| | 08-18-2000 |
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| FORM PTC-1595 RECORDATION FORM COVER SHEETU.S. DEPARTMENT (Modified) PATENTS ONLYPatent and Trademark Of | |
| To the Honorable Commissioner of Patents and Trademarks: P | 101436511 <u>its or copy thereof</u> |
| 1. Name of conveying party(ies): EXECUTION DATE | 2. Name and address of receiving party(ies): Name:APPLIED MATERIALS, INC. Internal Address:Patent Counsel, M/S 2061 Legal Affairs Dept. Street Address:P.O. Box 450A City: Santa ClaraState: &A Zip: _95052 Additional Name(s) & address(es) attached? □ Yes X No |
| Other | |
| Execution Date:SEE ABOVE | |
| A. Patent Application No.(s) Serial No.: 09/364,777 - Filing Date: July 30, 1999 | B. ratelit no.(3) |
| Additional Numbers attached? ☐ Yes X No 5. Name and address of party to whom correspondence | 6. Total number of applications and patents involved: |
| Concerning document should be mailed: Name: APPLIED MATERIALS, INC. Internal Address: Patent Counsel, M/S 2061 Legal Affairs Dept. Street Address: P.O. Box 450A | 7. Total fee (37 CFR 3.41)\$40.00 □ Enclosed X Authorized to be charged to Deposit Account 50-1074 8. Deposit Account Number: 50-1074 |
| City: <u>Santa Clara</u> State: <u>CA</u> ZIP: <u>95052</u> | |
| DO NOT USE THIS SPACE 8/17/2000 DNGUYEN 00000416 501074 09364777 | |
| 1 FC:581 40.00 CH 9. Statement and signature. To the best of my knowledge and belief, the foregoing informa original document. Robert W. Mulcahy Name of Person Signing Signatur 10. Total number of pages comprising cover sheet, attachments, a OMB No. 0651-0011 (exp. 4/94) | 7/17/co Date |

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of Inventors:

| 1) | Tai-Hon P CHANG 1105 Nimitz Lane Foster City, CA 94404 | 2) | Marian MANKOS 333 Presidio Avenue #3 San Francisco, CA 94115 |
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| 3) | Lawrence P MURAY 62 Buckingham Drive Moraga, CA 94556 | 4) | Ho-Seob KIM Sun Moon University 100 Kanlsan-ri, Tangjeon-myen Asan City, Choong-nam, South Korea |
| 5) | Kim Y LEE 2672 Benchmark Avenue Fremont, CA 94536 | | |

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

ELECTROSTATIC ALIGNMENT OF A CHARGED PARTICLE BEAM

for which application for Letters Patent in the United States was filed on July 30, 1999 under Serial No. 09/364,777, executed on even date herewith; 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 the Application), and the invention disclosed therein (hereinafter referred to as the 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 the 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

PATENT REEL: 010999 FRAME: 0209 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) | July 5th | , 2000 | Grachan |
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| | \mathcal{I} | | Tai-Hon P CHANG |
| 2) | 2/20 | , 2000 | But A. |
| 3) | Time 20 | , 2000 | Marian MANKOS |
| · | | | (Lawrence P MURAY |
| 4) | June 15 | , 2000 | Han |
| 5) | 6/20 | _, 2000 | Ho-Séob KIM |
| - | | | Kim Y LEE |