

## PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>RICHARD DAVID GOLDBERG</td><td>06/30/2008</td></tr><tr><td>ANDREW STEPHEN DEVANEY</td><td>07/23/2008</td></tr><tr><td>CHRISTOPHER BURGESS</td><td>07/09/2008</td></tr><tr><td>DAVID GEORGE ARMOUR</td><td>08/05/2008</td></tr><tr><td>DAVID KIRKWOOD</td><td>06/30/2008</td></tr></tbody></table>	Name	Execution Date	RICHARD DAVID GOLDBERG	06/30/2008	ANDREW STEPHEN DEVANEY	07/23/2008	CHRISTOPHER BURGESS	07/09/2008	DAVID GEORGE ARMOUR	08/05/2008	DAVID KIRKWOOD	06/30/2008	
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DAVID GEORGE ARMOUR	08/05/2008												
DAVID KIRKWOOD	06/30/2008												
RECEIVING PARTY DATA													
Name:	Applied Materials, Inc.												
Street Address:	Legal Affairs Dept.												
Internal Address:	P.O. Box 450-A												
City:	Santa Clara												
State/Country:	CALIFORNIA												
Postal Code:	95052												
PROPERTY NUMBERS Total: 1													
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>11886526</td></tr></tbody></table>	Property Type	Number	Application Number:	11886526									
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Application Number:	11886526												
CORRESPONDENCE DATA													
Fax Number:	(408)986-3090												
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>													
Phone:	408-563-2726												
Email:	jo_ann_cottrell@amat.com												
Correspondent Name:	Applied Materials, Inc.												
Address Line 1:	Legal Affairs Dept												
Address Line 2:	P.O. Box 450-A												
Address Line 4:	Santa Clara, CALIFORNIA 95052												
ATTORNEY DOCKET NUMBER:	9714/IMPLANT/CONDUCT												

CH \$40.00 11886526

500670381

PATENT  
REEL: 021652 FRAME: 0236

NAME OF SUBMITTER:

JO ANN COTTRELL

Total Attachments: 10

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**ASSIGNMENT**

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WHEREAS, I, **Richard David GOLDBERG**  
of **445 Beacon St., Apt. 3, Boston, MA 02115, United States of America**

have invented certain new and useful improvements as described in an application  
entitled

**"CATHODE AND COUNTER-CATHODE ARRANGEMENT IN AN ION SOURCE"**

for Letters Patent of the United States, the application having been executed on  
even date herewith and/or being identifiable in the United States Patent and  
Trademark Office by Serial No. **11/886,526** filed **17 September 2007**; 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**

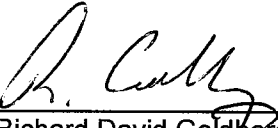
(AAssignee@) is desirous of acquiring the entire right, title and interest in and to the  
invention, the application, and any and all Letters Patent or similar legal protection,  
foreign or domestic, to be obtained therefor;

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.


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.

  
 (Richard David Goldberg)

Date: 30<sup>th</sup> June 2008.

Witness:   
 Signature: Albert P. Cefalo  
 Name: Albert P. Cefalo  
 Address: 34 Sullivan Rd  
N. Billerica, Mass

Witness:   
 Signature: Dale Jacobson  
 Name: DALE JACOBSON  
 Address: 34 SULLIVAN RD  
Billerica, MA 01862

**ASSIGNMENT**

---

WHEREAS, I, **Andrew Stephen 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"**

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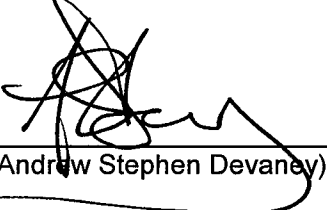
(Assignee) is desirous of acquiring the entire right, title and interest in and to the  
invention, the application, and any and all Letters Patent or similar legal protection,  
foreign or domestic, to be obtained therefor;

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  
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Patent of similar legal protection to the Assignee.

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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.

  
(Andrew Stephen Devaney)

Date: 23 July 2008

Witness:  
Signature E. Gearing

Name: ELIZABETH GEARING

Address: 40 SIX ACRES  
SUNFOLD  
W. SUSSEX

Witness:  
Signature K. J. Gray

Name: KAREN GRAY

Address: 42, SIX ACRES  
SUNFOLD  
W. SUSSEX

## ASSIGNMENT

---

WHEREAS, I, **Christopher 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"**

for Letters Patent of the United States, the application having been executed on even date herewith and/or being identifiable in the United States Patent and Trademark Office by Serial No. **11/886,526** filed **17 September 2007**; 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.

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.

  
(Christopher Burgess)

Date: 9<sup>th</sup> July 2008

Witness:  
Signature E. Hunter

Name: EARL HUNTER

Address: 2000 #1 WESTFALIAN TEL.  
AUSTIN  
TX 78732

Witness:  
Signature 

Name: DEBORAH LORTON

Address: 3308 ROGERS ROAD #6110  
AUSTIN TX  
78758



**ASSIGNMENT**

---

**WHEREAS, I, David George ARMOUR**  
**of 384 Chapeltown Road, Turton, Bolton, Lancashire, BL7 0EJ, United**  
**Kingdom**

have invented certain new and useful improvements as described in an application  
entitled

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for Letters Patent of the United States, the application having been executed on  
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a corporation organized and existing under the laws of **Delaware, United States of**  
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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  
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Dy Armour

(David George Armour)

Date: 05 August 2008

Witness: A Readett  
Signature

Name: ALAN READETT

Address: 350, CHAPELTOWN RD  
TURTON  
BOLTON BLT OES  
UK

Witness: K Readett  
Signature

Name: KATHLEEN READETT

Address: 350 Chapelton Rd  
TURTON, BOLTON  
LANCS BLT OES  
UK.

1

Attorney Docket No: 009714 USA/IMPLANT/CONDUCTIVE/AG

**ASSIGNMENT**

WHEREAS, I, **David KIRKWOOD**  
of <sup>45 HANOVER COURT, CAMBRIDGE, CB2 1SH, UNITED KINGDOM</sup>  
~~8 Canberra Place, Horsham, West Sussex, RH12 4WQ, United Kingdom~~

have invented certain new and useful improvements as described in an application  
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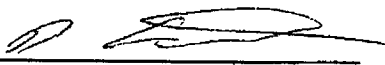
2

Attorney Docket No: 009714 USA/IMPLANT/CONDUCTIVE/AG

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(David Kirkwood)

Date: 30<sup>th</sup> JUNE 2008.

Witness:   
Signature

Name: FRANCIS COOL

Address: PHILIPS AVENUE  
LOUTH ROAD  
GLENSFORD  
UK.

Witness:   
Signature

Name: SUSAN GREEN

Address: PHILIPS AVENUE  
LOUTH RD, GLENSFORD  
SUFFOLK CO10 7QS.

324449: NPT: ACO