

<b>PATENT ASSIGNMENT COVER SHEET</b>
--------------------------------------

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3589740

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	CHANGE OF NAME
<b>SEQUENCE:</b>	3

**CONVEYING PARTY DATA**

Name	Execution Date
MEMC ELECTRONIC MATERIALS, INC.	05/23/2013

**RECEIVING PARTY DATA**

<b>Name:</b>	SUNEDISON SEMICONDUCTOR LIMITED (UEN201334164H)
<b>Street Address:</b>	9 BATTERY ROAD
<b>Internal Address:</b>	#15-01, STRAITS TRADING BUILDING
<b>City:</b>	SINGAPORE
<b>State/Country:</b>	SINGAPORE
<b>Postal Code:</b>	049910

**PROPERTY NUMBERS Total: 1**

Property Type	Number
<b>Application Number:</b>	14608661

**CORRESPONDENCE DATA**

**Fax Number:** (314)612-2307

*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:** 314-621-5070

**Email:** uspatents@armstrongteasdale.com, clager@armstrongteasdale.com

**Correspondent Name:** RICHARD R. SCHUTH

**Address Line 1:** ARMSTRONG TEASDALE LLP

**Address Line 2:** 7700 FORSYTH BLVD., STE 1800

**Address Line 4:** ST. LOUIS, MISSOURI 63105

<b>ATTORNEY DOCKET NUMBER:</b>	28744-4458 (130023.2)
<b>NAME OF SUBMITTER:</b>	NICHOLAS A. KEPPEL
<b>SIGNATURE:</b>	/Nicholas A. Keppel/
<b>DATE SIGNED:</b>	10/28/2015

**Total Attachments: 38**

source=Executed Assignment MEMC to SSL-21645052#page1.tif

source=Executed Assignment MEMC to SSL-21645052#page2.tif

source=Executed Assignment MEMC to SSL-21645052#page3.tif

source=Executed Assignment MEMC to SSL-21645052#page4.tif  
source=Executed Assignment MEMC to SSL-21645052#page5.tif  
source=Executed Assignment MEMC to SSL-21645052#page6.tif  
source=Executed Assignment MEMC to SSL-21645052#page7.tif  
source=Executed Assignment MEMC to SSL-21645052#page8.tif  
source=Executed Assignment MEMC to SSL-21645052#page9.tif  
source=Executed Assignment MEMC to SSL-21645052#page10.tif  
source=Executed Assignment MEMC to SSL-21645052#page11.tif  
source=Executed Assignment MEMC to SSL-21645052#page12.tif  
source=Executed Assignment MEMC to SSL-21645052#page13.tif  
source=Executed Assignment MEMC to SSL-21645052#page14.tif  
source=Executed Assignment MEMC to SSL-21645052#page15.tif  
source=Executed Assignment MEMC to SSL-21645052#page16.tif  
source=Executed Assignment MEMC to SSL-21645052#page17.tif  
source=Executed Assignment MEMC to SSL-21645052#page18.tif  
source=Executed Assignment MEMC to SSL-21645052#page19.tif  
source=Executed Assignment MEMC to SSL-21645052#page20.tif  
source=Executed Assignment MEMC to SSL-21645052#page21.tif  
source=Executed Assignment MEMC to SSL-21645052#page22.tif  
source=Executed Assignment MEMC to SSL-21645052#page23.tif  
source=Executed Assignment MEMC to SSL-21645052#page24.tif  
source=Executed Assignment MEMC to SSL-21645052#page25.tif  
source=Executed Assignment MEMC to SSL-21645052#page26.tif  
source=Executed Assignment MEMC to SSL-21645052#page27.tif  
source=Executed Assignment MEMC to SSL-21645052#page28.tif  
source=Executed Assignment MEMC to SSL-21645052#page29.tif  
source=Executed Assignment MEMC to SSL-21645052#page30.tif  
source=Executed Assignment MEMC to SSL-21645052#page31.tif  
source=Executed Assignment MEMC to SSL-21645052#page32.tif  
source=Executed Assignment MEMC to SSL-21645052#page33.tif  
source=Executed Assignment MEMC to SSL-21645052#page34.tif  
source=Executed Assignment MEMC to SSL-21645052#page35.tif  
source=Executed Assignment MEMC to SSL-21645052#page36.tif  
source=Executed Assignment MEMC to SSL-21645052#page37.tif  
source=Executed Assignment MEMC to SSL-21645052#page38.tif

## ASSIGNMENT

WHEREAS MEMC Electronic Materials, Inc., a Delaware Corporation having a place of business at 501 Pearl Drive, St. Peters, MO 63376 (hereinafter referred to as "Assignor"), is the sole owner and assignee of an undivided right, title and interest in and to the following United States Patent Applications, United States Patents, Inventions described in said Patent Applications or Patents, any other United States applications (including provisional, non-provisional, divisional, continuing, or reissue applications) based in whole or in part on said United States Patent Applications, said United States Patents or said Inventions, any foreign applications based in whole or in part on, and/or claiming priority from, any of said United States Patent Applications, said United States Patents or said Inventions, and any patents (including extensions thereof) of any country based in whole or in part on, and/or claiming priority from, any of said United States Patent Applications, said United States Patents or said Inventions:

### U.S. Patents

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
7938982 05/10/2011	Silicon Wafer Etching Compositions (Div. of U.S. Patent 7,323,421)	016596/0425
7611580 11/03/2009	Controlling Melt-Solid Interface Shape Of A Growing Silicon Crystal Using A Variable Magnetic Field (Div. of U.S. Patent 7,223,304)	016157/0533
8026145 09/27/2011	Arsenic And Phosphorus Doped Silicon Wafer Substrates Having Intrinsic Gettering (Div. of U.S. Patent 7,485,928)	017763/0557
8267745 09/18/2012	Methods Of Grinding Semiconductor Wafers Having Improved Nanotopology (Div. of U.S. Patent 8,066,553)	026813/0719 026813/0773
8216362 07/10/2012	Controlling Agglomerated Point Defect And Oxygen Cluster Formation Induced By The Lateral Surface Of A Silicon Single Crystal During CZ Growth	019543/0983

