

Search history

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Search 3 and identif* (Results 36)
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Search [SP]: New optic and electromagnetic material comprises a glass substrate, melting point between 700K to 2000K, and dopant agents, elements with energy levels between 0,4eV to 6,2eV. (Results 544)
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Search (21) AND IPC=(G02) (Results 29)
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Title: INTEGRATED **DEVICE** WITH EXTERNAL LIGHT SOURCE FOR PROBING DETECTING AND ANALYZING MOLECULES

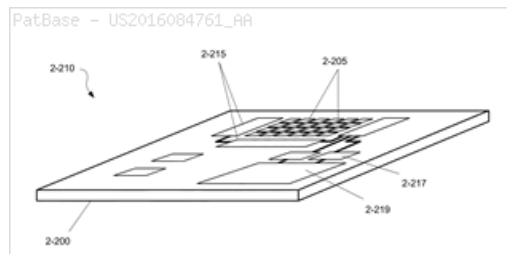
Abstract: Source: US2016084761A System and methods for analyzing single molecules and performing nucleic acid sequencing. An integrated **device** includes multiple pixels with sample wells configured to receive a sample, which when **excited**, emits **radiation**. The integrated **device** includes at least one **waveguide** configured to propagate **excitation energy** to the sample wells from a region of the integrated **device** configured to couple with an **excitation energy** source. A pixel may also include at least one element for directing the emission **energy** towards a sensor within the pixel. The system also includes an instrument that interfaces with the integrated **device**. The instrument may include an **excitation energy** source for providing **excitation energy** to the integrated **device** by coupling to an **excitation energy** coupling region of the integrated **device**. One of multiple markers distinguishable by temporal parameters of the emission **energy** may label the sample and configuration of the sensor within a pixel may allow for detection of a temporal parameter associated with the marker labeling the sample.

Classifications:

International (IPC 8-9): A61B5/00 A61B5/145 A61B5/1455 C12M1/34 C12Q1/00 C12Q1/68 C12Q1/6869 G01J1/44 G01J3/44 G01N21/00 G01N21/01 G01N21/17 G01N21/25 G01N21/62 G01N21/63 G01N21/64 G01N21/75 G01N27/327 G01N33/48 G01N33/58 G01S17/89 G01S7/486 G02B3/08 H01L27/00 H01L27/146 H01L27/148 H01L31/00 H01S3/00 H01S3/081 H01S3/0941 H01S3/10 H01S3/101 H01S3/105 H01S3/11 H01S3/13 H01S5/00 H01S5/026 H01S5/042 H01S5/06 H01S5/062 H01S5/22 H01S5/30 H04N5/3745 H05B33/08 H05B37/02 (Advanced/Invention); G01S7/481 G01S7/486 H01S3/04 H01S3/0941 H01S3/16 (Advanced/Non-invention)

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US: 250/201.1 250/206 250/458.1 250/459.1 257/225 29/592.1 435/6.1 435/6.12 436/94 438/75 506/38 506/4



Family:

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Priority:

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHODS AND APPARATUS FOR REMOVAL AND CONTROL OF MATERIAL IN LASER DRILLING OF A BOREHOLE

Abstract: Source: US2010044102A There is provided a system, apparatus and methods for removal of material for the path of a laser beam during laser drilling of a borehole and for removal of displaced borehole material from the borehole during laser drilling. In particular, there are provided paths, dynamics and parameters of fluid flows, and apparatus for obtaining such, for use in conjunction with a laser bottom hole assembly.

Classifications:

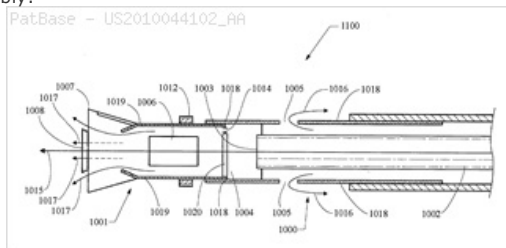
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Family:

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Probable Assignee: FORO ENERGY INC

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: ARRAY OF NANOWIRES IN A SINGLE CAVITY WITH ANTI-REFLECTIVE COATING ON **SUBSTRATE**

Abstract: Source: US2010308214A An embodiment relates to image sensor comprising one or more nanowires on a **substrate** of a cavity, the nanowire being configured to transmit a first portion of an **electromagnetic radiation** beam incident on the sensor, and the **substrate** that absorbs a second portion of the **electromagnetic radiation** beam incident on the sensor, wherein the first portion is substantially different from the second portion. The **substrate** could have a anti-reflective **material**. The **ratio** of a diameter of the cavity to a diameter of the nanowire could be at less than about 10.

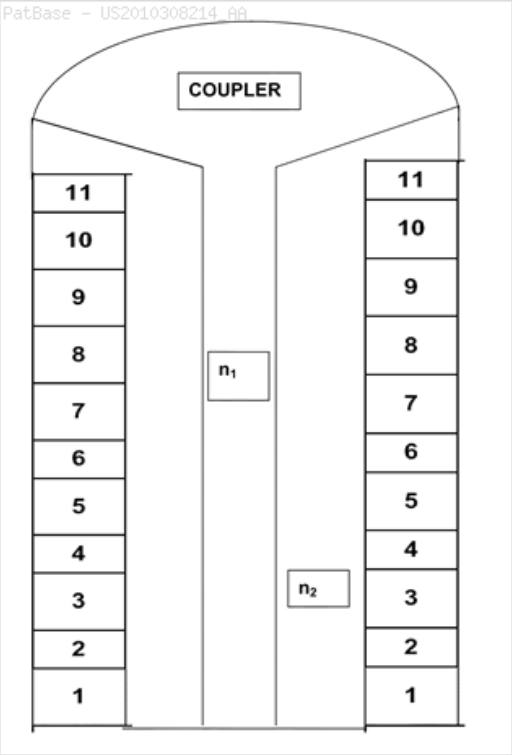
Classifications:

