

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT2791178

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT

**CONVEYING PARTY DATA**

Name	Execution Date
SMITA AGRAWAL	03/06/2014
TIANHONG CUI	02/04/2014
LONGZHONG HUANG	03/05/2014
VINNEE BHARATHI A. SELVI	01/29/2014
TERRENCE W. SIMON	01/29/2014
TAIHO YEOM	02/25/2014
YOU MIN YU	01/31/2014
MIN ZHANG	01/30/2014
CONGSHUN WANG	02/06/2014
XUE LIN ZHU	02/01/2014
TAO ZHANG	01/30/2014

**RECEIVING PARTY DATA**

<b>Name:</b>	Regents of the University of Minnesota
<b>Street Address:</b>	200 Oak Street SE
<b>Internal Address:</b>	Suite 600
<b>City:</b>	Minneapolis
<b>State/Country:</b>	MINNESOTA
<b>Postal Code:</b>	55455

**PROPERTY NUMBERS Total: 2**

Property Type	Number
<b>Application Number:</b>	61613327
<b>Application Number:</b>	13828625

**CORRESPONDENCE DATA**

**Fax Number:** (612)626-9624

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.*

**Phone:** 6126254597

**Email:** rosen848@umn.edu

**Correspondent Name:** MOLLY A. ROSEN

**Address Line 1:** 200 OAK STREET SE

**PATENT**

<b>Address Line 2:</b>	SUITE 360 MCNAMARA CENTER
<b>Address Line 4:</b>	MINNEAPOLIS, MINNESOTA 55455-2006

<b>ATTORNEY DOCKET NUMBER:</b>	20130243
<b>NAME OF SUBMITTER:</b>	MOLLY A. ROSEN
<b>SIGNATURE:</b>	/Molly A. Rosen/
<b>DATE SIGNED:</b>	03/28/2014

**Total Attachments: 33**

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## **ASSIGNMENT**

WHEREAS, I, Smita Agrawal, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the “Applications”);

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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.

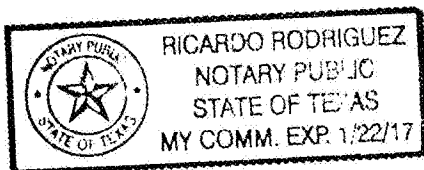
IN WITNESS WHEREOF, I have hereunto set my hand on this 6<sup>th</sup> day of March, 2014.

Smita Agrawal  
Smita Agrawal

STATE OF TEXAS )  
COUNTY OF Brazoria )

On this 6<sup>th</sup> day of March, 2014, before me personally appeared Smita Agrawal, 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.



[Signature]  
Notary Public

## ASSIGNMENT

WHEREAS, I, Tianhong Cui, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

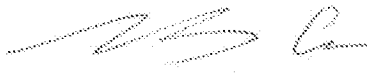
NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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.

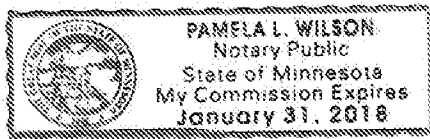
IN WITNESS WHEREOF, I have hereunto set my hand on this 4<sup>th</sup> day of February, 2014.

  
Tianhong Cui

STATE OF Minnesota  
COUNTY OF Hennepin

On this 4 day of February, 2014, before me personally appeared Tianhong Cui, 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



## ASSIGNMENT

WHEREAS, I, Longzhong Huang, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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.

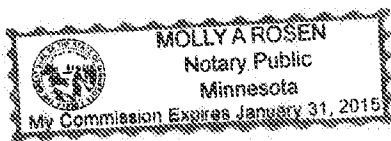
IN WITNESS WHEREOF, I have hereunto set my hand on this 5th day of March, 2014.

Longzhong Huang  
Longzhong Huang

STATE OF Minnesota )  
COUNTY OF Hennepin )

On this 5th day of March, 2014, before me personally appeared Longzhong Huang, 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.



Molly A. Rosen  
Notary Public

## ASSIGNMENT

WHEREAS, I, Vinnee Bharathi A. Selvi, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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 29 day of JANUARY, 2014.

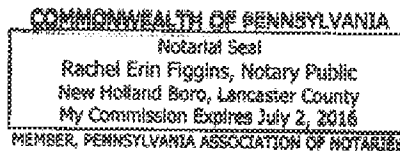
A.S. V. Alth  
Vinee Bharathi A. Selvi

STATE OF Pennsylvania )  
COUNTY OF Lancaster )

On this 29 day of January, 2014, before me personally appeared Vinee Bharathi A. Selvi, 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.

Rachel Erin Figgins  
Notary Public



**ASSIGNMENT**

WHEREAS, I, Terrence W. Simon, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

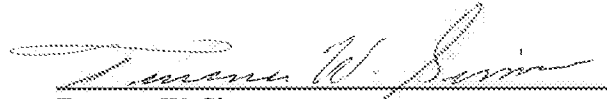
I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of said United States application and/or otherwise take advantage of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

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 for 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.

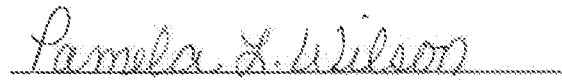
IN WITNESS WHEREOF, I have hereunto set my hand on this 29<sup>th</sup> day of January, 2014.

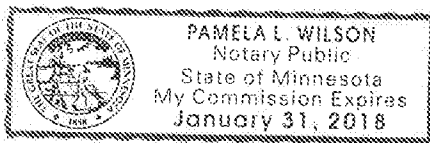
  
Terrence W. Simon

STATE OF MN )  
COUNTY OF Hennepin )

On this 29 day of Jan, 2014, before me personally appeared Terrence W. Simon, 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



## ASSIGNMENT

WHEREAS, I, Taiho Yeom, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

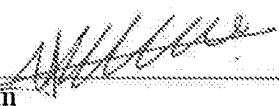
NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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 25<sup>th</sup> day of February, 2014.

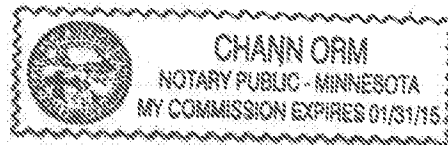
  
\_\_\_\_\_  
Taiho Yeom

STATE OF Minnesota )  
COUNTY OF Hennepin )

On this 25<sup>th</sup> day of February, 2014, before me personally appeared Taiho Yeom, 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



## ASSIGNMENT

WHEREAS, I, Youmin Yu, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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 31<sup>st</sup> day of January, 2014.

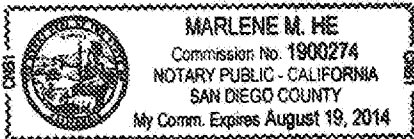
Yumin Yu  
Yumin Yu

STATE OF California )  
COUNTY OF San Diego )

On this 31<sup>st</sup> day of January, 2014, before me personally appeared Yumin Yu, 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.

Marlene M. He  
Notary Public



## ASSIGNMENT

WHEREAS, I, Min Zhang, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.



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 for 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 30<sup>th</sup> day of January, 2014.

Min Zhang  
Min Zhang

WITNESSED BY:

Xing Yang  
Name:

Quan Yu  
Name:

## ASSIGNMENT

WHEREAS, I, Congshun Wang, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

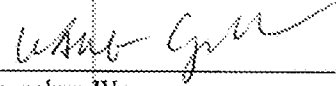
NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto Assignee, its successors and assigns, the entire right, title and interest 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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.

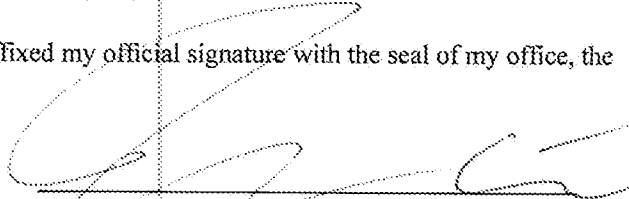
IN WITNESS WHEREOF, I have hereunto set my hand on this 6<sup>th</sup> day of February, 2014.

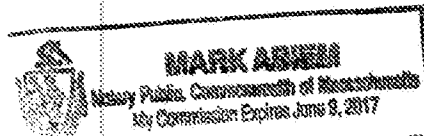
  
\_\_\_\_\_  
Congshun Wang

STATE OF Massachusetts )  
COUNTY OF Middlesex )

On this 6<sup>th</sup> day of February, 2014, before me personally appeared Congshun Wang, 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



**ASSIGNMENT**

WHEREAS, I, Xuelin Zhu, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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 1st day of Feb, 2014.

Xuelin Zhu

Xuelin Zhu

WITNESSED BY:

Hongman Lu

Name:

Ting Li

Name:



## **ASSIGNMENT**

WHEREAS, I, Tao Zhang, have invented certain new and useful improvements in Heat Transfer Apparatus and Method, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/613,327 on March 20, 2012; and Utility application no. 13/828,625 on March 14, 2013 (collectively, the "Applications");

Whereas, the 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 acquiring the entire right, title and interest in and to said invention, said application and in, to and under any and all Letters Patent to be obtained therefore;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, 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 Applications including my rights under the International Convention for the Protection of Industrial Property, and in and to any and all extensions, divisions, continuations, continuations-in-part or reissues of said Applications and Letters Patent that may be granted, 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 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.

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 said United States application and/or otherwise take advantage of the provisions of the International Convention.

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 for 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.

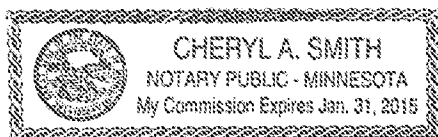
IN WITNESS WHEREOF, I have hereunto set my hand on this 30 day of January, 2014.

Tao Zhang  
Tao Zhang

STATE OF Minnesota )  
COUNTY OF Douglas )

On this 30 day of January, 2014, before me personally appeared Tao Zhang, 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.



Cheryl A. Smith  
Notary Public