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
8673248 03/18/2014	Silicon Material With Controlled Agglomerated Point Defects And Oxygen Clusters Induced By The Lateral Surface	019543/0929
8058173 11/15/2011	Methods For Producing Smooth Wafers	020574/0531
7927185 04/19/2011	Method For Assessing Workpiece Nanotopology Using A Double Side Wafer Grinder (Div. of U.S. Patent 7,662,023)	019136/0568
7846006 12/07/2010	Dressing A Wafer Polishing Pad	019874/0788
7846007 12/07/2010	System And Method For Dressing A Wafer Polishing Pad	022421/0086
8080482 12/20/2011	Methods For Preparing A Semiconductor Structure For Use In Backside Illumination Applications (Div. of U.S. Serial No. 11/698,728)	019110/0543
6942733 09/13/2005	Fluid Sealing System For A Crystal Puller	013911/0117
8309464 11/13/2012	Methods For Etching The Edge Of A Silicon Wafer	022560/0266
8192822 06/05/2012	Edge Etched Silicon Wafers	022560/0473
8153538 04/10/2012	Process For Annealing Semiconductor Wafers With Flat Dopant Depth Profiles	025822/0648
8404049 03/26/2013	Epitaxial Barrel Susceptor Having Improved Thickness Uniformity	020483/0271
7930058 04/19/2011	Nanotopography Control And Optimization Using Feedback From Warp Data	020693/0907
8145342 03/27/2012	Methods And Systems For Adjusting Operation Of A Wafer Grinder Using Feedback From Warp Data (Div. of U.S. Patent 7,662,023)	019136/0568

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
8186661 05/29/2012	Wafer Holder For Supporting A Semiconductor Wafer During A Thermal Treatment Process	021536/0801
7573587 08/11/2009	Method And Device For Continuously Measuring Silicon Island Elevation	021482/0085
7922817 04/12/2011	Method And Device For Feeding Arsenic Dopant Into A Silicon Crystal Growing Apparatus	021386/0080
8696811 04/15/2014	Method For Feeding Arsenic Dopant Into A Silicon Crystal Growing Apparatus (Div. of U.S. Patent 7,922,817)	021386/0080
8398765 03/19/2013	Controlling A Melt-Solid Interface Shape Of A Growing Silicon Crystal Using An Unbalanced Magnetic Field And Iso-Rotation	022998/0604
8042697 10/25/2011	Low Thermal Mass Semiconductor Wafer Support	021361/0831
8220647 07/17/2012	Low Thermal Mass Semiconductor Wafer Boat	026972/0873
8220646 07/17/2012	Low Thermal Mass Semiconductor Wafer Plate	026972/0822
8551247 10/08/2013	Generating A Pumping Force In A Silicon Melt By Applying A Time-Varying Magnetic Field	023146/0807
8691008 04/08/2014	Systems For Weighing A Pulled Object	024443/0972
8347740 01/08/2013	Systems For Weighing A Pulled Object Having A Changing Weight	024447/0934
8080464 12/20/2011	Methods For Processing Silicon On Insulator Wafers	025897/0977
8367519 02/05/2013	Method For The Preparation Of A Multi-Layered Crystalline Structure	025698/0144

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
8165706 04/24/2012	Methods For Generating Representations Of Flatness Defects On Wafers	023776/0751
8340801 12/25/2012	Systems For Generating Representations Of Flatness Defects On Wafers	023776/0635
8143078 03/27/2012	Methods For Monitoring The Amount Of Contamination Imparted Into Semiconductor Wafers During Wafer Processing	025698/0088
8440541 05/14/2013	Methods For Reducing The Width Of The Unbonded Region In SOI Structures	026049/0051
8330245 12/11/2012	Semiconductor Wafers With Reduced Roll-Off And Bonded And Unbonded SOI Structures Produced From Same	026048/0758
8310031 11/13/2012	Semiconductor And Solar Wafers	024830/0781
8712575 04/29/2014	Hydrostatic Pad Pressure Modulation in a Simultaneous Double Side Wafer Grinder	026410/0338
8420554 04/16/2013	Wafer Support Ring	024344/0109
8524319 09/03/2013	Methods For Producing Crucibles With A Reduced Amount Of Bubbles	027768/0588
6955718 10/18/2005	Process For Preparing A Stabilized Ideal Oxygen Precipitating Silicon Wafer	032738/0005
7125450 10/24/2006	Process For Preparing Single Crystal Silicon Using Crucible Rotation To Control Temperature Gradient	015026/0907
7442253 10/28/2008	Process For Forming Low Defect Density, Ideal Oxygen Precipitating Silicon (Cont. of U.S. Patent 7229693)	009409/0291
7618879 11/17/2009	Non-Uniform Minority Carrier Lifetime Distributions In High Performance Silicon Power Devices (Div. of U.S. Patent 7242037)	010225/0266

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
6344083 02/05/2002	Process For Producing A Silicon Melt	010783/0683
6652645 11/25/2003	Process For Preparing A Silicon Melt (Cont. of U.S. Patent 6344083)	010783/0683
6749683 01/15/2004	Process For Producing A Silicon Melt	012722/0302
6482263 11/19/2002	Heat Shield Assembly For Crystal Pulling Apparatus	011642/0278
6743495 06/01/2004	Thermal Annealing Process For Producing Silicon Wafers With Improved Surface Characteristics	013008/0188
6497403 12/24/2002	Semiconductor Wafer Holder	011605/0469
6869477 03/22/2005	Controlled Neck Growth Process For Single Crystal Silicon	013478/0217
6986925 01/17/2006	Single Crystal Silicon Having Improved Gate Oxide Integrity	012720/0452
7431765 10/07/2008	Process For Preparing Single Crystal Silicon Having Improved Gate Oxide Integrity (Div. of U.S. Patent 6986925)	012720/0452
6897084 05/24/2005	Control Of Oxygen Precipitate Formation In High Resistivity CZ Silicon	013007/0300
7135351 11/14/2006	Method For Controlling Of Thermal Donor Formation In High Resistivity CZ Silicon (Div. of U.S. Patent 6897084)	013007/0300
6609870 08/26/2003	Granular Semiconductor Material Transport System And Process	012817/0489
6866713 03/15/2005	Seed Crystals For Pulling Single Crystal Silicon	013582/0482

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
7182809 02/27/2007	Nitrogen-Doped Silicon Substantially Free Of Oxidation Induced Stacking Faults	014336/0001 014339/0812
7404856 07/29/2008	Nitrogen-Doped Silicon Substantially Free Of Oxidation Induced Stacking Faults (Div. of U.S. Patent 7182809)	014336/0001 014339/0812
6663709 12/16/2003	Crystal Puller And Method For Growing Monocrystalline Silicon Ingots	012122/0105
6554898 04/29/2003	Crystal Puller For Growing Monocrystalline Silicon Ingots (Div. of U.S. Patent 6663709)	012122/0105
6846539 01/25/2005	Low Defect Density Silicon Having A Vacancy-Dominated Core Substantially Free Of Oxidation Induced Stacking Faults	012789/0747
7217320 05/15/2007	Low Defect Density Silicon Having A Vacancy-Dominated Core Substantially Free Of Oxidation Induced Stacking Faults (Div. of U.S. Patent 6846539)	012789/0747
7132091 11/07/2006	Single Crystal Silicon Ingot Having A High Arsenic Concentration	013576/0951
6808781 10/26/2004	Silicon Wafers With Stabilized Oxygen Precipitate Nucleation Centers And Process For Making The Same	013923/0124
7201800 04/10/2007	Process For Making Silicon Wafers With Stabilized Oxygen Precipitate Nucleation Centers (Div. of U.S. Patent 6808781)	013923/0124
6709981 03/23/2004	Method And Apparatus For Processing A Semiconductor Wafer Using Novel Final Polishing Method	012431/0085
6712673 03/30/2004	Polishing Apparatus, Polishing Head And Method	012328/0298
6930375 08/16/2005	Silicon On Insulator Structure Having An Epitaxial Layer And Intrinsic Gettering	013181/0822



PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
7071080 07/04/2006	Process For Producing Silicon On Insulator Structure Having Intrinsic Gettering By Ion Implantation (Div. of U.S. Patent 6930375)	013181/0822
8147613 04/03/2012	Crystal Puller And Method For Growing A Monocrystalline Ingot	014999/0249
6960254 11/01/2005	Method To Monitor And Control The Crystal Cooling Or Quenching Rate By Measuring Crystal Surface Temperature	014312/0399
7008308 03/07/2006	Wafer Carrier	013778/0718
7323421 01/29/2008	Silicon Wafer Etching Process And Composition	016596/0425
7497907 03/03/2009	Partially Devitrified Crucible	015337/0767
7084048 08/01/2006	Process For Metallic Contamination Reduction In Silicon Wafers	014971/0329
7223304 05/29/2007	Controlling Melt-Solid Interface Shape Of A Growing Silicon Crystal Using A Vairable Magnetic Field	016157/0533
7291222 11/06/2007	Systems And Methods For Measuring And Reducing Dust In Granular Material	015390/0001
7485928 02/03/2009	Arsenic And Phosphorus Doped Silicon Wafer Substrates Having Intrinsic Gettering	017763/0557
7521382 04/21/2009	High Resistivity Silicon Structure And A Process For The Preparation Thereof	017945/0383
7691199 04/06/2010	Melter Assembly And Method For Charging A Crystal Forming Apparatus With Molten Source Material	016706/0613
7344594 03/18/2008	Melter Assembly And Method For Charging A Crystal Forming Apparatus With Molten Source Material	016864/0061

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
7465351 12/16/2008	Melter Assembly And Method For Charging A Crystal Forming Apparatus With Molten Source Material	016833/0100
7291221 11/06/2007	Eletromagnetic Pumping Of Liquid Silicon In A Crystal Growing Process	016141/0710
8066553 11/29/2011	Wafer Clamping Device For A Double Side Grinder	026813/0719 026813/0773
7888685 02/15/2011	High Purity Silicon Carbide Structures	015284/0081
7696103 04/13/2010	Method For Purifying Silicon Carbide Coated Structures (Div. of U.S. Patent 7888685)	015284/0081
7033168 04/25/2006	Semiconductor Wafer Boat For A Vertical Furnace	015891/0655
7462246 12/09/2008	Modified Susceptor For Barrel Reactor	016278/0974
7878883 02/01/2011	Wire Saw Ingot Slicing System And Method With Ingot Preheating, Web Preheating, Slurry Temperature Control and/or Slurry Flow Rate Control	019177/0655
7566951 07/28/2009	Silicon Structures With Improved Resistance To Radiation Events	017974/0835
7662023 02/16/2010	Double Side Wafer Grinder And Methods For Assessing Workpiece Nanotopology	019136/0568
7559825 07/14/2009	Method Of Polishing A Semiconductor Wafer	018935/0398
7601049 10/13/2009	Double Side Wafer Grinder And Methods For Assessing Workpiece Nanotopology	019136/0619
7878562 02/01/2011	Seminconductor Wafer Carrier Blade	020471/0374

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
8192248 01/05/2012	Semiconductor Wafer Polishing Apparatus And Method Of Polishing	021361/0092
5571373 11/05/1996	Method Of Rough Polishing Semiconductor Wafers To Reduce Surface Roughness	007004/0118
5855859 01/05/1999	Gettering Agent	008310/0578
5605487 02/25/1997	Semiconductor Wafer Polishing Apparatus And Method	007077/0987 007072/0515 007077/0991
5573680 11/12/1996	Method For Etching A Semiconductor Material Without Altering Flow Pattern Defect Distribution	007101/0518
5976247 11/02/1999	Surface-Treated Crucibles For Improved Zero Dislocation Performance	007745/0102
5882989 03/16/1999	Process For The Preparation Of Silicon Wafers Having A Controlled Distribution Of Oxygen Precipitate Nucleation Centers	008987/0562
5980629 11/09/1999	Methods For Improving Zero Dislocation Yield Of Single Crystals	007745/0080
5578284 11/26/1996	Silicon Single Crystal Having Eliminated Dislocation In Its Neck	008083/0271
5628823 05/13/1997	Process For Eliminating Dislocations In The Neck Of A Silicon Single Crystal (Div. of U.S. Patent 5578284)	008083/0271
5840120 11/24/1998	Apparatus For Controlling Nucleation Of Oxygen Precipitates In Silicon Crystals	008940/0469
5656078 08/12/1997	Non-Distorting Video Camera For Use With A System For Controlling Growth Of A Silicon Crystal	007792/0024
5518549 05/21/1996	Susceptor And Baffle Therefor	007475/0417

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
5588993 12/31/1996	Method For Preparing Molten Silicon Melt From Polycrystalline Silicon Charge	007622/0247
5593494 01/14/1997	Precision Controlled Precipitation Of Oxygen In Silicon	007468/0720
5904768 05/18/1999	Process For Controlling The Oxygen Content In Silicon Wafers Heavily Doped With Antimony Or Arsenic	008330/0759
6214109 04/10/2001	Apparatus For Controlling The Oxygen Content In Silicon Wafers Heavily Doped With Antimony Or Arsenic  (Div. of U.S. Patent 5904768)	008330/0759
5795381 08/18/1998	SiO Probe For Real-Time Monitoring And Control Of Oxygen During Czochralski Growth Of Single Crystal Silicon	008207/0632
5906533 05/25/1999	Radiant Polishing Block Heater	008055/0011
5593498 01/14/1997	Apparatus For Rotating A Crucible Of A Crystal Pulling Machine	007660/0649
5766341 06/16/1998	Method For Rotating A Crucible Of A Crystal Pulling Machine  (Div. of U.S. Patent 5593498)	007660/0649
5908504 06/01/1999	Method For Tuning Barrel Reactor Purge System	007883/0703
5787595 08/04/1998	Method And Apparatus For Controlling Flatness Of Polished Semiconductor Wafer	008102/0127
5791493 08/11/1998	Polysilicon Particle Classifying Apparatus	008105/0330
5843234 12/01/1998	Method And Apparatus For Aiming A Barrel Reactor Nozzle	007979/0618
5840202 11/24/1998	Apparatus And Method For Shaping Polishing Pads	008487/0463

