

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | | | | | | | |
|---|---------------------|---------------|---------------------|---------------------|-------------------|-----------------|------------|---------------------|------------|-----------------------|------------|---------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | | | | | | | |
| CONVEYING PARTY DATA | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Yubao Wang</td> <td>06/26/2013</td> </tr> <tr> <td>Mary Ann Hockey</td> <td>06/26/2013</td> </tr> <tr> <td>Douglas J. Guerrero</td> <td>07/23/2013</td> </tr> <tr> <td>Vandana Krishnamurthy</td> <td>06/26/2013</td> </tr> <tr> <td>Robert C. Cox</td> <td>06/26/2013</td> </tr> </tbody> </table> | | Name | Execution Date | Yubao Wang | 06/26/2013 | Mary Ann Hockey | 06/26/2013 | Douglas J. Guerrero | 07/23/2013 | Vandana Krishnamurthy | 06/26/2013 | Robert C. Cox | 06/26/2013 |
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| Vandana Krishnamurthy | 06/26/2013 | | | | | | | | | | | | |
| Robert C. Cox | 06/26/2013 | | | | | | | | | | | | |
| RECEIVING PARTY DATA | | | | | | | | | | | | | |
| <table border="1"> <tr> <td>Name:</td> <td>Brewer Science Inc.</td> </tr> <tr> <td>Street Address:</td> <td>2401 Brewer Drive</td> </tr> <tr> <td>City:</td> <td>Rolla</td> </tr> <tr> <td>State/Country:</td> <td>MISSOURI</td> </tr> <tr> <td>Postal Code:</td> <td>65401</td> </tr> </table> | | Name: | Brewer Science Inc. | Street Address: | 2401 Brewer Drive | City: | Rolla | State/Country: | MISSOURI | Postal Code: | 65401 | | |
| Name: | Brewer Science Inc. | | | | | | | | | | | | |
| Street Address: | 2401 Brewer Drive | | | | | | | | | | | | |
| City: | Rolla | | | | | | | | | | | | |
| State/Country: | MISSOURI | | | | | | | | | | | | |
| Postal Code: | 65401 | | | | | | | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13862720</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 13862720 | | | | | | | | |
| Property Type | Number | | | | | | | | | | | | |
| Application Number: | 13862720 | | | | | | | | | | | | |
| CORRESPONDENCE DATA | | | | | | | | | | | | | |
| <p>Fax Number: 9136479057 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 913 647-9050 Email: jkahrau@hoveywilliams.com Correspondent Name: Hovey Williams LLP Address Line 1: 10801 Mastin Blvd., Suite 1000 Address Line 4: Overland Park, KANSAS 66210</p> | | | | | | | | | | | | | |
| ATTORNEY DOCKET NUMBER: | 45169 | | | | | | | | | | | | |
| NAME OF SUBMITTER: | Tracy Bornman | | | | | | | | | | | | |
| Signature: | /Tracy Bornman/ | | | | | | | | | | | | |

CH \$40.00 13862720

Date:

08/23/2013

Total Attachments: 8

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ASSIGNMENT

WHEREAS, WE, Yubao Wang, OF 10215 Summerfield Drive, Rolla, Missouri 65401, Mary Ann Hockey, OF 11120 County Road 5120, Rolla, Missouri 65401, Douglas J. Guerrero, OF 11145 Breeden Drive, Rolla, Missouri 65401, Vandana Krishnamurthy, OF 475 Countryside Drive, Rolla, Missouri 65401, and Robert C. Cox, OF 12300 Jeffery's Pl., Rolla, Missouri 65401, have invented certain new and useful improvements in

SILICON HARDMASK LAYER FOR DIRECTED SELF-ASSEMBLY, which is the subject of U.S. Patent Application No. 13/862,720, filed April 15, 2013; and claims the benefit of the earlier filed U.S. Provisional Patent Application No. 61/624,805, filed April 16, 2012; and

WHEREAS, Brewer Science Inc., a corporation duly organized under the laws of the State of Missouri, and having its principal place of business at 2401 Brewer Drive, Rolla, Missouri 65401, is desirous of acquiring an interest in, to, and under said invention, said Application and any and all Letters Patent which may be granted for or upon said invention in the United States of America and all countries foreign thereto.

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledge, WE, Yubao Wang, OF 10215 Summerfield Drive, Rolla, Missouri 65401, Mary Ann Hockey, OF 11120 County Road 5120, Rolla, Missouri 65401, Douglas J. Guerrero, OF 11145 Breeden Drive, Rolla, Missouri 65401, Vandana Krishnamurthy, OF 475 Countryside Drive, Rolla, Missouri 65401, and Robert C. Cox, OF 12300 Jeffery's Pl., Rolla, Missouri 65401, have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto said Brewer Science Inc., the full and exclusive right, title, and interest, throughout the world, in, to, and under the following:

- (a) said invention as fully set forth and described in said Application;
- (b) said Application Serial No. 13/862,720, filed April 15, 2013, and said U.S. Provisional Patent Application No. 61/624,805, filed April 16, 2012;
- (c) any and all refilings, divisions, and continuations of said Application;
- (d) any and all Letters Patent of the United States of America that may issue from said Application, refilings, divisions, and continuations;
- (e) any and all reissues of said Letters Patent of the United States of America;

(f) any and all applications for Letters Patent on said invention that have been, or may be, filed in any and all countries foreign to the United States of America, together with all rights to file and to claim priority in connection with said foreign-filed applications;

(g) any and all refilings, divisions, and continuations of said foreign-filed applications;

(h) any and all Letters Patent of countries foreign to the United States of America that

may issue from said foreign-filed applications, refilings, divisions, and continuations; and

(i) any and all extension of, and additions to, said Letters Patent of countries foreign

to the United States of America.

ALL of the above shall be held and enjoyed by said Brewer Science Inc. for its own use and behoof, and for its successors, legal representatives, and assigns, to the full end of the term for which said Letters Patent may be granted, and we do hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent in accordance with this Assignment.

Assignor(s) further agree to execute all paperwork and provide any other requested, non-monetary assistance in procuring, perfecting, enforcing, and/or defending Assignee's rights in the rights assigned herein.

Executed this 26 day of June, 2013.

Yubao
Yubao Wang

STATE OF Missouri:)
)SS.

COUNTY OF Phelps)

On this 26th day of June, 2013, before me personally appeared Yubao Wang, OF 10215 Summerfield Drive, Rolla, Missouri 65401, to me known to be the person described in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

Catherine M. Frank
Notary Public

My Commission Expires: 4/10/2015

CATHERINE M. FRANK
Notary Public-Notary Seal
State of Missouri-County of Phelps
My Commission Expires 4/10/2015
Commission # 11389650

Executed this 26 day of June, 2013

Mary Ann Hockey
Mary Ann Hockey

STATE OF Missouri)
)SS.

COUNTY OF Phelps)

On this 26th day of June, 2013, before me personally appeared Mary Ann Hockey, OF 11120 County Road 5120, Rolla, Missouri 65401, to me known to be the person described in and who executed the foregoing instrument, and she duly acknowledged to me that she executed the same for the uses and purposes therein set forth.

Catherine M. Frank
Notary Public

My Commission Expires: 4/10/2015

CATHERINE M. FRANK
Notary Public-Notary Seal
State of Missouri-County of Phelps
My Commission Expires 4/10/2015
Commission # 11389650

Executed this 23 day of July, 2013.

D Guerrero

Douglas J. Guerrero

STATE OF Missouri)
)SS.

COUNTY OF Phelps)

On this 23rd day of July, 2013, before me personally appeared Douglas J. Guerrero, OF 11145 Breeden Drive, Rolla, Missouri 65401, to me known to be the person described in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

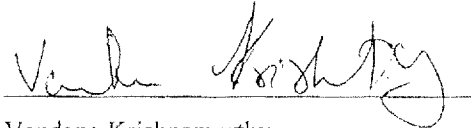
Catherine M. Frank

Notary Public

My Commission Expires: 4/10/2015

CATHERINE M. FRANK
Notary Public-Notary Seal
State of Missouri-County of Phelps
My Commission Expires 4/10/2015
Commission # 11389850

Executed this 26th day of June, 2013.

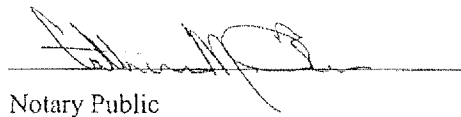


Vandana Krishnamurthy

STATE OF Missouri)
)SS.

COUNTY OF Phelps)

On this 26th day of June, 2013, before me personally appeared Vandana Krishnamurthy, OF 475 Countryside Drive, Rolla, Missouri 65401, to me known to be the person described in and who executed the foregoing instrument, and she duly acknowledged to me that she executed the same for the uses and purposes therein set forth.



Notary Public

My Commission Expires: 4/10/2015

CATHERINE M. FRANK
Notary Public-Notary Seal
State of Missouri-County of Phelps
My Commission Expires 4/10/2015
Commission # 11389850

Executed this 26 day of June, 2013

Robert Christian Cox
Robert C. Cox

Robert C. Cox

STATE OF Missouri)
)SS.

COUNTY OF Phelps)

On this 26th day of June, 2013, before me personally appeared Robert C. Cox, OF 12300 Jeffery's Pl., Rolla, Missouri 65401, to me known to be the person described in and who executed the foregoing instrument, and he duly acknowledged to me that he executed the same for the uses and purposes therein set forth.

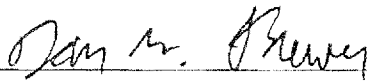
Notary Public

My Commission Expires: 4/10/2015

CATHERINE M. FRANK
Notary Public-Notary Seal
State of Missouri-County of Phelps
My Commission Expires 4/10/2015
Commission # 11389650

Brewer Science Inc. hereby declares it accepts the rights and property hereby assigned and transferred to it.

Brewer Science Inc.

By 
Dan Brewer