

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3478652

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JIAN-PING WANG	07/10/2015
HAO WANG	04/13/2015
HAIBAO ZHAO	04/04/2015
<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
<b>PROPERTY NUMBERS Total: 3</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14422262
<b>Application Number:</b>	61691681
<b>PCT Number:</b>	US2013056031
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(651)735-1102
<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>Phone:</b>	6517351100
<b>Email:</b>	pairedocketing@ssiplaw.com
<b>Correspondent Name:</b>	SHUMAKER & SIEFFERT
<b>Address Line 1:</b>	1625 RADIO DRIVE
<b>Address Line 2:</b>	SUITE 300
<b>Address Line 4:</b>	WOODBURY, MINNESOTA 55125
<b>ATTORNEY DOCKET NUMBER:</b>	1008-087US01/20130006
<b>NAME OF SUBMITTER:</b>	ALIYA R. KHAZON
<b>SIGNATURE:</b>	/Aliya R. Khazon/
<b>DATE SIGNED:</b>	08/11/2015

**Total Attachments: 9**

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UNIVERSITY OF MINNESOTA  
ASSIGNMENT

WHEREAS, I, Jian-Ping Wang of Shoreview, MN, have invented certain new and useful improvements in EMBEDDED MASK PATTERNING PROCESS FOR FABRICATING MAGNETIC MEDIA AND OTHER STRUCTURES, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/691,681 filed on August 21, 2012; International application no. PCT/US2013/056031 filed on August 21, 2013; and Utility application no. 14/422,262 claiming International filing date of August 21, 2013, (collectively, the "Applications") this assignment including said application, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known),

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 Applications and in, to and under any and all Letters Patent to be obtained therefore;

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 the Assignor has 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 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, 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.

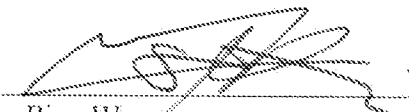
I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Applications and/or otherwise take advantage of the provisions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

Attorney Docket Number: 1008-087US01  
UM Case No. : 20130006

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 10<sup>th</sup> day of July, 2015.

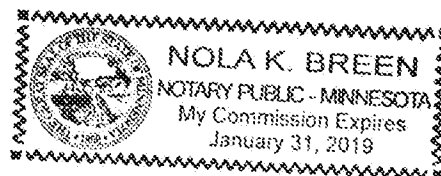
  
Jian-Ping Wang

STATE OF Minnesota )  
COUNTY OF Hennepin )

On this 10<sup>th</sup> day of July, 2015, before me personally appeared Jian-Ping 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.

Nola K. Breen  
Notary Public



IN WITNESS WHEREOF, I have hereunto set my hand on this 10<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



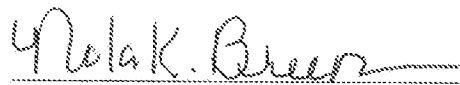
Paul B. Saveriede  
Senior Associate General Counsel  
per Presidential Delegation DA\_070027

STATE OF Minnesota )

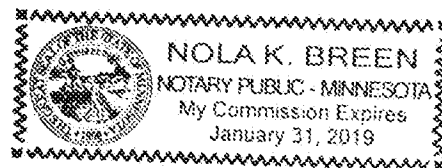
COUNTY OF Hennepin )

On this 10<sup>th</sup> day of July, 2015, before me personally appeared Paul B. Saveriede 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, Hao Wang of St. Paul, MN, have invented certain new and useful improvements in EMBEDDED MASK PATTERNING PROCESS FOR FABRICATING MAGNETIC MEDIA AND OTHER STRUCTURES, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/691,681 filed on August 21, 2012; International application no. PCT/US2013/056031 filed on August 21, 2013; and Utility application no. 14/422,262 claiming International filing date of August 21, 2013. (collectively, the "Applications") this assignment including said application, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known);

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 Applications and in, to and under any and all Letters Patent to be obtained therefore;

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 the Assignor has 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 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, 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.

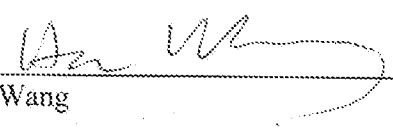
I hereby authorize said Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent, in its own name if desired, in any and all foreign countries, and additionally to claim the filing date of any the Applications and/or otherwise take advantage of the provisions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

Attorney Docket Number: 1008-087US01  
UM Case No. : 20130006

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 13<sup>th</sup> day of April, 2015.

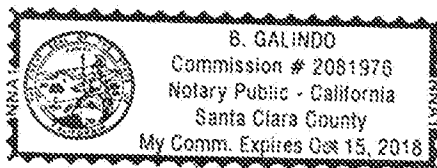
  
Hao Wang

STATE OF California

COUNTY OF San Jose

On this 13<sup>th</sup> day of April, 2015, before me personally appeared Hao Wang, to me known to be the person described in and who executed the foregoing instrument and acknowledged that ~~she~~ 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

Attorney Docket Number: 1008-087US01  
UM Case No. : 20130006

IN WITNESS WHEREOF, I have hereunto set my hand on this 27<sup>th</sup> day of April, 2015 on behalf of Assignee Regents of the University of Minnesota accepting this assignment.

REGENTS OF THE UNIVERSITY OF MINNESOTA



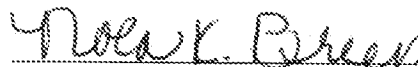
Paul B. Saveriede  
Senior Associate General Counsel  
per Presidential Delegation DA\_070027

STATE OF Minnesota )

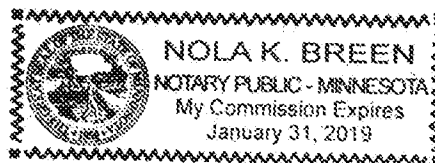
COUNTY OF Hennepin )

On this 27<sup>th</sup> day of April, 2015, before me personally appeared Paul B. Saveriede 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, Haibao Zhao of San Jose, CA, have invented certain new and useful improvements in EMBEDDED MASK PATTERNING PROCESS FOR FABRICATING MAGNETIC MEDIA AND OTHER STRUCTURES, for which applications for Letters Patents of the United States have been made, said applications being filed as follows: Provisional application no. 61/691,681 filed on August 21, 2012; International application no. PCT/US2013/056031 filed on August 21, 2013; and Utility application no. 14/422,262 claiming International filing date of August 21, 2013, (collectively, the "Applications") this assignment including said application, (and do hereby authorize ASSIGNEE and its representative to hereafter add herein such application number(s) and/or filing date(s) when known);

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 Applications and in, to and under any and all Letters Patent to be obtained therefore;

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 the Assignor has 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 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, 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 Applications and/or otherwise take advantage of the provisions of the International Convention.

Attorney Docket Number: 1008-087US01  
UM Case No. : 20130006

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.

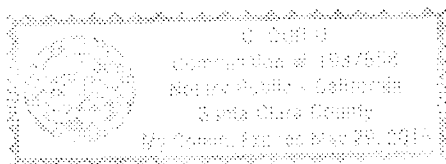
IN WITNESS WHEREOF, I have hereunto set my hand on this 4<sup>th</sup> day of April, 2015.

赵海宝  
Haibao Zhao

STATE OF California )  
COUNTY OF Santa Clara )

On this 4<sup>th</sup> day of April, 2015, before me personally appeared Haibao Zhao, to me known to be the person described in and who executed the foregoing instrument and acknowledged that she 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.



C. Au  
Notary Public

Attorney Docket Number: 1008-087US01  
UM Case No. : 20130006

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

REGENTS OF THE UNIVERSITY OF MINNESOTA



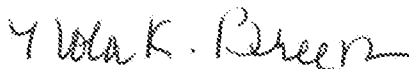
Paul B. Savereide  
Senior Associate General Counsel  
per Presidential Delegation DA\_070027

STATE OF Minnesota )

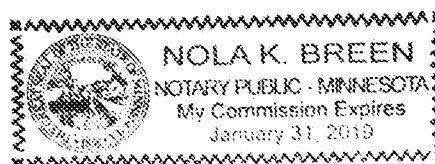
COUNTY OF Hennepin )

On this 16th day of April, 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



Attorney Docket Number: 1008-087US01  
UM Case No. : 20130006