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
5679055 10/21/1997	Automated Wafer Lapping System	008025/0466
5814148 09/29/1998	Method For Preparing Molten Silicon Melt From Polycrystalline Silicon Charge	008157/0114
5779791 07/14/1998	Process For Controlling Thermal History Of Czochralski-Grown Silicon	008894/0352 008901/0831
5712198 01/27/1998	Pre-Thermal Treatment Cleaning Process	008127/0472
5849076 12/15/1998	Cooling System And Method For Epitaxial Barrel Reactor	008551/0009
5827113 10/27/1998	Cutting Machine	008593/0617
6287380 09/11/2001	Low Defect Density Silicon	009345/0970
6409827 06/25/2002	Low Defect Density Silicon And A Process For Producing Low Defect Density Silicon Wherein V/G0 Is Controlled By Controlling Heat Transfer At The Melt/Solid Interface (Cont. of U.S. Patent 6287380)	009345/0970
6605150 08/12/2003	Low Defect Density Regions For Self-Interstitial Dominated Silicon (Cont. of U.S. Patent 6409827)	009345/0970
6254672 07/03/2001	Low Defect Density Self-Interstitial Dominated Silicon	009399/0843
6409826 06/25/2002	Low Defect Density, Self-Interstitial Dominated Silicon (Cont. of U.S. Patent 6254672)	009399/0843
6632278 10/14/2003	Low Defect Density Epitaxial Wafer And A Process For The Preparation Thereof (Cont. of U.S. Patent 6409826)	009399/0843

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
8638357 10/28/2003	Method For Revealing Agglomerated Intrinsic Point Defects In Semiconductor Crystals	010688/0082
5885344 03/23/1999	Non-Dash Neck Method For Single Crystal Silicon Growth	008866/0956
5770522 06/23/1998	Polishing Block Heater	008350/0030
5846318 12/08/1998	Method And System For Controlling Growth Of A Silicon Crystal	008743/0005
5653799 08/05/1997	Method For Controlling Growth Of A Silicon Crystal	007556/0138
6006738 12/28/1999	Method And Apparatus For Cutting An Ingot	008653/0761
5816274 04/10/1997	Apparatus For Cleaning Semiconductor Wafers	008532/0921
6019838 02/01/2000	Crystal Growing Apparatus With Melt-Doping Facility	008999/0439
5942032 08/24/1999	Heat Shield Assembly And Method Of Growing Vacancy Rich Single Crystal Silicon	009035/0985
5839460 11/24/1998	Apparatus For Cleaning Semiconductor Wafers	008823/0781
5990014 11/23/1999	In Situ Wafer Cleaning Process	009132/0093
6482269 11/19/2002	Process For The Removal Of Copper And Other Metallic Impurities From Silicon	009307/0116
6114245 09/05/2000	Method Of Processing Semiconductor Wafers	008681/0757
5792273 08/11/1998	Secondary Edge Reflector For Horizontal Reactor	008584/0874

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
5865670 02/02/1999	Wafer Demount Apparatus	008807/0932
6503322 01/07/2003	Electrical Resistance Heater And Method For Crystal Growing Apparatus	009486/0902
6093913 07/25/2000	Electrical Heater For Crystal Growth Apparatus With Upper Sections Producing Increased Heating Power Compared To Lower Sections	009228/0546
5837662 11/17/1998	Post-Lapping Cleaning Process For Silicon Wafers	009132/0102
6210640 04/03/2001	Collector For An Automated On-Line Bath Analysis System	009345/0893
5922127 07/13/1999	Heat Shield For Crystal Puller	008743/0188
6053974 04/25/2000	Heat Shield For Crystal Puller (Div. of U.S. Patent 5922127)	008743/0188
5882402 03/16/1999	Method For Controlling Growth Of A Silicon Crystal	008743/0409
6183553 02/06/2001	Process And Apparatus For Preparation Of Silicon Crystals With Reduced Metal Content	009424/0062
5891250 04/06/1999	Injector For Reactor	009294/0282
6190631 02/20/2001	Low Defect Density, Ideal Oxygen Precipitating Silicon	009409/0291
6555194 04/29/2003	Process For Producing Low Defect Density, Ideal Oxygen Precipitating Silicon (Cont. of U.S. Patent 6190631)	009409/0291
6896728 05/24/2005	Process For Producing Low Defect Density, Ideal Oxygen Precipitating Silicon (Div. of U.S. Patent 6555194)	009409/0291

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
7229693 06/12/2007	Low Defect Density, Ideal Oxygen Precipitating Silicon (Cont. of U.S. Patent 6896728)	009409/0291
5913975 06/22/1999	Crucible And Method Of Preparation Thereof	009145/0088
6129048 10/10/2000	Susceptor For Barrel Reactor	009295/0115
6330971 12/18/2001	Radio Frequency Identification System And Method For Tracking Silicon Wafers	009369/0418
6187089 02/13/2001	Tungsten Doped Crucible And Method For Preparing Same	009924/0736
6828690 12/07/2004	Non-Uniform Minority Carrier Lifetime Distributions In High Performance Silicon Power Devices	010225/0266
7242037 07/10/2007	Process For Making Non-Uniform Minority Carrier Lifetime Distribution In High Performance Silicon Power Devices (Div. of U.S. Patent 6828690)	010225/0266
6171391 01/09/2001	Method And System For Controlling Growth Of A Silicon Crystal	009572/0757
6284039 09/04/2001	Epitaxial Silicon Wafers Substantially Free Of Grown-In Defects	010464/0549
6565649 05/20/2003	Epitaxial Wafer Substantially Free Of Grown-In Defects (Cont. of U.S. Patent 6284039)	010464/0549
7097718 08/29/2006	Single Crystal Silicon Wafer Having An Epitaxial Layer Substantially Free From Grown-In Defects (Cont. of U.S. Patent 6565649)	010464/0549
6039801 03/21/2000	Continuous Oxidation Process For Crystal Pulling Apparatus	009612/0596



PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
6315828 11/13/2001	Continuous Oxidation Process For Crystal Pulling Apparatus (Cont. of U.S. Patent 6039801)	009612/0596
5919302 07/06/1999	Low Defect Density Vacancy Dominated Silicon	009409/0098
6379642 04/30/2002	Vacancy Dominated, Defect-Free Silicon	010287/0032
6840997 01/11/2005	Vacancy Dominated, Defect-Free Silicon (Div. of U.S. Patent 6379642)	010287/0032
6214704 04/10/2001	Method Of Processing Semiconductor Wafers To Build In Back Surface Damage	010379/0160
6416836 07/09/2002	Thermally Annealed, Low Defect Density Single Crystal Silicon	010818/0677
6743289 06/09/2004	Thermal Annealing Process For Producing Low Defect Density Single Crystal Silicon (Div. of U.S. Patent 6416836)	010818/0677
6361619 03/26/2002	Thermally Annealed Wafers Having Improved Internal Gettering	010330/0004
6686260 02/03/2004	Process For Producing Thermally Annealed Wafers Having Improved Internal Gettering (Div. of U.S. Patent 6361619)	010330/0004
6227944 05/08/2001	Method For Processing A Semiconductor Wafer	009988/0581
6338805 01/15/2002	Process For Fabricating Semiconductor Wafers With External Gettering	010222/0227
6458202 10/01/2002	Process For Preparing Single Crystal Silicon Having Uniform Thermal History	011107/0117
6236104 05/22/2001	Silicon On Insulator Structure From Low Defect Density Single Crystal Silicon	010430/0582

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
6342725 01/29/2002	Silicon On Insulator Structure Having A Low Defect Density Handler Wafer And Process For The Preparation Thereof (Cont. of U.S. Patent 6236104)	010430/0582
6849901 02/01/2005	Device Layer Of A Silicon-On-Insulator Structure Having Vacancy Dominated And Substantially Free Of Agglomerated Vacancy-Type Defects (Div. of U.S. Patent 6342725)	010430/0582
6336968 01/08/2002	Non-Oxygen Precipitating Czochralski Silicon Wafers	010296/0838
6432197 08/13/2002	Process For The Preparation Of Non-Oxygen Precipitating Czochralski Silicon Wafers (Cont. of U.S. Patent 6336968)	010296/0838
6709511 03/23/2004	Process For Suppressing Oxygen Precipitation In Vacancy Dominated Silicon (Cont. of U.S. Patent 6432197)	010296/0838
6191010 02/20/2001	Process For Preparing An Ideal Oxygen Precipitating Silicon Wafer	010724/0525
6579779 01/17/2003	Process For The Preparation Of An Ideal Oxygen Precipitating Silicon Wafer Having An Asymmetrical Vacancy Concentration Profile Capable Of Forming An Enhanced Denuded Zone (Cont. of U.S. Patent 6191010)	010724/0525
6713370 03/30/2004	Process For The Preparation Of An Ideal Oxygen Precipitating Silicon Wafer Capable Of Forming An Enhanced Denuded Zone (Div. of U.S. Patent 6579779)	010724/0525
6284384 09/04/2001	Epitaxial Silicon Wafer With Intrinsic Gettering	009906/0976
6537655 03/25/2003	Epitaxial Silicon Wafer With Intrinsic Gettering And A Method For The Preparation Thereof (Div. of U.S. Patent 6284384)	009906/0976

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
6958092 10/25/2005	Epitaxial Silicon Wafer With Intrinsic Gettering And A Method For The Preparation Thereof (Div. of U.S. Patent 6537655)	009906/0976
6599815 07/29/2003	Method And Apparatus For Forming A Silicon Wafer With A Denuded Zone	011185/0935
6328795 12/11/2001	Process For Growth Of Defect Free Silicon Crystals Or Arbitrarily Large Diameters	010198/0955
6562123 05/13/2003	Process For Growing Defect-Free Silicon Wherein The Grown Silicon Is Cooled In A Separate Chamber (Cont. of U.S. Patent 6328795)	010198/0955
6913647 07/05/2005	Process For Cooling A Silicon Ingot Having A Vacancy Dominated Region To Produce Defect Free Silicon (Cont. of U.S. Patent 6562123)	010198/0955
6197111 03/06/2001	Heat Shield Assembly For Crystal Puller	009939/0094
6339016 01/15/2002	Method And Apparatus For Forming An Epitaxial Silicon Wafer With A Denuded Zone	011186/0967
6312516 11/06/2001	Process For Preparing Defect Free Silicon Crystals Which Allows For Variability In Process Conditions	010883/0143 010883/0216
6500255 12/31/2002	Process For Growing Silicon Crystals Which Allows For Variability In The Process Conditions While Suppressing The Formation Of Agglomerated Intrinsic Point Defects (Cont. of U.S. Patent 6312516)	010883/0143 010883/0216
6652646 11/25/2003	Process For Growing A Silicon Crystal Segment Substantially Free From Agglomerated Intrinsic Point Defects Which Allows For Variability In The Process Conditions (Cont. of U.S. Patent 6500255)	010883/0143 010883/0216
6520191 02/18/2003	Carrier For Cleaning Silicon Wafers	011897/0310

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
6858307 02/22/2005	Method For The Production Of Low Defect Density Silicon	012409/0073
6726764 04/27/2004	Method For Controlling Growth Of A Silicon Crystal To Minimize Growth Rate And Diameter Deviations	011380/0967
6241818 06/05/2001	Method And System Of Controlling Taper Growth In A Semiconductor Crystal Growth Process	009924/0330
7008874 03/07/2006	Process For Reclaiming Semiconductor Wafers And Reclaimed Wafers	012722/0205
6350312 02/26/2002	Strontium Doping Of Molten Silicon For Use In Crystal Growing Process	010884/0146 012139/0404
6319313 11/20/2001	Barium Doping Of Molten Silicon For Use In Crystal Growing Process	010818/0660 012139/0400
6776840 08/17/2004	Method And Apparatus For Controlling Diameter Of A Silicon Crystal In A Locked Seed Lift Growth Process	010585/0457
6514423 02/04/2003	Method For Wafer Processing	010627/0292
6376395 04/23/2002	Semiconductor Wafer Manufacturing Process	010697/0282
6635587 10/21/2003	Method For Producing Czochralski Silicon Free Of Agglomerated Self-Interstitial Defects	011316/0129
6689209 02/10/2004	Process For Preparing Low Defect Density Silicon Using High Growth Rates	012116/0796
6293139 09/25/2001	Method Of Determining Performance Characteristics Of Polishing Pads	010459/0198
6376335 04/23/2002	Semiconductor Wafer Manufacturing Process	010818/0439
6435474 08/20/2002	Non-Contaminating Gas-Tight Valve For Semiconductor Applications	010938/0274

