

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4806222

|                                                                                                                                                                                                 |                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT               |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                   |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                              |
| <b>Name</b>                                                                                                                                                                                     | <b>Execution Date</b>        |
| JING ZHANG                                                                                                                                                                                      | 08/10/2017                   |
| KRIS BHASKAR                                                                                                                                                                                    | 08/10/2017                   |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                              |
| <b>Name:</b>                                                                                                                                                                                    | KLA-TENCOR CORPORATION       |
| <b>Street Address:</b>                                                                                                                                                                          | ONE TECHNOLOGY DRIVE         |
| <b>City:</b>                                                                                                                                                                                    | MILPITAS                     |
| <b>State/Country:</b>                                                                                                                                                                           | CALIFORNIA                   |
| <b>Postal Code:</b>                                                                                                                                                                             | 95035                        |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                              |
| <b>Property Type</b>                                                                                                                                                                            | <b>Number</b>                |
| <b>Application Number:</b>                                                                                                                                                                      | 15603249                     |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                              |
| <b>Fax Number:</b>                                                                                                                                                                              |                              |
| <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>                                                                                                                                                                                   | 212-861-1352                 |
| <b>Email:</b>                                                                                                                                                                                   | mewherter@entropymatters.com |
| <b>Correspondent Name:</b>                                                                                                                                                                      | ENTROPY MATTERS LLC          |
| <b>Address Line 1:</b>                                                                                                                                                                          | P.O. BOX 2250                |
| <b>Address Line 4:</b>                                                                                                                                                                          | NEW YORK, NEW YORK 10021     |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | 5222-34500/P4936             |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | ANN MARIE MEWHERTER          |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /Ann Marie Mewherter/        |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 02/01/2018                   |
| <b>Total Attachments: 4</b>                                                                                                                                                                     |                              |
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| source=ASSIGNMENT34500P4936signed#page4.tif                                                                                                                                                     |                              |

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, does hereby:

SELL, ASSIGN AND TRANSFER to KLA-TENCOR CORPORATION (the "Assignee"), a Delaware corporation having its principal place of business at One Technology Drive, Milpitas, CA 95035 the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent Serial No. 15/603,249 filed May 23, 2017 entitled "GENERATING SIMULATED IMAGES FROM INPUT IMAGES FOR SEMICONDUCTOR APPLICATIONS," such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been or will be made to others by the undersigned, and that the full right to convey the same as herein expressed is possessed by the undersigned;

COVENANT that, when requested and at the expense of the Assignee, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all such improvements; execute all rightful oaths, declarations, assignments, powers of attorney and other papers; communicate to the Assignee all facts known to the undersigned relating to such improvements and the history thereof; and generally do everything possible which the Assignee shall consider desirable for securing, maintaining and enforcing proper patent protection for such improvements and for vesting title to such improvements in the Assignee; and

COVENANT AND AGREE that the above is and will be binding on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

(Signature) Jing Zhang  
Name: Jing Zhang

Date: 08/10/2017

STATE OF \_\_\_\_\_ §  
COUNTY OF \_\_\_\_\_ §

BEFORE ME, the undersigned authority, on this \_\_\_\_\_ day of \_\_\_\_\_, personally appeared Jing Zhang known to me to be the person whose name is subscribed to the foregoing instrument and acknowledge to me that he/she executed the same of his own free will for the purposes and consideration therein expressed.

[SEAL]

\_\_\_\_\_  
Witness, Notary or Consular Officer

(Signature) \_\_\_\_\_  
Name: Kris Bhaskar

Date: \_\_\_\_\_

STATE OF \_\_\_\_\_ §  
COUNTY OF \_\_\_\_\_ §

BEFORE ME, the undersigned authority, on this \_\_\_\_\_ day of \_\_\_\_\_, personally appeared Kris Bhaskar known to me to be the person whose name is subscribed to the foregoing instrument and acknowledge to me that he/she executed the same of his own free will for the purposes and consideration therein expressed.

[SEAL]

\_\_\_\_\_  
Witness, Notary or Consular Officer

Customer No. 61507  
Entropy Matters LLC  
P.O. Box 2250  
New York, NY 10021

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency and adequacy of which are hereby acknowledged, the undersigned, does hereby:

SELL, ASSIGN AND TRANSFER to KLA-TENCOR CORPORATION (the "Assignee"), a Delaware corporation having its principal place of business at One Technology Drive, Milpitas, CA 95035 the entire right, title and interest for the United States and all foreign countries, in and to any and all improvements which are disclosed in the application for United States Letters Patent Serial No. 15/603,249 filed May 23, 2017 entitled "GENERATING SIMULATED IMAGES FROM INPUT IMAGES FOR SEMICONDUCTOR APPLICATIONS," such application and all divisional, continuing, substitute, renewal, reissue and all other applications for patent which have been or shall be filed in the United States and all foreign countries on any of such improvements; all original and reissued patents which have been or shall be issued in the United States and all foreign countries on such improvements; and specifically including the right to file foreign applications under the provisions of any convention or treaty and claim priority based on such application in the United States;

AUTHORIZE AND REQUEST the issuing authority to issue any and all United States and foreign patents granted on such improvements to the Assignee;

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TO BE BINDING on the heirs, assigns, representatives and successors of the undersigned and extend to the successors, assigns and nominees of the Assignee.

(Signature) \_\_\_\_\_  
Name: Jing Zhang

Date: \_\_\_\_\_

STATE OF \_\_\_\_\_ §

COUNTY OF \_\_\_\_\_ §

BEFORE ME, the undersigned authority, on this \_\_\_\_\_ day of \_\_\_\_\_, personally appeared Jing Zhang known to me to be the person whose name is subscribed to the foregoing instrument and acknowledge to me that he/she executed the same of his own free will for the purposes and consideration therein expressed.

[SEAL]

\_\_\_\_\_  
Witness, Notary or Consular Officer

(Signature)   
Name: Kris Bhaskar

August 10, 2017  
Date: \_\_\_\_\_

STATE OF CA §

COUNTY OF Santa Clara §

August 10, 2017

BEFORE ME, the undersigned authority, on this \_\_\_\_\_ day of \_\_\_\_\_, personally appeared Kris Bhaskar known to me to be the person whose name is subscribed to the foregoing instrument and acknowledge to me that he/she executed the same of his own free will for the purposes and consideration therein expressed.

[SEAL]

\_\_\_\_\_  
Witness, Notary or Consular Officer

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New York, NY 10021