FORM PTO-1619A Expires 06/30/99 OMB 0651-0027

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U.S. Department of Commerce Patent and Trademark Office PATENT

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7 RECORD	ATION FORM COVER SHEET	
TO: The Commissioner of Patents and Tradema	PATENTS ONLY rks: Please record the attached original document(s) or copy(ies).	
Submission Type	Conveyance Type	
X New	X Assignment Security Agreement	
Resubmission (Non-Recordation) Document ID#	License Change of Name	
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Corrective Document Reel # Frame #	(For Use ONLY by U.S. Government Agencies) Departmental File Secret File	
Conveying Party(ies)	X Mark if additional names of conveying parties attached Execution Date	
Name (line 1) Kent A. Murphy	Month Day Year 01–20–2000	
Name (line 2)		
Second Party Name (line 1) Scott A. Meller	Execution Date Month Day Year 01-20-2000	
Name (line 2)		
Receiving Party	Mark if additional names of receiving parties attached	
Name (line 1) Luna Innovations, Inc.	If document to be recorded is an assignment and the receiving party is not	
Name (line 2)	domiciled in the United States, an appointment	
Address (line 1) 2851 Commerce Street	of a domestic representative is attached. (Designation must be a	
Address (line 2)	separate document from Assignment.)	
Address (line 3) Blacksburg City	Virginia/U.S.A. 24060 State/Country Zip Code	
Domestic Representative Name and Ac	idress Enter for the first Receiving Party only.	
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gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Hackage 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

Mail documents to be recorded with required cover sheet(s) information to: Mail documents to be recorded with required cover sheets, incomp. C. 20231

Commissioner of Patents and Trademarks, Box Assignments, Washington, D.C. 20231

PATENT

REEL: 010714 FRAME: 0867

FORM PTO Expres 06/30/99 OMB 0651-0027	-1619 B	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
Corresponde	ent Name and Address	Area Code and Telephone Number	
Name [Joy L. Bryant		
Address (line 1)	P.O. Box 590		
Address (line 2)	Lightfoot, Virginia	23090	, j
Address (line 3)			The second secon
Address (line 4)			
Pages	Enter the total number of paincluding any attachments	ages of the attached conveyance docume	nt # 6
Application N	lumber(s) or Patent Nui	mber(s) Mark if add	litional numbers attached
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09/489,768			
	being filed together with a <u>new</u> Pate named executing inventor.	ent Application, enter the date the patent application v	was Month Day Year
Patent Coope	eration Treaty (PCT)		
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Method of Deposit A		osed X Deposit Account	
(Enter for pa	lyrnent by deposit account or if add	itional fees can be charged to the account.) Deposit Account Number: #	
		Authorization to charge additional fees:	es No
Statement and	d Signature		
To the b attached indicated	copy is a true copy of the c	elief, the foregoing information is true and original document. Charges to deposit ac	correct and any count are authorized, as
	Joy L. Bryant	Day L. Bryant	March 30, 2000
	f Person Signing	$U^{\dagger}0$ Signature g	Date

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RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

U.S. Department of Commerce Patent and Trademark Office PATENT

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Conveying Pa	- additional names of conveying parties attached	Execution Date
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Name (line 2)		Execution Date Month Day Year
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	Receiving Party(ies)	
Name (line 1)		If document to be recorded is an assignment and the
Name (line 2)		receiving party is not domiciled in the United States, an appointment
Address (line 1)		of a domestic representative is attached. (Designation must be a separate
Address (line 2)		document from Assignment.)
Address (line 3)	City State/Country Zip Cod	e
Name (line 1)		If document to be recorded is an assignment and the
Name (line 2)		receiving party is not domiciled in the United States, an appointment of a
Address (line 1)		domestic representative is attached. (Designation must be a separate document from
Address (line 2)		Assignment.)
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PATENT

REEL: 010714 FRAME: 0869

ASSIGNMENT

WHEREAS, I, Kent A. Murphy, of 4556 Mountain Pass Road, Troutville, Virginia 24175, have invented certain new and useful improvements concerning a Flexible Fiber Optic Microbend Device, Sensors, and Method of Use ("Invention"), for which I am about to make an application for Letters Patent of the United States; and

WHEREAS, Luna Innovations, Inc., a corporation duly organized under the laws of the Commonwealth of Virginia and having its principal place of business at 2851 Commerce Street, Blacksburg, Virginia 24060 is desirous of acquiring an interest in, to and under said Invention and improvements thereon, said application, and any and all Letters Patern which may be granted for or upon said Invention and improvements in the United States of America and all countries foreign thereto;

