

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4855727

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
C. DANIEL FRISBIE	06/22/2015
SOOMAN LIM	06/17/2015
LORRAINE F. FRANCIS	06/15/2015
WOO JIN HYUN	06/12/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	REGENTS OF THE UNIVERSITY OF MINNESOTA
<b>Street Address:</b>	200 OAK STREET SE
<b>Internal Address:</b>	600 MCNAMARA ALUMNI CENTER
<b>City:</b>	MINNEAPOLIS
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55455-2020
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15836310
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(414)298-8097
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Email:</b>	ipadmin@reinhartlaw.com
<b>Correspondent Name:</b>	RODNEY DEKRUIF
<b>Address Line 1:</b>	1000 NORTH WATER STREET
<b>Address Line 2:</b>	SUITE 1700
<b>Address Line 4:</b>	MILWAUKEE, WISCONSIN 53202
<b>ATTORNEY DOCKET NUMBER:</b>	12864-DIV
<b>NAME OF SUBMITTER:</b>	PETER K. KOSCIAK
<b>SIGNATURE:</b>	/Peter K. Kosciak/
<b>DATE SIGNED:</b>	03/07/2018
<b>Total Attachments: 12</b>	
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UNIVERSITY OF MINNESOTA  
ASSIGNMENT

WHEREAS, I, C. Daniel Frisbie, have invented certain new and useful improvements in HIGH-RESOLUTION PATTERNING OF GRAPHENE BY SCREEN AND GRAVURE PRINTING FOR HIGHLY FLEXIBLE PRINTED ELECTRONICS, for which applications for Letters Patent of the United States have been made, said applications being filed as follows: PCT/US2015/028325 on April 29, 2015; and Utility application no. 14/699,822 on April 29, 2015 (the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns 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 and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number: 12864  
NU Ref. No. 2014-038-02/03 / UM Case No. 20140260

Upon said consideration I do hereby covenant and agree with said Assignee, its successors and assigns, that I will not execute in writing or do any act whatsoever conflicting with these presents, and that I or my executors or administrators will at any time upon request, without further or additional consideration, but at the expense of said Assignee, its successors and assigns, execute such additional writings and do such additional acts as said Assignee, its successors and assigns, may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissues or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such application or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 22<sup>nd</sup> day of June, 2015.

C. Daniel Frisbie  
C. Daniel Frisbie

STATE OF Minnesota )  
 )  
COUNTY OF Hennepin )

On this 22 day of June, 2015, before me personally appeared C. Daniel Frisbie, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Gayle Marie Gabrielski  
Notary Public



Attorney Docket Number: 12864  
NU Ref. No. 2014-038-02/03 / UM Case No. 20140260

IN WITNESS WHEREOF, I have hereunto set my hand on this 16<sup>th</sup> day of July, 2015 on behalf of Assignee Regents of the University of Minnesota accepting this assignment.

REGENTS OF THE UNIVERSITY OF MINNESOTA



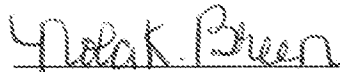
Paul B. Savereide  
Senior Associate General Counsel  
per Presidential Delegation DA\_070027

STATE OF MINNESOTA )

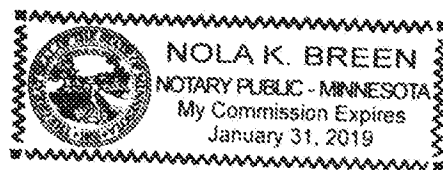
COUNTY OF HENNEPIN )

On this 16<sup>th</sup> day of July, 2015, before me personally appeared Paul B. Savereide, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Notary Public





UNIVERSITY OF MINNESOTA  
ASSIGNMENT

WHEREAS, I, Sooman Lim, have invented certain new and useful improvements in HIGH-RESOLUTION PATTERNING OF GRAPHENE BY SCREEN AND GRAVURE PRINTING FOR HIGHLY FLEXIBLE PRINTED ELECTRONICS, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: PCT/US2015/028325 on April 29, 2015; and Utility application no. 14/699,822 on April 29, 2015 (the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns 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 and enjoyed by me had this assignment and sale not been made.


