

Form PTO-1595 (Rev. 06/04)  
OMB No. 0651-0027 (exp. 6/30/2005)

U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office

## RECORDATION FORM COVER SHEET PATENTS ONLY

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):**

James W. Mayer                      Terry L. Alford  
Hyunchul Kim                      Daniel Adams  
Douglas C. Thompson

Execution Date(s) 12-15-04; 12-16-04; 12-17-04; 2-1-05

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

☒ Record to correct Assignee's address previously recorded at  
reel/frame 015726/0359

**2. Name and address of receiving party(ies)**

Name: ARIZONA BOARD OF REGENTS,

Internal Address: acting for and on behalf of

Arizona State University,

Street Address: c/o Arizona Technology

Enterprises, LLC - Brickyard Suite 601, 691AA

City: 699 S. Mill Avenue

State: Tempe, Arizona

Country: United States Zip: 85281

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)

PCT/US04/38702

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

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

Name: Robert D. Atkins

Internal Address: QUARLES & BRADY STREICH  
LANG LLP

Street Address: One Renaissance Square  
Two North Central Avenue

City: Phoenix

State: Arizona Zip: 85004

Phone Number: (602) 229-5311

Fax Number: (602) 229-5690

Email Address: rda@quarles.com

**6. Total number of applications and patents involved:**

1

**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40**

- ☐ Authorized to be charged by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

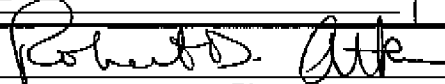
**8. Payment Information**

a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_

b. Deposit Account Number 17-0055

Authorized User Name Robert D. Atkins

**9. Signature:**



Signature

June 20, 2005

Date

Robert D. Atkins

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 11

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

Docket Number: 112624.00062

**700188977**

**PATENT**  
Doc. No.: 1905608  
**REEL: 016368 FRAME: 0625**

02/16/2005  
700154757Form PTO-1593 (Rev. 05/04)  
OMB No. 0951-0027 (exp. 6/30/2005)U.S. DEPARTMENT OF COMMERCE  
United States Patent and Trademark OfficeRECORDATION FORM COVER SHEET  
PATENTS ONLY

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Douglas C. Thompson

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Internal Address: acting for and on behalf of

Arizona State University

Street Address: c/o Arizona Technology

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City: Tempe

State: Arizona

Country: United States Zip: 85281

Execution Date(s) 12-16-04; 12-16-04; 12-17-04; 2-1-05

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

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A. Patent Application No.(s)

B. Patent No.(s)

PCT/US04/38702

Additional numbers attached? ☐ Yes ☒ No

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

Name: Robert D. Atkins

Internal Address: QUARLES & BRADY STREICH  
LANG LLPStreet Address: One Renaissance Square  
Two North Central Avenue

City: Phoenix

State: Arizona

Zip: 85004

Phone Number: (602) 229-5311

Fax Number: (602) 229-5690

Email Address: rda@quarles.com

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) &amp; 3.41) \$ 40

☐ 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

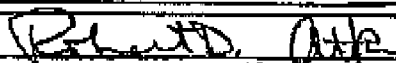
a. Credit Card Last 4 Numbers

Expiration Date

b. Deposit Account Number 17-0055

Authorized User Name Robert D. Atkins

9. Signature:



Signature

02-08-05

Date

Robert D. Atkins

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents: 6

Documents to be recorded (including cover sheet) should be faxed to (703) 505-6995, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

Docket Number: 112624.00082

Doc. No.: 1905608

## ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, JAMES W. MAYER of Phoenix, AZ, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of Arizona State University (ABR/ASU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s) entitled FLEXIBLE ELECTRONICS USING ION IMPLANTATION TO ADHERE POLYMER SUBSTRATE TO SINGLE CRYSTAL SILICON SUBSTRATE, which is described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), Application No. PCT/US04/38702, filed November 17, 2004, together with the entire right, title and interest in and to the PCT application, and in and to any application for patent filed in any country claiming priority to, claiming the invention described in, or otherwise based on the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any patent which may grant from such application(s).

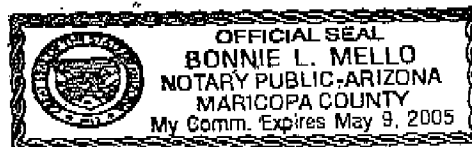
I hereby authorize and request all government authorities in any country to issue patent(s) upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/ASU, for the sole use and behalf of ABR/ASU, its successors, assigns, and legal representatives, to the full end of the term for which the patent(s) may be granted, the same as they would have been held and enjoyed by me had this assignment not been made.

I agree that, when requested, I will, without charge to ABR/ASU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/ASU, its successors, assigns, and legal representatives or nominees.

I covenant with ABR/ASU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

  
Signature for JAMES W. MAYER

STATE OF ARIZONA  
COUNTY OF MARICOPA



I, Bonnie L. Mello, a Notary Public in and for the County and State aforesaid, do hereby certify that JAMES W. MAYER, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 15 day of December, 2004.

  
Signature of Notary


ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, HYUNCHUL KIM of Chandler, AZ, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of Arizona State University (ABR/ASU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s) entitled FLEXIBLE ELECTRONICS USING ION IMPLANTATION TO ADHERE POLYMER SUBSTRATE TO SINGLE CRYSTAL SILICON SUBSTRATE, which is described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), Application No. PCT/US04/38702, filed November 17, 2004, together with the entire right, title and interest in and to the PCT application, and in and to any application for patent filed in any country claiming priority to, claiming the invention described in, or otherwise based on the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any patent which may grant from such application(s).

I hereby authorize and request all government authorities in any country to issue patent(s) upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/ASU, for the sole use and behalf of ABR/ASU, its successors, assigns, and legal representatives, to the full end of the term for which the patent(s) may be granted, the same as they would have been held and enjoyed by me had this assignment not been made.

I agree that, when requested, I will, without charge to ABR/ASU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/ASU, its successors, assigns, and legal representatives or nominees.

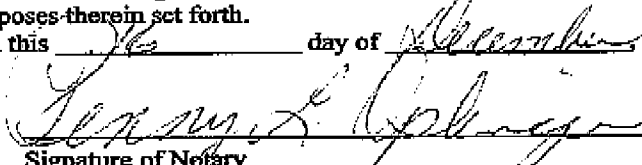
I covenant with ABR/ASU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

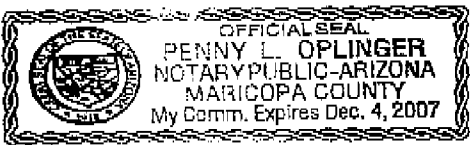
  
\_\_\_\_\_  
Signature for HYUNCHUL KIM

STATE OF ARIZONA )  
COUNTY OF MARICOPA )

I, Penny L. Oplinger, a Notary Public in and for the County and State aforesaid, do hereby certify that HYUNCHUL KIM, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 16 day of December, 2004.

  
\_\_\_\_\_  
Signature of Notary




## ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, DOUGLAS C. THOMPSON, JR. of Chandler, AZ, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of Arizona State University (ABR/ASU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s) entitled FLEXIBLE ELECTRONICS USING ION IMPLANTATION TO ADHERE POLYMER SUBSTRATE TO SINGLE CRYSTAL SILICON SUBSTRATE, which is described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), Application No. PCT/US04/38702, filed November 17, 2004, together with the entire right, title and interest in and to the PCT application, and in and to any application for patent filed in any country claiming priority to, claiming the invention described in, or otherwise based on the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any patent which may grant from such application(s).

I hereby authorize and request all government authorities in any country to issue patent(s) upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/ASU, for the sole use and behalf of ABR/ASU, its successors, assigns, and legal representatives, to the full end of the term for which the patent(s) may be granted, the same as they would have been held and enjoyed by me had this assignment not been made.

I agree that, when requested, I will, without charge to ABR/ASU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/ASU, its successors, assigns, and legal representatives or nominees.

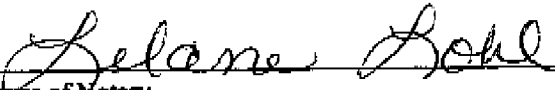
I covenant with ABR/ASU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

  
Signature for DOUGLAS C. THOMPSON, JR.