NOW, THEREFORE, to all whom it may concern, be it known that in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Luna Innovations, Inc. the full and exclusive right, title and interest, throughout the world, in, to and under said Invention as fully set forth and described in the specification prepared and executed by me on 5000 [even date herewith] preparatory to obtaining Letters Patent of the United States therefor, and in any improvements on the Invention heretofore or hereafter made or acquired by me; in, to and under said application and additional applications covering the Invention and improvements; in, to and under any and all refilings, divisions and continuations of said applications; in, to and uncer any and all Letters Patent of the United States of America which may issue from said applications, refilings, divisions and continuations; in, to and under any and all reissues of said Letters Patent of the United States of America; in, to and under any and all applications for Letters Patent upon said Invention and any improvements thereto which may hereafter be filed in any and all countries foreign to the United States of America; in, to and under any and all refilings, divisions and continuations of said foreign-filed applications; in, to and under any and all Letters Patent of countries foreign to the United States of America, which may issue from the said foreign-filed applications, 'etilings, divisions and continuations; and in, to and under any and all extensions of, and additions to, said Letters Fatent of countries foreign to the United States of America, the same to be held and enjoyed by said Luna Innovations, Inc. for its own use and behoof, and for its successors, legal representatives and assigns, to the full end of the term for which said Letters Patent may be granted, and I do hereby authorize and request the Commissioner of Patents to issue the said Letters Patent in accordance with this assignment.

FURTHERMORE, I covenant and agree to cooperate with Luna Innovations, Inc. so that Luna Innovations, Inc. may enjoy to the fullest extent the right, title, and interest herein conveyed. Such cooperation shall include:

- (1) Frompt execution of all papers, to be prepared at the expense of Luna Innovations, Inc., that are deemed necessary or desirable by Luna Innovations, Inc. to perfect the right, title, and interest herein conveyed.
- (2) Frompt execution of all petitions, oaths, specifications, declarations or other papers, to be prepared at the expense of Luna Innovations, Inc., that are deemed necessary or desirable by Luna Innovations, Inc. for prosecuting the application identified herein, for filing and prosecuting refilings, substitute, divisional, continuing, or additional applications in the United States and/or foreign countries covering the Invention and improvements, for filing and prosecuting applications for reissuance of Letters Patent covering the Invention and improvements, or for interference proceedings involving the Invention and improvements.
- (3) Frompt assistance and cooperation in the prosecution of legal proceedings involving the Invention and improvements, any and all applications for Letters Patent upon said Invention and improvements, and Letters Patent granted thereon, including oppositions, cancellation proceedings, priority contests, interferences, public use proceedings and court actions.

EXECUTED this 2C day of Son , 2000.

KENTIA. MURPHY

COMMONWEALTH/STATE OF	Virginia
COUNTY OF WWW. AG.ME	01

Before me personally appeared the foregoing instrument, and he duly acknowledged to me that he executed the same for the use and purpose therein set forth, on the day and year aforesaid.

Meusse J. Blankowship Notary Public J. Blankowship

SEAL

My Commission Expires:

November 5, 2003

ASSIGNMENT

WHEREAS, I, Scott A. Meller, of 212 Primrose Drive, Blacksburg, Virginia 24060, have invented certain new and useful improvements concerning a Flexible Fiber Optic Microbend Device, Sensors, and Method of Use ("Invention"), for which I am about to make an application for Letters Patent of the United States; and

WHEREAS, Luna Innovations, Inc., a corporation duly organized under the laws of the Commonwealth of Virginia and having its principal place of business at 2851 Commerce Street, Blacksburg, Virginia 24060 is desirous of acquiring an interest in, to and under said Invention and improvements thereon, said application, and any and all Letters Pater t which may be granted for or upon said Invention and improvements in the United States of America and all countries foreign thereto;

NOW. THEREFORE, to all whom it may concern, be it known that in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged. I have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Luna Innovations, Inc. the full and exclusive right, title and interest, throughout the world, in, to and under said Invention as fully set forth and described in the specification prepared and executed by me on _______ [even date herewith] preparatory to obtaining Letters Patent of the United States therefor, and in any improvements on the Invention heretofore or hereafter made or acquired by me; in, to and under said application and additional applications covering the Invention and improvements; in, to and under any and all refilings, divisions and continuations of said applications; in, to and under any and all Letters Patent of the United States of America which may issue from said applications, refilings, divisions and continuations; in, to and under any and all reissues of said Letters Patent of the United States of America; in. to and under any and all applications for Letters Patent upon said Invention and any improvements thereto which may hereafter be filed in any and all countries foreign to the United States of America; in, to and under any and all refilings, divisions and continuations of said foreign-filed applications; in, to and under any and all Letters Pater t of countries foreign to the United States of America, which may issue from the said foreign-filed applications, refilings, divisions and continuations; and in, to and under any and all extensions of, and additions to, said Letters Patent of countries foreign to the United States of America, the same to be held and enjoyed by said Luna Innovations, Inc. for its own use and behoof, and for its successors, legal representatives and assigns, to the full end of the term for which said Letters Patent may be granted, and I do hereby authorize and request the Commiss oner of Patents to issue the said Letters Patent in accordance with this assignment.

