

Form PTO-1556 (Rev. 09/04)
OMB No. 0851-0027 (exp. 6/30/2005)U.S. Department of COMMERCE
United States Patent and Trademark OfficeRECORDATION FORM COVER SHEET
PATENTS ONLY

To the Director of the U.S. Patents and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies):

JEONG SOO BYUN

July 15, 2002

2. Name and address of receiving party(ies)

Name: APPLIED MATERIALS, INC.Internal Address: Patent CounselStreet Address: P.O. Box 450-ACity: Santa ClaraState: CACountry: USAZip: 95052Additional Name(s) & address(es) attached? ☐ Yes ☒ NoAdditional name of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

Execution Date(s) _____

- ☒ Assignment ☐ Merger
- ☐ Security Agreement ☐ Change of Name
- ☐ Government Interest Assignment
- ☐ Executive Order 9424, Confirmatory License
- ☐ Other

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

A. Patent Application No.(s)

11/768,647; June 26, 2007☐ This document is being filed together with a new application.

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Patterson & Sheridan, L.L.P.Internal Address: Applied Materials, Inc.Street Address: 3040 Post Oak Boulevard, Suite 1500City: HoustonState: TX Zip: 77056Phone Number: 713-623-4844Fax Number: 713-623-4846Email Address: tpatterson@pattersonsheridan.com6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41)

\$ 40.00

- ☐ Authorized to be charged by credit card
- ☒ Authorized to be charged to deposit account
- ☐ Enclosed
- ☐ None required (government interest not affecting title)

8. Payment information

a. Credit Card Last 4 Numbers
Expiration Date _____b. Deposit Account Number
50-1074/004349.C2/CPI/WCVD/PJSAuthorized User Name Robert W. Mulcahy

Signature

June 28, 2007

Date

Robert W. Mulcahy - Reg No. 25, 436

Name of Person Signing

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

3

Documents to be recorded (including cover sheet) should be faxed to (703) 308-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1460, Alexandria, V.A. 22313-1460.

Atty. Dkt. No. AMAT/4349/W&T/WCVD/BG

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Name and Address of Inventor:

1)	Jeong Soo Byun 20975 Valley Green Drive, #257 Cupertino, CA 95014		

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

METHOD AND APPARATUS FOR DEPOSITING TUNGSTEN AFTER SURFACE TREATMENT TO IMPROVE FILM CHARACTERISTICS

for which application for Letters Patent in the United States was filed herewith ,
under Serial No., to be assigned, 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 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) 7/15, 2002 J. S. Byun
Jeong Soo Byun



3040 Post Oak Blvd, Suite 1500
Houston, TX 77056-6582
TEL 713.623.4844
FAX 713.623.4846

FACSIMILE COVER SHEET

DATE: June 28, 2007
FILE NO: APPM/004349.C2/CPI/WCVD/PJS
TO: Mail Stop Assignment Recordation Services
FAX NO: 571-273-0140
COMPANY: USPTO
FROM: John-Paul F. Cherry
PAGE(S) with cover: 5
ORIGINAL TO FOLLOW? ☐ YES ☒ NO

RECORDATION COVER SHEET AND ASSIGNMENT

TITLE: METHODS FOR DEPOSITING TUNGSTEN AFTER SURFACE TREATMENT
U.S. SERIAL NO.: 11/768,647
FILING DATE: June 26, 2007
INVENTOR: JEONG SOO BYUN
EXAMINER: Unknown
GROUP ART UNIT: Unknown
CONFIRMATION NO.: 3404

CONFIDENTIALITY NOTE

The document accompanying this facsimile transmission contains information from the law firm of Patterson & Sheridan, L.L.P. which is confidential or privileged. The information is intended to be for the use of the individual or entity named on this transmission sheet. If you are not the intended recipient, be aware that any disclosure, copying, distribution or use of the contents of this faxed information is prohibited. If you have received this facsimile in error, please notify us by telephone immediately so that we can arrange for the retrieval of the original documents at no cost to you.

PATENT
REEL: 019503 FRAME: 0041

Form PTO-1595 (Rev. 09/04)
OMB No. 0651-0027 (exp. 6/30/2006)

U.S. Department of COMMERCE
United States Patent and Trademark Office

RECORDATION FORM COVER SHEET

PATENTS ONLY

To the Director of the U.S. Patents and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies):

JEONG SOO BYUN

July 15, 2002

2. Name and address of receiving party(ies)

Name: APPLIED MATERIALS, INC.

Internal Address: Patent Counsel

Street Address: P.O. Box 450-A

City: Santa Clara

State: CA

Country: USA

Zip: 95052

Additional Name(s) & address(es) attached? ☐ Yes ☒ No

3. Nature of conveyance:

Execution Date(s) _____

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other

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

A. Patent Application No.(s)

11/768,647; June 26, 2007

☐ This document is being filed together with a new application.

B. Patent No.(s)

COPY

Additional numbers attached? ☐ Yes ☒ No

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

Name: Patterson & Sheridan, L.L.P.

Internal Address: Applied Materials, Inc.

Street Address: 3040 Post Oak Boulevard, Suite 1500

City: Houston

State: TX

Zip: 77056

Phone Number : 713-623-4844

Fax Number: 713-623-4846

Email Address: tpatterson@pattersonsheridan.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00

- ☐ Authorized to be charged by credit card
☒ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____

Expiration Date _____

b. Deposit Account Number

50-1074/004349.C2/CPI/WCVD/PJS

Authorized User Name Robert W. Mulcahy

Signature

June 28, 2007

Date

Robert W. Mulcahy - Reg No. 25, 436

Name of Person Signing

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

3

Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450.