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RECORDATION FORM COVER SHEET **PATENTS ONLY**

Atty Ref/Docket No.: 1153.151US1 Patent and Trademark Office

| To the Director of the U.S. Patent and Trademark Office: Please | | | | |
|--|--|--|--|--|
| Name of conveying party(ies): | 2. Name and address of receiving party(ies): | | | |
| David Erickson, Michal Lipson, Allen Yang, Brad Schmidt, Sean Moore | Name: Cornell University | | | |
| | Street Address: 395 Pine Tree Road, Suite 310 | | | |
| Additional name(s) of conveying party(ies) attached? | City: <u>Ithaca</u> State: <u>NY</u> Zip: <u>14850</u> Country: United States of America | | | |
| []Yes [X]No | Additional name(s) & address(es) attached? []Yes | | | |
| 3. Nature of conveyance: | [X]No | | | |
| [X] Assignment [] Merger | | | | |
| [] Security Agreement[] Change of Name | | | | |
| [] Other | | | | |
| Execution Date: May 9, 2011, October 4, 2011, October 31, 2011, June 15, 2011, June 16, 2011 | | | | |
| | | | | |
| 4. Application number(s) or patent number(s): | | | | |
| If this document is being filed together with a new application, | the execution date of the application is: | | | |
| A. Patent Application No.(s) | B. Patent No.(s) | | | |
| Serial No. 13/062,867, filed October 28, 2011 | | | | |
| Additional numbers attached? []Yes [X]No | | | | |
| 5. Name and address of a sure to sub-one a sure and as a sure | 6. Total number of applications and patents involved: 1 | | | |
| 5. Name and address of party to whom correspondence concerning document should be mailed: | 7. Total fee (37 CFR 3.41):\$ <u>40.00</u> | | | |
| Name: Bradley A. Forrest | []Enclosed | | | |
| Address: | [X] Authorized to be charged to deposit account | | | |
| Schwegman, Lundberg & Woessner, P.A. | 19-0743 | | | |
| P.O. Box 2938 Minneapolis, MN 554020938 | 8. Please charge any additional fees or credit any over payments to our Deposit Account No.: 19-0743 | | | |
| DO NOT USE THIS SPACE | | | | |
| 9. Statement and signature. | | | | |
| To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. | | | | |
| Bradley A. Forrest/Reg. No. 30,837 Bradly A for Name of Person Signing | 3 June 2013 | | | |
| Name of Person Signing | Signature Date | | | |
| Total number of pages including cover sheet: 22 | | | | |
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Commissioner of Patents and Trademarks Mail Stop Assignment Recordation Services P.O. Box 1450 Alexandria, VA 22313-1450

Attorney Docket No. 1153.151US1 Client Ref. No. D-4438-03

ASSIGNMENT

WHEREAS, We, **David Erickson**, a citizen of Canada, residing at 205 East Marshall Street, Ithaca, NY 14850, and **Michal Lipson**, a citizen of the United States of America, residing at 49 Murfield Dr., Ithaca, NY 14850, and **Allen Yang**, a citizen of the United States of America, residing at 2610 Hasbrouck Apartments, Ithaca, NY 14850-2646, and **Brad Schmidt**, a citizen of Canada residing at 50 John Street, Apt 311, Toronto, Ontario M5V 3T5, Canada, and **Sean Moore**, a citizen of the United States of America, residing at 8154 Hayes Hollow Road, Colden, NY 14033, have invented certain new and useful improvements in <u>OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES</u> for which an application for Letters Patent in the United States was filed as U.S. Serial No. **13/062,867** on **March 8, 2011**;

AND WHEREAS, Cornell University, with its principal place of business at Cornell Center for Technology, Enterprise & Commercialization ("CCTEC"), 395 Pine Tree Road, Suite 310, Ithaca, New York 14850 USA, is entitled to acquire the entire right, title and interest in and to the said improvements and the said Application:

NOW, THEREFORE, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt of which is hereby acknowledged, we, the said inventors, do hereby acknowledge that we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said Cornell University, its successors, legal representatives and assigns, the entire right, title and interest throughout the world in, to and under the said improvements, and the said application and all divisions, renewals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and we hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said Cornell University, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we will communicate to the said Cornell University, its successors, legal representatives, and assigns, any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths and generally do everything possible to aid the said Cornell University, its successors, legal representatives, and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

| ASSIGNMENT Cliënt Ref. No. D-4438-03 Assignors: David Erickson et al. Title: OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES Page 2 of 6 | Docket.No: 1153.151US1 Serial Number: 13/062,867 |
|---|---|
| IN TESTIMONY WHEREOF, I have hereunto set my hand 20 11. | this <u>1</u> day of |
| David E | Brickson |
| STATE OF New York)ss COUNTY OF Tompkins | |
| COUNTY OF Tompkins | |
| On this day of, 2011 before me David Erickson, to me known and known to me to be the person describ the foregoing instrument, and he/she duly acknowledged to me that he/s the uses and purposes therein set forth. | ed in and who executed |
| Notary Public | VIRGINIA MCAULEY OTARY PUBLIC-STATE OF NEW YORK |
| | No. 0164758973 Gualified in Tompkins County My Commission Expires July 21, 2014 |