I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number: 12864  
NU Ref. No. 2014-038-02/03 / UM Case No. 20140260


Upon said consideration I do hereby covenant and agree with said Assignee, its successors and assigns, that I will not execute in writing or do any act whatsoever conflicting with these presents, and that I or my executors or administrators will at any time upon request, without further or additional consideration, but at the expense of said Assignee, its successors and assigns, execute such additional writings and do such additional acts as said Assignee, its successors and assigns, may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissues or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such application or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

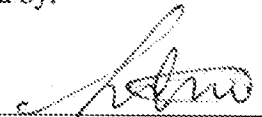
IN WITNESS WHEREOF, I have hereunto set my hand on this Wed 17 day of June, 2015.

  
Sooman Lim

Witnessed by:

  
Signature  
chang OK Lim  
Print Name  
6.17.2015  
Date

Witnessed by:

  
Signature  
evn Sook Lim  
Print Name  
6.17.2015  
Date

Attorney Docket Number: 12864  
NU Ref. No. 2014-038-02/03 / UM Case No. 20140260

IN WITNESS WHEREOF, I have hereunto set my hand on this 7<sup>th</sup> day of July, 2015 on behalf of Assignee Regents of the University of Minnesota accepting this assignment.

REGENTS OF THE UNIVERSITY OF MINNESOTA



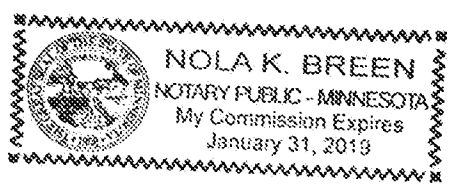
Paul B. Savereide  
Senior Associate General Counsel  
per Presidential Delegation DA\_070027

STATE OF MINNESOTA )  
  )  
COUNTY OF HENNEPIN )

On this 7<sup>th</sup> day of July, 2015, before me personally appeared Paul B. Savereide, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Nola K. Breen  
Notary Public



Attorney Docket Number: 12864  
NU Ref. No. 2014-038-02/03 / UM Case No. 20140260





UNIVERSITY OF MINNESOTA  
ASSIGNMENT

WHEREAS, I, Lorraine F. Francis, have invented certain new and useful improvements in HIGH-RESOLUTION PATTERNING OF GRAPHENE BY SCREEN AND GRAVURE PRINTING FOR HIGHLY FLEXIBLE PRINTED ELECTRONICS, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: PCT/US2015/028325 on April 29, 2015; and Utility application no. 14/699,822 on April 29, 2015 (the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns 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 and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number: 12864  
NU Ref. No. 2014-038-02/03 / UM Case No. 20140260

Upon said consideration I do hereby covenant and agree with said Assignee, its successors and assigns, that I will not execute in writing or do any act whatsoever conflicting with these presents, and that I or my executors or administrators will at any time upon request, without further or additional consideration, but at the expense of said Assignee, its successors and assigns, execute such additional writings and do such additional acts as said Assignee, its successors and assigns, may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissues or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such application or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 15<sup>th</sup> day of June, 2015.

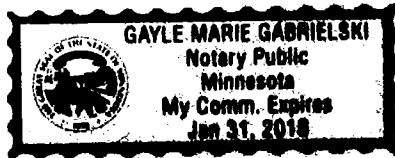
Lorraine F. Francis  
Lorraine F. Francis

STATE OF Minnesota )  
  )  
COUNTY OF Hennepin )

On this 15 day of June, 2015, before me personally appeared Lorraine F. Francis to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

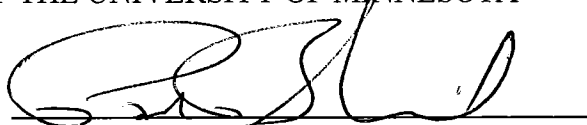
IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Gayle Marie Gabrielski  
Notary Public



IN WITNESS WHEREOF, I have hereunto set my hand on this 18<sup>th</sup> day of June, 2015 on behalf of Assignee Regents of the University of Minnesota accepting this assignment.

