#### 506597843 04/07/2021

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6644648

| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name                | Execution Date |
|---------------------|----------------|
| LEONARD TEDESCHI    | 03/27/2018     |
| BENJAMIN SCHWARZ    | 03/27/2018     |
| CHANGHUN LEE        | 03/08/2018     |
| PING HAN HSIEH      | 03/08/2018     |
| ADAUTO DIAZ         | 03/27/2018     |
| DANIEL T. MCCORMICK | 03/09/2018     |

#### **RECEIVING PARTY DATA**

| Name:           | applied Materials, Inc. |  |  |
|-----------------|-------------------------|--|--|
| Street Address: | 3050 Bowers Avenue      |  |  |
| City:           | Santa Clara             |  |  |
| State/Country:  | CALIFORNIA              |  |  |
| Postal Code:    | 95054                   |  |  |

#### **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 16709684 |

#### **CORRESPONDENCE DATA**

Fax Number: (503)796-2900

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.

Phone: (503) 222-9981

Email: bniksich@schwabe.com JUSTIN K. BRASK **Correspondent Name:** 

Address Line 1: 1211 SW FIFTH AVENUE

Address Line 2: **SUITE 1900** 

Address Line 4: PORTLAND, OREGON 97204

| ATTORNEY DOCKET NUMBER: | 024798US02DIV     |
|-------------------------|-------------------|
| NAME OF SUBMITTER:      | JUSTIN K. BRASK   |
| SIGNATURE:              | /Justin K. Brask/ |
| DATE SIGNED:            | 04/07/2021        |

# **Total Attachments: 15** source=4887.P1229D Assignment#page1.tif source=4887.P1229D Assignment#page2.tif source=4887.P1229D Assignment#page3.tif source=4887.P1229D Assignment#page4.tif source=4887.P1229D Assignment#page5.tif source=4887.P1229D Assignment#page6.tif source=4887.P1229D Assignment#page7.tif source=4887.P1229D Assignment#page8.tif source=4887.P1229D Assignment#page9.tif source=4887.P1229D Assignment#page10.tif source=4887.P1229D Assignment#page11.tif source=4887.P1229D Assignment#page12.tif source=4887.P1229D Assignment#page13.tif source=4887.P1229D Assignment#page14.tif source=4887.P1229D Assignment#page15.tif

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

Leonard Tedeschi, Benjamin Schwarz, Changhun Lee, Ping Han Hsieh, Adauto Diaz and Daniel T. McCormick

hereby sell, assign, and transfer to

#### Applied Materials, Inc.

a Corporation of Delaware having a principal place of business at 3050 Bowers Avenue, Santa Clara, CA 95054, United States, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which for the non-provisional application may have a declaration executed by the undersigned prior hereto or concurrently herewith and which application (provisional or non-provisional) is entitled

# WAFER BASED CORROSION & TIME DEPENDENT CHEMICAL EFFECTS

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Patent Application Number 15/480,337 filed April 5, 2017,

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continuation applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

| 3/22/18 | - Lelli                                             |  |
|---------|-----------------------------------------------------|--|
| Date    | Leonard Tedeschi                                    |  |
| 2/07/14 | , ASS                                               |  |
|         | Benjamin-Schwarz                                    |  |
|         |                                                     |  |
|         | sid nekagabagat nekarah di Masah dan kisisa da masa |  |

| Attorney Docket No. |  |  |
|---------------------|--|--|
|                     |  |  |
|                     |  |  |
|                     |  |  |

Patent

| <br>Date |   | Ping Han Hsieh      |  |    | ` |
|----------|---|---------------------|--|----|---|
|          | • |                     |  |    |   |
|          |   |                     |  |    |   |
| Date     |   | Adauto Diaz         |  |    |   |
|          |   |                     |  | *. |   |
|          |   |                     |  |    |   |
|          |   | 2                   |  |    |   |
| <br>Date |   | Daniel T. McCormick |  |    |   |

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

Leonard Tedeschi, Benjamin Schwarz, Changhun Lee, Ping Han Hsieh, Adauto Diaz and Daniel T. McCormick

hereby sell, assign, and transfer to

#### Applied Materials, Inc.

a Corporation of Delaware having a principal place of business at 3050 Bowers Avenue, Santa Clara, CA 95054, United States, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which for the non-provisional application may have a declaration executed by the undersigned prior hereto or concurrently herewith and which application (provisional or non-provisional) is entitled