Jun. 5. 2013 7:43AM Black HillsIP No. 0474 P. 5/23 ASSIGNMENT Docket No: 1153.151US1 Client Ref. No. D-4438-03 Assignors: David Erickson et al. Serial Number: 13/062,867 Title: OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES Page 3 of 6 IN TESTIMONY WHEREOF, I have hereunto set my hand this _____ day of _____, 20____. Michal Lipson STATE OF _____ COUNTY OF _____ On this _____ day of _____, 20____ before me personally appeared Michal Lipson, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

Notary Public

| ASSIGNMENT Client Ref. No. D-4438-03 Assignors: David Erickson et al. Title: OPTICAL FORCE BASED BIOMOLECUL Page 4 of 6 | Docket No: 1153,151US1 Script Number: 13/062,867 AR ANALYSIS IN SLOT WAVEGUIDES | | | |
|--|---|--|--|--|
| IN TESTIMONY WHEF | REOF, I have hereunto set my hand this <u>31</u> day of | | | |
| STATE OF California | Allen Yang)ss | | | |
| On this 3 day of Mey, 20 11 before me personally appeared Allen Yang, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth. Refer where OS/S1/11 Refer where OS/S1/11 OS/S1/1 | | | | |
| [SEAL] 05/3/ | Notary Public Witnesses | | | |

Jun. 5. 2013 7:43AM Black HillsIP No. 0474 P. 7/23 ASSIGNMENT Docket No: 1153.151US1 Client Ref. No. D-4438-03 Assignors: David Erickson et al. Scrial Number: 13/062,867 Title: OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES Page 5 of 6 IN TESTIMONY WHEREOF, I have hereunto set my hand this _____ day of _____, 20____. Brad Schmidt STATE OF _____ COUNTY OF _____ On this _____ day of _____, 20____ before me personally appeared <u>Brad Schmidt</u>, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

Notary Public

[SEAL]

[SEAL]

Notary Public

VIRGINIA MCAULEY

NOTARY PUBLIC-STATE OF NEW YORK

No. 01Gl4758973

Qualified to Topphilis County

My Commission Expires July 31, 2014

Attorney Docket No. 1153,151US1 Client Ref. No. D-4438-03

ASSIGNMENT

WHEREAS, We, David Erickson, a citizen of Canaua, John East Marshall Street, Ithaca, NY 14850, and Michal Lipson, a citizen of the United States of America, residing at 49 Murfield Dr., Ithaca, NY 14850, and Allen Yang, a citizen of the United States of America, residing at 2610 Hasbrouck Apartments, Ithaca, NY 14850-2646, and Brad Schmidt, a citizen of Canada residing at 50 John Street, Apt Canada, and Sean Moore, a citizen of the United States certain new and useful improvements in OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES for which an application for Letters Patent in the United States was filed as U.S. Serial No. 13/062,867 on March 8, 2011;

AND WHEREAS, Cornell University, with its principal place of business at Cornell Center for Technology, Enterprise & Commercialization ("CCTEC"), 395 Pine Tree Road, Suite 310, Ithaca, New York 14850 USA, is entitled to acquire the entire right, title and interest in and to the said improvements and the said Application:

NOW, THEREFORE, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt of which is hereby acknowledged, we, the said inventors, do hereby acknowledge that we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said Cornell University, its successors, legal representatives and assigns, the entire right, title and interest throughout the world in, to and under the said improvements, and the said application and all divisions, renewals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and we hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said Cornell University, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we will communicate to the said Cornell University, its successors, legal representatives, and assigns, any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths and generally do everything possible to aid the said Cornell University, its successors, legal representatives, and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

Jun. 5. 2013 7:44AM

[SEAL]

