505866671 01/15/2020

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NAGRAJ SHANKAR	04/26/2018
KAPU SIRISH REDDY	05/07/2018
JON HENRI	04/26/2018
PENGYI ZHANG	04/26/2018
ELHAM MOHIMI	04/27/2018
BHAVIN JARIWALA	04/27/2018
ARPAN PRAVIN MAHOROWALA	04/30/2018

RECEIVING PARTY DATA

Name:	LAM RESEARCH CORPORATION
Street Address:	4650 CUSHING PARKWAY
City:	FREMONT
State/Country:	CALIFORNIA
Postal Code:	94538

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16744022

CORRESPONDENCE DATA

Fax Number:

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.

Email: REQUEST@SLWIP.COM

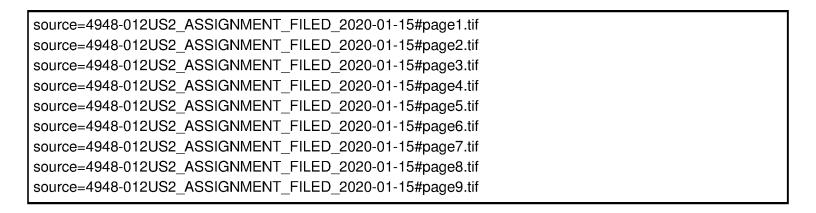
Correspondent Name: SCHWEGMAN LUNDBERG & WOESSNER, P.A.

Address Line 1: PO BOX 2938

Address Line 4: MINNEAPOLIS, MINNESOTA 55402

ATTORNEY DOCKET NUMBER:	4948.012US2
NAME OF SUBMITTER:	JONATHAN FERGUSON
SIGNATURE:	/JONATHAN FERGUSON/
DATE SIGNED:	01/15/2020

Total Attachments: 9



ASSIGNMENT

WHEREAS, Nagraj Shankar, Kapu Sirish Reddy, Jon Henri, Pengyi Zhang, Elham Mohimi, Bhavin Jariwala and Arpan Pravin Mahorowala (hereinafter the "Undersigned") have made one or more inventions and other subject matter (hereinafter collectively referred to as the "Invention"); as described in the patent application filed on May 7, 2018, assigned U.S. application number 15/972,918, and titled SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING.

FOR GOOD AND VALUABLE CONSIDERATION, the receipt, sufficiency, and adequacy of which are hereby acknowledged by the Undersigned, the Undersigned do hereby irrevocably and unconditionally:

CONVEY, ASSIGN, AND TRANSFER to Lam Research Corporation (the "Assignee"), a corporation of the State of Delaware, having a place of business at 4650 Cushing Parkway, Fremont, CA 94538-6470, the Undersigned's entire right, title, and interest for the United States and all foreign countries and jurisdictions in and to:

the Invention which is disclosed in the above-identified application or applications;

such application or applications, and all divisional, continuing (including continuation-in-part), substitute, renewal, reissue, and all other applications for a patent or patents which have been or shall be filed in the United States (including all provisional and non-provisional applications), and in all foreign countries and jurisdictions based in whole or in part on any of such Invention (including any application for a utility model or an innovation patent application);

all original and reissued patents which have been or shall be issued in the United States and all foreign countries and jurisdictions based in whole or in part on any of such Invention;

including the right to claim priority to the above-identified patent application or applications in relation to subject matter based in whole or in part on the above-identified patent application or applications and any of the foregoing including the right to file foreign applications under the provisions of any convention or treaty;

and including the right to all causes of action, remedies, and other enforcement rights related to the above-identified application or applications, including without limitation the right to sue for past, present, or future infringement, misappropriation, or violation of any and all rights related to the above-identified patent application or applications and any of the foregoing, including the right to obtain and collect damages for past, present, or future infringement;

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

Assignors: Nagraj Shankar et al.

Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

AUTHORIZE AND REQUEST that any attorney associated with U.S. Patent and Trademark Office

(USPTO) Customer No. 21186 may (directly or through his/her designee) delete, insert, or alter any information related to the above-identified patent application or applications or any of the foregoing, after

execution of this Assignment;

WARRANT AND COVENANT that no assignment, grant, mortgage, license or other agreement

affecting the rights and property herein conveyed has been or shall 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 without compensation, but at the expense of the Assignee, in

order to carry out in good faith the intent and purpose of this Assignment, the Undersigned shall (1) execute

all provisional, non-provisional, divisional, continuing (including continuation-in-part), substitute, renewal,

reissue, and all other patent applications for the Invention; (2) execute all rightful oaths, declarations,

assignments, powers of attorney and other papers for the Invention; (3) communicate to the Assignee all facts known to the Undersigned relating to the Invention and the history thereof; (4) cooperate with the

Assignee in any interference, reexamination, reissue, opposition, dispute, or litigation involving any of the

applications or patents for the Invention; and (5) take such further actions as the Assignee shall reasonably

consider necessary or desirable for vesting title to such Invention in the Assignee, or for securing, maintaining

and enforcing proper patent protection for the Invention;

COVENANT, that should any provision of this agreement be held unenforceable by an authority of

competent jurisdiction, such a ruling shall not affect the validity and enforceability of the remaining provisions. To the extent that any such provision is found to be unenforceable, the Undersigned, when

requested and without compensation shall act in good faith to substitute for such provision a new provision

with content and purpose as close as possible to the provision deemed unenforceable.

THIS AGREEMENT IS TO BE BINDING on the heirs, assigns, representatives, and successors of the

Undersigned, and is to extend to the benefit of the successors, assigns, and nominees of the Assignee.

AGREED as of the date of my signature below:

Assignors: Nagraj Shankar et al.

Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

Assignor:

Nagray Shankar (Signature):

Name: Nagraj Shankar City/State: Tualatin, OR

4/26/2018 Date:

Assignors: Nagraj Shankar et al.

Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

Assignor:

(Signature): / kapu Sirish Reddy

Name: Kapu Sirish Reddy

City/State: Portland, OR

Date: 5/7/2018

Assignors: Nagraj Shankar et al.
Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

Assignor:

(Signature):

Name: Jon Henri

City/State: West Linn, OR

Date: 4/26/2018

Assignors: Nagraj Shankar et al.
Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

Assignor:

(Signature):

Name: Pengyi Zhang City/State: Tigard, OR

Date: 4/26/2018

Assignors: Nagraj Shankar et al.

Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

Assignor:

(Signature): / Elliam Molimi

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Name: Elham Mohimi City/State: Hillsboro, OR

Date: 4/27/2018

Assignors: Nagraj Shankar et al.

Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

Assignor:

(Signature): / Bhavin Janiwala

,

Name: Bhavin Jariwala

City/State: Lake Oswego, OR

Date: 4/27/2018

Assignors: Nagraj Shankar et al.

Title: SELECTIVE DEPOSITION OF ETCH-STOP LAYER FOR ENHANCED PATTERNING

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Docket No: 4948.012US1 Client Ref. No. 9088-1US

Assignor:

(Signature):

Super R. When

Name: Arpan Pravin Mahorowala

City/State: West Linn, OR

Date: 4/30/2018

PATENT REEL: 051528 FRAME: 0123

RECORDED: 01/15/2020