International (IPC 8-9): B82Y15/00 B82Y20/00 B82Y30/00 B82Y40/00 B82Y99/00 C01B31/02 F21K99/00 F21V9/08 F21V9/16 G01J1/04 G01J1/20 G01J1/42 G01J5/08 G01J5/20 G01N21/25 G01N23/04 G01N23/20 G02B5/22 G02B6/02 G02B6/10 G02B6/26 G09F13/00 G09G3/32 G21K1/06 H01J40/14 H01L21/02 H01L21/20 H01L27/00 H01L27/14 H01L27/142 H01L27/144 H01L27/146 H01L27/15 H01L29/04 H01L29/06 H01L29/15 H01L31/00 H01L31/02 H01L31/0216 H01L31/0224 H01L31/0232 H01L31/0236 H01L31/0248 H01L31/028 H01L31/0304 H01L31/0352 H01L31/04 H01L31/042 H01L31/052 H01L31/054 H01L31/056 H01L31/062 H01L31/068 H01L31/072 H01L31/074 H01L31/075 H01L31/08 H01L31/10 H01L31/101 H01L31/102 H01L31/103 H01L31/105 H01L31/107 H01L31/108 H01L31/112 H01L31/113 H01L31/12 H01L31/14 H01L31/153 H01L31/18 H01L33/00 H01L33/04 H01L33/50 H02S50/15 H04N3/14 H04N5/369 (Advanced/Invention); B82Y15/00 B82Y20/00 B82Y40/00 B82Y99/00 C01B3/00 G01J5/08 G02B6/10 G02B6/42 H01L27/15 H01L29/06 H01L33/00 H01L33/06 (Advanced/Non-invention); H01L27/14 H01L31/08 H01L31/10 (Core/Non-invention)

CPC: H01L27/14621 H01L27/14627 H01L27/14629 H01L27/14685 B82Y15/00 B82Y20/00 B82Y99/00 H01L27/14649 H01L31/0304 H01L27/1462 H01L27/14625 H01L31/109 C01B3/0021 C01B2202/06 H01L29/0669 H01L33/0012 Y10S977/762 Y10S977/95 H01L31/153 H01L31/02327 Y10S977/954 H01L27/14683 H01L27/14612 H01L31/1126 G01J1/429 H01L31/028 H01L31/107 H01L31/022408 H01L27/14643 H01L27/14605 H01L27/156 H01L31/1055 H01L33/06 H01L27/14692 B82Y40/00 F21V9/08 G02B5/22 Y10S977/888 H01L27/1464 H01L31/145 H01L31/02168 H01L31/02322 H01L27/14 H01L31/035281 G09F13/00 H01L27/1446 H01L31/108 H01L31/113 H01L31/02162 H01L21/02603 H01L27/1443 Y10T428/24174 Y10T428/24893 H01L27/14665 F21V9/16 F21K9/50 G01N23/046 H01L31/02167 H01L31/0747 H01L31/1892 G01J1/04 C01B3/00 G01J1/42 G01J5/08 H01L31/035227 H01L27/1461 H01L27/14645 H01L31/0232 H01L31/101 H01L31/102 H01L31/0684 H01L31/1804 H01L31/03529 H01L31/056 H01L31/068 H01L31/075 H01L31/103 H01L31/105 Y02E10/52 Y02E10/547 Y02E10/548 H01L31/0543 H01L31/076 H01L31/078 H01L31/0687 H01L31/0725 H01L31/08 H01L31/0392 H01L31/03926 H01L31/046 H01L31/0465 H01L31/072 H01L31/0475 H01L31/0547 G01N23/20008 H01L27/14875 H01L29/0676 B82Y30/00 G02B6/107 G02B6/4298 H01L27/14601 H01L27/14607 H01L27/14603 Y02P70/521 H01L31/0745 Y02E10/50 G01J4/04 G01T1/24 H01L27/15 H01L33/16 H01L33/56 H01L31/02325 C01B32/158 H01L31/18 H01L31/0352

European: B82Y15/00 B82Y20/00 B82Y30/00 G02B6/10S H01L27/14 H01L27/144R H01L27/146A H01L27/146A10 H01L27/146A10M H01L27/146A2 H01L27/146A2P H01L27/146A4P H01L27/146A8C H01L27/146F H01L27/146F2 H01L27/146V2 H01L31/0232 H01L31/0352 H01L31/0352A3 H01L31/0352C2 H01L31/0352C3 H01L31/052B4 H01L31/068 H01L31/075 H01L31/101 H01L31/102 H01L31/103 H01L31/105 H01L31/109 H01L31/18C T01L27/146A10 T01L27/146A10M T01L27/146A4P T01L27/146F2 T01L27/15B2 T01L31/0352 T01L33/00D2B T01L33/06 Y02E10/50

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Probable Assignee: ZENA TECHNOLOGIES INC

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Inventor(s): YU, YOUNG-JUNE

Agent(s): PILLSBURY WINTHROP SHAW PITTMAN LLP; DAVE RAJ S ET AL; DAVE RAJ S; GU QIAN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: NON-INVASIVE **ENERGY** UPCONVERSION METHODS AND SYSTEMS FOR IN-SITU PHOTOBIOMODULATION

Abstract: Source: US2011021970A Products, compositions, systems, and methods for modifying a target structure which mediates or is associated with a biological activity, including treatment of conditions, disorders, or diseases mediated by or associated with a target structure, such as a virus, cell, subcellular structure or extracellular structure. The methods may be performed in situ in a non-invasive manner by placing a nanoparticle having a metallic shell on at least a fraction of a surface in a vicinity of a target structure in a subject and applying an initiation **energy** to a subject thus producing an effect on or change to the target structure directly or via a modulation **agent**. The nanoparticle is configured, upon exposure to a first **wavelength** ?1, to generate a second **wavelength** ?2 of **radiation** having a higher **energy** than the first **wavelength** ?1. The methods may further be performed by application of an initiation **energy** to a subject in situ to activate a pharmaceutical **agent** directly or via an **energy** modulation **agent**, optionally in the presence of one or more plasmonics active **agents**, thus producing an effect on or change to the target structure. Kits containing products or compositions formulated or configured and systems for use in practicing these methods.

Classifications:

International (IPC 8-9): A01N65/00 A61B5/00 A61B5/055 A61B6/00 A61K31/37 A61K31/409 A61K33/24 A61K33/30 A61K33/38 A61K35/12 A61K39/00 A61K39/395 A61K41/00 A61K45/00 A61K49/00 A61K9/14 A61K9/16 A61K9/51 A61L2/00 A61L2/08 A61M37/00 A61M5/00 A61N1/40 A61N5/02 A61N5/06 A61N5/10 A61P13/08 A61P17/02 A61P17/06 A61P17/14 A61P19/00 A61P19/02 A61P25/00 A61P25/02 A61P25/04 A61P25/14 A61P25/16 A61P25/28 A61P27/02 A61P29/00 A61P3/04 A61P31/00 A61P31/04 A61P31/10 A61P31/12 A61P33/00 A61P35/00 A61P37/02 A61P37/06 A61P43/00 A61P9/00 A61P9/14 B82Y20/00 B82Y40/00 B82Y5/00 G02F1/01 (Advanced/Invention); A61L2/08 A61N1/40 A61N5/02 B82Y5/00 (Advanced/Non-invention); A61N5/06 (Core/Non-invention)

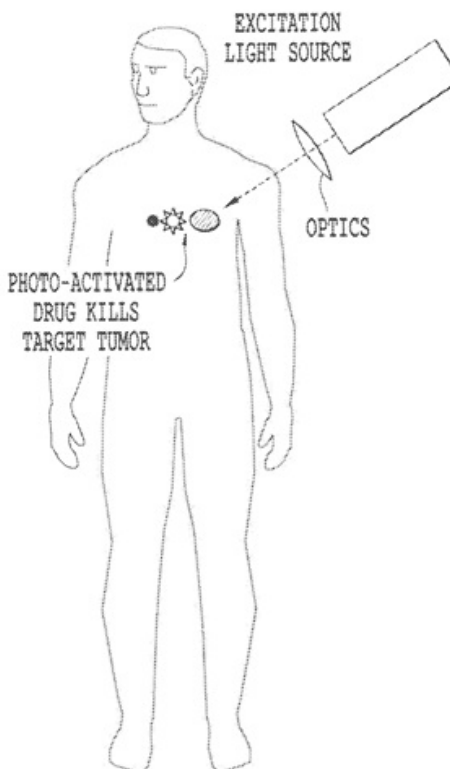
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US: 1/1 359/241 359/241S 424/184.1 424/184.100S 424/490 424/490S 424/93.7 424/93.700S 604/20 604/20P 607/88 977/773 977/773S 977/834 977/834S 977/906 977/906S 977/908 977/908S

PatBase - US2011021970_AA



Family:

Publication number	Publication date	Application number	Application date
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Assignee(s): IMMUNOLIGHT LLCUS ; DUKE UNIV ; DUKE UNIVERSITY

Inventor(s): (std): BENOIT LAULY ; BOURKE JR FREDERIC A ; AYRES JENNIFER A ; FREDERIC A BOURKE ; HAROLD

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Inventor(s): VO-DINH, TUAN

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: PRINTABLE ELECTRONIC FEATURES ON NON-UNIFORM **SUBSTRATE** AND PROCESSES FOR MAKING SAME

Abstract: Source: US2006158470A A system and process for compensating for non-uniform surfaces of a **substrate** when direct printing traces is provided. The system and process provided herein measures the surface of a **substrate** and can determine whether the surface is substantially flat, rises or falls, or whether a mesa or valley is encountered. Depending on the surface feature (i.e., mesa, valley, falling or rising surface), the direct printing system can change the frequency of the printing timing signal, advance or retard the print timing signal, advance or retard the print data, or make repeated passes over certain areas. In addition, the process disclosed herein can determine whether two, three or all of the aforementioned steps for compensating for non-uniform **substrates** should be combined to most effectively and efficiently print on the non-uniform surface of the **substrate** as intended.

Classifications:

International (IPC 8-9): B01D61/14 B01J13/02 B41J2/16 C09D11/02 C22B3/16 H05K3/46 A61K9/14 B05D1/36 B05D3/00 B05D5/12 B22F1/00 B22F9/18 B22F9/24 B22F9/30 B32B18/00 B32B3/00 B41J2/01 B41J25/308 B41J29/38 B41J29/393 B41J3/407 B41M3/14 B42D15/00 B42D15/10 C09D11/00 C09D5/10 C22B3/00 G01D11/00 G02B5/18 G02B5/32 G06F17/50 G09F3/02 H01B1/22 H01L21/00 H01L21/31 H01L21/44 H01L21/469 H01L21/48 H01L23/48 H03K17/693 H05K1/00 H05K1/09 H05K1/14 H05K1/16 H05K3/12 H05K3/38 (Advanced/Invention); H01L21/768 B41J2/01 B42D15/00 B42D15/10 (Advanced/Non-invention); A61K9/14 B05D1/36 B05D3/00 B05D5/12 B22F1/00 B22F9/16 B32B18/00 B32B3/00 B41J25/308 B41J29/393 B41J3/407 B41M3/14 B42D15/00 B42D15/10 C09D11/00 C09D5/10 C22B3/00 G01D11/00 G02B5/18 G02B5/32 G06F17/50 G09F3/02 H01B1/22 H01L21/00 H01L21/02 H01L23/48 H03K17/693 H05K1/00 H05K1/09 H05K1/14 H05K1/16 H05K3/12 H05K3/38 H05K3/46 (Core/Invention); B41J2/01 (Core/Non-invention); B42D (Subclass/Invention)

International (IPC 1-7): B42D15/00

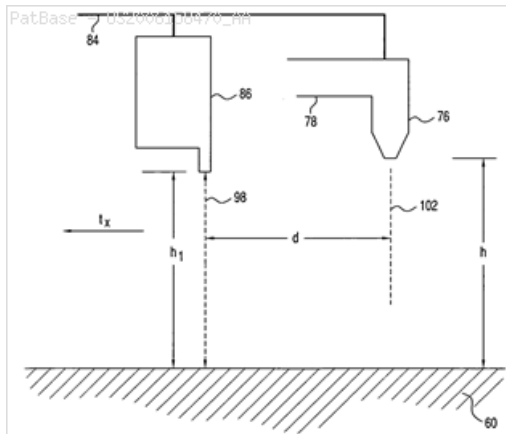
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Family:

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Priority:

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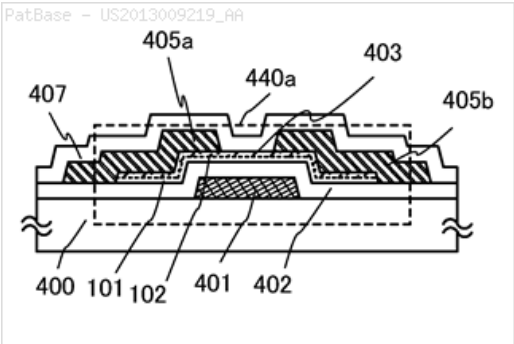
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Title: SEMICONDUCTOR **DEVICE** AND MANUFACTURING METHOD THEREOF

Abstract: Source: US2013009219A Provided are a transistor which has electrical characteristics requisite for its purpose and uses an **oxide** semiconductor layer and a semiconductor **device** including the transistor. In the bottom-gate transistor in which at least a gate electrode layer, a gate insulating film, and the semiconductor layer are stacked in this order, an **oxide** semiconductor stacked layer including at least two **oxide** semiconductor layers whose **energy** gaps are different from each other is used as the semiconductor layer. Oxygen and/or a **dopant** may be added to the **oxide** semiconductor stacked layer.

