

01-05-2005

cket No. A9203/T58300  
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To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)/Execution Date(s):

Qiwei Liang  
Siqing Lu

Execution Date  
12/9/04  
12/9/04

Execution Date(s) \_\_\_\_\_

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance:

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

2. Name and address of receiving party(ies)

Name: Applied Materials, Inc.

Internal Address: Legal Affairs Department

Street Address: P.O. Box 450A

City: Santa Clara

State: California

Country: USA Zip: 95052

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

4. Application or patent number(s):

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

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Patent Counsel

Internal Address: APPLIED MATERIALS, INC.

Legal Affairs Department

Street Address: P.O. Box 450A, M/S 2061

City: Santa Clara

State: California Zip: 95052

Phone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

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

Authorized User Name Applied Materials, Inc.

9. Signature:

Signature

Robert W. Mulcahy

Name of Person Signing Atty. Reg. No. 25,436

12/17/04  
Date

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

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, VA 22313-1450

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01/04/2005 6TH13 00000167 501074 11016166

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PATENT  
REEL: 016117 FRAME: 0550

**ASSIGNMENT FOR APPLICATION FOR PATENT**

WHEREAS:

Names and Addresses  
of Inventors:

1)	Qiwei Liang 37800 Freesia Court Fremont, CA 94536 United States	2)	Siqing Lu 925 Hibiscus Lane San Jose, CA 95117 United States
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(hereinafter referred to as Assignors), have invented a certain invention entitled:

**SELF-COOLING GAS DELIVERY APPARATUS UNDER HIGH VACUUM FOR HIGH DENSITY  
PLASMA APPLICATIONS**

for which application for Letters Patent in the United States was filed on , under Application No. ,  
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) 12/9/04 ~~2003~~ Qiwei Liang

2) 12/9/04 ~~2003~~ Siqing Lu

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