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
6203611 03/20/2001	Method Of Controlling Growth Of A Semiconductor Crystal To Automatically Transition From Taper Growth To Target Diameter Growth	010344/0075
6579362 06/17/2003	Heat Shield Assembly For Crystal Puller	011897/0283
6479386 11/12/2002	Process For Reducing Surface Variations For Polished Wafer	010883/0103
6444027 09/03/2002	Modified Susceptor For Use In Chemical Vapor Deposition Process	011003/0198
6652650 11/25/2003	Modified Susceptor For Use In Chemical Vapor Deposition Process (Cont. of U.S. Patent 6444027)	011003/0198
6515742 02/04/2003	Defect Classification Using Scattered Light Intensities	011320/0948
6596095 07/22/2003	Epitaxial Silicon Wafer Free From Autodoping And Backside Halo And A Method And Apparatus For The Preparation Thereof	011662/0217
5904768 05/18/1999	Process For Controlling The Oxygen Content In Silicon Wafers Heavily Doped With Antimony Or Arsenic	008330/0759
6006736 12/28/1999	Method And Apparatus For Washing Silicon Ingot With Water To Remove Particulate Matter	009124/0658
6180220 01/30/2001	Ideal Oxygen Precipitating Silicon Wafers And Oxygen Out-Diffusion-Less Process Therefor	009389/0565
6586068 07/01/2003	Ideal Oxygen Precipitating Silicon Wafer Having An Asymmetrical Vacancy Concentration Profile And A Process For The Preparation Thereof (Cont. of U.S. Patent 6100220)	009389/0565
6849119 02/01/2005	Ideal Oxygen Precipitating Silicon Wafers And Oxygen Out-Diffusion-Less Process Therefor (Div. of U.S. Patent 6586068)	009389/0565

PATENT NO./ ISSUE DATE	TITLE	REEL/FRAME
5653799 08/05/1997	Method For Controlling Growth Of A Silicon Crystal	007556/0138
5665159 09/09/1997	System For Controlling Growth Of A Silicon Crystal (Div. of U.S. Patent 5653799)	007556/0138
6398631 06/04/2002	Method And Apparatus To Place Wafers Into And Out Of Machine	011477/0604
6447601 09/10/2002	Crystal Puller And Method For Growing Monocrystalline Silicon Ingots	011866/0713
7105050 09/12/2006	Method For The Production Of Low Defect Density Silicon (Div. of U.S. Patent 6,858,307)	012409/0073
6454851 09/24/2002	Method For Preparing Molten Silicon Melt From Polycrystalline Silicon Charge	011265/0157
6461427 10/08/2002	Barium Doping Of Molten Silicon For Use In Crystal Growing Process	012139/0410
6391662 05/21/2002	Process For Detecting Agglomerated Intrinsic Point Defects By Metal Decoration	011298/0578
6454635 09/24/2002	Method And Apparatus For A Wafer Carrier Having An Insert	011214/0312

**U.S. Applications**

SERIAL NO./ FILING DATE	TITLE	REEL/FRAME
13/199587 02/09/2011	Methods For Preparing A Semiconductor Wafer With High Thermal Conductivity	027356/0676
13/061386 02/28/2011	Bulk Silicon Wafer Product Useful In The Manufacture Of Three Dimensional Multigate Mosfets	026054/0228

SERIAL NO./ FILING DATE	TITLE	REEL/FRAME
12/415274 03/31/2009	Edge Etching Apparatus For Etching The Edge Of A Silicon Wafer	022560/0343
13/130160 05/25/2011	Method And System For Stripping The Edge Of A Semiconductor Wafer	026308/0502
12/840549 07/21/2010	Method And System For Processing Abrasive Slurry	024809/0233
13/733468 01/03/2013	Methods For Processing Abrasive Slurry	029561/0954
13/733499 01/03/2013	Systems For Processing Abrasive Slurry	029562/0088
13/730011 12/28/2012	Method For The Preparation Of A Multi-Layered Crystalline Structure	029870/0894
13/353142 01/18/2012	Methods For Monitoring The Amount Of Metal Contamination In A Process	028048/0665
13/162122 06/16/2011	Methods For In-Situ Passivation Of Silicon-On-Insulator Wafers	026459/0603
13/354788 01/20/2012	Methods For Reducing The Metal Content In The Device Layer Of SOI Structures And SOI Structures Produced By Such Methods	027969/0286
13/237049 09/20/2011	Adapter Ring For Silicon Electrode	026934/0638
14/045325 10/03/2013	UV Treatment Of Polished Wafers	032667/0718
13/417934 03/12/2012	Systems And Methods For Cleaving A Bonded Wafer Pair	027944/0683
13/724050 12/21/2012	Methods For Mounting An Ingot On A Wire Saw	029525/0563

SERIAL NO./ FILING DATE	TITLE	REEL/FRAME
13/443074 04/10/2012	Susceptor For Improved Epitaxial Wafer Flatness	028420/0957
13/443076 04/10/2012	Methods For Fabricating A Semiconductor Wafer Processing Device	028421/0064
13/419139 03/13/2012	Methods For Producing Silicon On Insulator Structures Having High Resistivity Regions In The Handle Wafer	028141/0411
13/663038 10/29/2012	Methods For Cleaving A Bonded Wafer Structure	029208/0326
13/663073 10/29/2012	Clamping Apparatus For Cleaving A Bonded Wafer Structure	029208/0895
13/652665 10/16/2012	Direct Formation Of Graphene On Semiconductor Substrates	029215/0351
13/299926 11/18/2011	Methods For Producing Crucibles With A Reduced Amount Of Bubbles	027768/0851
13/299929 11/18/2011	Processes For Producing Silicon Ingots	027768/0788
13/299917 11/18/2011	Crucibles With A Reduced Amount Of Bubbles And Ingots And Wafers Produced By Use Of Such Crucibles	027768/0378
13/413284 03/06/2012	Method Of Manufacturing Silicon-On-Insulator Wafers	028140/0939
13/712561 12/12/2012	Air Pocket Detection Methods And Systems	029455/0906
13/712592 12/12/2012	Symmetry Based Air Pocket Detection Methods And Systems	029455/0985
13/838284 03/15/2013	Susceptor Assemblies For Supporting Wafers In A Reactor Apparatus	032683/0030



SERIAL NO./ FILING DATE	TITLE	REEL/FRAME
13/890316 05/09/2013	Direct And Sequential Formation Of Monolayers Of Boron Nitride And Graphene On Substrates	032120/0671
13/432326 03/28/2012	Systems And Methods For Ultrasonically Cleaving A Bonded Wafer Pair	027945/0473
2013/0133407 01/25/2013	Methods For Analysis Of Water And Substrates Rinsed In Water	029695/0677
2013/0168836 02/08/2013	SOI Structures Having A Sacrificial Oxide Layer	030381/0199
2013/0168802 02/08/2013	SOI Structures With Reduced Metal Content	030381/0259
2012/0235283 03/13/2012	Silicon On Insulator Structures Having High Resistivity Regions In The Handle Wafer	028141/0115
2007/0176238 01/26/2007	Semiconductor Wafer With High Thermal Conductivity	019110/0543

(herein referred to as "said United States Patents" and "said United States applications"), and the inventions disclosed therein (hereinafter referred to as "said Inventions");

