TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 ETAS ID: TM487648

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

CONVEYING PARTY DATA

| Name | Formerly | Execution Date | Entity Type |
|--------------------------|----------|----------------|-----------------------|
| MATTSON TECHNOLOGY, INC. | | 08/21/2018 | Corporation: DELAWARE |

RECEIVING PARTY DATA

| Name: | EAST WEST BANK |
|-----------------|---------------------------------------|
| Street Address: | 2350 Mission College Blvd., Suite 988 |
| City: | Santa Clara |
| State/Country: | CALIFORNIA |
| Postal Code: | 95054 |
| Entity Type: | Corporation: CALIFORNIA |

PROPERTY NUMBERS Total: 12

| Property Type | Number | Word Mark |
|----------------------|----------|------------------------------|
| Serial Number: | 87563778 | MATTSON TECHNOLOGY |
| Serial Number: | 87563850 | ATOMIC SURFACE ENGINEERING |
| Serial Number: | 87563834 | ATOMIC INTERFACE ENGINEERING |
| Serial Number: | 87715568 | AGILIS |
| Serial Number: | 87688747 | NOVYKA |
| Registration Number: | 3363448 | SUPREMA |
| Registration Number: | 3998402 | MILLIOS |
| Registration Number: | 3655138 | PARADIGME |
| Registration Number: | 3544715 | ALPINE |
| Registration Number: | 1438539 | VORTEK |
| Serial Number: | 88082123 | ASPEN |
| Serial Number: | 88064123 | SCISSORBOT |

CORRESPONDENCE DATA

Fax Number: 6506440520

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: 6506483802

Email: patty@pattycheng.com

Correspondent Name: Patty Cheng

TRADEMARK

REEL: 006423 FRAME: 0230 900463887

| Address Line 1: | 2625 MIDDLEFIELD ROAD, SUITE 215 |
|--|---|
| Address Line 4: | Palo Alto, CALIFORNIA 94306 |
| NAME OF SUBMITTER: | Patty Cheng |
| SIGNATURE: | /s/ Patty Cheng |
| DATE SIGNED: | 08/27/2018 |
| Total Attachments: 13 source=Mattson - IPSA- exc | ecuted#page2.tif ecuted#page3.tif ecuted#page4.tif ecuted#page5.tif ecuted#page6.tif ecuted#page6.tif ecuted#page7.tif ecuted#page8.tif |
| source=Mattson - IPSA- exc source=Mattson - IPSA- exc source=Mattson - IPSA- exc source=Mattson - IPSA- exc | ecuted#page10.tif ecuted#page11.tif |

source=Mattson - IPSA- executed#page13.tif

INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement is entered into as of August <u>U</u>, 2018 by and between Mattson Technology, Inc., a Delaware corporation ("Borrower"), and East West Bank, a California corporation ("Lender").

RECITALS

Lender has agreed to make certain advances of money and to extend certain financial accommodations to Borrower under that certain Loan and Security Agreement by and between Lender and Borrower dated of even date herewith (as amended, restated, modified or otherwise supplemented from time to time, the "Loan Agreement"). Capitalized terms used herein are used as defined in the Loan Agreement. Pursuant to the terms of the Loan Agreement, Borrower has granted to Lender a security interest in its personal property.

NOW, THEREFORE, Borrower agrees as follows:

AGREEMENT

To secure its obligations under the Loan Agreement and under any other agreement now existing or hereafter arising between Borrower and Lender, subject to any applicable limitations on the collateral set forth in the Loan Agreement, Borrower grants to Lender a security interest in all of Borrower's right, title and interest in, its intellectual property (including without limitation those copyrights, patents and trademarks listed on Schedules A, B and C hereto) and all proceeds thereof (such as, by way of example but not by way of limitation, license royalties and proceeds of infringement suits), the right to sue for past, present and future infringements, all rights corresponding thereto throughout the world and all re-issues, divisions continuations, renewals, extensions and continuations-in-part thereof. Borrower represents and warrants that Schedules A, B, and C attached hereto set forth as of the date hereof any and all intellectual property rights in connection to which Borrower has registered or filed an application with either the United States Patent and Trademark Office or the United States Copyright Office, as applicable.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute the same instrument. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original hereof.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

