



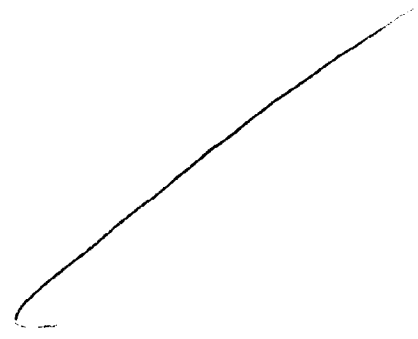
4/1/04

04-07-2004



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ASSIGNMENT RJ
-P.



Commissioner of Patents:

Please record the attached document.

- 1. Name of conveying party:
 - a) Wenxian Zhu
 - b) Jengyi Yu
 - c) Siswanto Sutanto
 - d) Pinsheng Sun
 - e) Jeffrey Chih-Hou Lowe
 - f) Waikit Fung
 - g) Tze Wing Poon

- 2. Name and address of receiving party:
 - a) Name: Novellus Systems, Inc.
 - Address: 3970 North First Street
San Jose, California 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: January 12, 2004

- 4. Application Number or Patent Number: 10/733,858

The title of the application is: BIASED H₂ ETCH PROCESS IN DEPOSITION-ETCH-DEPOSITION GAP FILL

- 5. Please send all correspondence concerning this document to:

Beyer Weaver & Thomas, LLP
P.O. Box 778
Berkeley, CA 94704-0778

Ph: (510) 843-6200
Fax: (510) 843-6203
Customer Number: 022434

- 6. Total number of applications and patents involved: 1

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

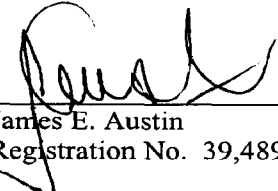
- Enclosed.
- Charge to Deposit Account No. 500388 (Order No. _____).
- Any additional fees are authorized to be charged to Deposit Account No. 500388 (Order No. NOVLP090).

Date: March 29, 2004

04/02/2004 WDEMSS1 00000032 10733858

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 James E. Austin
 Registration No. 39,489

Total number of pages including this cover sheet, attachments and documents: 5

Attorney Docket No. NOVLP090/NVLS-002888

(Revised 9/03)

ASSIGNMENT OF PATENT APPLICATION

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

BIASED H₂ ETCH PROCESS IN DEPOSITION-ETCH-DEPOSITION GAP FILL

(Atty. Docket No. NOVLP090/NVLS-002888), (check one)

- for which I have executed a U.S. patent application on even date herewith. (Accompanying)
- which bears U.S. application No.10/733,858. (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, California 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: Wenxian Zhu
Wenxian Zhu

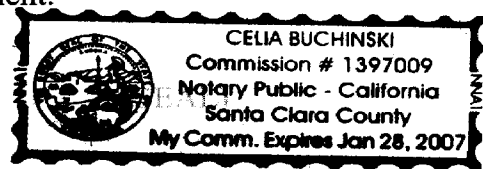
Date: 01/12/04

State of California)
County of Santa Clara) ss.

On this 12th day of JANUARY, in the year 2004, before me, Celia Buchinski, Notary Public, personally appeared Wenxian Zhu, 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 Celia Buchinski



2. Inventor Signature: Jengyi Yu
Jengyi Yu

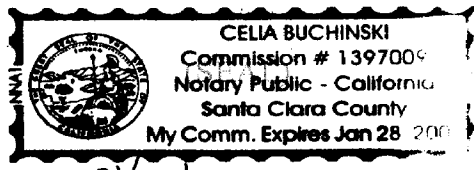
Date: 1/12/04

State of California)
County of Santa Clara) ss.

On this 12th day of JANUARY, in the year 2004, before me, Celia Buchinski, Notary Public personally appeared Jengyi 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 Celia Buchinski



3. Inventor Signature: Siswanto Sutanto
Siswanto Sutanto

Date: 01/12/04

State of California)
County of Santa Clara) ss.

On this 12th day of JANUARY, in the year 2004, before me, Celia Buchinski, Notary Public, personally appeared Siswanto Sutanto, 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 Celia Buchinski



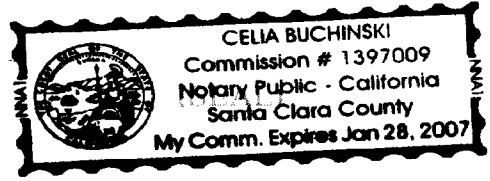
4. Inventor Signature: *Pinsheng Sun* Date: 01-12-2004
Pinsheng Sun

State of California)
County of SANTA CLARA) ss.

On this 12TH day of JANUARY, in the year 2004, before me, Celia Buchinski, Notary Public, personally appeared Pinsheng Sun, 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 *Celia Buchinski*



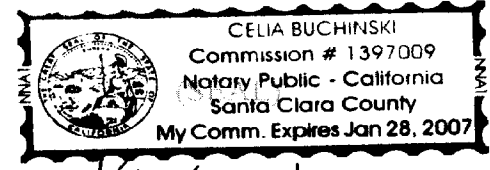
5. Inventor Signature: *Jeffrey Chih-Hou Lowe* Date: 1/12/2004
Jeffrey Chih-Hou Lowe

State of California)
County of SANTA CLARA) ss.

On this 12TH day of JANUARY, in the year 2004, before me, Celia Buchinski, Notary Public, personally appeared Jeffrey Chih-Hou Lowe, 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 *Celia Buchinski*



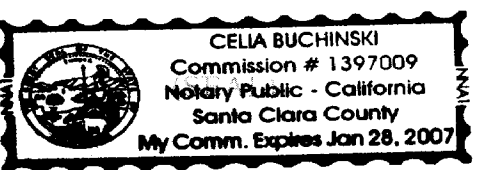
6. Inventor Signature: *Waikit Fung* Date: 1/12/2004
Waikit Fung

State of California)
County of SANTA CLARA) ss.

On this 12TH day of JANUARY, in the year 2004, before me, Celia Buchinski, Notary Public, personally appeared Waikit Fung, 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 *Celia Buchinski*



7. Inventor Signature: Tze Wing Poon
Tze Wing Poon

Date: 1/12/04

State of California)
County of SANTA CLARA) ss.

On this 12TH day of JANUARY, in the year 2004, before me, CELIA BUCHINSKI, Notary Public, personally appeared Tze Wing Poon, 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 Celia Buchinski

