | |
|----|--------------------|----|----------------|
| a) | Yongsik Yu | d) | Jon Henri |
| b) | Pramod Subramonium | e) | Elizabeth Apen |
| c) | Zhiyuan Fang | f) | Dan Vitkavage |

2. Name and address of receiving party:

- a) Name: Novellus Systems, Inc.
Address: 3970 North First Street
San Jose, CA 95134

3. Nature of conveyance:

- | | | | |
|-------------------------------------|--------------------|--------------------------|-------------------|
| <input checked="" type="checkbox"/> | Assignment | <input type="checkbox"/> | Merger |
| <input type="checkbox"/> | Security Agreement | <input type="checkbox"/> | Change of Name |
| <input type="checkbox"/> | Other _____ | <input type="checkbox"/> | License Agreement |

Execution Date:

- | | | | |
|----|---------------------------------------|----|-----------------------------------|
| a) | Yongsik Yu (January 11, 2007) | d) | Jon Henri (January 11, 2007) |
| b) | Pramod Subramonium (January 12, 2007) | e) | Elizabeth Apen (January 12, 2007) |
| c) | Zhiyuan Fang (January 11, 2007) | f) | Dan Vitkavage (January 11, 2007) |

4. Application Number or Patent Number: NEW

The title of the application is: IMPROVED DIFFUSION BARRIER AND ETCH STOP FILMS

5. Please send all correspondence concerning this document to:

Beyer Weaver & Thomas, LLP
P.O. Box 70250
Oakland, CA 94612-0250
Customer Number: 022434

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$40.00

- ☒ Enclosed.
☐ Charge to Deposit Account No. 500388 (Order No. _____).
☒ Any additional fees are authorized to be charged to Deposit Account No. 500388 (Order No. NOVLP181/NVLS-3192).

Date: February 22, 2007

Anna Gavrilova
Registration No. 58,181

Jeffrey K. Weaver
Registration No. 31,314

02/28/2007 DEMMANU1 00000003 11710652

05 FC:8021

40.00 0P

Attorney Docket No. NOVLP181/NVLS-3192

(Revised 9/03)

PATENT
REEL: 019046 FRAME: 0189

ASSIGNMENT OF PATENT APPLICATION

Whereas I, an undersigned inventor, have invented certain new and useful improvements as set forth in the patent application entitled:

IMPROVED DIFFUSION BARRIER AND ETCH STOP FILMS

(Atty. Docket No. NOVLP181/NVLS-3192), (check one)

- ☒ for which I have executed a U.S. patent application on even date herewith. (Accompanying)
☐ which bears U.S. application No. _____. (Not accompanying)
☐ which is a U.S. provisional application. (Accompanying)

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, an undersigned inventor, hereby:

- 1) Sell, assign and transfer to Novellus Systems, Inc., a California corporation having a place of business at 3970 North First Street, San Jose, CA 95134 ("ASSIGNEE"), the entire right, title and interest in any and all improvements and inventions disclosed in, applications based upon, and patents granted upon (including foreign patents and the right to claim priority), the above-referenced application.
- 2) Authorize and request the Commissioner of Patents to issue any and all United States Patents resulting from said application 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 representatives, and shall be binding upon the inventor, as well as the 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.
- 6) Authorize and request my attorney/agent to insert above the application No. in order to assist with recordal of this assignment.

Signed on the date indicated beside my signature.

1. Inventor Signature: Yongsik Yu
Yongsik Yu

Date: 1/11/2007

State of Oregon)

County of Washington)

ss.

On this 11th day of January, in the year 2007, before me, Laura L. Johnson, Notary Public, personally appeared Yongsik Yu, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature Laura L. Johnson



2. Inventor Signature: Pramod Subramonium
Pramod Subramonium

Date: 1/12/07

State of Oregon)

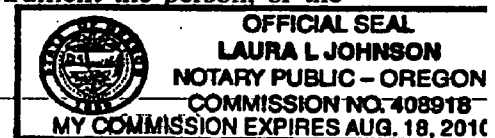
County of Washington)

ss.

On this 12th day of January, in the year 2007, before me, Laura L. Johnson, Notary Public, personally appeared Pramod Subramonium, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature Laura L. Johnson



3. Inventor Signature: Zhiyuan Fang
Zhiyuan Fang

Date: 1/11/07

State of Oregon)

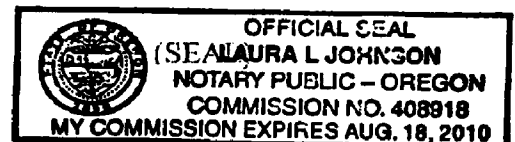
County of Washington)

ss.

On this 11th day of January, in the year 2007, before me, Laura L. Johnson, Notary Public, personally appeared Zhiyuan Fang, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature Laura L. Johnson



Revised 01/02, Assign US Notary

4. Inventor Signature: _____

Jon Henri

Date: _____

1/11/07

State of Oregon)

County of Washington)

ss.

On this 11th day of January, in the year 2007, before me, Laura L. Johnson Notary Public, personally appeared Jon Henri personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature _____

Laura L. Johnson



5. Inventor Signature: _____

Elizabeth Apen

Date: _____

1/12/07

State of Oregon)

County of Washington)

ss.

On this 12th day of January, in the year 2007, before me, Laura L. Johnson Notary Public, personally appeared Elizabeth Apen personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature _____

Laura L. Johnson



6. Inventor Signature: _____

Dan Vitkavage

Date: _____

1/11/07

State of Oregon)

County of Washington)

ss.

On this 11th day of January, in the year 2007, before me, Laura L. Johnson Notary Public, personally appeared Dan Vitkavage personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity(ies), and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

WITNESS my hand and official seal.

Notary Signature _____

Laura L. Johnson

