

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2788450

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ARTHUR C. WATTERSON	01/08/2014
JAYANT KUMAR	03/10/2014
VIRINDER S. PARMAR	01/28/2014
RAJESH KUMAR	01/23/2014
VINCENT B. TUCCI	01/18/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	UNIVERSITY OF MASSACHUSETTS
<b>Street Address:</b>	225 FRANKLIN STREET
<b>Internal Address:</b>	12TH FLOOR
<b>City:</b>	BOSTON
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	02110
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	13894173
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(978)341-0136
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	9783410036
<b>Email:</b>	Lisa.Puopolo@hbsr.com
<b>Correspondent Name:</b>	N. SCOTT PIERCE
<b>Address Line 1:</b>	HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
<b>Address Line 2:</b>	530 VIRGINIA ROAD, P.O. BOX 9133
<b>Address Line 4:</b>	CONCORD, MASSACHUSETTS 01742-9133
<b>ATTORNEY DOCKET NUMBER:</b>	0813.2012-003
<b>NAME OF SUBMITTER:</b>	LISA R. PUOPOLO
<b>SIGNATURE:</b>	/LISA R. PUOPOLO/
<b>DATE SIGNED:</b>	03/27/2014
<b>Total Attachments: 20</b>	

PATENT

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Multi-Joint

ASSIGNMENT

WHEREAS, we, **Arthur C. Watterson, Jayant Kumar, Virinder S. Parmar, Rajesh Kumar and Vincent B. Tucci**, together with co-inventors **Ravi Mosurkal and Lynne A. Samuelson**, have invented a certain improvement in **Mixed Organic And Inorganic Polymers** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office *(use for utility (37 CFR § 1.53(b)) and design filings only)*;
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **13/894,173**, filed **May 14, 2013**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. [   ], filed [   ], which designates the United States of America [and is assigned United States Application No. [   ]];
- ☐ which was patented under United States Patent No. [   ].

WHEREAS, **University of Massachusetts** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **Commonwealth of Massachusetts**, and having a usual place of business at **225 Franklin Street, 12<sup>th</sup> Floor, Boston, MA 02110** desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with our entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest

therein; I hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any further applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_

Arthur C. Watterson

State/Commonwealth  
of Massachusetts  
County of Middlesex

On this 8th day of January, 2014, before me, the undersigned notary public, personally appeared Arthur C. Watterson,

- ☒ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

Diana Lorey (print name)

My Commission expires 01/01/2016

Inventor's Signature: \_\_\_\_\_

Jayant Kumar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Jayant Kumar,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Virinder S. Parmar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Virinder S. Parmar,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Rajesh Kumar

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, before me, the undersigned notary public, personally appeared Rajesh Kumar,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Vincent B. Tucci

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, before me, the undersigned notary public, personally appeared Vincent B. Tucci,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Multi-JointASSIGNMENT

WHEREAS, we, **Arthur C. Watterson, Jayant Kumar, Virinder S. Parmar, Rajesh Kumar and Vincent B. Tucci**, together with co-inventors **Ravi Mosurkal and Lynne A. Samuelson**, have invented a certain improvement in **Mixed Organic And Inorganic Polymers** described in an application for Patent,

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NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with our entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein; I hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any further applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

---

Inventor \_\_\_\_\_ Date \_\_\_\_\_  
Arthur C. Watterson

Address \_\_\_\_\_  
1 University Avenue  
Lowell, Massachusetts 01854

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

---



Inventor J Kumar  
Jayant Kumar

Date 3/10/2014

Address 1 University Avenue

Lowell, Massachusetts 01854

Witness Signature Gennam Binelli

Print Witness Name Genna Binelli

Address 102 Lower Rd Apt 307

North Reading, MA 01864

Witness Signature Diana Locay

Print Witness Name Diana Locay

Address 23 Dunfey St.

Lowell MA 01854

Inventor \_\_\_\_\_  
Virinder S. Parmar

Date \_\_\_\_\_

Address 1 University Avenue

Lowell, Massachusetts 01854

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_

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Inventor \_\_\_\_\_ Date \_\_\_\_\_  
Rajesh Kumar

Address \_\_\_\_\_  
1 University Avenue  
Lowell, Massachusetts 01854

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_

---

Inventor \_\_\_\_\_ Date \_\_\_\_\_  
Vincent B. Tucci

Address \_\_\_\_\_  
1 University Avenue  
Lowell, Massachusetts 01854

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_

Witness Signature \_\_\_\_\_

Print Witness Name \_\_\_\_\_

Address \_\_\_\_\_

Multi-JointASSIGNMENT

WHEREAS, we, **Arthur C. Watterson, Jayant Kumar, Virinder S. Parmar, Rajesh Kumar and Vincent B. Tucci**, together with co-inventors **Ravi Mosurkal and Lynne A. Samuelson**, have invented a certain improvement in **Mixed Organic And Inorganic Polymers** described in an application for Patent,

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NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with our entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest

therein; I hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

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AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_  
ArthurC.Watterson

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, before me, the undersigned notary public, personally appeared ArthurC.Watterson,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_ (print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_  
JayantKumar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared JayantKumar,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) Notary Public \_\_\_\_\_  
\_\_\_\_\_(print name)  
My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor \_\_\_\_\_  
Virinder S. Parmar Date 01/28/2014