Classifications:

International (IPC 8-9): G02F1/1368 G09F9/30 H01L21/28 H01L21/336 H01L21/8234 H01L21/8242 H01L27/06 H01L27/08 H01L27/088 H01L27/108 H01L27/1156 H01L27/146 H01L29/04 H01L29/10 H01L29/12 H01L29/24 H01L29/417 H01L29/423 H01L29/49 H01L29/78 H01L29/786 H01L29/788 H01L29/792 H01L51/50 H05B33/08 H05B33/14 (Advanced/Invention)
CPC: H01L29/04 H01L29/66742 H01L29/786 H01L29/78693 H01L29/045 H01L29/24 H01L29/78696 H01L29/7869
US: 1/1 257/288 257/43 257/59 257/72 257/E21.409 257/E29.255 438/158



Family:

Publication number	Publication date	Application number	Application date
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CN102867854 B	20170301	CN201210235123	20120709
CN106960880 A	20170718	CN201611205405	20120709
JP2013038399 A2	20130221	JP20120151178	20120705
JP2015195384 A2	20151105	JP20150109649	20150529
JP2017034266 A2	20170209	JP20160181157	20160916
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JP6010660 B2	20161019	JP20150109649	20150529
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US2013009219 AA	20130110	US20120527882	20120620
US2015115263 AA	20150430	US20150590133	20150106
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US8952377 BB	20150210	US20120527882	20120620
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Priority:

CN201210235123	20120709	JP20110152099	20110708	JP20120151178	20120705
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Inventor(s): (std): SHINOHARA SATOSHI ; YAMAZAKI SHUNPEI ; SHINOHARA SOJI

Agent(s): ERIC J; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE PC; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE

Title: METHODS AND **DEVICES** FOR THE **OPTICAL** MEASUREMENT OF TEMPERATURE WITH LUMINESCENT **MATERIALS**

Abstract: Source: US4708494A The present invention provides new methods and their associated **materials** and **devices** for the remote **optical** measurements of temperatures with luminescent sensors. These methods allow the use of a single sensor to measure temperatures over a wide range from the cryogenic regions to well above ambient temperatures, up to about 800 K depending on the sensor. Using fiber **optic** links a single, inexpensive light source, for example a light emitting diode, and a single photodetector are used to obtain normalized measurements from a sensor, only minimally affected by fluctuations in the intensity of the **excitation** light source, fiber and/or connector losses or detector drift. One preferred embodiment of this invention can be used with most luminescent **materials** and does not require a temperature-dependent change in the luminescence properties of the sensor within the temperature range being measured. Another preferred embodiment uses temperature-dependent luminescence decay times as temperature indicators, using a class of **materials** the luminescence quantum efficiency of which does not degrade within the temperature range being measured. The invention permits the use of a single sensor in two independent operative modes, thus providing redundancy and a self-checking feature.

Classifications:

International (IPC 8-9): F25B23/00 G01D5/353 G01J5/08 G01J5/52 G01K11/12 G01K11/32 G01L1/24 G06F3/033 G06F3/041 G06F3/042 (Advanced/Invention);

A61B17/00 (Advanced/Non-invention);

G01D5/26 G01J5/08 G01J5/52 G01K11/00 G01L1/24 G06F3/033 G06F3/041 (Core/Invention);

A61B17/00 (Core/Non-invention)

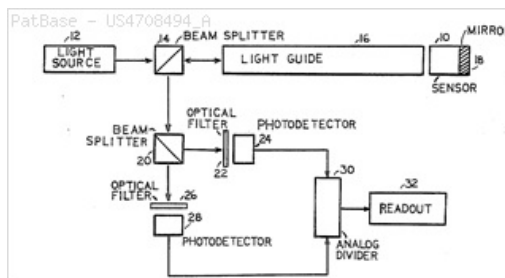
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IPC: G01D5/35358 G01D5/3538 G01D5/35345 G01D5/35374

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US: 250/227.11 250/227.14 250/227.16 250/227.18 250/227.21 250/227.22 250/227.23 250/231.1 250/231R 250/330 250/361.00R 250/361R 250/458.1 252/301.33 356/130 356/133 356/136 356/319 356/320 356/43 356/432 356/44 356/445 359/115 359/124 359/333 359/341 359/342 359/343 359/345 372/39 372/40 372/6 372/69 372/70 374/120 374/131 374/137 374/142 374/143 374/161 374/162 374/E11.015 374/E11.017 374/E11.018 385/12 385/123 385/126 385/127 385/13 385/141 385/142 385/144 385/145 385/24 385/27 385/31 385/32 385/88 385/89 606/12 606/15 606/16 73/293 73/714



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: KLEINERMAN MARCOS Y SOUTHBRIDGE MASS US

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Inventor(s): (std): KLEINERMAN MARCOS Y ; KLEINERMAN MARCOS

Designated states: BE CH DE DK FR GB IT LI LU NL SE

Title: **OXIDE** INTERFACE AND A METHOD FOR FABRICATING **OXIDE** THIN FILMS

Abstract: Source: US2004094808A An **oxide** interface and a method for fabricating an **oxide** interface are provided. The method comprises forming a silicon layer and an **oxide** layer overlying the silicon layer. The **oxide** layer is formed at a temperature of less than 400 degrees centigrade using an inductively coupled plasma source. In some aspects of the method, the **oxide** layer is more than 20 nanometers (nm) thick and has a refractive index between 1.45 and 1.47. In some aspects of the method, the **oxide** layer is formed by plasma oxidizing the silicon layer, producing plasma **oxide** at a rate of up to approximately 4.4 nm per minute (after one minute). In some aspects of the method, a high-density plasma enhanced chemical vapor deposition (HD-PECVD) process is used to form the **oxide** layer. In some aspects of the method, the silicon and **oxide** layers are incorporated into a thin film transistor.

