Docket No.: 66307-413-7 via fax

FORM PTO-1595 (Modified) (Rev. 03-01)

RECORDATION FORM COVER SHEET

U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

M8 No. 0651-0027 (exp. 5/31/2002) PATEN	TS ONLY
Tab settings → → → ▼	▼ ▼
To the Director of the United States Patent and Trademark Off	ice: Please record the attached original documents or copy thereof.
1. Name of conveying party(ies): Richard D. GOLDBERG - executed 9/21/2006 Andrew S. DEVANEY - executed 11/10/2006 Christopher BURGESS - executed 10/18/2006 David G. ARMOUR - executed 1/18/2007 David KIRKWOOD - executed 11/30/2006	Name and address of receiving party(ies): Name: APPLIED MATERIALS, INC. Internal Address:
Additional names(s) of conveying party(ies)	
3. Nature of conveyance:	
☑ Assignment☐ Merger☐ Security Agreement☐ Change of Name	Street Address: 3050 BOWERS AVENUE
Other	City: SANTA CLARA State: CA ZIP: 95054
Execution Date: see Block 1	Additional name(s) & address(es) attached? Yes No
If this document is being filed together with a new application A. Patent Application No.(s) Filing Date 11/886,526	n, the execution date of the application is: B. Patent No.(s)
Additional numbers atte	ached? 🔲 Yes 🖾 No
Name and address of party to whom correspondence concerning document should be mailed:	Total number of applications and patents involved: 1
Name: RICHARD H. TUSHIN, Reg. 27,297	- 7. Total fee (37 CFR 3.41):\$ 40.00
internal Address: DYKEMA GOSSETT PLLC SUITE 300 WEST	□ Enclosed - Any excess or insufficiency should be credited or debited to deposit account □ Authorized to be charged to deposit account
Street Address: 1300 I STREET, NW	8. Deposit account number:
City: WASHINGTON State: DC ZIP: 20005	(Attach duplicate copy of this page if paying by deposit account)
	T USE THIS SPACE
9. Statement and signature. To the best of my knowledge and belief, the foregoing inform of the original document. RICHARD H. TUSHIN	mation is true puid correct and any attached copy is a true copy OCT, 12, 2007
Name of Person Signing Total number of pages including cover	Signature Date sheet, attachments, and document:

ASSIGNMENT

WHEREAS, I, Richard David GOLDBERG

of Flat 4, 2 Selborne Road, Hove, East Sussex BN3 3AG, United Kingdom

have invented certain new and useful improvements as described in an application entitled CATHODE AND COUNTER-CATHODE ARRANGEMENT IN AN ION SOURCE

which is subject to a United Kingdom Patent Application No. 2565866 Stried 2244 March 2505; and

WHEREAS, APPLIED MATERIALS, INC.

a corporation organized and existing under the laws of Delaware, United States of America and having offices at 3050 Bowers Avenue, Santa Clara, California 95054, United States of America

("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I transfer to Assignee, its successors and assigns, my entire right, title and interest in and to the invention, the above-identified application, corresponding domestic and foreign applications, all Letters Patents or similar legal protection issuing thereon, and all rights and benefits under any applicable treaty or convention; and I authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the Letters Patent of similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and serial number of the application when ascertained.

-2-

I authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

2/51 Septomber 2006. Date:

Witness: 🌌

Witness:

Sik Collant

Name:

Address: 27 Foirfield Rol Ashington W. Sunex RH20 3DB

140 RS HA 14 W 2022E M

RH12 407

Address: 92 FARHALLS CRES

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225973; NPT; ACO

ASSIGNMENT

WHEREAS, I, Andrew S. DEVANEY

of 39 Six Acres, Slinfold, West Sussex, RH13 0TH, United Kingdom

have invented certain new and useful improvements as described in an application entitled CATHODE AND COUNTER-CATHODE ARRANGEMENT IN AN ION SOURCE

which is subject to a white Kingdom Patcht Application 11/886, 526 which is subject to a white Kingdom Patcht Application No. Usesses The 22 members 2006; and

WHEREAS, APPLIED MATERIALS, INC.

a corporation organized and existing under the laws of **Delaware**, **United States of America** and having offices at 3050 Bowers Avenue, Santa Clara, California 95054, United States of America

(AAssignee®) is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I transfer to Assignee, its successors and assigns, my entire right, title and interest in and to the invention, the above-identified application, corresponding domestic and foreign applications, all Letters Patents or similar legal protection issuing thereon, and all rights and benefits under any applicable treaty or convention; and I authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the Letters Patent of similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and serial number of the application when ascertained.

