

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| | |
|-----------------------|----------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------|----------------|
| Kartik Ramaswamy | 08/29/2005 |
| Hiroji Hanawa | 08/26/2005 |
| Biagio Gallo | 08/29/2005 |
| Kenneth S. Collins | 08/29/2005 |
| Kai Ma | 08/26/2005 |
| Vijay Parihar | 08/24/2005 |
| Dean Jennings | 08/23/2005 |
| Abhilash J. Mayur | 08/31/2005 |
| Amir Al-Bayati | 08/31/2005 |
| Andrew Nguyen | 08/25/2005 |

RECEIVING PARTY DATA

| | |
|-------------------|--------------------------|
| Name: | Applied Materials, Inc. |
| Street Address: | P.O. Box 450-A |
| Internal Address: | Legal Affairs Department |
| City: | Santa Clara |
| State/Country: | CALIFORNIA |
| Postal Code: | 95052 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 11199592 |

CORRESPONDENCE DATA

Fax Number: (408)986-3090
Correspondence will be sent via US Mail when the fax attempt is unsuccessful.
 Phone: 408-235-6536
 Email: jo_ann_cottrell@amat.com
 Correspondent Name: Applied Materials, Inc.

CH \$40.00 11199592

Address Line 1: P.O. Box 450-A
Address Line 2: Legal Affairs Dept.
Address Line 4: Santa Clara, CALIFORNIA 95052

NAME OF SUBMITTER:

Jo Ann Cottrell

Total Attachments: 6

source=10182 asg 081505#page1.tif

source=10182 asg 081505#page2.tif

source=10182 asg 081505#page3.tif

source=10182 asg 081505#page4.tif

source=10182 asg 081505#page5.tif

source=10182 asg 081505#page6.tif

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses
of Inventors:

| | | | |
|----|---|-----|---|
| 1) | KARTIK RAMASWAMY 1646 TAWNYGATE WAY SAN JOSE, CA 95124 | 2) | HIROJI HANAWA 696 SPRUCE DRIVE SUNNYVALE, CA 94086 |
| 3) | BIAGIO GALLO 160 COLLEGE AVENUE LOS GATOS, CA 95030 | 4) | KENNETH S. COLLINS 7214 GLENVIEW DRIVE SAN JOSE, CA 95120 |
| 5) | KAI MA 750 N. SHORELINE BLVD., #141 MOUNTAIN VIEW, CA 94043 | 6) | VIJAY PARIHAR 41521 JOYCE AVENUE FREMONT, CA 94539 |
| 7) | DEAN JENNINGS 6 THOREAU CIRCLE BEVERLY, MA 01915 | 8) | ABHILASH J. MAYUR 17651 OLSON PLACE SALINAS, CA 93907 |
| 9) | AMIR AL-BAYATI 3302 CHEMIN DE RIVIERE SAN JOSE, CA 95148 | 10) | ANDREW NGUYEN 3148 HOSTETTER ROAD SAN JOSE, CA 95132 |

(hereinafter referred to as Assignors), have invented a certain invention entitled:

"SEMICONDUCTOR SUBSTRATE PROCESS USING AN OPTICALLY WRITABLE CARBON-CONTAINING MASK"for which application for Letters Patent in the United States was filed on **August 8, 2005**, Serial No. **11/199,592**; and

WHFRFAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as Application), and the invention disclosed therein (hereinafter referred to as Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive

right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.

2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefor and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

- 1) 08-29-05, 2005 Kartik Ramaswamy
Kartik Ramaswamy
- 2) 8-26-05, 2005 Hiroji Hanawa
Hiroji Hanawa
- 3) 8/29/05, 2005 Biagio Gallo
Biagio Gallo
- 4) 8-29, 2005 Kenneth S. Collins
Kenneth S. Collins
- 5) 8/26, 2005 Kai Ma
Kai Ma
- 6) 8/24, 2005 Vijay Parihar
Vijay Parihar

