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(les) 2. Name and address of receiving party(les) UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN F4820-981-10030 2. Name and address of receiving party(les) Additional name(s) of conveying party(les) attacher? [ves [] No Street Address: <u>875 N. Rendolph St.</u> Street Address: <u>875 N. Rendolph St.</u> Street Address: <u>875 N. Rendolph St.</u> Security Agreement Joint Research Agreement Government Interest Assignment Change of Name State: VA Country: USA Zip:22203 Additional number(s): This document is being filed together with a new application B. Patent No.(s) 107782;164 6. Total number of applications and patents involved : 1 Name: <u>Under State Address: <u>875 N. Randolph St.</u> Street Address: <u>875 N. Randolph St.</u> Site 25, Rm 3112 City: <u>Address: AF DOSR/JA</u> City: <u>Address: 375 N. Randolph St.</u> Total fee (37 CFR 1.21(h) & 3.41) \$_0 Internal Address: <u>875 N. Randolph St.</u> Total fee (37 CFR 1.21(h) & 3.41) \$_0 Site 24, Address: <u>875 N. Randolph St.</u> City: <u>Address: AF DOSR/JA</u> Site 24, Address: <u>875 N. Randolph St.</u> Deposit Account Numbers_ Expiration Date </u>	Form PTO-1595 (Rev. 07/05) OMB No. 0651-0027 (exp. 6/30/2008)	U.S. DEPARTMENT OF COMMERCE United States Patent and Trademark Office				
To the Director of the U.S. Patent and Trademark Office: Piesse record the attached documents or the new address(e) below. 1. Name of conveying party(ies) 1. Name of conveying party(ies) 1. Name of conveying party(ies) 2. Name and address of receiving party(ies) 1. Name of conveying party(ies) 2. Name and address of receiving party(ies) 3. Nature of conveying party(ies) ettached? Yes [Vio] Security Agreement Charge of Name Joint Research Agreement Charge of Name A. Application No.(s) B. Patent No.(s) 107782.164 Additional numbers attached? Yes [Vio] Additional numbers attached? Yes [Vio] State: VA Courtry: USA Internal Address: AFOSRUA B. Patent No.(s) Internal Address: AFOSRUA B. Total number of applications and patents involved: 1						
1. Name of conveying party(ies) 2. Name and address of receiving party(ies) UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN Name: United States Air Force Additional name(s) of conveying party(ies) attached? Yes [V] No 3. Nature of conveying party(ies) attached? Yes [V] No 3. Nature of conveying party(ies) attached? Yes [V] No 3. Nature of conveying party(ies) attached? Yes [V] No 3. Nature of conveying party(ies) attached? Yes [V] No 3. Nature of conveying party(ies) attached? Yes [V] No 3. Stignment Change of Name Joint Research Agreement Change of Name Joint Research Agreement State: VA Country: USA Zip: 2203 Additional number(s): This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) 10/752.164 State: Yes [V] No 5. Name and address to whom correspondence 6. Total number of applications and patents concerning document should be mailed: None required (government interest not affecting tild Name:Unled States AFOSRUA Internal Address: AFOSRUA Internal Address: AFOSRUA State: YA Street Address: 375 N. Randolph St <t< th=""><th colspan="5">PATENTS ONLY</th></t<>	PATENTS ONLY					
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN VINUERSITY OF ILLINOIS URBANA-CHAMPAIGN Additional name(s) of conveying party(les) attached? Yes [/] No 3. Nature of conveying party(les) attached? Yes [/] No Streat Address: 875 N. Randolph St Suite 325, Rm 3112 Suite 325, Rm 3112 Government Interest Assignment City: Arlington Government Interest Assignment City: Arlington Government Interest Assignment Country: USA Zip:22203 Additional name(s) & address(es) attached? Yes [/] No A. Application or patent number(s): This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) B. Patent No.(s) 107782.164 Country: USA S. Total number of applications and patents involved: 1 Name: United States Air Force F. Total fee (37 CFR 1.21(h) & 3.41) \$_0 Internal Address: <u>875 N. Randolph St</u> Street Address: <u>875 N. Randolph St</u> Give: <u>2203</u> Phone Number: (703) 686-7860 S. Payment Information a. Credit Card Authorized to be charged by credit card Authorized User Name Signature Yes Vick I. LUND, Maj. USAF, Stafl. Judge Advocate Total number of pages including over <	To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.					