BORROWER:

| Address of Borrower: 47131 Bayside Parkway Fremont, CA 94538 Attn: Tyler Purvis FAX: (510) 492-5963 EMAIL: Tyler.Purvis@Mattson.com | Mattson Technology, Inc. By: hard way Name: Tyler Purvis Title: SVV, LAD and Corp. Controller |
|--|--|
| Address of Lender: | LENDER: East West Bank |
| 2350 Mission College Blvd., Suite 988 Santa Clara, CA 95054 Attn: Kelvin Chan | By:Name: |

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed by its officers thereunto duly authorized as of the first date written above.

BORROWER:

| Address of Borrower: | Mattson Technology, Inc. |
|--|--------------------------|
| 47131 Bayside Parkway Fremont, CA 94538 Attn: Tyler Purvis FAX: (510) 492-5963 EMAIL: Tyler.Purvis@Mattson.com | By: Name: Title: |
| | LENDER: |
| Address of Lender: | East West Bank |
| 2350 Mission College Blvd., Suite 988 | Ву: |
| Santa Clara, CA 95054 | Name: Kelvin Chan |
| Attn: Kelvin Chan | Title: Managing Director |

SCHEDULE A

Copyrights

| | Registration | Registration |
|--------------------|---------------|--------------|
| <u>Description</u> | <u>Number</u> | <u>Date</u> |
| None | | |

SCHEDULE B

PATENTS *Indicates expired

| Title Description | Patent/App. Number | Issue/App. Date |
|--|-----------------------|-----------------|
| INTEGRATED VACUUM AND PLATING CLUSTER SYSTEM | 6017820 * | 25-Jan-2000 |
| APPARATUS AND PROCESS FOR MEASURING THE TEMPERATURE OF SEMICONDUCTOR WAFERS IN THE PRESENCE OF RADIATION ABSORBING GASES | 6034357 * | 07-Mar-2000 |
| METHOD OF MEASURING ELECTROMAGNETIC RADIATION | 6191392 | 20-Feb-2001 |
| PROCESS FOR FORMING THIN DIELECTRIC LAYERS IN SEMICONDUCTOR DEVICES | 6281141 | 28-Aug-2001 |
| HIGH-TEMPERATURE SHORT TIME CURING OF LOW DIELECTRIC CONSTANT MATERIALS USING RAPID THERMAL PROCESSING TECHNIQUES | 6303524 | 16-Oct-2001 |
| SPATIALLY RESOLVED TEMPERATURE MEASUREMENT AND IRRADIANCE CONTROL | 6303411 | 16-Oct-2001 |
| METHOD OF MEASURING ELECTROMAGNETIC RADIATION | 6369363 | 09-Apr-2002 |
| SYSTEMS AND METHODS FOR EPITAXIAL PROCESSING OF A SEMICONDUCTOR SUBSTRATE | 6436796 | 20-Aug-2002 |
| GAS DRIVEN ROTATING SUSCEPTOR FOR RAPID THERMAL PROCESSING (RTP) SYSTEMS | 6449428 | 10-Sep-2002 |
| OPTICAL RADIATION MEASUREMENT APPARATUS | 6462315 | 08-Oct-2002 |
| SPATIALLY RESOLVED TEMPERATURE MEASUREMENT AND IRRADIANCECONTROL | 6534752 | 18-Mar-2003 |
| WINDOWS USED IN THERMAL PROCESSING CHAMBERS | 6559424 | 06-May-2003 |
| METHOD AND DEVICE FOR CALIBRATING MEASUREMENTS OF TEMPERATURES INDEPENDENT OF EMISSIVITY | 6561694 | 13-May-2003 |
| METHOD OF PRODUCING A SEMICONDUCTOR SURFACE COVERED WITH FLUORINE | 6566271 | 20-May-2003 |
| HEAT TREATING METHODS AND SYSTEMS | 6594446 | 15-Jul-2003 |
| RAPID THERMAL PROCESSING SYSTEM FOR INTEGRATED CIRCUITS | 6600138 | 29-Jul-2003 |
| DEVICE AND METHOD FOR THERMALLY TREATING SUBSTRATES | 6614005 | 02-Sep-2003 |
| HIGH INTENSITY ELECTROMAGNETIC RADIATION APPARATUS AND METHOD | 6621199 | 16-Sep-2003 |
| DOOR SYSTEMS FOR LOW CONTAMINATION, HIGH THROUGHPUT HANDLING OF WORKPIECES FOR VACUUM PROCESSING | 6647665 | 18-Nov-2003 |
| SYSTEMS AND METHODS FOR ENHANCING PLASMA PROCESSING OF A SEMICONDUCTOR SUBSTRATE | 6706142 | 16-Mar-2004 |
| HEATING DEVICE FOR HEATING SEMICONDUCTOR WAFERS IN THERMAL PROCESSING CHAMBERS | 6717158 | 06-Apr-2004 |

