02-01-2002	
Form PTO 1505	HEET U.S. DEPARTMENT OF COMMERCE
Form P10 1393	
To the Honorable Commiss: 1 Name of conveying parties: 101967901	ord the attached original documents or copy thereof
1. Traine of conveying parties.	ame and address of receiving parties:
Term song	Name: Applied Materials, Inc.
Jallepally Ravi C1/602 Shih-Hung Li C1/802	Internal Address: Legal Affairs Department Street Address: P. O. Box 450A
Liang-Yuh Chen C1/60 >	City: Santa Clara State: CA Zip: 95052
Execution Date: herewith	Builta Clara State. CA Zip. 93032
	Additional Names & Addresses attached? Yes No
Additional names of conveying Parties attached? ☐ Yes ☒ No	
3. Nature of conveyance;	Q 3
Assignment Merger	À <u>0</u>
☐ Security Agreement ☐ Change of Name ☐ Other	,
Outer) Sign
Execution Date: See Above	100
	ÿ - =
4. Application number(s) or patent number(s):	''
TOTAL TOTAL COLUMN TO THE COLUMN TOTAL COLUMN TO THE COLUM	
If this document is being filed together with a new application, the	ne execution date of the application is: herewith
For: Process Conditions and Precursors For Atomic Layer Deposition	n (ALD) of AL ₂ O ₃
A. Patent Application No; filed herewith	B. Patent No.(s)
A. Tatent Application No, med herewith	D. 1 ment 110.(5)
Additional Numbers attac	ched? □Yes ☑ No
5. Name and address of party to whom correspondence	6. Total number of applications and patent involved: 1
concerning this document should be mailed:	
Name: ROBERT W. MULCAHY	
Internal Address: Applied Materials, Inc.	7. Total Fee (37 CFR 3.41) \$40.00
Legal Affairs Department	☐ Enclosed
Street Address: P. O. Box 450A	Authorized to be charged to deposit account
City: Santa Clara State: CA Zip: 95052	
	8. Deposit Account Number: 50-1074
D. M. H. C	(Attach duplicate copy of this page if paying by deposit account)
Do Not Use 7	(Attach duplicate copy of this page if paying by deposit account)
9. Statement and signature.	(Attach duplicate copy of this page if paying by deposit account)
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	(Attach duplicate copy of this page if paying by deposit account) This Space
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is document.	(Attach duplicate copy of this page if paying by deposit account) This Space true and any attached copy is a true copy of the original
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is document. Robert W. Mulcahy, Reg. No. 25,436	(Attach duplicate copy of this page if paying by deposit account) This Space true and any attached copy is a true copy of the original 1-18-02
9. Statement and signature. To the best of my knowledge and belief, the foregoing information is document.	(Attach duplicate copy of this page if paying by deposit account) This Space true and any attached copy is a true copy of the original
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9. Statement and signature. To the best of my knowledge and belief, the foregoing information is document. Robert W. Mulcahy, Reg. No. 25,436 Name of Person Signing Total number of pages comprising cover sheet, atta Mail documents to be recorded with the	(Attach duplicate copy of this page if paying by deposit account) This Space True and any attached copy is a true copy of the original Date Chments, and document: e required cover sheet information to: Trademarks, Box Assignment
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PATENT REEL: 012519 FRAME: 0765

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of the Inventors:

1)	Kevin Song	2)	Jallepally Ravi
	2981 Nieman Blvd. #326		1655 Betty Ct.
	San Jose, California 95148		Santa Clara, California 95051
3)	Shih-Hung Li	4)	Liang-Yuh Chen
	998 #A La Mesa Terrace		1400 Melbourne Street
	Sunnyvale, California 84086		Foster City, California 94404

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

PROCESS CONDITIONS AND PRECURSORS FOR ATOMIC LAYER DEPOSITION (ALD) OF AL₂O₃

for which application for L	etters Patent in the United States was filed on	,
under Serial No.	, executed on even date herewith;	

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 sells, assigns, transfers and conveys 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 covenants and agrees 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

PATENT REEL: 012519 FRAME: 0766 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 warrants and represents that he has not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. Said Assignors hereby authorizes and requests the attorneys of record to insert, where indicated above, the application number and filing date of said application when known.

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

In 16, 2002	462 42
	Kevin Song
In 16, 2002	J. Kan
	Jallepally Ravi
, 2002	Shih Hung Li
Jan. 16 2002	Shih-Hung Li

Liang-Yuh Chen

ASSIGNMENT FOR APPLICATION FOR PATENT

WHEREAS:

Names and Addresses of the Inventors:

1)	Kevin Song	2)	Jallepally Ravi
	2981 Nieman Blvd. #326		1655 Betty Ct.
	San Jose, California 95148	L _	Santa Clara, California 95051
3)	Shih-Hung Li	4)	Liang-Yuh Chen
	998 #A La Mesa Terrace		1400 Melbourne Street
	Sunnyvale, California 84086		Foster City, California 94404

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

PROCESS CONDITIONS AND PRECURSORS FOR ATOMIC LAYER DEPOSITION (ALD) OF AL₂O₃

for which	application	for Letters	Patent in the	United	States was	filed on	
under Sei	rial No.		, executed	on eve	n date her	ewith;	

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.

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PATENT REEL: 012519 FRAME: 0768 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 warrants and represents that he has not entered and will not enter into any assignment, contract, or understanding in conflict herewith.
- 5. Said Assignors hereby authorizes and requests the attorneys of record to insert, where indicated above, the application number and filing date of said application when known.

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

, 2002	Kevin Song
, 2002	Jallepally Ravi
1/18 2002	Shih-Hung Li
, 2002	Liang-Yuh Chen

RECORDED: 01/18/2002