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN F49520-98-4-030 Additional name(s) of conveying party(ies) attached? [_Yes [Z] No 3. Nature of conveying party(ies) attached? [_Yes [Z] No 3. Nature of conveying party(ies) attached? [_Yes [Z] No 3. Nature of conveying party(ies) attached? [_Yes [Z] No 3. Nature of conveying party(ies) attached? [_Yes [Z] No 3. Nature of conveying party(ies) attached? [_Yes [Z] No 3. Street Address: <u>aFOSRUA</u> City: <u>Arlington 3. Conveying party(ies) attached?</u> [_Yes [Z] No 3. Nature of conveying party(ies) attached? [_Yes [_] No 3. Street Address: <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 4. Application or patent number(s): A. Application No.(s) 10/782.164 Additional numbers attached? [_Yes [_] No 5. Name and address to whom correspondence concerning document should be malled: Name: <u>United States AF Force</u> Internal Address: <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers attached? [_Yes [_] No 5. Name and address is <u>AFOSRUA</u> Additional numbers of applications and patents involved: 1 Name: <u>Internal Address is <u>AFOSRUA</u> Additional numbers of applications and patents involved: 1 None required (government interest not affecting title S. Payment information a. Credit Card Last 4 Numbers Expiration Date D. Deposit Account Number Authorized User Name Signature ViCKI LUND, Mai, USAF, Staff Judge Advocate Total number of pages inducing cover abached to documents: [_3] </u>	1. Name of conveying party(ies)	2. Name and address of receiving party(ies)				
F4920-98-1-0030 Internal Address: AFOSRUA Additional name(s) of conveying party(ies) attached? Yes X No Street Address: aFOSRUA Additional name(s) of conveying party(ies) attached? No Street Address: aFOSRUA Street Address: aFOSRUA Additional name(s) of conveying party(ies) attached? No Sacurity Agreement Change of Name Joint Research Agreement Change of Name Government Interest Assignment City: Arlington Country: USA Zip:22203 Other Additional name(s) & address(es) attached? Other Additional numbers attached? Other Additional numbers attached? Application No.(s) B. Patent No.(s) B. Patent No.(s) B. Patent No.(s) B. Patent No.(s) B. Patent No.(s) B. Patent No.(s) B. Total number of applications and patents involve: 1 Name: Unded States Air Force F. Total reguired (government interest not affecting title Internal Address: AFOSRUA Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged by credit card Suite 325, Fm 3112 None required (government interest not affecting title	UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN	Name: United States Air Force				
3. Nature of conveyance/Execution Date(s): Street Address: <u>875 N. Randolph St</u> Execution Date(s): Government Assignment Merger Security Agreement Change of Name Government Interest Assignment City: <u>Arlington</u> Executive Order 9424, Confirmatory License Country: USA Other Additional name(s) & address(es) attached? A. Application or patent number(s): This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) 10/782,164 6. Total number of applications and patents Internal Address: <u>875 N. Randolph St</u> Internal Address: <u>875 N. Randolph St</u> Suite 325, Rm 3112 7. Total fee (37 CFR 1.21(h) & 3.41) \$_0 Internal Address: <u>875 N. Randolph St</u> Interviewed to be charged to deposit account Enclosed View and the st and address is afforment interest not affecting title Suite 325, Rm 3112 City: <u>Arlington</u> Street Address: <u>875 N. Randolph St</u> Signature Suite 325, Rm 3112 Zip: 22203 Phone Number: (703) 698-9500 Fax Number: (703) 698-9500 Fax Number: (703) 698-9500 Expiration Date Fax Number: (703) 698-9500 Signatu		Internal Address: AFOSR/JA				