| Title Description | Patent/App. Number | Issue/App. Date |
|---|-----------------------|-----------------|
| METHOD AND APPARATUS FOR THE THERMAL TREATMENT OF SUBSTRATES | 6752625 | 22-Jun-2004 |
| HEATING DEVICE FOR HEATING SEMICONDUCTOR WAFERS IN THERMAL PROCESSING CHAMBERS | 6771895 | 03-Aug-2004 |
| METHOD AND SYSTEM FOR ROTATING A SEMICONDUCTOR WAFER IN PROCESSING CHAMBERS | 6770146 | 03-Aug-2004 |
| ADJUSTING OF DEFECT PROFILES IN CRYSTAL OR CRYSTALLINE-LIKE STRUCTURES | 6809011 | 26-Oct-2004 |
| PULSE PRECURSOR DEPOSITION PROCESS FOR FORMING LAYERS IN SEMICONDUCTOR DEVICES | 6808758 | 26-Oct-2004 |
| METHOD FOR THE REMOVAL OF ABSORBED MOLECULES FROM A CHAMBER | 6830631 | 14-Dec-2004 |
| APPARATUS AND METHOD FOR REDUCING STRAY LIGHT IN SUBSTRATE PROCESSING CHAMBERS | 6835914 | 28-Dec-2004 |
| APPARATUS AND METHOD FOR MEASURING THE TEMPERATURE OF SUBSTRATES | 6847012 | 25-Jan-2005 |
| PULSED PROCESSING SEMICONDUCTOR HEATING METHODS USING COMBINATIONS OF HEATING SOURCES | 6849831 | 01-Feb-2005 |
| SYSTEMS AND METHODS FOR EPITAXIALLY DEPOSITING FILMS ON A SEMICONDUCTOR SUBSTRATE | 6902622 | 07-Jun-2005 |
| METHOD FOR RAPIDLY HEATING AND COOLING SEMICONDUCTOR WAFERS | 6919271 | 19-Jul-2005 |
| HEAT TREATING METHODS AND SYSTEMS | 6941063 | 06-Sep-2005 |
| PULSED PROCESSING SEMICONDUCTOR HEATING METHODS USING COMBINATIONS OF HEATING SOURCES | 6951996 | 04-Oct-2005 |
| APPARATUS FOR THERMAL TREATMENT OF SUBSTRATES | 6953338 | 11-Oct-2005 |
| HEAT TREATING METHODS AND SYSTEMS | 6963692 | 08-Nov-2005 |
| HEATING CONFIGURATION FOR USE IN THERMAL PROCESSING CHAMBERS | 6970644 | 29-Nov-2005 |
| SYSTEM AND PROCESS FOR HEATING SEMICONDUCTOR WAFERS BY OPTIMIZING ABSORPTION OF ELECTROMAGNETIC ENERGY | 7015422 | 21-Mar-2006 |
| A HEATING DEVICE FOR HEATING SEMICONDUCTOR WAFERS IN THERMAL PROCESSING CHAMBERS | 7038174 | 02-May-2006 |
| LOCALIZED HEATING AND COOLING OF SUBSTRATES | 7037797 | 02-May-2006 |
| METHOD AND APPARATUS FOR THE THERMAL TREATMENT OF SUBSTRATES | 7041610 | 09-May-2006 |
| SHADOW-FREE SHUTTER ARRANGEMENT AND METHOD | 7045746 | 16-May-2006 |
| METHOD AND DEVICE FOR THERMAL TREATMENT OF SUBSTRATES | 7056389 | 06-Jun-2006 |
| METHOD FOR MINIMIZING THE VAPOR DEPOSITION OF TUNGSTEN OXIDE DURING THE SELECTIVE SIDE WALL OXIDATION OF TUNGSTEN-SILICON GATES | 7094637 | 22-Aug-2006 |