**AND, WHEREAS**, SunEdison Semiconductor Limited (UEN201334164H), a company incorporated under the laws of Singapore and having its registered address at 9 Battery Road, #15-01, Straits Trading Building, Singapore 049910 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring certain rights, title, and interest of Assignor in said United States applications and said inventions;

**NOW, THEREFORE**, for good and valuable consideration, receipt of all of which is hereby acknowledged, Assignor has agreed to and does hereby sell, assign and transfer unto said ASSIGNEE the entire right, title and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto in and to said United States Patent Applications, said United States Patents, said Inventions described in said Patent Applications or Patents, any other United States applications (including

provisional, non-provisional, divisional, continuing, or reissue applications) based in whole or in part on said United States Patent Applications, said United States Patents or said Inventions, any foreign applications based in whole or in part on, and/or claiming priority from, any of said United States Patent Applications, said United States Patents or said Inventions, and any patents (including extensions thereof) of any country based in whole or in part on, and/or claiming priority from, any of said United States Patent Applications, said United States Patents or said Inventions;

**TO BE HELD AND ENJOYED** by said ASSIGNEE, its successors and assigns, as fully and entirely as the same would have been held and enjoyed by us had no sale and assignment of said interest been made;

**AND Assignor** hereby authorizes and requests the Commissioner of Patents of the United States of America to issue any and all United States patents which may be granted upon said United States Applications or any of them, or upon said Invention or any part thereof, to said ASSIGNEE;

**AND Assignor** hereby agrees for itself and for its respective heirs, executors and administrators, to execute without further consideration any further lawful documents and any further assurances, and any provisional, non-provisional, divisional, continuing, reissue, or other applications for patents of any country, that may be deemed necessary by said ASSIGNEE fully to secure to said ASSIGNEE its interest as aforesaid in and to said United States Patent Applications, said United States Patents or said Inventions;

**IN WITNESS WHEREOF**, Assignor has caused these presents to be executed by its officers thereunto duly authorized this 23<sup>rd</sup> day of May, 2014.


  
\_\_\_\_\_  
Martin Truong  
Senior Vice President & General Counsel  
MEMC Electronic Materials, Inc.

5-23-2014  
\_\_\_\_\_  
Date

STATE OF Missouri )  
COUNTY OF St. Charles )

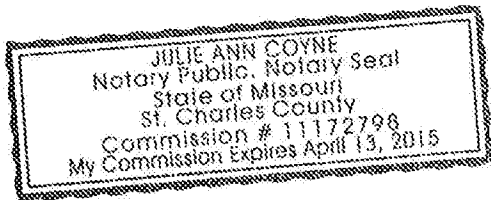
On this 23 day of May, 2014, before me, a Notary Public, personally appeared Martin Truong to be known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

  
Notary Public

My Commission Expires:

April 13, 2015



For and on behalf of SunEdison Semiconductor Limited.

Sally Townsley  
Sally Townsley  
VP and General Counsel  
SunEdison Semiconductor Limited

5/21/14  
Date

STATE OF Missouri  
COUNTY OF St. Charles

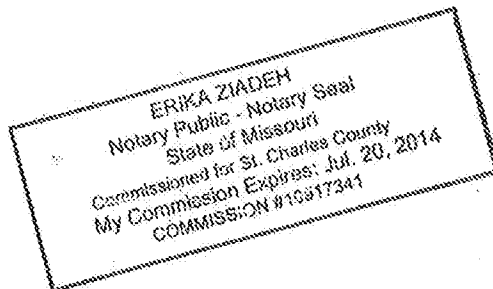
On this 21 day of May, 2014, before me, a Notary Public, personally appeared Sally Townsley to me known to be the person described in and who executed the foregoing assignment and acknowledged that he executed same as his free act and deed.

IN TESTIMONY WHEREOF, I have hereunto set my hand and seal the date and year last above written.

Erika Ziaeh  
Notary Public

My Commission Expires:

July 20, 2014





Electronic Patent Assignment System

# Confirmation Receipt

Your assignment has been received by the USPTO.  
The coversheet of the assignment is displayed below:

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
MEMC ELECTRONIC MATERIALS, INC.	05/23/2014
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	SUNEDISON SEMICONDUCTOR LIMITED (UEN201334164H)
<b>Street Address:</b>	9 BATTERY ROAD
<b>Internal Address:</b>	#15-01 STRAITS TRADING BUILDING
<b>City:</b>	SINGAPORE
<b>State/Country:</b>	SINGAPORE
<b>Postal Code:</b>	049910
<b>PROPERTY NUMBERS Total: 274</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	7938982
Patent Number:	7611580
Patent Number:	8026145
Patent Number:	8267745

Patent Number:	8216362
Patent Number:	8673248
Patent Number:	8058173
Patent Number:	7927185
Patent Number:	7846006
Patent Number:	7846007
Patent Number:	8080482
Patent Number:	6942733
Patent Number:	8309464
Patent Number:	8192822
Patent Number:	8153538
Patent Number:	8404049
Patent Number:	7930058
Patent Number:	8145342
Patent Number:	8186661
Patent Number:	7573587
Patent Number:	7922817
Patent Number:	8696811
Patent Number:	8398765
Patent Number:	8042697
Patent Number:	8220647
Patent Number:	8220646
Patent Number:	8551247
Patent Number:	8691008
Patent Number:	8347740
Patent Number:	8080464
Patent Number:	8367519
Patent Number:	8165706
Patent Number:	8340801
Patent Number:	8143078
Patent Number:	8440541
Patent Number:	8330245
Patent Number:	8310031
Patent Number:	8712575
Patent Number:	8420554
Patent Number:	8524319

Patent Number:	6955718
Patent Number:	7125450
Patent Number:	7442253
Patent Number:	7618879
Patent Number:	6344083
Patent Number:	6652645
Patent Number:	6749683
Patent Number:	6482263
Patent Number:	6743495
Patent Number:	6497403
Patent Number:	6869477
Patent Number:	6986925
Patent Number:	7431765
Patent Number:	6897084
Patent Number:	7135351
Patent Number:	6609870
Patent Number:	6866713
Patent Number:	7182809
Patent Number:	7404856
Patent Number:	6663709
Patent Number:	6554898
Patent Number:	6846539
Patent Number:	7217320
Patent Number:	7132091
Patent Number:	6808781
Patent Number:	7201800
Patent Number:	6709981
Patent Number:	6712673
Patent Number:	6930375
Patent Number:	7071080
Patent Number:	8147613
Patent Number:	6960254
Patent Number:	7008308
Patent Number:	7323421
Patent Number:	7497907
Patent Number:	7084048