3. Nature of conveyance/Execution Date(s): Street Address: 675 N. Randolph St Execution Date(s): Street Address: 675 N. Randolph St Assignment Merger Security Agreement Change of Name Government Interest Assignment City: Arlington Executive Order 9424, Confirmatory License Country: USA Other_ Additional name(s) & address(es) attached? A. Application or patent number(s): This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) 10/752,164 6. Total number of applications and patents Internal Address: AFOSRUA 6. Total number of applications and patents Involved: 1 Total fee (37 CFR 1.21(h) & 3.41) \$_0 Internal Address: AFOSRUA Authorized to be charged by credit card Suite 325, Rm 3112 Authorized to be charged to deposit account Enclosed Vicki Luvnbers Suite 325, Rm 3112 Signature City: Arlington Street Address: argunond matow@alersr.at.mil Signature 9. Signature: Yes Yicki L. LuND, Maj, USAF, Staff Judge Advocate Total number of pages including cover Name of Person Signing </th <td>Additional name(s) of conveying partu(ies) attached?</td> <td></td>	Additional name(s) of conveying partu(ies) attached?					
Assignment Merger Security Agreement Change of Name Joint Research Agreement State: VA Government Interest Assignment Country: USA Zip:22203 Zip:22203 Other		Street Address: 875 N. Randolph St				
Assignment Merger Security Agreement Change of Name Joint Research Agreement State: VA Government Interest Assignment Country: USA Executive Order 9424, Confirmatory License Country: USA Other Additional name(s) & address(es) attached? Yes ✓ No A. Application or patent number(s): This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) 10/782,164 6.867.548 Name and address to whom correspondence concerning document should be mailed: Name:Unated States Air Force Internal Address: <u>AFOSR/JA</u> 6. Total number of applications and patents involved: 1 Martionized to be charged by credit card Authorized to be charged to deposit account Street Address: <u>AFOSR/JA</u> Government Information a. Credit Card Last 4 Numbers State: VA Zip: _22203 b. Deposit Account Number Authorized User Name Fax Number: (703) 698-7360 Expiration Date Date Signature: Yet	Execution Date(s) 03 OCT 05	Suite 325, Rm 3112				
□ Socurity Agreement □ Change of Name □ Joint Research Agreement □ Government Interest Assignment □ Government Interest Assignment □ Country: USA □ Other Additional name(s) & address(es) attached? □ Yes ☑ No. • Application or patent number(s): □ This document is being filed together with a new application A. Patent Application No.(s) □ This document is being filed together with a new application B. Patent No.(s) □ B. Patent No.(s) 10/782,164 □ Additional numbers attached? □ Yes ☑ No 5. Name and address to whom correspondence concerring document should be malled: □ Total fee (37 CFR 1.21(h) & 3.41) \$_0 □ Internal Address: <u>AFOSR/JA</u> □ Total fee (37 CFR 1.21(h) & 3.41) \$_0 □ Internal Address: <u>AFOSR/JA</u> □ Authorized to be charged to deposit account □ Street Address: <u>3F5 N. Randolph St</u> □ □ None required (government interest not affecting title State: VA	Assignment Merger					
Government Interest Assignment Zip:22203 Country: USA Zip:22203 Additional name(s) & address(es) attached? Yes ✓ Not A. Application or patent number(s): This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) 10/782,164 Additional numbers attached? Yes ✓ Not 5. Name and address to whom correspondence concerning document should be mailed: 6. Total number of applications and patents Name: United States Air Force 7. Total fee (37 CFR 1.21(h) & 3.41) \$_0 Internal Address: <u>875 N. Randolph St</u> Suite 325, Rm 3112 Zip: 22203 Phone Number: (703) 696-9500 None required (government interest not affecting title States: VA Zip: 22203 Phone Number: (703) 696-7360 B. Payment Information a. Credit Card Last 4 Numbers	Security Agreement Change of Name	City: Arington				