#### WAFER BASED CORROSION & TIME DEPENDENT CHEMICAL EFFECTS

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Patent Application Number 15/480,337 filed April 5, 2017,

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continuation applications, continuation applications, continuation applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

| Date             | Leonard Tedeschi |
|------------------|------------------|
| Date             | Benjamin Schwarz |
| 3/8/20/P<br>Date | Changhun Lee     |

| Attorney | / Docket No. | 024798LISA | /ETCH/NEW | ET/CHAMBER/ | MDD  |
|----------|--------------|------------|-----------|-------------|------|
| MUDITION | DOCKEL NO.   | ひんせいひひひひつ  |           |             | いいしし |

Patent

| Date | Ping Han Hsieh      |
|------|---------------------|
| Date | Adauto Diaz         |
| Date | Daniel T. McCormick |

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

Leonard Tedeschi, Benjamin Schwarz, Changhun Lee, Ping Han Hsieh, Adauto Diaz and Daniel T. McCormick

hereby sell, assign, and transfer to

#### Applied Materials, Inc.

a Corporation of Delaware having a principal place of business at 3050 Bowers Avenue, Santa Clara, CA 95054, United States, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which for the non-provisional application may have a declaration executed by the undersigned prior hereto or concurrently herewith and which application (provisional or non-provisional) is entitled

### WAFER BASED CORROSION & TIME DEPENDENT CHEMICAL EFFECTS

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Patent Application Number 15/480,337 filed April 5, 2017,

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

|        | Date |                                         | Leonard  | Tedeschi  |                                       | X |  |
|--------|------|-----------------------------------------|----------|-----------|---------------------------------------|---|--|
|        |      |                                         |          |           |                                       |   |  |
|        | Date |                                         | Benjamir | n Schwarz |                                       |   |  |
|        |      | *************************************** |          |           | · · · · · · · · · · · · · · · · · · · |   |  |
| ./ . , | Date |                                         | Changhu  | ın Lee    |                                       |   |  |

| 03/08/2018 | SMIM STATE          |
|------------|---------------------|
| Date       | Ping Han Hsieh      |
|            |                     |
| Date       | Adauto Diaz         |
| Date       | Daniel T. McCormick |

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

Leonard Tedeschi, Benjamin Schwarz, Changhun Lee, Ping Han Hsieh, Adauto Diaz and Daniel T. McCormick

hereby sell, assign, and transfer to

#### Applied Materials, Inc.

a Corporation of Delaware having a principal place of business at 3050 Bowers Avenue, Santa Clara, CA 95054, United States, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which for the non-provisional application may have a declaration executed by the undersigned prior hereto or concurrently herewith and which application (provisional or non-provisional) is entitled

### WAFER BASED CORROSION & TIME DEPENDENT CHEMICAL EFFECTS

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Patent Application Number 15/480,337 filed April 5, 2017,

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continuation applications, continuation applications, continuation applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

| Date | Leonard Tedeschi |  |
|------|------------------|--|
| Date | Benjamin Schwarz |  |
| Date | Changhun Lee     |  |

| March 27 <sup>17</sup> 2018 Adauto Diaz | Date   | Ping Han Hsieh |
|-----------------------------------------|--------|----------------|
| Date ( Adauto Diaz                      |        |                |
|                                         | Date ( | Adauto Diaz    |

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

Leonard Tedeschi, Benjamin Schwarz, Changhun Lee, Ping Han Hsieh, Adauto Diaz and Daniel T. McCormick

hereby sell, assign, and transfer to

## Applied Materials, Inc.

a Corporation of Delaware having a principal place of business at 3050 Bowers Avenue, Santa Clara, CA 95054, United States, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which for the non-provisional application may have a declaration executed by the undersigned prior hereto or concurrently herewith and which application (provisional or non-provisional) is entitled

# WAFER BASED CORROSION & TIME DEPENDENT CHEMICAL EFFECTS

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

United States Patent Application Number 15/480,337 filed April 5, 2017,

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continuation applications, continuation applications, continuation applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

| Date     | Leonard Tedeschi |  |  |
|----------|------------------|--|--|
|          |                  |  |  |
|          |                  |  |  |
| <br>Date | Benjamin Schwarz |  |  |
|          |                  |  |  |
| Date     | Changhun Lee     |  |  |

| Date          | Ping Han Hsieh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |   |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |
| Date          | Adauto Diaz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2 |
| March 9, 2018 | W. Carrier and Control of the Contro |   |
| Date          | Daniel F. McCormick                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |