

## 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>Jinhong Tong</td> <td>08/15/2013</td> </tr> <tr> <td>Vidyut Gopal</td> <td>04/10/2013</td> </tr> <tr> <td>Imran Hashim</td> <td>08/09/2013</td> </tr> <tr> <td>Randall Higuchi</td> <td>08/09/2013</td> </tr> <tr> <td>Albert Lee</td> <td>08/14/2013</td> </tr> <tr> <td>Tim Minvielle</td> <td>04/10/2013</td> </tr> <tr> <td>Takeshi Yamaguchi</td> <td>04/10/2013</td> </tr> </tbody> </table> |                                  | Name  | Execution Date           | Jinhong Tong    | 08/15/2013                       | Vidyut Gopal | 04/10/2013 | Imran Hashim   | 08/09/2013 | Randall Higuchi | 08/09/2013 | Albert Lee | 08/14/2013 | Tim Minvielle | 04/10/2013 | Takeshi Yamaguchi | 04/10/2013 |
| Name   | Execution Date                   |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Jinhong Tong   | 08/15/2013                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Vidyut Gopal   | 04/10/2013                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Imran Hashim   | 08/09/2013                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Randall Higuchi  | 08/09/2013                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Albert Lee   | 08/14/2013                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Tim Minvielle  | 04/10/2013                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Takeshi Yamaguchi  | 04/10/2013                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| RECEIVING PARTY DATA   |                                  |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| <table border="1"> <tr> <td>Name:</td> <td>Intermolecular, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>3011 N. First Street</td> </tr> <tr> <td>City:</td> <td>San Jose</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>95134</td> </tr> </table>   |                                  | Name: | Intermolecular, Inc.     | Street Address: | 3011 N. First Street             | City:        | San Jose   | State/Country: | CALIFORNIA | Postal Code:    | 95134      |            |            |               |            |                   |            |
| Name:  | Intermolecular, Inc.             |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Street Address:  | 3011 N. First Street             |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| City:  | San Jose                         |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| State/Country:   | CALIFORNIA                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Postal Code:   | 95134                            |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| <table border="1"> <tr> <td>Name:</td> <td>Kabushiki Kaisha Toshiba</td> </tr> <tr> <td>Street Address:</td> <td>1-1, Shibaura 1-chome, Minato-Ku</td> </tr> <tr> <td>City:</td> <td>Tokyo</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>105-8001</td> </tr> </table>  |                                  | Name: | Kabushiki Kaisha Toshiba | Street Address: | 1-1, Shibaura 1-chome, Minato-Ku | City:        | Tokyo      | State/Country: | JAPAN      | Postal Code:    | 105-8001   |            |            |               |            |                   |            |
| Name:  | Kabushiki Kaisha Toshiba         |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Street Address:  | 1-1, Shibaura 1-chome, Minato-Ku |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| City:  | Tokyo                            |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| State/Country:   | JAPAN                            |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Postal Code:   | 105-8001                         |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| <table border="1"> <tr> <td>Name:</td> <td>SanDisk 3D LLC</td> </tr> <tr> <td>Street Address:</td> <td>601 McCarthy Boulevard</td> </tr> <tr> <td>City:</td> <td>Milpitas</td> </tr> <tr> <td>State/Country:</td> <td>CALIFORNIA</td> </tr> <tr> <td>Postal Code:</td> <td>95034</td> </tr> </table>   |                                  | Name: | SanDisk 3D LLC           | Street Address: | 601 McCarthy Boulevard           | City:        | Milpitas   | State/Country: | CALIFORNIA | Postal Code:    | 95034      |            |            |               |            |                   |            |
| Name:  | SanDisk 3D LLC                   |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Street Address:  | 601 McCarthy Boulevard           |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| City:  | Milpitas                         |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| State/Country:   | CALIFORNIA                       |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Postal Code:   | 95034                            |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| PROPERTY NUMBERS Total: 1  |                                  |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
| Property Type  | Number                           |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |
|  | PATENT                           |       |                          |                 |                                  |              |            |                |            |                 |            |            |            |               |            |                   |            |

502460716

REEL: 031030 FRAME: 0934

CH \$40.00 13306096

Application Number: 13306096

**CORRESPONDENCE DATA**

Fax Number: 4085825401  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
Phone: 4085825533  
Email: patents@intermolecular.com  
Correspondent Name: Intermolecular, Inc.  
Address Line 1: 3011 N. First Street  
Address Line 4: San Jose, CALIFORNIA 95134

ATTORNEY DOCKET NUMBER: IM0425\_US

NAME OF SUBMITTER: Manu Kashyap

Signature: /Manu Kashyap/

Date: 08/15/2013

Total Attachments: 4  
source=2013\_08\_15\_IM0425\_US\_AST#page1.tif  
source=2013\_08\_15\_IM0425\_US\_AST#page2.tif  
source=2013\_08\_15\_IM0425\_US\_AST#page3.tif  
source=2013\_08\_15\_IM0425\_US\_AST#page4.tif