-2-

I authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, reaintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

invention in any and all countries.	
Andrew S. Devaney	Date: 10 November 2006
Witness: MEGIBSON	Witness: 711. BARTY.
Signature MES La	Signature A
Name:	Name:
Address: 92 FARHALLS CRES FLORSHAM W SUSSIEM RH12 484	Address: <u>Il BARTON CRESCE</u> NT EPST GRINSTERD WEST SUSSEX: RHI9 GNR.

225984; NPT; ACO

ASSIGNMENT

WHEREAS, I, Christopher J.S. BURGESS

of 84A Old Shoreham Road, Hove, East Sussex, BN3 6HL, United Kingdom.

have invented certain new and useful improvements as described in an application entitled CATHODE AND COUNTER-CATHODE ARRANGEMENT IN AN ION SOURCE

WHEREAS, APPLIED MATERIALS, INC.

a corporation organized and existing under the laws of Delaware, United States of America and having offices at 3050 Bowers Avenue, Santa Clara, California 95054, United States of America

(AAssignee@) is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged. I transfer to Assignee, its successors and assigns, my entire right, title and interest in and to the invention, the above-identified application, corresponding domestic and foreign applications, all Letters Patents or similar legal protection issuing thereon, and all rights and benefits under any applicable treaty or convention; and I authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the Letters Patent of similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and serial number of the application when ascertained.

-2-

Fauthorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

Christopher J.S. Burgess	Date: 18 ⁷⁴ October 2006
Witness: Attaceel	Witness:
Signature Scott CALDWELL	Signature
Name:	Name: LESLIE LAWE
Address: 1 ST JOHNS ROAD REDHILL SURREY RHIGHE UK	Address: 8 LONGFELLOW CLOSE HORSHAM
	WEST SUSSEX RHIZ SPT UK

225983; NPT; ACO

ASSIGNMENT

WHEREAS, I, David G. ARMOUR

of 348 Chapeltown Road, Turton, Bolton, BL7 0EJ, United Kingdom

have invented certain new and useful improvements as described in an application entitled CATHODE AND COUNTER-CATHODE ARRANGEMENT IN AN ION SOURCE

U.S. Patent Application 11/886,526
which is subject to a Waited Mingdom Point Application Nov 9505856.5 (iled 22 mb March
2005; and

WHEREAS, APPLIED MATERIALS, INC.

a corporation organized and existing under the laws of Delaware, United States of America and having offices at 3050 Bowers Avenue, Santa Clara, California 95054, United States of America

("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I transfer to Assignee, its successors and assigns, my entire right, title and interest in and to the invention, the above-identified application, corresponding domestic and foreign applications, all Letters Patents or similar legal protection issuing thereon, and all rights and benefits under any applicable treaty or convention; and I authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the Letters Patent of similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and serial number of the application when ascertained.

- 2 -

I authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

David G. Armour	Date:	18/01/07
Witness: PAT CORNFORTH	Witness:	R. W.KNIGHT
Signature P. Comforth	Signature	R. WKneht.
Name: PAT CORNFORTH	Name:	R. W. KHIGHT
Address: 343 BURY RD	Address:	40 ATTHERSTAN CLOSE
EDGWORTH		Blomboliesun
BOLTON BLIOB	S	WIRRAL

225985: NPT: ACO

ASSIGNMENT

WHEREAS, I, David KIRKWOOD

of 73 St. Johns Crescent, Broadbridge Heath, West Sussex, RH12 3NG, United Kingdom

have invented certain new and useful improvements as described in an application entitled CATHODE AND COUNTER-CATHODE ARRANGEMENT IN AN ION SOURCE

U.S. Patent Application 11/886,526
which is subject to a United Kingdom Patent Application Nov 0505856.5 filed 22nd Margh.
2005; and

WHEREAS, APPLIED MATERIALS, INC.

a corporation organized and existing under the laws of Delaware, United States of America and having offices at 3050 Bowers Avenue, Santa Clara, California 95054, United States of America

(AAssignee@) is desirous of acquiring the entire right, title and interest in and to the invention, the application, and any and all Letters Patent or similar legal protection, foreign or domestic, to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, I transfer to Assignee, its successors and assigns, my entire right, title and interest in and to the invention, the above-identified application, corresponding domestic and foreign applications, all Letters Patents or similar legal protection issuing thereon, and all rights and benefits under any applicable treaty or convention; and I authorize the Commissioner of Patents and Trademarks of the United States or foreign equivalent thereof to issue the Letters Patent of similar legal protection to the Assignee.

I authorize the Assignee, its successors and assigns, to insert in this instrument the filing date and serial number of the application when ascertained.

- 2 -

I authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries.

I represent to the Assignee, its successors and assigns, that I have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. I, my executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries.

	let -	
Day	vid Kirkwood	

Date:

30/11/06

Signature 2

Name:

Address: // BARTON

Signature

Name:

Address:

225986; NPT; ACO

RECORDED: 10/12/2007