| Title Description | Patent/App. Number | Issue/App. Date |
|---|-----------------------|-----------------|
| METHOD AND APPARATUS FOR THERMALLY TREATING DISK-SHAPED SUBSTRATES | 7098157 | 29-Aug-2006 |
| METHOD OF FORMING AND/OR MODIFYING A DIELECTRIC FILM ON A SEMICONDUCTOR SUBSTRATE | 7101812 | 05-Sep-2006 |
| SELECTIVE REFLECTIVITY PROCESS CHAMBER WITH CUSTOMIZED WAVELENGTH RESPONSE AND METHOD | 7115837 | 03-Oct-2006 |
| APPARATUS AND METHOD FOR REDUCING STRAY LIGHT IN SUBSTRATE CHAMBERS | 7135656 | 14-Nov-2006 |
| METHOD AND APPARATUS FOR THE PRODUCTION OF PROCESS GAS THAT INCLUDES WATER VAPOR AND HYDROGEN FORMED BY BURNING OXYGEN IN A HYDROGEN-RICH ENVIRONMENT | 7144826 | 05-Dec-2006 |
| METHOD FOR THERMALLY TREATING A SUBSTRATE THAT COMPRISES SEVERAL LAYERS | 7144747 | 05-Dec-2006 |
| DEVICE AND METHOD FOR THERMALLY TREATING SEMICONDUCTOR WAFERS | 7151060 | 19-Dec-2006 |
| METHOD OF PRODUCING A CALIBRATION WAFER | 7169717 | 30-Jan-2007 |
| APPARATUSES AND METHODS FOR RESISTIVELY HEATING A THERMAL PROCESSING SYSTEM | 7176417 | 13-Feb-2007 |
| ENHANCED RAPID THERMAL PROCESSING APPARATUS AND METHOD | 7184657 | 27-Feb-2007 |
| FAST HEATING AND COOLING APPARATUS FOR SEMICONDUCTOR WAFERS | 7226488 | 05-Jun-2007 |
| SLOTTED ELECTROSTATIC SHIELD MODIFICATION FOR IMPROVED ETCH AND CVD PROCESS UNIFORMITY | 7232767 | 19-Jun-2007 |
| HEATING CONFIGURATION FOR USE IN THERMAL PROCESSING CHAMBERS | 7269343 | 11-Sep-2007 |
| MULTI-WORKPIECE PROCESSING CHAMBER | 7276122 | 02-Oct-2007 |
| METHOD AND APPARATUS FOR THERMALLY TREATING SUBSTRATES | 7316969 | 08-Jan-2008 |
| PULSED PROCESSING SEMICONDUCTOR HEATING METHODS USING COMBINATIONS OF HEATING SOURCES | 7317870 | 08-Jan-2008 |
| APPARATUS AND METHOD FOR REDUCING STRAY LIGHT IN SUBSTRATE PROCESSING CHAMBERS | 7358462 | 15-Apr-2008 |
| SYSTEM AND METHOD FOR REMOVAL OF PHOTORESIST AND RESIDUES FOLLOWING CONTACT ETCH WITH A STOP LAYER PRESENT | 7361605 | 22-Apr-2008 |
| ENHANCED RAPID THERMAL PROCESSING APPARATUS AND METHOD | 7398014 | 08-Jul-2008 |
| PROCESS FOR DETERMINING THE TEMPERATURE OF A SEMICONDUCTOR WAFER IN A RAPID HEATING UNIT | 7412299 | 12-Aug-2008 |
| TEMPERATURE MEASUREMENT AND HEAT-TREATING METHODS AND SYSTEMS | 7445382 | 04-Nov-2008 |