Classifications:

International (IPC 8-9): B05D5/06 B05D5/12 B32B43/00 B82B3/00 B82Y10/00 B82Y20/00 B82Y40/00 C01B21/082 C01B33/02 C09K11/00 C09K11/02 C09K11/08 C09K11/59 C09K11/66 C23C14/16 C23C14/48 C23C16/00 C23C16/02 C23C16/24 C23C16/30 C23C16/40 C23C16/42 C23C16/455 C23C16/50 C23C16/509 C23C16/56 C23F1/00 C30B1/00 G02B6/122 G02B6/13 G02B6/26 G09G3/20 G09G3/32 G09G3/36 G11C11/34 G11C13/04 H01J1/62 H01J1/63 H01J9/24 H01L21/00 H01L21/02 H01L21/04 H01L21/20 H01L21/205 H01L21/208 H01L21/26 H01L21/28 H01L21/31 H01L21/316 H01L21/318 H01L21/3205 H01L21/324 H01L21/332 H01L21/336 H01L21/36 H01L21/38 H01L21/42 H01L21/469 H01L21/4763 H01L21/84 H01L23/58 H01L27/01 H01L27/10 H01L27/12 H01L29/06 H01L29/10 H01L29/41 H01L29/47 H01L29/49 H01L29/74 H01L29/76 H01L29/77 H01L29/772 H01L29/78 H01L29/786 H01L29/872 H01L29/94 H01L31/0248 H01L31/028 H01L31/042 H01L33/00 H01L33/34 H01L33/44 H01L45/00 H01S3/10 H01S3/16 H01S3/17 H01S5/00 H03H11/26 H03K3/00 H04B10/12 H04R1/00 H04R1/10 H04R25/00 H04R5/033 H05B33/00 H05B33/10 H05B33/14 H05B33/22 H05B33/26 H05B33/28 (Advanced/Invention); B82Y10/00 B82Y15/00 H01J1/62 H01J63/04 H01L21/205 H01L21/316 H01L33/00 H01L33/18 H01L33/34 H01L33/42 (Advanced/Non-invention);

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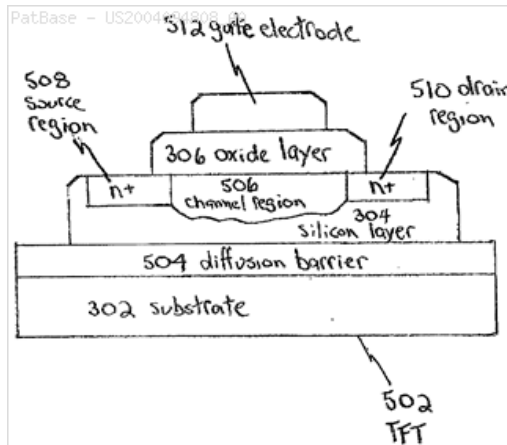
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Probable Assignee: SHARP KK

Assignee(s): (std): AFENTAKIS THEMISTOKLES ; AKG ACOUSTICS GMBH ; AKG AKUSTIKS GMBKH ; CASASANTA VINCENZO ; HARTZELL JOHN W ; HUANG JIANDONG ; SHARP KK ; SHARP LAB OF AMERICA INC ; JOSHI POORAN CHANDRA ; SCHUELE PAUL J ; TANG LIANG ; VOUTSAS APOSTOLOS T ; ZHANG HAO ; TU CHANG CHING ; ZHAN CHANGQING ; SHARP CORP

Assignee(s): SHARP KABUSHIKI KAISHA ; SHARP LABORATORY OF AMERICA INC ; LENHARD BACKHAUS HUGO ; SHARP LABORATORIES OF AMERICA INC ; SHARP L ORATORIES OF AMERICA INC AB

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: UP AND DOWN CONVERSION SYSTEMS FOR PRODUCTION OF EMITTED LIGHT FROM VARIOUS **ENERGY** SOURCES

Abstract: Source: US2010261263A A system for **energy** upconversion and/or down conversion and a system for producing a photostimulated reaction in a medium. These systems include 1) a nanoparticle configured, upon exposure to a first **wavelength** ?1 of **radiation**, to generate a second **wavelength** ?2 of **radiation** having a higher **energy** than the first **wavelength** ?1 and 2) a metallic structure disposed in relation to the nanoparticle. A physical characteristic of the metallic structure is set to a value where a surface plasmon resonance in the metallic structure resonates at a frequency which provides a spectral overlap with either the first **wavelength** ?1 or the second **wavelength** ?2, or with both ?1 and ?2. The system for producing a photostimulated reaction in a medium includes a receptor disposed in the medium in proximity to the nanoparticle which, upon activation by the second **wavelength** ?2, generates the photostimulated reaction.

Classifications:

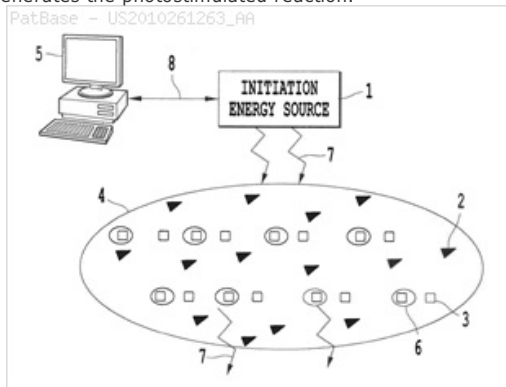
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International (IPC 1-7): G01N21/63

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Publication number	Publication date	Application number	Application date
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Priority:

US20070954263P 20070806	US20080030437P 20080221	US20090161328P 20090318
US20080042561P 20080404	US20080035559P 20080311	US20080080140P 20080711
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Probable Assignee: DUKE UNIV

Assignee(s): (std): FELS DIANE RENEE ; DEWHIRST MARK WESLEY ; BOURKE JR FREDERIC A ; FATHI ZAKARYAE ; SIMMONS JOSEPH H ; SCAFFIDI JONATHAN P ; VO DINH TUAN ; STANTON IAN NICHOLAS ; GREGAS MOLLY K ; THERIEN MICHAEL J ; LAULY BENOIT ; STECHER JOSHUA T ; UNIV DUKE ; IMMUNOLIGHT LLC ; HANSEN KATHERINE SARAH ; IMMUNOLIGHT L L C ; STAUFFER PAUL RATH ; MACCARINI PAOLO ; NORTON STEPHEN JOHN ; ZHANG ZHENYUAN ; ZHANG YAN ; WYATT CORY ROBERT ; AYRES JENNIFER ; AYRES JENNIFER ANN ; BOURKE FREDERIC A ; BOURKE FREDERIC A JR ; FATHI ZAK ; CHADA VENKATA GOPAL REDDY