Country: USA Zip:22203 Other Additional name(s) & address(es) attached? Yes Ø Md Application or patent number(s): This document is being filed together with a new application A. Patent Application No.(s) B. Patent No.(s) 10/782,164 Additional numbers attached? Yes Ø No 5. Name and address to whom correspondence concerning document should be malled: 6. Total number of applications and patents involved: 1 Name: United States Air Force 7. Total fee (37 CFR 1.21(h) & 3.41) \$_0 1 Internal Address: AFOSRUA Authorized to be charged by credit card Authorized to be charged by credit card Street Address: 875 N. Randolph St Enclosed None required (government interest not affecting tille Stile 325, Rm 3112 Zip: 22203 Phone Number: (703) 696-7360 a. Credit Card Last 4 Numbers		State: VA				
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4. Application or patent number(s): □ This document is being filed together with a new application A. Patent Application No.(s) □ Patent No.(s) 10/782,164 B. Patent No.(s) 6. Name and address to whom correspondence concerning document should be malled: No Name:United States Air Force 6. Total number of applications and patents involved: 1 Internal Address: AFOSR/JA □ Authorized to be charged by credit card						
A. Patent Application No.(s) B. Patent No.(s) 10/782,164 Additional numbers attached? Yes ✓ No 5. Name and address to whom correspondence concerning document should be mailed: 6. Total number of applications and patents involved: 1 Name:United States Air Force 7. Total fee (37 CFR 1.21(h) & 3.41) \$_0 1 Internal Address: AFOSRUA Authorized to be charged by credit card Authorized to be charged to deposit account Street Address: aF5 N. Randolph St B. Payment Information a. Credit Card Last 4 Numbers Expiration Date State: VA Zip: 22203 b. Deposit Account Number b. Deposit Account Number 9. Signature: Yes Yes Yes Yes Yes Yes 9. Signature: Yes Yes Yes Yes ViCKI L LUND, Mai, USAF, Staff Judge Advocate Name of Person Signing Total number of pages including cover sheet, attachments, and documents: 3						
10/782,164 6,867,548 10/782,164 Additional numbers attached? Yes 5. Name and address to whom correspondence concerning document should be mailed: 6. Total number of applications and patents involved: 1 Name:United States Air Force 7. Total fee (37 CFR 1.21(h) & 3.41) \$_0 Internal Address: AFOSR/JA Authorized to be charged by credit card Street Address: 875 N. Randolph St Authorized to be charged to deposit account Street Address: 875 N. Randolph St Enclosed Suite 325, Rm 3112 None required (government interest not affecting title City: Arlington 8. Payment Information state: VA Zip: 22203 Phone Number: (703) 696-9500 b. Deposit Account Numbers Fax Number: (703) 696-9500 b. Deposit Account Number Fax Number: (703) 696-9500 Authorized User Name Fax Number: (703) 696-9500 Date Fax Number: (703) 696-9500 Deposit Account Number Signature: IT Mut Signature Vicki L LUND, Mai, USAF, Staff Judge Advocate Total number of pages including cover sheet, attachments, and documents:		-				
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Internal Address: AFOSR/JA Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged to deposit account Street Address: 875 N. Randolph St Enclosed Suite 325, Rm 3112 None required (government interest not affecting title City: Arlington 8. Payment Information a. Credit Card Last 4 Numbers State: VA Zip: 22203 Phone Number: (703) 696-9500 b. Deposit Account Number Fax Number: (703) 696-9500 b. Deposit Account Number Fax Number: (703) 696-7360 Authorized User Name Email Address: raymond.marlow@afosr.af.mil ITAMPUL 9. Signature: Vicki L. LUND, Maj, USAF, Staff Judge Advocate Total number of pages including cover Name of Person Signing Total number of pages including cover 3	-	•••				
Authorized to be charged to deposit account Street Address: 875 N. Randolph St Suite 325, Rm 3112 City: Arlington State: VA Zip: _22203 Phone Number: (703) 696-9500 Fax Number: (703) 696-7360 Email Address: raymond.marlow@afosr.af.mil 9. Signature: ✓ VICKI L. LUND, Maj, USAF, Staff Judge Advocate Name of Person Signing	Name:United States Air Force	7. Total fee (37 CFR 1.21(h) & 3.41) \$_0				
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Suite 325, Rm 3112 Suite 325, Rm 3112 City: Arlington State: VA Zip: 22203 Phone Number: Zip: (703) 696-9500 Fax Number: (703) 696-9500 Fax Number: (703) 696-7360 Email Address: raymond.marlow@afosr.af.mil 9. Signature: Vicki L. LUND, Maj, USAF, Staff Judge Advocate Vicki L. LUND, Maj, USAF, Staff Judge Advocate Total number of pages including cover Name of Person Signing 3		Authorized to be charged to deposit account				
Solide 323, Kill ST12 Image: Solide 323, Kill ST12 City: Arlington State: VA Zip: 22203 Phone Number: City: Arrington a. Credit Card Last 4 Numbers Expiration Date	Street Address: 875 N. Randolph St					
City. Anington State: VA Zip: 22203 Phone Number: (703) 696-9500 Fax Number: (703) 696-9500 Fax Number: (703) 696-7360 Email Address: raymond.marlow@afosr.af.mil 9. Signature: Vicki L. LUND, Mai, USAF, Staff Judge Advocate Vicki L. LUND, Mai, USAF, Staff Judge Advocate Total number of pages including cover sheet, attachments, and documents:	Suite 325, Rm 3112	✓ None required (government interest not affecting title)				
State: VA Zip: 22203 Expiration Date Phone Number: (703) 696-9500 b. Deposit Account Number Fax Number: (703) 696-7360 b. Deposit Account Number Email Address: raymond.marlow@afosr.af.mil b. Deposit Account Number 9. Signature: Vicki L. LUND, Mai, USAF, Staff Judge Advocate ITAMOL VICKI L. LUND, Mai, USAF, Staff Judge Advocate Total number of pages including cover sheet, attachments, and documents: 3	City: Arlington	•				
Phone Number: (703) 696-9500 b. Deposit Account Number Fax Number: (703) 696-7360 b. Deposit Account Number Email Address: raymond.marlow@afosr.af.mil Authorized User Name 9. Signature: Image: Signature VICKI L. LUND, Mai, USAF, Staff Judge Advocate Total number of pages including cover sheet, attachments, and documents:	State: VA Zip: 22203					
Fax Number: (703) 696-7360 b. Deposit Account Number Email Address: raymond.marlow@afosr.af.mil Authorized User Name 9. Signature: Image: Signature VICKI L. LUND, Maj, USAF, Staff Judge Advocate Total number of pages including cover sheet, attachments, and documents:	Phone Number:(703) 696-9500					
Email Address: raymond.marlow@afosr.af.mil 9. Signature:		· ·				
Signature Date VICKI L. LUND, Maj, USAF, Staff Judge Advocate Total number of pages including cover sheet, attachments, and documents: 3 Name of Person Signing sheet, attachments, and documents: 3	Email Address: raymond.marlow@afosr.af.mil	Authorized User Name				
Signature Date VICKI L. LUND, Maj, USAF, Staff Judge Advocate Total number of pages including cover sheet, attachments, and documents: 3 Name of Person Signing sheet, attachments, and documents: 3	9. Signature:	17anol				
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Invention Title: Flexible Microdischarge Devices and Arrays

Inventor(s): Sung-Jin Park, J Gar Eden, Clark J Wagner

U.S. Filing/Issue Date: 2/19/2004; issued 3/15/2005

Patent or Application Serial No.: 10/782, 164; 6, 867, 548

Grant/Contract Number(s): F49620-98-1-0030

Foreign Applications filed/intended in (countries):

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14, FAR 52.227-11 or FAR 52.227-12 (if applicable) which are included among the terms of the above identified grant or contract award from the United State Government. This document is confirmatory of:

- 1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and
- 2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations that are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the above-identified patent application.

Signe	d this <u>3rd</u> d	lay of Ocrobes	. 20 05	
Ву	Stephen K. Rugg (Name of Grantee/Contractor	Official)	Stepher K. Ruga (Signature) S.	<u> </u>
Title _	Vice President for Admini	stration, Comptro	<u>ller</u>	
For In	ITVERSITY OF TLUINOIS IDDAM	ለ _ ጦሀ አ ለበአ ፕ <i>ር</i> እ፣		

(Grantee/Contractor Organization)

At 506 S. Wright Street Urbana, IL 61801 US (Business Address)



PATENT REEL: 017537 FRAME: 0379

RECORDED: 04/25/2006