| Title Description | Patent/App. Number | Issue/App. Date |
|---|-----------------------|-----------------|
| SYSTEM AND PROCESS FOR HEATING SEMICONDUCTOR WAFERS BY OPTIMIZING ABSORPTION OF ELECTROMAGNETIC ENERGY | 7453051 | 18-Nov-2008 |
| APPARATUSES AND METHODS FOR SUPPRESSING THERMALLY-INDUCED MOTION OF A WORKPIECE | 7501607 | 10-Mar-2009 |
| APPARATUS AND METHOD FOR MEASURING THE TEMPERATURE OF SUBSTRATES | 7528348 | 05-May-2009 |
| METHODS FOR DETERMINING WAFER TEMPERATURE | 7543981 | 09-Jun-2009 |
| LOW COST HIGH THROUGHPUT PROCESSING PLATFORM | 7563068 | 21-Jul-2009 |
| A HEATING DEVICE FOR HEATING SEMICONDUCTOR WAFERS IN THERMAL PROCESSING CHAMBERS | 7608802 | 27-Oct-2009 |
| TEMPERATURE MEASUREMENT AND HEAT-TREATING METHODS AND SYSTEMS | 7616872 | 10-Nov-2009 |
| RAPID THERMAL PROCESSING USING ENERGY TRANSFER LAYERS | 7642205 | 05-Jan-2010 |
| END EFFECTORS FOR HANDLING SEMICONDUCTOR WAFERS | 7654596 | 02-Feb-2010 |
| ADVANCED LOW COST HIGH THROUGHPUT PROCESSING PLATFORM | 7658586 | 09-Feb-2010 |
| METHOD FOR THE THERMAL TREATMENT OF DISK-SHAPED SUBSTRATES | 7704898 | 27-Apr-2010 |
| SYSTEM AND PROCESS FOR CALIBRATING PYROMETERS IN THERMAL PROCESSING CHAMBERS | 7734439 | 08-Jun-2010 |
| SELECTIVE REFLECTIVITY PROCESS CHAMBER WITH CUSTOMIZED WAVELENGTH RESPONSE AND METHOD | 7737385 | 15-Jun-2010 |
| DETERMINING THE POSITION OF A SEMICONDUCTOR SUBSTRATE ON A ROTATION DEVICE | 7746482 | 29-Jun-2010 |
| OPTIMIZING THE THERMAL BUDGET DURING A PULSED HEATING PROCESS | 7745762 | 29-Jun-2010 |
| HIGH INTENSITY ELECTROMAGNETIC RADIATION APPARATUS AND METHODS | 7781947 | 24-Aug-2010 |
| SYSTEM & METHOD FOR REMOVAL OF PHOTORESIST IN TRANSISTOR FABRICATION FOR INTEGRATED CIRCUIT MANUFACTURING | 7799685 | 21-Sep-2010 |
| SYSTEM AND PROCESS FOR HEATING SEMICONDUCTOR WAFERS BY OPTIMIZING ABSORPTION OF ELECTROMAGNETIC ENERGY | 7847218 | 07-Dec-2010 |
| HEATING CONFIGURATION FOR USE IN THERMAL PROCESSING CHAMBERS | 7949237 | 24-May-2011 |
| POST ION IMPLANT PHOTORESIST STRIP USING A PATTERN FILL AND METHOD | 7947605 | 24-May-2011 |
| SYSTEM AND PROCESS FOR CALIBRATING PYROMETERS IN THERMAL PROCESSING CHAMBERS | 7957926 | 07-Jun-2011 |

| Title Description | Patent/App. Number | Issue/App. Date |
|--|-----------------------|-----------------|
| WORKPIECE SUPPORT WITH FLUID ZONES FOR TEMPERATURE CONTROL | 7972444 | 05-Jul-2011 |
| DETERMINING THE TEMPERATURE OF SILICON AT HIGH TEMPERATURES | 7976216 | 12-Jul-2011 |
| METHOD AND SYSTEM FOR THERMALLY PROCESSING A PLURALITY OF WAFER-SHAPED OBJECTS | 7977258 | 12-Jul-2011 |
| PULSED PROCESSING SEMICONDUCTOR HEATING METHODS AND ASSOCIATED SYSTEM USING COMBINATIONS OF HEATING SOURCES | 8000587 | 16-Aug-2011 |
| IRRADIANCE PULSE HEAT-TREATING METHODS AND APPARATUS | 8005351 | 23-Aug-2011 |
| MULTI-WORKPIECE PROCESSING CHAMBER | 8066815 | 29-Nov-2011 |
| AADVANCED PROCESSING TECHNIQUE AND SYSTEM FOR PRESERVING TUNGSTEN IN A DEVICE STRUCTURE | 8093157 | 10-Jan-2012 |
| END EFFECTORS FOR HANDLING SEMICONDUCTOR WAFERS | 8109549 | 07-Feb-2012 |
| A HEATING DEVICE FOR HEATING SEMICONDUCTOR WAFERS IN THERMAL PROCESSING CHAMBERS | 8138451 | 20-Mar-2012 |
| RAPID THERMAL PROCESSING USING ENERGY TRANSFER LAYERS | 8138105 | 20-Mar-2012 |
| METHOD AND SYSTEM FOR DETERMINING OPTICAL PROPERTIES OF SEMICONDUCTOR WAFERS | 8152365 | 10-Apr-2012 |
| METHODS FOR DETERMINING WAFER TEMPERATURE | 8157439 | 17-Apr-2012 |
| SYSTEM AND PROCESS FOR HEATING SEMICONDUCTOR WAFERS BY OPTIMIZING ABSORPTION OF ELECTROMAGNETIC ENERGY | 8222570 | 17-Jul-2012 |
| METHOD AND APPARATUS FOR GROWING THIN OXIDE FILMS ON SILICON WHILE MINIMIZING IMPACT ON EXISTING STRUCTURES | 8236706 | 07-Aug-2012 |
| CALIBRATION SUBSTRATE AND METHOD OF CALIBRATION THEREFOR | 8282272 | 09-Oct-2012 |
| SYSTEM AND PROCESS FOR CALIBRATING PYROMETERS IN THERMAL PROCESSING CHAMBERS | 8296091 | 23-Oct-2012 |
| VERFAHREN UND VORRICHTUNG ZUR ERMITTLUNG VON MESSWERTEN/METHOD AND APPARATUS TO DETERMINE MEASUREMENT VALUES | 833,5658 | 18-Dec-2012 |
| HIGH INTENSITY ELECTROMAGNETIC RADIATION APPARATUS AND METHODS | 8384274 | 26-Feb-2013 |
| ELECTROSTATIC CHUCK SYSTEM AND PROCESS FOR RADIALLY TUNING THE TEMPERATURE PROFILE ACROSS THE SURFACE OF A SUBSTRATE | 8405005 | 26-Mar-2013 |
| SLOTTED ELECTROSTATIC SHIELD MODIFICATION FOR IMPROVED ETCH AND CVD PROCESS UNIFORMITY | 8413604 | 09-Apr-2013 |