No. 0474 P. 10/23

| ASSIGNMENT | Docket No. 1153,151US1- | | |
|--|--|--|--|
| Cilent Ref. No. D-4438-03 Assignors: David Erickson et al. Title: OPTICAL FORCE BASED BIOMOLECULAR Page 3 of 6 | Şerial Number: 13/062,867 ANALYSIS IN SLOT WAVEGUIDES | | |
| IN TESTIMONY WHERE | OF, I have hereunto set my hand this 🔑 day of | | |
| | Milledge | | |
| | Michal Lipson | | |
| STATE OF |) | | |
| | ea(| | |
| COUNTY OF |) | | |
| On this day of, 20 before me personally appeared Michal Lipson, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth. | | | |
| [SEAL] | Notary Public | | |

Jun. 5. 2013 7:45AM Black HillsIP

[SEAL]

No. 0474 P. 13/23

Attorney Docket No. 1153.151US1 Client Ref. No. D-4438-03

ASSIGNMENT

WHEREAS, We, David Erickson, a citizen of Canada, residing at 205 East Marshall Street, Ithaca, NY 14850, and Michal Lipson, a citizen of the United States of America, residing at 49 Murfield Dr., Ithaca, NY 14850, and Allen Yang, a citizen of the United States of America, residing at 2610 Hasbrouck Apartments, Ithaca,

NY 14850-2646, and Brad Schmidt, a citizen of Canada residing at 50 John Street, Apt 116 Groupe St.

311, Toronto, Ontario M5V-315, Canada, and Sean Moore, a citizen of the United States 311. Toronto, Ontario M5V315, Canada, and Sean Moore, a citizen of the United States of America, residing at 8154 Hayes Hollow Road, Colden, NY 14033, have invented certain new and useful improvements in OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES for which an application for Letters Patent in the United States was filed as U.S. Serial No. 13/062,867 on March 8, 2011;

AND WHEREAS, Cornell University, with its principal place of business at Cornell Center for Technology, Enterprise & Commercialization ("CCTEC"), 395 Pine Tree Road, Suite 310, Ithaca, New York 14850 USA, is entitled to acquire the entire right, title and interest in and to the said improvements and the said Application:

NOW, THEREFORE, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt of which is hereby acknowledged, we, the said inventors, do hereby acknowledge that we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said Cornell University, its successors, legal representatives and assigns, the entire right, title and interest throughout the world in, to and under the said improvements, and the said application and all divisions, renewals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and we hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said Cornell University, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we will communicate to the said Cornell University, its successors, legal representatives, and assigns, any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths and generally do everything possible to aid the said Cornell University, its successors, legal representatives, and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

ASSIGNMENT Docket No: 1153.151US1 Client Ref. No. D-4438-03 Assignors: David Erickson et al. Serial Number: 13/062,867 Title: OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES Page 2 of 6 IN TESTIMONY WHEREOF, I have hereunto set my hand this _____ day of ______, 20_____. David Erickson STATE OF _____ COUNTY OF _____ On this _____ day of _____, 20____ before me personally appeared <u>David Erickson</u>, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

Notary Public

Black HillsIP

Jun. 5. 2013 7:46AM

[SEAL]

No. 0474 P. 16/23

[SEAL]

| ASSIGNMENT | | Docket No. 1153,151USI |
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| Client Ref. No. D-4438-03 Assignors: Bávid Erickson et al. Title: OPTICAL FORCE BASED BIÓ Page 5 of 6 | MÖLECÜLAR ANALYSIS IN S | Scrial Number: 13/062,867 |
| IN TESTIMON 20 | | reunto set my hand this 15 day of Built Almifl |
| STATE OF Toronto, C | | Brad Schmidt |
| COUNTY OF |)ss Y | |
| On this 15 do Schmidt, to me known and k foregoing instrument, and he uses and purposes therein set | ny of <u>Jane</u> , nown to me to be the per Ishe duly acknowledged t forth. | 20 1) before me personally appeared <u>Brad</u> rson described in and who executed the to me that he/she executed the same for the |
| [SEAL] J. Of Man. | De Ve bes | Notary Public |

Jun. 5. 2013 7:47AM Black HillsIP No. 0474 P. 20/23 ASSIGNMENT Docket No: 1153.151US1 Client Ref. No. D-4438-03 Assignors: David Erickson et al. Serial Number: 13/062,867 Title: OPTICAL FORCE BASED BIOMOLECULAR ANALYSIS IN SLOT WAVEGUIDES Page 6 of 6 IN TESTIMONY WHEREOF, I have hereunto set my hand this _____ day of _____, 20____. Scan Moore STATE OF _____ COUNTY OF _____ On this _____ day of _____, 20____ before me personally appeared <u>Sean Moore</u>, to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

Notary Public

Jun. 5. 2013 7:47AM Black HillsIP

[SEAL]

No. 0474 P. 22/23

PATENT REEL: 030618 FRAME: 0211