Assignee(s): DUKE UNIV ; DUKE UNIVERSITY

Inventor(s): (std): BOURKE FREDERIC A ; BOURKE FREDERIC A JR ; BOURKE JR FREDERIC A ; AYRES JENNIFER ; AYRES JENNIFER A ; CHADA VENKATA GOPAL REDDY ; DEWHIRST MARK WESLEY ; FATHI ZAK ; FATHI ZAKARYAE ; FELS DIANE RENEE ; GREGAS MOLLY K ; HANSEN KATHERINE SARAH ; LAULY BENOIT ;

MACCARINI PAOLO ; NORTON STEPHEN JOHN ; SCAFFIDI JONATHAN P ; SIMMONS JOSEPH H ;
STANTON IAN N ; STANTON IAN NICHOLAS ; STAUFFER PAUL RATH ; STECHER JOSHUA T ; THERIEN
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TUAN ; AYRES JENNIFER ANN

Inventor(s): VO-DINH, TUAN

Agent(s): REBOUSSIN YOHANN MICKAEL NOEL; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP; OBLON
SPIVAK MCCLELLAND MAIER AND NEUSTADT L L P; OBLON MCCLELLAND MAIER AND NEUSTADT LLP;
MASON J DEREK ET AL; MASON DEREK J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU
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MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST
SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: **OPTICAL WAVEGUIDES** IN IMAGE SENSORS

Abstract: Source: US2010163714A An embodiment relates to an image sensor comprising (a) a **optical** pipe comprising a core and a cladding, and (b) a pair of photosensitive elements comprising a central photosensitive element and a peripheral photosensitive element, wherein the central photosensitive element is operably coupled to the core and the peripheral photosensitive element is operably coupled to the cladding, and methods of fabricating and using the same. The image sensor could further comprise a lens structure or an **optical** coupler or an **optical** coupler over the **optical** pipe, wherein the lens structure or the **optical** coupler or the **optical** coupler is operably coupled to the **optical** pipe.

Classifications:

International (IPC 8-9): B82Y20/00 B82Y40/00 F21V7/22 G01J1/42 G01J5/20 G01T1/24 G02B1/10 G02B27/10 G02B27/64 G02B5/20 G02B6/00 G02B6/02 G02B6/06 G02B6/10 G02B6/12 G02B6/42 G02B6/43 H01L21/00 H01L21/02 H01L21/28 H01L27/14 H01L27/144 H01L27/146 H01L27/148 H01L29/06 H01L31/02 H01L31/0224 H01L31/0232 H01L31/0352 H01L31/042 H01L31/0475 H01L31/054 H01L31/101 H01L31/103 H01L31/105 H01L31/107 H01L31/18 H04N5/225 H04N5/335 H04N5/374 H04N5/378 (Advanced/Invention); H01L27/146 H04N5/374 (Advanced/Non-invention); G02B6/00 G02B6/02 G02B6/06 H01L27/14 (Core/Invention); G02B6/42 H01L27/146 H04N5/335 (Core/Non-invention)

CPC: G02B6/421 G02B6/43 H01L27/14627 H01L27/14685 H01L27/14643 G02B2006/12138 H04N5/374 H01L31/035281 H01L31/0475 H01L31/0547 H01L31/18 H01L31/02327 H01L27/1446 G02B27/1013 H01L27/14649 G02B6/12007 G02B6/102 G02B2006/1215 H01L31/03529 H01L31/056 Y02E10/52 H01L27/14875 H01L29/0676 B82Y20/00 G02B6/107 G02B6/12004 G02B6/42 H01L21/02532 H01L21/02573 H01L21/02653 H01L27/14632 H01L27/14687 H01L28/60 G01J1/0425 H01L27/1464 H01L31/02167 H01L31/0543 H01L31/076 H01L31/078 H01L27/14621 H01L27/14625 H01L27/14692 H01L31/035227 H01L31/107 G02B6/4204 G02B6/12002 B82Y30/00 B82Y40/00 B82Y99/00 F21V9/08 G02B5/22 G09F13/00 Y10S977/762 Y10S977/888 Y10S977/954 Y10T428/24174 Y10T428/24893 H01L27/14605 H01L27/14645 H01L31/105 H01L27/14607 H01L27/14603 H04N5/378 H04N5/2253 H04N5/2254 Y02E10/548 H01L27/14629 Y10S977/819 H01L27/02521 H01L21/02381 H01L21/02521 H01L21/02603 H01L21/0262 H01L21/02639 H01L21/02645 H01L21/02664 H01L31/103 H01L31/0352 H01L31/101 H01L27/14665 H01L27/14669 H01L27/14683 G01J5/20 G01J1/42 H01L31/022433 H01L31/068 Y02E10/547

European: G02B6/42C3 G02B6/42C3D G02B6/43 H01L21/02K4A1A3 H01L21/02K4C1 H01L21/02K4C1A3 H01L21/02K4C3C H01L21/02K4C5M6 H01L21/02K4E3C H01L21/02K4E3S3 H01L21/02K4E3S5 H01L21/02K4E3S8 H01L21/02K4T8 H01L27/146A10M H01L27/146A10R H01L27/146A22 H01L31/0352A3 H01L31/103 H01L31/105 T01L27/146A10M T01L27/146A8C T01L27/146F T01L27/146V2 T04N5/374

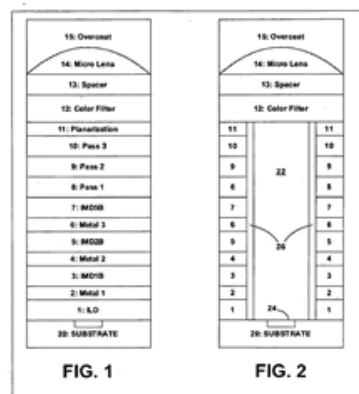
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Family:

Publication number	Publication date	Application number	Application date
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PatBase - US2010163714_HH

Patent Application Publication Jul. 1, 2010 Sheet 1 of 10 US 2010/0163714 A1



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Priority:

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Inventor(s): WENDLING THOMAS PHF

Agent(s): PILLSBURY WINTHROP SHAW PITTMAN LLP; DAVE RAJ S ET AL; GU QIAN ET AL; DAVE RAJ S

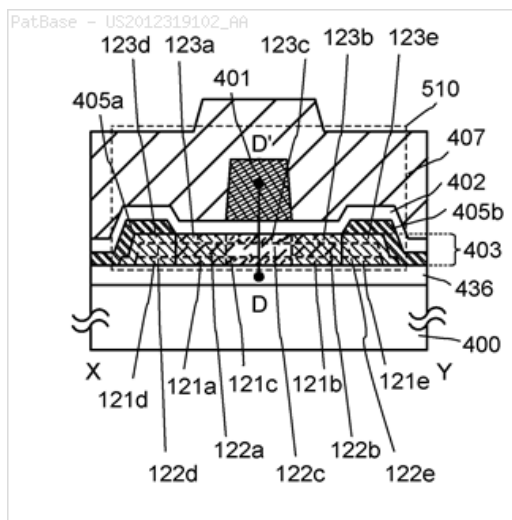
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Abstract: Source: US2012319102A An object is to provide a structure of a transistor which has a channel formation region formed using an **oxide** semiconductor and a positive threshold voltage value, which enables a so-called normally-on switching element. The transistor includes an **oxide** semiconductor stack in which at least a first **oxide** semiconductor layer and a second **oxide** semiconductor layer with different **energy** gaps are stacked and a region containing oxygen in excess of its stoichiometric composition **ratio** is provided.

International (IPC 8-9): G02F1/1368 G09F9/30 H01L21/00 H01L21/02 H01L21/28 H01L21/336 H01L21/34 H01L27/12 H01L27/146 H01L27/32 H01L29/04 H01L29/66 H01L29/78 H01L29/786 H01L51/50 H05B33/08 H05B33/14 (Advanced/Invention); H01L21/02 H01L27/12 (Advanced/Non-invention);

H01L27/14616 H01L29/78609 H01L27/1225 H01L29/78696

US: 1/1 257/43 257/E21.46 257/E29.296 438/104



Publication number	Publication date	Application number	Application date
JP2013021313 A2	20130131	JP20120134402	20120614
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SG10201505586U A1	20150828	SG20151005586	20120601
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Assignee(s): (std): HONDA TATSUYA ; SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD ; SEMICONDUCTOR ENERGY LABORATORY CO LTD ; YAMAZAKI SHUNPEI

Inventor(s): (std): HONDA TATSUYA ; YAMAZAKI SHUNPEI

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TI TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: ANTIREFLECTIVE FILM AND DISPLAY **DEVICE**

Abstract: Source: US2008165315A An object of the present invention is to provide an antireflective film having an anti-reflection function with which reflection of incident light from external can be further reduced and a high-visibility display **device** having such an antireflective film. The tops of the plurality of pyramidal projections are evenly spaced and each side of the **base** of a pyramidal projection is in contact with one side of the **base** of an adjacent pyramidal projection. That is, one pyramidal projection is surrounded by other pyramidal projections, and the **base** of the pyramidal projection and the **base** of the adjacent pyramidal projection have a side in common.

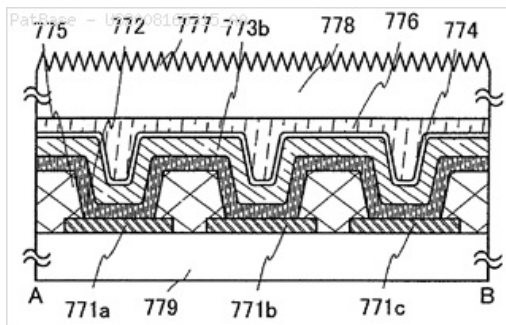
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CPC: G02B1/118 H01L51/5268 H01L51/5281 H05B33/22 G02F1/133504

European: G02B1/11M H05B33/22 S02F1/1335D T01L51/52D4 T01L51/52E

US: 313/495 313/501 313/582 349/137 349/137P 359/586 359/586S 359/601 362/311.06 362/311.060P

**Family:**

Publication number	Publication date	Application number	Application date
JP2008165211 A2	20080717	JP20070311076	20071130
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US2008165315 AA	20080710	US20070950677	20071205
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WO08069219 A1	20080612	WO2007JP73430	20071128

Priority:

JP20060327787 20061205 JP20070311076 20071130 US20070950677 20071205
US20100944195 20101111

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): EGI YUJI ; NISHI TAKESHI ; NISHIDA JIRO ; SEMICONDUCTOR ENERGY LAB ; YAMAZAKI SHUNPEI

Assignee(s): SEMICONDUCTOR ENERGY LAB CO LTD ; SEMICONDUCTOR ENERGY LABORATORY CO ; SEMICONDUCTOR ENERGY LABORATORY CO LTD

Inventor(s): (std): EGI YUJI ; NISHI TAKESHI ; NISHIDA JIRO ; YAMAZAKI SHUNPEI

Agent(s): NIXON PEABODY LLP; JEFFREY L

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: UPCONVERSION LUMINESCENCE MATERIALS AND METHODS OF MAKING AND USING SAME

Abstract: Source: US2003030067A The present relates in general to upconversion luminescence ("UCL") materials and methods of making and using same and more particularly, but not meant to be limiting, to Mn²⁺ doped semiconductor nanoparticles for use as UCL materials. The present invention also relates in general to upconversion luminescence including two-photon absorption upconversion, and potential applications using UCL materials, including light emitting diodes, upconversion lasers, infrared detectors, chemical sensors, temperature sensors and biological labels, all of which incorporate a UCL material.

Classifications:

International (IPC 8-9): C09K11/54 C09K11/55 C09K11/56 C09K11/57 C09K11/61 C09K11/77 C09K11/78 C09K11/88 G01K1/14 G01K11/00 G01K11/20 G01K11/32 G01K13/00 G01N33/00 G02F2/02 G03B42/08 H01S3/09 H01S3/16 H05B33/00 (Advanced/Invention); G01J1/58 G01J5/28 H01L33/02 H01L33/50 H01S3/094 (Advanced/Non-invention);