| Title Description | Patent/App. Number | Issue/App. Date |
|---|--------------------|-----------------|
| METHODS AND SYSTEMS FOR SUPPORTING A WORKPIECE AND FOR HEAT TREATING THE WORKPIECE | 8434341 | 07-May-2013 |
| INDUCTIVE PLASMA SOURCE WITH HIGH COUPLING EFFICIENCY | 8444870 | 21-May-2013 |
| APPARATUS FOR THERMALLY TREATING SEMICONDUCTOR SUBSTRATES | 8450652 | 28-May-2013 |
| SYSTEMS AND METHODS FOR SUPPORTING A WORKPIECE DURING HEAT-TREATING | 8454356 | 04-Jun-2013 |
| RAPID THERMAL PROCESSING USING ENERGY TRANSFER LAYERS | 8557721 | 15-Oct-2013 |
| MONITORING WITNESS STRUCTURES FOR TEMPERATURE CONTROL IN RTP SYSTEMS | 8575521 | 05-Nov-2013 |
| END EFFECTORS FOR HANDLING SEMICONDUCTOR WAFERS | 8622451 | 07-Jan-2014 |
| SYSTEM AND PROCESS FOR HEATING SEMICONDUCTOR WAFERS BY OPTIMIZING ABSORPTION OF ELECTROMAGNETIC ENERGY | 8669496 | 11-Mar-2014 |
| METHODS FOR DETERMINING WAFER TEMPERATURE | 8668383 | 11-Mar-2014 |
| LOW COST HIGH THROUGHPUT PROCESSING PLATFORM | 8668422 | 11-Mar-2014 |
| IRRADIANCE PULSE HEAT-TREATING METHODS AND APPARATUS | 8693857 | 08-Apr-2014 |
| METHOD AND SYSTEM FOR DETERMINING OPTICAL PROPERTIES OF SEMICONDUCTOR WAFERS | 8696197 | 15-Apr-2014 |
| METHOD FOR FORMING MICRO LENSES | 8801947 | 12-Aug-2014 |
| PULSED PROCESSING SEMICONDUCTOR HEATING METHODS AND ASSOCIATED SYSTEM USING COMBINATIONS OF HEATING SOURCES | 8837923 | 16-Sep-2014 |
| SYSTEM AND PROCESS FOR CALIBRATING PYROMETERS IN THERMAL PROCESSING CHAMBERS | 8918303 | 23-Dec-2014 |
| INDUCTIVE PLASMA SOURCE WITH HIGH COUPLING EFFICIENCY | 8920600 | 30-Dec-2014 |
| PLASMA REACTOR WITH INDUCTIVE EXCITATION OF PLASMA AND EFFICIENT REMOVAL OF HEAT FROM THE EXCITATION COIL | 8992725 | 31-Mar-2015 |
| WORKPIECE BREAKAGE PREVENTION METHOD AND APPARATUS | 9070590 | 30-Jun-2015 |
| APPARATUS FOR THE HEAT TREATMENT OF DISC SHAPED SUBSTRATES | 9111970 | 18-Aug-2015 |
| ADVANCED MULTI-WORKPIECE PROCESSING CHAMBER | 9184072 | 10-Nov-2015 |
| HIGH EFFICIENCY PLASMA SOURCE | 9214319 | 15-Dec-2015 |
| APPARATUS AND METHODS FOR GENERATING ELECTROMAGNETIC RADIATION | 9245730 | 26-Jan-2016 |

