

RI 03-29-2002

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE



TO THE HONORABLE DIRECTOR OF THE ORIGINAL DOCUMENTS OR COPY THEREOF.

102037193

(OFFICE. PLEASE RECORD THE ATTACHED

J1017 U.S. PTO
 10/099232
 03/13/02

1. Name of conveying party(ies):

(a) Jengyi Yu
 (b) Ka Shun Wong
 (c) Sanjeev Jain

Additional name(s) of conveying party(ies) attached?
 Yes No

03/13/02

2. Name and address of receiving party(ies):

Name: Novellus Systems, Inc.
 Street Address: 4000 N. First Street
 City: San Jose CA 95134
 Country: USA

3. Nature of Conveyance:

Assignment Merger
 Security Agreement Change of Name
 Other

Execution Date: (a)(g) 02/26/02; (b) 02/27/02; (c)(d)(e) 02/28/02;
 (f) 03/04/02

Name and address of receiving party(ies):

Name:
 Street Address:
 City: State: Zip:
 Country:
 Additional name(s) & address(es) attached?
 Yes No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: (a)(f)(g) 02/26/02; (b)02/27/02; (c)(d)(e) 02/28/02

A. Patent Application No.(s) -

Title: Systems and Methods to Retard Copper Diffusion and Improve Film Adhesion for a Dielectric Barrier on Copper

B. Patent No.(s)

Additional numbers attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Greg J. Michelson
 Internal Address: SKJERVEN MORRILL MacPHERSON LLP
 Street Address: 25 METRO DRIVE, SUITE 700
 City SAN JOSE State CA Zip 95110

03/29/2002 GTON11 00000026 192386 10099232
01 FC:581 40.00 CH

6. Total number of applications and patents involved: 1

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

Authorized to be charged to Deposit Account 19-2386
 Charge Deposit Account 19-2386 for any additional fees required for this conveyance and credit deposit account 19-2386 any amounts overpaid

DO NOT USE THIS SPACE

8. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Greg J. Michelson 44,940 Greg J. Michelson 3-13-02
 Name of Person Signing Signature Date

Total number of pages including cover sheet, attachments, and documents: 6

PATENTS ONLY

To the Honorable Director of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Additional name(s) of conveying party(ies):

- (d) Somnath Nag
- (e) Haiying Fu
- (f) Atul Gupta
- (g) Bart J. Van Schravendijk

2. Additional Names and address of receiving party(ies):

Name: _____

Internal Address: _____

Street Address: _____

City _____ State _____ ZIP _____

Name: _____

Internal Address: _____

Street Address: _____

City _____ State _____ ZIP _____

Name: _____

Internal Address: _____

Street Address: _____

City _____ State _____ ZIP _____

Additional name(s) & address(es) attached? Yes No

4. Additional Application number(s) or patent number(s):

A. Patent Application No.(s)

B. Patent No.(s)

ASSIGNMENT

For good and valuable consideration, receipt of which is hereby acknowledged, we

Jengyi Yu of 2979 Cataldi Drive; San Jose, CA 95132
Ka Shun Wong of 1457 Bing Drive; San Jose, CA 95129
Sanjeev Jain of 4220 Ramshall Place; Santa Clara, CA 95054
Somnath Nag of 18910 Harleigh Drive; Saratoga, CA 95070
Haiying Fu of 22580 Clark Street; West Linn, OR 97068
Atul Gupta of 1555 W. Middlefield Rd., Apt. 25; Mountain View, CA 94043
Bart J. Van Schravendijk of 741 Islay Court; Sunnyvale, CA 94087

hereby sell, assign and transfer to Novellus Systems, Inc., a California corporation, having a place of business at 4000 North First Street, San Jose, CA 95134,, its successors and assigns, the entire right, title and interest throughout the world in our invention in:

Systems and Methods to Retard Copper Diffusion and Improve Film Adhesion for a Dielectric Barrier on Copper

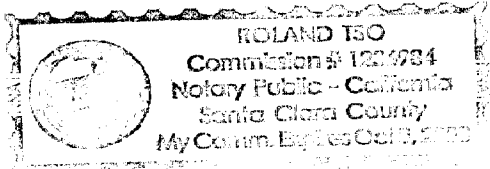
for which we have executed a United States patent application on or about the date of this assignment, and all patent applications and patents of every country for said invention, including divisions, reissues, continuations and extensions thereof, and all rights of priority resulting from the filing of said applications; we authorize the above-named assignee to apply for patents of foreign countries for said invention, and to claim all rights of priority without further authorization from us; we agree to execute all papers useful in connection with said United States and foreign applications, and generally to do everything possible to aid said assignee, their successors, assigns and nominees, at their request and expense, in obtaining and enforcing patents for said invention in all countries; and we request that the United States Patent and Trademark Office issue all patents granted for said invention to the above-named assignee, its successors and assigns.

