

03-24-2005



OXT PTO-1595 (Rev. 09/04) OMB No. 0651-0027 (exp. 6/30/2005)	U.S. Department of COMMERCE ted States Patent and Trademark Office
RECOR	2965344
To the Director of the U.S. Patents and Trademark Office: Pleas	
1. Name of conveying party(ies)/Execution Date(s): LING CHEN VINCENT KU DIEN-YEH WU HUA CHUNG ALAN OUYE NORMAN NAKASHIMA Execution Date(s) Execution Date(s) See Above Additional name of conveying party(ies) attached? Yes No	2. Name and address of receiving party(ies) Name: APPLIED MATERIALS, INC. Internal Address: Patent Counsel Street Address: P.O. Box 450-A
3. Nature of conveyance:	
	City: Santa Clara State: CA Country: USA Zip: 95052 Additional Name(s) & address(es) attached? ☐ Yes ☒ No
A. Patent Application No.(s) A. Patent Application No.(s) Additional numbers atta	This document is being filed together with a new application. B. Patent No.(s) ached? Yes No
5. Name and address of party to whom correspondence concerning this document should be mailed:	6. Total number of applications and patents involved: 1
Name: Applied Materials, Inc. Internal Address: Patent Counsel Street Address: P.O. Box 450-A City: Santa Clara	7. Total fee (37 CFR 1.21(h) & 3.41) \$\\\ \triangleq \text{Authorized to be charged by credit card} \$\\\ \triangleq \text{Authorized to be charged to deposit account} \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
State: CA Zip: 95052	8. Payment Information
Phone Number: 713-623-4844 Fax Number: 713-623-4846 Email Address: tpatterson@mpsllp.com	a. Credit Card Last 4 Numbers Expiration Date b. Deposit Account Number 50- 1074/5192.C1/CPI/COPPER/PJS Authorized User Name
9. Signature : Signature Signature 11077753 Robert W. Mulcahy; Reg No. 25,436	March // , 2005 Date Total number of pages, check, attachments

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

Name of Person Signing

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03/23/2005 DB

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PATENT REEL: 016379 FRAME: 0767

WHEREAS:

Names and Addresses

of Inventors:

1)	Ling Chen 784 Dartshire Way Sunnyvale, CA 94087	2)	Vincent Ku 1830 Daltrey Way San Jose, CA 95132
3)	Dien-Yeh Wu 3625 Rowley Drive San Jose, CA 95132	4)	Hua Chung 4645 Piper Drive San Jose, CA 95129
5)	Alan Ouye 716 North Idaho Street San Mateo, CA 94401	6)	Norman Nakashima 841 Lincoln Avenue Sunnyvale, CA 94086

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

GAS DELIVERY APPARATUS AND METHOD FOR ATOMIC LAYER DEPOSITION

for which application for Letters Patent in the United States was filed on 12/21/2001, under Serial No. 10/032,284; 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,

- 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.

1)	2-22-02	
2)		Ling Chen
		Vincent Ku
3)	I	Dien-Yeh Wu
4)		Hua Chung
5)		
		Alan Ouye
6)		:Norman Nakashima

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PATENT REEL: 016379 FRAME: 0770

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1)			
·		Ling Chen	
2)	2-21-02	Vinut Ker	
		Vincent Ku	
3)			
σ,	/	Dien-Yeh Wu	
4)		Hua Chung	
		rida Oriang	
5)			
		Alan Ouye	
6)	I	Norman Nakashima	

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2) Vincent Ku	
3) 2/21/2002, July Dien-Yeh Wu	
4)	
Hua Chung	
5) Alan Ouye	
6) Norman Nakashima	

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PATENT REEL: 016379 FRAME: 0774

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1)	,	Ling Chen
2)		Vincent Ku
3)	·	Dien-Yeh Wu
4)	2/25/02	Hua Chung
5)		Alan Ouye
6)		Norman Nakashima

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		Ling Chen
2)		
_,	1	Vincent Ku
3)	J	
		Dien-Yeh Wu
4)		
4)		Hua Chung
	01 1	
5)	2/21/202.	LETH Mys
		Alan Ouye
6)		Norman Nakashima
		Norman Nakashima

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

1)		
		Ling Chen
2)		
		Vincent Ku
3)		
		Dien-Yeh Wu
41		
4)		Hua Chung
		rida Chang
5)		
		Alan Ouye
6)	2-21-02	- Non M. Nekesti
	•	Norman Nakashima

RECORDED: 03/11/2005