- 7) _____, 2005 _____
Dean Jennings
- 8) 8/31/, 2005 Abhilash J. Mayur
Abhilash J. Mayur
- 9) 8/31, 2005 A. Alluyt
Amir Al-Bayati
- 10) 8/25/0, 2005 Andrew
Andrew Nguyen

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses
of Inventors:

| | | | |
|----|---|-----|---|
| 1) | KARTIK RAMASWAMY 1646 TAWNYGATE WAY SAN JOSE, CA 95124 | 2) | HIROJI HANAWA 696 SPRUCE DRIVE SUNNYVALE, CA 94086 |
| 3) | BIAGIO GALLO 160 COLLEGE AVENUE LOS GATOS, CA 95030 | 4) | KENNETH S. COLLINS 7214 GLENVIEW DRIVE SAN JOSE, CA 95120 |
| 5) | KAI MA 750 N. SHORELINE BLVD., #141 MOUNTAIN VIEW, CA 94043 | 6) | VIJAY PARIHAR 41521 JOYCE AVENUE FREMONT, CA 94539 |
| 7) | DEAN JENNINGS 6 THOREAU CIRCLE BEVERLY, MA 01915 | 8) | ABHILASH J. MAYUR 17651 OLSON PLACE SALINAS, CA 93907 |
| 9) | AMIR AL-BAYATI 3302 CHEMIN DE RIVIERE SAN JOSE, CA 95148 | 10) | ANDREW NGUYEN 3148 HOSTETTER ROAD SAN JOSE, CA 95132 |

(hereinafter referred to as Assignors), have invented a certain invention entitled:

"SEMICONDUCTOR SUBSTRATE PROCESS USING AN OPTICALLY WRITABLE CARBON-CONTAINING MASK"for which application for Letters Patent in the United States was filed on **August 8, 2005**, Serial No. **11/199,592**; and

WHEREAS, Applied Materials, Inc., a corporation of the State of Delaware, having a place of business at 3050 Bowers Avenue, Santa Clara, California 95054 (hereinafter referred to as Assignee), is desirous of acquiring the entire right, title and interest in and to said application (hereinafter referred to as Application), and the invention disclosed therein (hereinafter referred to as Invention), and in and to all embodiments of the Invention, heretofore conceived, made or discovered by said Assignors, and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter referred to as Patents) thereon granted in any and all countries and groups of countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Assignors to have been received in full from said Assignee:

1. Said Assignors hereby sell, assign, transfer and convey to Assignee the full and exclusive right, title and interest (a) in and to said Application and said Invention; (b) in and to all rights to apply for patents on said Invention in any and all countries pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all Applications filed and any and all Patents granted on said Invention in any and all countries and groups of countries, including each and every Application filed and each and every Patent granted on any application which is a division, substitution, or continuation of said Application; and (d) in and to each and every reissue or extension of any of said Patents.

2. Said Assignors hereby covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right, title and interest to said Invention herein conveyed in any and all countries and groups of countries. Such cooperation by said Assignors shall include prompt production of pertinent facts and documents, giving testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said Invention; (d) for filing and prosecuting applications for reissuance of any of said Patents; (e) for interference or other priority proceedings involving said Invention; and (f) for legal proceedings involving said Invention and any application therefor and any Patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Assignors in providing such cooperation shall be paid for by said Assignee.

3. The term and covenants of this agreement shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Assignors, their respective heirs, legal representatives and assigns.

4. Said Assignors hereby warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Assignors have executed and delivered this instrument to said Assignee on the dates indicated below.

1) _____, 2005 _____
Kartik Ramaswamy

2) _____, 2005 _____
Hiroji Hanawa


3) _____, 2005 _____
Blaglo Gallo

4) _____, 2005 _____
Kenneth S. Collins

5) _____, 2005 _____
Kai Ma

6) _____, 2005 _____

Vijay Parihar

7) 23 Aug, 2005 
Dean Jennings

8) _____, 2005 _____
Abhilash J. Mayur

9) _____, 2005 _____
Amir Al-Bayati

10) _____, 2005 _____
Andrew Nguyen