Patent Number:	7223304
Patent Number:	7291222
Patent Number:	7485928
Patent Number:	7521382
Patent Number:	7691199
Patent Number:	7344594
Patent Number:	7465351
Patent Number:	7291221
Patent Number:	8066553
Patent Number:	7888685
Patent Number:	7696103
Patent Number:	7033168
Patent Number:	7462246
Patent Number:	7878883
Patent Number:	7566951
Patent Number:	7662023
Patent Number:	7559825
Patent Number:	7601049
Patent Number:	7878562
Patent Number:	8192248
Patent Number:	5571373
Patent Number:	5855859
Patent Number:	5605487
Patent Number:	5573680
Patent Number:	5976247
Patent Number:	5882989
Patent Number:	5980629
Patent Number:	5578284
Patent Number:	5628823
Patent Number:	5840120
Patent Number:	5656078
Patent Number:	5518549
Patent Number:	5588993
Patent Number:	5593494
Patent Number:	5904768
Patent Number:	6214109



Patent Number:	5795381
Patent Number:	5906533
Patent Number:	5593498
Patent Number:	5766341
Patent Number:	5908504
Patent Number:	5787595
Patent Number:	5791493
Patent Number:	5843234
Patent Number:	5840202
Patent Number:	5679055
Patent Number:	5814148
Patent Number:	5779791
Patent Number:	5712198
Patent Number:	5849076
Patent Number:	5827113
Patent Number:	6287380
Patent Number:	6409827
Patent Number:	6605150
Patent Number:	6254672
Patent Number:	6409826
Patent Number:	6632278
Patent Number:	6638357
Patent Number:	5885344
Patent Number:	5770522
Patent Number:	5846318
Patent Number:	5653799
Patent Number:	6006738
Patent Number:	5816274
Patent Number:	6019838
Patent Number:	5942032
Patent Number:	5839460
Patent Number:	5990014
Patent Number:	6482269
Patent Number:	6114245
Patent Number:	5792273
Patent Number:	5865670

Patent Number:	6503322
Patent Number:	6093913
Patent Number:	5837662
Patent Number:	6210640
Patent Number:	5922127
Patent Number:	6053974
Patent Number:	5882402
Patent Number:	6183553
Patent Number:	5891250
Patent Number:	6190631
Patent Number:	6555194
Patent Number:	6896728
Patent Number:	7229693
Patent Number:	5913975
Patent Number:	6129048
Patent Number:	6330971
Patent Number:	6187089
Patent Number:	6828690
Patent Number:	7242037
Patent Number:	6171391
Patent Number:	6284039
Patent Number:	6565649
Patent Number:	7097718
Patent Number:	6039801
Patent Number:	6315828
Patent Number:	5919302
Patent Number:	6379642
Patent Number:	6840997
Patent Number:	6214704
Patent Number:	6416836
Patent Number:	6743289
Patent Number:	6361619
Patent Number:	6686260
Patent Number:	6227944
Patent Number:	6338805
Patent Number:	6458202

Patent Number:	6236104
Patent Number:	6342725
Patent Number:	6849901
Patent Number:	6336968
Patent Number:	6432197
Patent Number:	6709511
Patent Number:	6191010
Patent Number:	6579779
Patent Number:	6713370
Patent Number:	6284384
Patent Number:	6537655
Patent Number:	6958092
Patent Number:	6599815
Patent Number:	6328795
Patent Number:	6562123
Patent Number:	6913647
Patent Number:	6197111
Patent Number:	6339016
Patent Number:	6312516
Patent Number:	6500255
Patent Number:	6652646
Patent Number:	6520191
Patent Number:	6858307
Patent Number:	6726764
Patent Number:	6241818
Patent Number:	7008874
Patent Number:	6350312
Patent Number:	6319313
Patent Number:	6776840
Patent Number:	6514423
Patent Number:	6376395
Patent Number:	6635587
Patent Number:	6689209
Patent Number:	6293139
Patent Number:	6376335
Patent Number:	6435474

Patent Number:	6203611
Patent Number:	6579362
Patent Number:	6479386
Patent Number:	6444027
Patent Number:	6652650
Patent Number:	6515742
Patent Number:	6596095
Patent Number:	6006736
Patent Number:	6180220
Patent Number:	6586068
Patent Number:	6849119
Patent Number:	5665159
Patent Number:	6398631
Patent Number:	6447601
Patent Number:	7105050
Patent Number:	6454851
Patent Number:	6461427
Patent Number:	6391662
Patent Number:	6454635
Application Number:	13199587
Application Number:	13061386
Application Number:	12415274
Application Number:	13130160
Application Number:	12840549
Application Number:	13733468
Application Number:	13733499
Application Number:	13730011
Application Number:	13353142
Application Number:	13162122
Application Number:	13354788
Application Number:	13237049
Application Number:	14045325
Application Number:	13417934
Application Number:	13724050
Application Number:	13443074
Application Number:	13443076

Application Number:	13419139
Application Number:	13663038
Application Number:	13663073
Application Number:	13652665
Application Number:	13299926
Application Number:	13299929
Application Number:	13299917
Application Number:	13413284
Application Number:	13712561
Application Number:	13712592
Application Number:	13838284
Application Number:	13890316
Application Number:	13432326
Application Number:	13750371
Application Number:	13762967
Application Number:	13762974
Application Number:	13419137
Application Number:	11698728

**CORRESPONDENCE DATA**

Fax Number: (314)612-2307  
Phone: 314-621-5070  
Email: USpatents@armstrongteasdale.com

*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.*

Correspondent Name: RICHARD A. SCHUTH (MEMC)  
Address Line 1: ARMSTRONG TEASDALE LLP  
Address Line 2: 7700 FORSYTH BOULEVARD, SUITE 1800  
Address Line 4: ST. LOUIS, MISSOURI 63105

<b>ATTORNEY DOCKET NUMBER:</b>	28744-1
<b>NAME OF SUBMITTER:</b>	RICHARD A. SCHUTH
<b>Signature:</b>	/Richard A. Schuth/
<b>Date:</b>	05/27/2014

**Total Attachments: 26**

source=Executed Assignment - MEMC to SSL Published-17948738#page1.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page2.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page3.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page4.tif

source=Executed Assignment - MEMC to SSL Published-17948738#page5.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page6.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page7.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page8.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page9.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page10.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page11.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page12.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page13.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page14.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page15.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page16.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page17.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page18.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page19.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page20.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page21.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page22.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page23.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page24.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page25.tif  
source=Executed Assignment - MEMC to SSL Published-17948738#page26.tif

**RECEIPT INFORMATION**

EPAS ID: PAT2870668  
Receipt Date: 05/27/2014

[Return to home page](#)

[| .HOME](#) | [INDEX](#) | [SEARCH](#) | [eBUSINESS](#) | [CONTACT US](#) | [PRIVACY STATEMENT](#)