Executed this 26th day of Feb., 2002.

Jengyi Yu

State of California)
 Santa) ss.
County of Clara)

On February 26, 2002 before me, Roland Tso, Notary Public personally appeared Jengyi Yu personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.
Roland Tso
SIGNATURE OF NOTARY

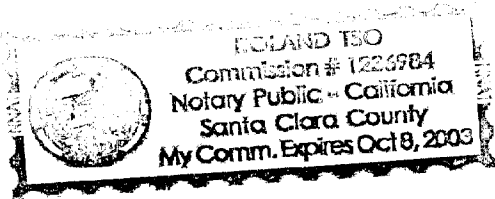
Executed this 27th day of Feb, 2002.

Ka Shun Wong
Ka Shun Wong

State of California)
County of Santa Clara) ss.

On February 27, 2002 before me, Roland Tso, Notary Public personally appeared Ka Shun Wong personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Roland Tso
SIGNATURE OF NOTARY

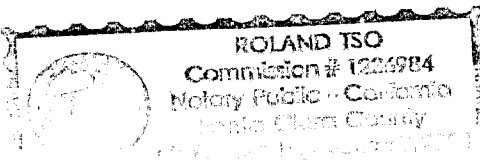
Executed this 28 day of February, 2002.

Sanjeev Jain
Sanjeev Jain

State of California)
County of Santa Clara) ss.

On February 28, 2002 before me, Roland Tso, Notary Public personally appeared Sanjeev Jain personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



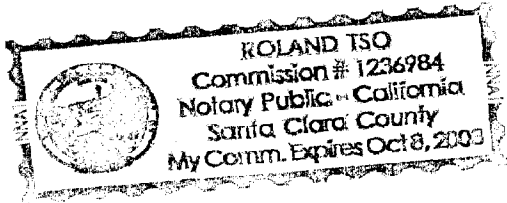
Roland Tso
SIGNATURE OF NOTARY

Executed this 28th day of FEBRUARY, 2002.

State of California)
County of Santa Clara) ss.

Somnath Nag
Somnath Nag

On February 28, 2002 before me, Roland Tso, Notary Public personally appeared Somnath Nag personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Roland Tso
SIGNATURE OF NOTARY

Executed this 28th day of February, 2002.

State of California)
County of Santa Clara) ss.

Haiying Fu
Haiying Fu

On February 28, 2002 before me, Roland Tso, Notary Public personally appeared Haiying Fu personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Roland Tso
SIGNATURE OF NOTARY

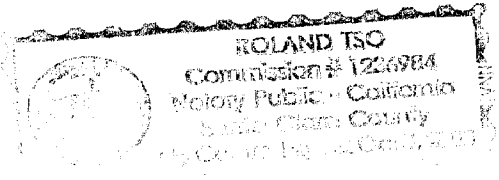
Executed this 17th day of March, 2002.

Atul Gupta
Atul Gupta

State of California,
County of Santa Clara) ss.

On March 4, 2002 before me, Roland Tso, Notary Public
personally appeared Atul Gupta personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Roland Tso
SIGNATURE OF NOTARY

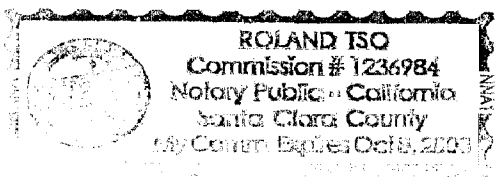
Executed this 26th day of February, 2002.

Bart J. Van Schravendijk
Bart J. Van Schravendijk

State of California,
County of Santa Clara) ss.

On February 26, 2002 before me, Roland Tso, Notary Public
personally appeared Bart J. Van Schravendijk personally known to me or proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is(are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Roland Tso
SIGNATURE OF NOTARY