FURTHERMORE. I covenant and agree to cooperate with Luna Innovations, Inc. so that Luna Innovations, Inc. may enjoy to the fullest extent the right, title, and interest herein conveyed. Such cooperation shall include:

- (1) Prompt execution of all papers, to be prepared at the expense of Luna Innovations, Inc., that are deemed necessary or desirable by Luna Innovations, Inc. to perfect the right, title, and interest herein conveyed.
- (2) Prompt execution of all petitions, oaths, specifications, declarations or other papers, to be prepared at the expense of Luna Innovations, Inc., that are deemed necessary or desirable by Luna Innovations, Inc. for prosecuting the application identified herein, for filing and prosecuting refilings, substitute, divisional, continuing, or additional applications in the United States and/or foreign countries covering the Invention and improvements, for filing and prosecuting applications for reissuance of Letters Patent covering the Invention and improvements, or for interference proceedings involving the Invention and improvements.
- (3) Prompt assistance and cooperation in the prosecution of legal proceedings involving the Invention and improvements, any and all applications for Letters Patent upon said Invention and improvements, and Letters Patent granted theneon, including oppositions, cancellation proceedings, priority contests, interferences, public use proceedings and court actions.

EXECUTED this ZO day of January, 2000.

SCOTT A. MELLER

COMMONWEALTH/STATE OF VIVAINIA:
COUNTY OF Montameny:
Before me personally appeared SCOTE A. Meller, to me known to be the person described in, and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the use and purpose therein set forth, on the day and year aforesaid.
Newsa Blankership Notary Public
SEAL

My Commission Expires:

November 5, 2003

ASSIGNMENT

WHEREAS, I, Mark E. Jones, of 3301 McEver Road, Blacksburg, Virginia 24060, have invented certain new and useful improvements concerning a Flexible Fiber Optic Microbend Device, Sensors, and Method of Use ("Invention"), for which I am about to make an application for Letters Patent of the United States; and

WHEREAS, Luna Innovations, Inc., a corporation duly organized under the laws of the Commonwealth of Virginia and having its principal place of business at 2851 Commerce Street, Blacksburg, Virginia 24060 is desirous of acquiring an interest in, to and under said Invention and improvements thereon, said application, and any and all Letters Patent which may be granted for or upon said Invention and improvements in the United States of America and all countries foreign thereto;

NOW. THEREFORE, to all whom it may concern, be it known that in consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Luna Innovations, Inc. the full and exclusive right, title and interest, throughout the world, in, to and under said Invention as fully set forth and described in the specification prepared and executed by me on 20 3AN, 2000 [even date herewith] preparatory to obtaining Letters Patent of the United States therefor, and in any improvements on the Invention heretofore or hereafter made or acquired by me; in, to and under said application and additional applications covering the Invention and improvements; in, to and under any and all refilings, divisions and continuations of said applications; in, to and under any and all Letters Patent of the United States of America which may issue from said applications, refilings, divisions and continuations; in, to and under any and all reissues of said Letters Patent of the United States of America; in, to and under any and all applications for Letters Patent upon said Invention and any improvements thereto which may hereafter be filed in any and all countries foreign to the United States of America; in, to and under any and all refilings, divisions and continuations of said foreign-filed applications; in, to and under any and all Letters Patent of countries foreign to the United States of America, which may issue from the said foreign-filed applications, refilings, divisions and continuations; and in, to and under any and all extensions of, and additions to, said Letters Patent of countries foreign to the United States of America, the same to be held and enjoyed by said Luna Innovations, Inc. for its own use and behoof, and for its successors, legal representatives and assigns, to the full end of the term for which said Letters Patent may be granted, and I do hereby authorize and request the Commissioner of Patents to issue the said Letters Patent in accordance with this assignment.

FURTHERMORE, I covenant and agree to cooperate with Luna Innovations, Inc. so that Luna Innovations, Inc. may enjoy to the fullest extent the right, title, and interest herein conveyed. Such cooperation shall include:

- (1) Frompt execution of all papers, to be prepared at the expense of Luna Innovations, Inc., that are deemed necessary or desirable by Luna Innovations, Inc. to perfect the right, title, and interest herein conveyed.
- (2) Prompt execution of all petitions, oaths, specifications, declarations or other papers, to be prepared at the expense of Luna Innovations, Inc., that are deemed necessary or desirable by Luna Innovations, Inc. for prosecuting the application identified herein, for filing and prosecuting refilings, substitute, divisional, continuing, or additional applications in the United States and/or foreign countries covering the Invention and improvements, for filing and prosecuting applications for reissuance of Letters Patent covering the Invention and improvements, or for interference proceedings involving the Invention and improvements.
- (3) Frompt assistance and cooperation in the prosecution of legal proceedings involving the Invention and improvements, any and all applications for Letters Patent upon said Invention and improvements, and Letters Patent granted thereon, including oppositions, cancellation proceedings, priority contests, interferences, public use proceedings and court actions.

EXECUTED this 20 day of January, 2000.

MARK E. JONES

Before me personally appeared Mark E. Tones, to me known to be the person described in, and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the use and purpose therein set forth, on the day and year aforesaid.
Melusia Blankenship Notary Public
SEAL

My Commission Expires:

November 5, 2003

RECORDED: 03/30/2000