| Title Description | Patent/App. Number | Issue/App. Date |
|---|-----------------------|-----------------|
| METHODS, APPARATUS AND MEDIA FOR DETERMINING A SHAPE OF AN IRRADIANCE PULSE TO WHICH A WORKPIECE IS TO BE EXPOSED | 9279727 | 08-Mar-2016 |
| NOVEL MASK REMOVAL PROCESS STRATEGY FOR VERTICAL NAND DEVICE | 9396963 | 19-Jul-2016 |
| REPEATABLE HEAT-TREATING METHODS AND APPARATUS | 9482468 | 01-Nov-2016 |
| LOW COST HIGH THROUGHPUT PROCESSING PLATFORM | 9493306 | 15-Nov-2016 |
| METHODS AND SYSTEMS FOR SUPPORTING A WORKPIECE AND FOR HEAT TREATING THE WORKPIECE | 9627244 | 18-Apr-2017 |
| SELECTIVE REFLECTIVITY PROCESS CHAMBER WITH CUSTOMIZED WAVELENGTH RESPONSE AND METHOD | 9633876 | 25-Apr-2017 |
| INDUCTIVELY COUPLED PLASMA SOURCE FOR PLASMA PROCESSING | 9653264 | 16-May-2017 |
| SUBSTRATE BREAKAGE DETECTION IN A THERMAL PROCESSING SYSTEM | 9941144 | 10-Apr-2018 |
| SYSTEM AND METHOD FOR PROTECTION OF VACUUM SEALS IN PLASMA PROCESSING SYSTEMS | 10049858 | 14-Aug-2018 |
| INDUCTIVE PLASMA SOURCE WITH HIGH COUPLING EFFICIENCY | 10037867 | 31-July-2018 |
| [redacted] | 14/665684 | |
| [redacted] | 15/650164 | |
| [redacted] | 15/589127 | |
| [redacted] | 14/406256 | |
| [redacted] | 15/073048 | |
| [redacted] | 15/403455 | |
| [redacted] | 15/386538 | |
| [redacted] | 15/377121 | |
| [redacted] | 15/378580 | |
| [redacted] | 15/909231 | |
| [redacted] | 15/378509 | |
| [redacted] | 15/377217 | |
| [redacted] | 15/380191 | |
| [redacted] | 15/380221 | |
| [redacted] | 15/380139 | |
| [redacted] | 15/417470 | |
| [redacted] | 15/441332 | |
| [redacted] | 15/591163 | |
| [redacted] | 15/597283 | |
| [redacted] | 15/726437 | |
| [redacted] | 15/936744 | |
| [redacted] | 15/582896 | |
| [redacted] | 15/896124 | |

| Title Description | Patent/App Number | Issue/App. Date |
|-------------------|----------------------|-----------------|
| [redacted] | 62/559778 | |
| [redacted] | 15/936764 | |
| [redacted] | 62/546269 | |
| [redacted] | 15/892723 | |
| [redacted] | 62/610582 | |
| [redacted] | 15/851922 | |
| [redacted] | 15/888257 | |
| [redacted] | 62/610588 | |
| [redacted] | 15/888283 | |
| [redacted] | 62/610601 | |
| [redacted] | 15/958560 | |
| [redacted] | 15/958601 | |
| [redacted] | 15/958635 | |
| [redacted] | 62/567295 | |
| [redacted] | 62/578725 | |
| [redacted] | 15/843043 | |
| [redacted] | 62/610573 | |
| [redacted] | 62/599105 | |
| [redacted] | 62/645476 | |
| [redacted] | 62/656428 | |
| [redacted] | 15/951291 | |
| [redacted] | 62/657114 | |
| [redacted] | 62/658117 | |
| [redacted] | 62/689475 | |
| [redacted] | 16/020178 | |
| [redacted] | 62/685564 | |
| [redacted] | 62/685608 | |
| [redacted] | 62/683246 | |
| [redacted] | 14/567631 | |

SCHEDULE C

Trademarks

| <u>Description</u> | Serial Number | Registration Number |
|--------------------------------|---------------|---------------------|
| MATTSON TECHNOLOGY | 87563778 | |
| ATOMIC SURFACE ENGINEERING | 87563850 | |
| ATOMIC INTERFACE ENGINEERING | 87563834 | |
| AGILIS | 87715568 | |
| NOVYKA | 87688747 | |
| SUPREMA | 78767551 | 3363448 |
| FRTP | 78964076 | * |
| SUPRA | 78782381 | * |
| MILLIOS | 77226992 | 3998402 |
| PARADIGME | 77036643 | 3655138 |
| NEXION | 77041390 | * |
| ALPINE | 77322086 | 3544715 |
| SUPREMAXE | 77469486 | * |
| HOT SHIELD | 77036598 | * |
| MAXUS | 76625601 | * |
| HYBRID ATOMIC LAYER CVD | 76422220 | * |
| HAL-CVD | 76422219 | * |
| HYBRID ATOMIC LAYER DEPOSITION | 76422218 | * |
| VORTEK | 73578996 | 1438539 |
| ASPEN | 88082123 | |
| SCISSORBOT | 88064123 | |

^{*}Indicates dead, abandoned or cancelled trademark

TRADEMARK REEL: 006423 FRAME: 0244

RECORDED: 08/27/2018