REGENTS OF THE UNIVERSITY OF MINNESOTA



Paul B. Savereide  
Senior Associate General Counsel  
per Presidential Delegation DA\_070027

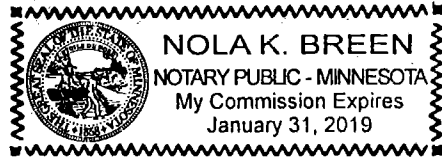
STATE OF MINNESOTA            )  
  )  
COUNTY OF HENNEPIN        )

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015, before me personally appeared Paul B. Savereide, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Notary Public





UNIVERSITY OF MINNESOTA  
ASSIGNMENT

WHEREAS, I, Woo Jin Hyun, have invented certain new and useful improvements in HIGH-RESOLUTION PATTERNING OF GRAPHENE BY SCREEN AND GRAVURE PRINTING FOR HIGHLY FLEXIBLE PRINTED ELECTRONICS, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: PCT/US2015/028325 on April 29, 2015; and Utility application no. 14/699,822 on April 29, 2015 (the "Application(s)");

Whereas, REGENTS OF THE UNIVERSITY OF MINNESOTA ("Assignee"), having offices at 600 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, Minnesota 55455-2020, is desirous of documenting the acquisition of the entire right, title and interest in and to said invention, said Application(s) and in, to and under any and all Letters Patent to be obtained therefor;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, and to the extent that I have not done so already via a prior agreement with the Assignee, or if I have already done so via a prior agreement with the Assignee then in confirmation of said prior agreement, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest in and to the inventions set forth hereinabove and the entire right, title and interest in and to any and all Letters Patent of the United States and any foreign countries which may be granted therefor on the Application(s) including my rights under the Paris Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Application(s) and Letters Patent that may be granted, including all rights to claim priority therefrom, and specifically including the right to enforce such Letters Patent in the name of Assignee and to recover damages for past infringement of the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit and use and benefit of its successors and assigns 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 and enjoyed by me had this assignment and sale not been made.

I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Application(s) and/or otherwise take advantage of the provisions of the Paris Convention.

Attorney Docket Number: 12864  
NU Ref. No. 2014-038-02/03 / UM Case No. 20140260

Upon said consideration I do hereby covenant and agree with said Assignee, its successors and assigns, that I will not execute in writing or do any act whatsoever conflicting with these presents, and that I or my executors or administrators will at any time upon request, without further or additional consideration, but at the expense of said Assignee, its successors and assigns, execute such additional writings and do such additional acts as said Assignee, its successors and assigns, may deem necessary or desirable to perfect the Assignee's enjoyment of this grant, and render all necessary assistance in making application for and obtaining original, divisional, reissues or extended Letters Patent of the United States, or of any and all foreign countries on said invention, and in enforcing any rights occurring as a result of such application or patents, by giving testimony in any proceedings or transactions involving such applications or patents.

I hereby request the Honorable Commissioner of Patents and Trademarks to issue the Letters Patent to Assignee in accordance with this instrument.

IN WITNESS WHEREOF, I have hereunto set my hand on this 6/12 day of June, 2015.

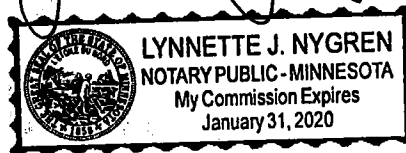
Woo Jin Hyun  
Woo Jin Hyun

STATE OF Minnesota )  
COUNTY OF Hennepin )

On this 12th day of June, 2015, before me personally appeared Woo Jin Hyun to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.

Lynnette J. Nygren  
Notary Public



IN WITNESS WHEREOF, I have hereunto set my hand on this 18<sup>th</sup> day of June, 2015 on behalf of Assignee Regents of the University of Minnesota accepting this assignment.

REGENTS OF THE UNIVERSITY OF MINNESOTA

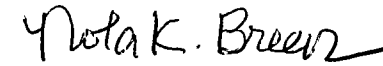


Paul B. Savereide  
Senior Associate General Counsel  
per Presidential Delegation DA\_070027

STATE OF MINNESOTA            )  
  )  
COUNTY OF HENNEPIN        )

On this 18<sup>th</sup> day of June, 2015, before me personally appeared Paul B. Savereide, to me known to be the person described in and who executed the foregoing instrument and acknowledged that s/he executed the same as his/her free act and deed.

IN WITNESS WHEREOF, I have hereunto affixed my official signature with the seal of my office, the day and year above written.



Notary Public

