

PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| I-KANG DING | 07/31/2014 |
| BRENDAN M. KAYES | 07/30/2014 |
| ROSE TWIST | 07/31/2014 |
| SYLVIA SPRYUTTE | 07/30/2014 |
| FENG LIU | 08/01/2014 |
| GREGG HIGASHI | 07/30/2014 |
| MELISSA J. ARCHER | 07/31/2014 |
| GANG HE | 07/31/2014 |
| RECEIVING PARTY DATA | |
| Name: | ALTA DEVICES, INC. |
| Street Address: | 545 OAKMEAD PARKWAY |
| City: | SUNNYVALE |
| State/Country: | CALIFORNIA |
| Postal Code: | 94085 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 14452393 |
| CORRESPONDENCE DATA | |
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| Correspondent Name: | SAWYER LAW GROUP, P.C. |
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| Address Line 4: | PALO ALTO, CALIFORNIA 94303 |
| ATTORNEY DOCKET NUMBER: | 0053CIP/5043CIP |
| NAME OF SUBMITTER: | JOSEPH A. SAWYER, JR. |
| SIGNATURE: | /Joseph A. Sawyer, Jr./ |
| DATE SIGNED: | 08/05/2014 |

PATENT

This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 2

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**DECLARATION (37 CFR 1.63) FOR UTILITY PATENT APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT**

Title of Invention: **THIN-FILM SEMICONDUCTOR OPTOELECTRONIC DEVICE WITH
TEXTURED FRONT AND/OR BACK SURFACE PREPARED FROM TEMPLATE LAYER
AND ETCHING**

As a below named inventor, I hereby declare that:

This declaration is directed to:

- The attached application, or
- US application or PCT international application number _____ filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

I have reviewed and understand the contents of the application, including the claims.

I am aware of the duty to disclose to the United States Patent & Trademark Office all information known to me to be material to patentability as defined in 37 CFR Section 1.56.

Whereas, each undersigned inventor has made certain inventions, improvements, and discoveries (herein referred to as the "Invention") disclosed in the above-identified patent application;

Whereas, Alta Devices, Inc., a corporation organized under the laws of the state of Delaware, having a principal place of business at 545 Oakmead Parkway, Sunnyvale, CA 94085, desires to acquire, and each undersigned inventor desires to grant to Alta Devices, Inc., the entire worldwide right, title, and interest in and to the Invention and in and to any and all patent applications and patents directed thereto;

For good and valuable consideration, the receipt of which is hereby acknowledged, each undersigned inventor ("ASSIGNOR"), hereby sells, assigns and otherwise transfers to Alta Devices, Inc. (the "ASSIGNEE"), and its successors, assigns and legal representatives, the entire right, title and interest, for all countries in and to certain inventions described in an application for Letters Patent of the United States,

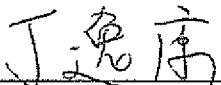
and the invention(s) and improvement(s) set forth therein, and any and all continuations, continuations-in-part, divisionals, and renewals of and substitutes for said application for said Letters Patent, and all the rights and privileges under any and all Letters Patent that may be granted therefore in any country, and any reissues, or reexaminations, or extensions of said Letters Patent. I request that any and all Letters Patent for said inventions be issued to said Assignee, its successors, assigns and legal representatives, or to such nominees as it may designate.

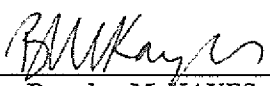
I agree that, when requested, I will, without charge to said Assignee but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents for said inventions in any and all countries and for vesting title thereto in said Assignee, its successors, assigns and legal representatives or nominees.

I authorize and empower the said Assignee, its successors, assigns and legal representatives or nominees, to invoke and claim for any application for patent or other form of protection for said inventions filed by it or them, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and to invoke and claim such right of priority without further written or oral authorization.

I hereby consent that this assignment shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of the said Assignee or nominee to claim the aforesaid benefit of the right of priority provided by the International convention which may henceforth be substituted for it.

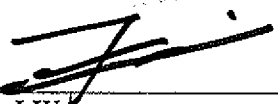
I covenant with said Assignee, its successors, assigns and legal representatives, that the rights and property herein conveyed are free and clear of any encumbrance, and that I have full right to convey the same as herein expressed. In witness whereof, I have hereunto signed my name on the day and year set forth below.

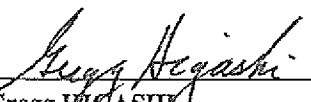
Inventor's Signature  Date: 7/31/2014
 Legal Name of Inventor: **I-Kang DING**

Inventor's Signature  Date: 7/30/2014
 Legal Name of Inventor: **Brendan M. KAYES**


Inventor's Signature  Date: 7-31-14
 Legal Name of Inventor: **Rose TWIST**

Inventor's Signature  Date: 7/30/2014
 Legal Name of Inventor: **Sylvia SPRYUTTE**

Inventor's Signature  Date: 8/1/2014
 Legal Name of Inventor: **Feng LIU**

Inventor's Signature  Date: 7-30-2014
 Legal Name of Inventor: **Gregg HIGASHI**

Inventor's Signature  Date: 7/31/14
 Legal Name of Inventor: **Melissa J. ARCHER**

Inventor's Signature  Date: 7/31/2014
 Legal Name of Inventor: **Gang HE**