Address WZ-1039 Rani Bagh

Delhi, 110 034, India

Witness Signature \_\_\_\_\_

Print Witness Name Professor Gurmeet Singh

Address Department of Chemistry, University of Delhi, Delhi-110 007, India

Witness Signature \_\_\_\_\_

Print Witness Name Dr BK Singh

Address Department of Chemistry, University of Delhi, Delhi-110 007, India

Inventor's Signature: \_\_\_\_\_

RajeshKumar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared RajeshKumar,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

VincentB.Tucci

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared VincentB.Tucci,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Multi-Joint

ASSIGNMENT

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IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_

Arthur C. Watterson

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Arthur C. Watterson,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_



Inventor's Signature: \_\_\_\_\_  
Jayant Kumar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary  
public, personally appeared Jayant Kumar,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and  
acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL) Notary Public \_\_\_\_\_  
\_\_\_\_\_  
(print name)  
My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_  
Virinder S. Parmar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary  
public, personally appeared Virinder S. Parmar,

- ☐ personally known to me, or  
☐ proved to me through satisfactory evidence of identification, which was

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(SEAL) Notary Public \_\_\_\_\_  
\_\_\_\_\_  
(print name)  
My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Rajesh Kumar

State/Commonwealth

of \_\_\_\_\_

County of New LondonOn this 23 day of January, 2014, before me, the undersigned notary public, personally appeared Rajesh Kumar,☐ personally known to me, or☒ proved to me through satisfactory evidence of identification, which wasD.L.

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public Karen RughKaren Rugh

(print name)

My Commission expires 12/31/16

Inventor's Signature: \_\_\_\_\_

Vincent B. Tucci

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Vincent B. Tucci,

☐ personally known to me, or☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Multi-Joint

ASSIGNMENT

WHEREAS, we, **Arthur C. Watterson, Jayant Kumar, Virinder S. Parmar, Rajesh Kumar and Vincent B. Tucci**, together with co-inventors **Ravi Mosurkal and Lynne A. Samuelson**, have invented a certain improvement in **Mixed Organic And Inorganic Polymers** described in an application for Patent,

- ☐ the specification of which is about to be filed in the United States Patent Office *(use for utility (37 CFR § 1.53(b)) and design filings only)*;
- ☐ is about to be filed in the United States Patent Office as a Provisional Application;
- ☒ the specification of which is United States Application No. **13/894,173**, filed **May 14, 2013**;
- ☐ the specification of which is a Patent Cooperation Treaty Application, International Application No. [   ], filed [   ], which designates the United States of America [and is assigned United States Application No. [   ]];
- ☐ which was patented under United States Patent No. [   ].

WHEREAS, **University of Massachusetts** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **Commonwealth of Massachusetts**, and having a usual place of business at **225 Franklin Street, 12<sup>th</sup> Floor, Boston, MA 02110** desires to confirm its interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, our entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with our entire right, title and interest in and to said application and such Letters Patent as may issue on said invention; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of our entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for any and all related provisional and nonprovisional, international and national phase applications, including any and all substitution, reissue, divisional, continuation, and continuation-in-part applications, and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest

therein; I hereby expressly authorize the filing of an International Patent Application under the Patent Cooperation Treaty which corresponds to and claims the priority of the above-identified application;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of any further applications including substitution, reissue, divisional or continuation, continuation-in-part applications, and all related provisional and nonprovisional, international and national phase applications, and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request each Patent Office and the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said invention to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

\_\_\_\_\_  
Inventor's Signature:

Arthur C. Watterson

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Arthur C. Watterson,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

\_\_\_\_\_  
to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Jayant Kumar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Jayant Kumar,

- ☐ personally known to me, or
- ☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Virinder S. Parmar

State/Commonwealth  
of \_\_\_\_\_  
County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Virinder S. Parmar,

- ☐ personally known to me, or
- ☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Rajesh Kumar

State/Commonwealth

of \_\_\_\_\_

County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me, the undersigned notary public, personally appeared Rajesh Kumar,

☐ personally known to me, or

☐ proved to me through satisfactory evidence of identification, which was

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

\_\_\_\_\_  
(print name)

My Commission expires \_\_\_\_/\_\_\_\_/\_\_\_\_

Inventor's Signature: \_\_\_\_\_

Vincent B. Tucci

State/Commonwealth

of Massachusetts

County of Middlesex

On this 18<sup>th</sup> day of January, 2014, before me, the undersigned notary public, personally appeared Vincent B. Tucci,

☐ personally known to me, or

☒ proved to me through satisfactory evidence of identification, which was

Mass. Lic. No. S40283980

to be the person whose name was signed on the foregoing instrument in my presence, and acknowledged that he/she signed the foregoing instrument as his/her free act and deed.

(SEAL)

Notary Public \_\_\_\_\_

Cheryl A. Purcell  
(print name)

My Commission expires 12/01/2017



CHERYL A. PURCELL  
NOTARY PUBLIC  
COMMONWEALTH OF MASSACHUSETTS  
MY COMM. EXP. 12-01-17

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PATENT