## ASSIGNMENT OF PATENT APPLICATION

Whereas we the undersigned inventors have invented certain new and useful improvements as set forth in the patent application entitled:

### ATOMIC LAYER DEPOSITION OF ZIRCONIUM OXIDE FOR FORMING RESISTIVE-SWITCHING MATERIALS

(Atty. Docket No. IM0425\_US) for which we have executed an application for a United States Letters Patent filed on November 29, 2011 having the application number 13/306,096

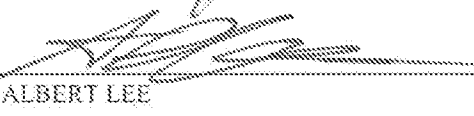
For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we the undersigned inventors hereby:

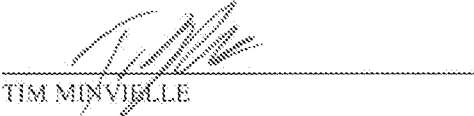
- 1) Sell, assign and transfer to Intermolecular, Inc., a Delaware corporation having a place of business at 3011 N. First Street, San Jose, California 95134 U.S., Kabushiki Kaisha Toshiba doing business at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan and SanDisk 3D LLC doing business at 601 McCarthy Boulevard, Milpitas, CA 95034 USA. (hereinafter referred to as "ASSIGNEE"), the entire right title and interest in any and all improvements and inventions disclosed in, application(s) based upon, and Patent(s) (including foreign patents) granted upon the information which is disclosed in the above referenced application.
- 2) Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said application or any division(s), continuation(s), substitutes(s) or reissue(s) thereof to the ASSIGNEE.
- 3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative and applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
- 4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon the inventor(s), as well as the inventor's heirs, legal representatives and assigns.
- 5) Warrant and represent that we have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.

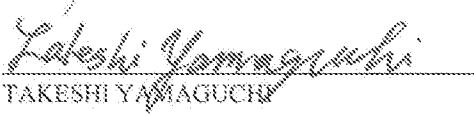
Signed on the dates indicated beside our signatures.

- 1) Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Typed Name: JINHONG TONG
- 2) Signature: Vidyun Gopal \_\_\_\_\_ Date: 04/10/2013  
Typed Name: VIDYUT GOPAL
- 3) Signature: Imran Hashim \_\_\_\_\_ Date: 8/9/13  
Typed Name: IMRAN HASHIM

4) Signature:  Date: 8/9/13  
Typed Name: RANDALL HIGUCHI

5) Signature:  Date: 8/14/13  
Typed Name: ALBERT LEE

6) Signature:  Date: 4/10/13  
Typed Name: TIM MINVILLE

7) Signature:  Date: 4/10/2013  
Typed Name: TAKESHI YAMAGUCHI

ASSIGNMENT OF PATENT APPLICATION

Whereas we the undersigned inventors have invented certain new and useful improvements as set forth in the patent application entitled:

ATOMIC LAYER DEPOSITION OF ZIRCONIUM OXIDE FOR FORMING RESISTIVE-SWITCHING MATERIALS

(Atty. Docket No. IM0425\_US) for which we have executed an application for a United States Letters Patent filed on November 29, 2011 having the application number 13/306,096

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we the undersigned inventors hereby:

- 1) Sell, assign and transfer to Intermolecular, Inc., a Delaware corporation having a place of business at 3011 N. First Street, San Jose, California 95134 U.S., Kabushiki Kaisha Toshiba doing business at 1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan and SanDisk 3D LLC doing business at 601 McCarthy Boulevard, Milpitas, CA 95034 USA, (hereinafter referred to as "ASSIGNEE"), the entire right title and interest in any and all improvements and inventions disclosed in, application(s) based upon, and Patent(s) (including foreign patents) granted upon the information which is disclosed in the above referenced application.
2) Authorize and request the Commissioner of Patents to issue any and all Letters Patents resulting from said application or any division(s), continuation(s), substitutes(s) or reissue(s) thereof to the ASSIGNEE.
3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative and applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the Assignee, its successors, assigns and other legal representative, and shall be binding upon the inventor(s), as well as the inventor's heirs, legal representatives and assigns.
5) Warrant and represent that we have not entered, and will not enter into any assignment, contract, or understanding that conflicts with this assignment.

Signed on the dates indicated beside our signatures.

1) Signature: [Handwritten Signature] Date: 08/15/13
Typed Name: JINHONG TONG
2) Signature: \_\_\_\_\_ Date: \_\_\_\_\_
Typed Name: VIDYUT GOPAL
3) Signature: \_\_\_\_\_ Date: \_\_\_\_\_
Typed Name: IMRAN HASHIM

- 4) Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Typed Name: RANDALL HIGUCHI
- 5) Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Typed Name: ALBERT LEE
- 6) Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Typed Name: TIM MINVIELLE
- 7) Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Typed Name: TAKESHI YAMAGUCHI