STATE OF ARIZONA )  
COUNTY OF MARICOPA )

I, Lelane Lohle, a Notary Public in and for the County and State aforesaid, do hereby certify that DOUGLAS C. THOMPSON, JR., whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 16th day of December, 2004.

  
Signature of Notary



ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, TERRY L. ALFORD of Phoenix, AZ, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of Arizona State University (ABR/ASU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s) entitled FLEXIBLE ELECTRONICS USING ION IMPLANTATION TO ADHERE POLYMER SUBSTRATE TO SINGLE CRYSTAL SILICON SUBSTRATE, which is described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), Application No. PCT/US04/38702, filed November 17, 2004, together with the entire right, title and interest in and to the PCT application, and in and to any application for patent filed in any country claiming priority to, claiming the invention described in, or otherwise based on the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any patent which may grant from such application(s).

I hereby authorize and request all government authorities in any country to issue patent(s) upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/ASU, for the sole use and behalf of ABR/ASU, its successors, assigns, and legal representatives, to the full end of the term for which the patent(s) may be granted, the same as they would have been held and enjoyed by me had this assignment not been made.

I agree that, when requested, I will, without charge to ABR/ASU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/ASU, its successors, assigns, and legal representatives or nominees.

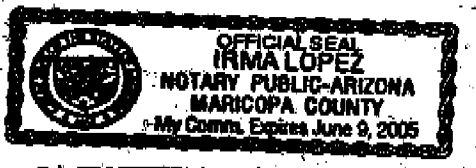
I covenant with ABR/ASU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

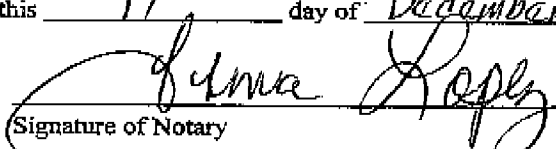
  
\_\_\_\_\_  
Signature for TERRY L. ALFORD

STATE OF ARIZONA  
COUNTY OF MARICOPA

I, IRMA LOPEZ, a Notary Public in and for the County and State aforesaid, do hereby certify that TERRY L. ALFORD, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 17 day of December, 2004.



  
\_\_\_\_\_  
(Signature of Notary)

ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, DANIEL ADAMS of Tempe, AZ, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of Arizona State University (ABR/ASU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s) entitled FLEXIBLE ELECTRONICS USING ION IMPLANTATION TO ADHERE POLYMER SUBSTRATE TO SINGLE CRYSTAL SILICON SUBSTRATE, which is described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), Application No. PCT/US04/38702, filed November 17, 2004, together with the entire right, title and interest in and to the PCT application, and in and to any application for patent filed in any country claiming priority to, claiming the invention described in, or otherwise based on the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any patent which may grant from such application(s).

I hereby authorize and request all government authorities in any country to issue patent(s) upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/ASU, for the sole use and behalf of ABR/ASU, its successors, assigns, and legal representatives, to the full end of the term for which the patent(s) may be granted, the same as they would have been held and enjoyed by me had this assignment not been made.

I agree that, when requested, I will, without charge to ABR/ASU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/ASU, its successors, assigns, and legal representatives or nominees.

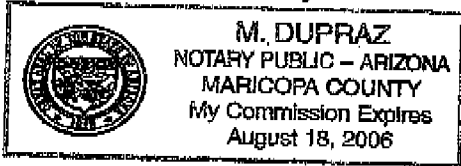
I covenant with ABR/ASU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

Adams  
Signature for DANIEL ADAMS

STATE OF ARIZONA )  
COUNTY OF MARICOPA )

I, me lisse Dupraz, a Notary Public in and for the County and State aforesaid, do hereby certify that DANIEL ADAMS, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 1st day of February, 2005.



[Signature]  
Signature of Notary

State of Arizona County of Maricopa  
Subscribed and sworn to before me on 2/1/05  
[Signature]  
(Date)  
(Notary Signature)  
M. Dupraz