Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | CORRECTIVE ASSIGNMENT |
|-----------------------|---|
| NATURE OF CONVEYANCE: | Corrective Assignment to correct the word Hydorgen in the title to Hydrogen previously recorded on Reel 020991 Frame 0178. Assignor(s) hereby confirms the word Hydorgen in the title be corrected to Hydrogen. |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| Pramod Subramonium | 05/20/2008 |
| Zhiyuan Fang | 05/20/2008 |
| Jon Henri | 05/20/2008 |

RECEIVING PARTY DATA

| Name: | Novellus Systems, Inc. |
|-----------------|-------------------------|
| Street Address: | 3970 North First Street |
| City: | San Jose |
| State/Country: | CALIFORNIA |
| Postal Code: | 95134 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12048967 |

CORRESPONDENCE DATA

Fax Number: (510)663-0920

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Email: djones@wavsip.com

Correspondent Name: Weaver Austin Villeneuve & Sampson LLP

Address Line 1: 500 12th Street

Address Line 4: Oakland, CALIFORNIA 94607

| ATTORNEY DOCKET NUMBER: | NOVLP144X1 |
|-------------------------|--------------|
| NAME OF SUBMITTER: | Cindy H. Shu |

Total Attachments: 6

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PATENT REEL: 021142 FRAME: 0951

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PATENT REEL: 021142 FRAME: 0952

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1 05/23/2008 500548139

| SUBMISSION TYPE: | NEW ASSIGNMENT | | |
|-----------------------|----------------|----------------|--|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | |
| CONVEYING PARTY DATA | | | |
| Name | | Execution Date | |
| Pramod Subramonium | | 05/20/2008 | |
| Zhiyuan Fang | | 05/20/2008 | |
| Jon Henri | | 05/20/2008 | |
| RECEIVING PARTY DATA | | | |

| City: | San Jose | |
|----------------|------------|--|
| State/Country: | CALIFORNIA | |
| Postal Code: | 95134 | |
| | | |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 12048967 |

CORRESPONDENCE DATA

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Novellus Systems, Inc.

3970 North First Street

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Address Line 4:

Oakland, CALIFORNIA 94607

ATTORNEY DOCKET NUMBER: NOVLP144X1

NAME OF SUBMITTER: Cindy H. Shu

Total Attachments: 2

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PATENT REEL: 021142 FRAME: 0953

| Address Line 1: 500 12th Street, Suite 200 Address Line 4: Oakland, CALIFORNIA 94607 | | |
|---|----------------|--|
| ATTORNEY DOCKET NUMBER: | NOVLP144X1 | |
| NAME OF SUBMITTER: | Cindy H. Shu | |
| Signature: | /Cindy H. Shu/ | |
| Date: 05/23/2008 | | |
| Total Attachments: 2 source=NOVLP144X1_Assignment#page1.tif source=NOVLP144X1_Assignment#page2.tif | | |
| RECEIPT INFORMATION | | |
| EPAS ID: PAT56100 Receipt Date: 05/23/2008 Fee Amount: \$40 | • | |

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ASSIGNMENT OF PATENT APPLICATION

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

PULSED PECVD METHOD FOR MODULATING HYDROGEN CONTENT IN HARD MASK

| (Atty. | Docket No. NOVLP144X1/NVLS-3102C1), (check one) |
|--------|--|
| | for which I have executed a U.S. patent application on even date herewith. (Accompanying) which bears U.S. application No.12/048,967. (Not accompanying) which is a U.S. provisional application. (Accompanying) |
| acknov | For good and valuable consideration, the receipt and sufficiency of which is 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.

Page 1 of 2

| 1. Inventor Signature: Pramod Subramonium | Date: 5/20/2008 |
|---|--|
| State of Oregon) | |
| County of Library On this 2011 day of May | ss, in the year 2008, before me, ic, personally appeared Pramod Subramonium, |
| | the basis of satisfactory evidence) to be the person |
| whose name is subscribed to the within instrum | ent, and acknowledged to me that he/she executed the |
| | at by his/her signature on the instrument the person, |
| or the entity upon behalf of which the person ac WITNESS my hand and official seal. | official seal |
| | LAURA L JOHNSON NOTARY PUBLIC – OREGON COMMISSION NO. 408918 MY COMMISSION EXPIRES AUG. 18, 2010 |
| 2. Inventor Signature: Zhiyuan Fang | Date: 5/20/2008 |
| State of Oregon | |
| County of Little County of this 20 day of Mark | SS. |
| Lava L. Vonction, Notary Public, | ersonally appeared Zhiyuan Fang, personally known factory evidence) to be the person whose name is |
| subscribed to the within instrument, and acknowledge | owledged to me that he/she executed the same in |
| | s/her signature on the instrument the person, or the |
| entity upon behalf of which the person acted, ex WITNESS my hand and official seal. | OFFICIAL SEAL |
| Notary Signature Towns The Market Towns | LAURA L JOHNOCN NOTARY PUBLIC - OR ECON COMMISSION NO. 400018 MY COMMISSION EXPIRES AUG. 18, 2010 |
| | ~ / / |
| 3. Inventor Signature: | Date: <u>\$\/20\/0\b</u> |
| Jon Henri State of Oregon | • |
| > 1) | SS. |
| County of Wath The County of Man | in the year 2000 hefers me |
| | personally appeared Jon Henri, personally known to |
| | evidence) to be the person whose name is subscribed to me that he/she executed the same in his/her |
| | ature on the instrument the person, or the entity upon |
| behalf of which the person acted, executed the i | |
| WITNESS my hand and official seal. | OFFICIAL SEAL LAURA L JOHNSON |
| Notary Signature Keller Many | NOTARY PUBLIC - OREGON COMMISSION NO. 408918 MY COMMISSION EXPIRES AUG. 18, 2010 |

RECORDED: 06/24/2008