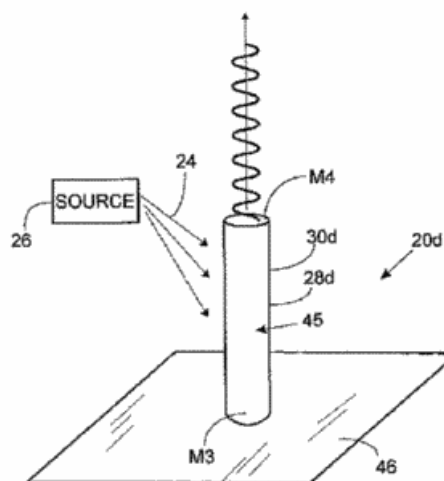
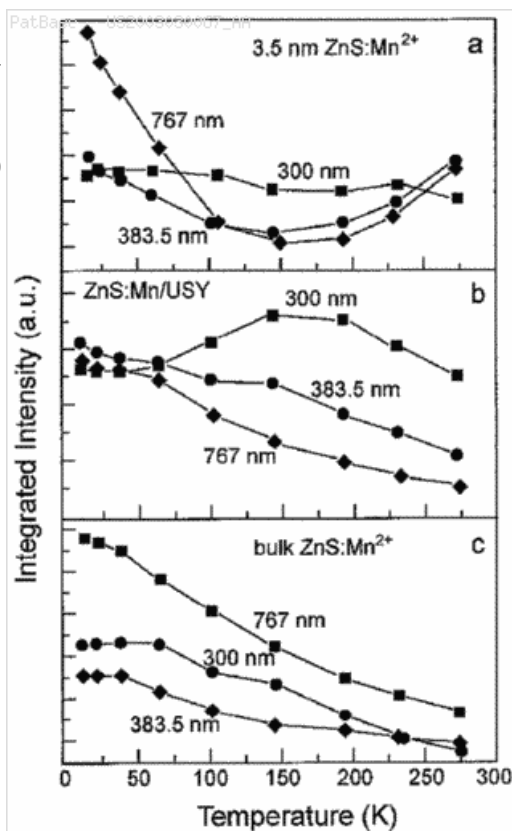
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US: 250/484.4 250/484.400S 250/581 250/581P 250/584 252/301.36 252/301.40R 252/301.40RS 252/301.4H 252/301.4R 252/301.4S 252/301.60S 252/301.6R 252/301.6S 257/102 257/102P 257/103 257/103S 257/613 257/613S 257/614 257/614S 257/E33.002 257/E33.002S 257/E33.061 372/69 372/69P 374/141 374/141S 374/161 374/161P 374/E11.017 374/E11.017S 374/E11.024 374/E11.024S 422/53 422/68.1 422/82.05 422/82.06 422/82.07 438/3 438/3P



Family:

Publication number	Publication date	Application number	Application date
US2003030067 AA	20030213	US20020166313	20020606
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US2005169348 AA	20050804	US20030460531	20030612
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Priority:

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Probable Assignee: FLIR DETECTION INC

Assignee(s): (std): CHEN WEI ; NOMADICS INC ; WANG SHAOPENG ; WESTCOTT SARAH

Assignee(s): FLIR DETECTION INC

Inventor(s): (std): CHEN WEI ; WANG SHAOPENG ; WESTCOTT SARAH

Agent(s): DUNLAP CODDING AND ROGERS PC; DUNLAP CODDINGS AND ROGERS PC; DUNLAP CODDING PC

Title: SEMICONDUCTOR **DEVICE** AND MANUFACTURING METHOD THEREOF

Abstract: Source: US2012319183A One object of the present invention is to provide a structure of a transistor including an **oxide** semiconductor in a channel formation region in which the threshold voltage of electric characteristics of the transistor can be positive, which is a so-called normally-off switching element, and a manufacturing method thereof. A second **oxide** semiconductor layer which has greater electron affinity and a smaller **energy** gap than a first **oxide** semiconductor layer is formed over the first **oxide** semiconductor layer. Further, a third **oxide** semiconductor layer is formed to cover side surfaces and a top surface of the second **oxide** semiconductor layer, that is, the third **oxide** semiconductor layer covers the second **oxide** semiconductor layer.

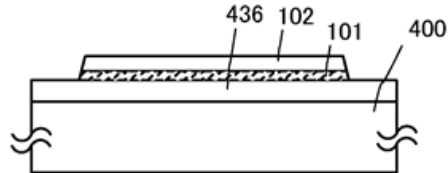
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H01L29/04 H01L29/24 H01L29/778 H01L29/78 H01L29/786
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H01L29/267 (Advanced/Non-invention)

CPC: H01L29/7869 H01L29/267 H01L29/7782 H01L29/78696
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US: 1/1 257/288 257/43 257/59 257/E21.409 257/E29.117
257/E29.255 438/197

PatBase - US2012319183_AA



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Publication number	Publication date	Application number	Application date
JP2013021315 A2	20130131	JP20120134667	20120614
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JP6050879 B2	20161221	JP20150224466	20151117
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Priority:

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Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): HONDA TATSUYA ; SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD ; YAMAZAKI SHUNPEI

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO ; SEMICONDUCTOR ENERGY LABORATORY CO LTD

Inventor(s): (std): HONDA TATSUYA ; YAMAZAKI SHUNPEI

Agent(s): ERIC J; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE PC; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE

Title: MANUFACTURING METHOD OF SEMICONDUCTOR **DEVICE**

Abstract: Source: US2012315730A A transistor using an **oxide** semiconductor, which has good on-state characteristics is provided. A high-performance semiconductor **device** including the transistor capable of high-speed response and high-speed operation is provided. The transistor includes the **oxide** semiconductor film including a channel formation region and low-resistance regions in which a metal element and a **dopant** are included. The channel formation region is positioned between the low-resistance regions in the channel length direction. In a manufacturing method of the transistor, the metal element is added by heat treatment performed in the state where the **oxide** semiconductor film is in contact with a film including the metal element and the **dopant** is added through the film including the metal element by an implantation method so that the low resistance regions in which a metal element and a **dopant** are included are formed.

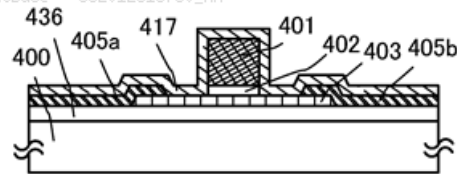
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H01L21/22 H01L21/324 H01L21/336 H01L21/339 H01L21/385
H01L21/425 H01L21/8234 H01L21/8242 H01L21/8247 H01L27/06
H01L27/08 H01L27/088 H01L27/105 H01L27/108 H01L27/115
H01L27/146 H01L29/24 H01L29/49 H01L29/66 H01L29/762
H01L29/786 H01L29/788 H01L29/792 H01L51/50
H05B33/14 (Advanced/Invention)

CPC: H01L21/324 H01L29/66742 H01L29/78696 H01L29/7869
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H01L29/24 H01L29/4908 H01L29/495

US: 1/1 257/43 257/E21.409 438/158

PatBase - US2012315730_AA



Family:

Publication number	Publication date	Application number	Application date
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JP6025928 B2	20161116	JP20150136608	20150708
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KR20160022334 A	20160229	KR20160016143	20160212
TW201301407 A	20130101	TW20120120145	20120605
TW201628096 A	20160801	TW20160110577	20120605
TW201730980 A	20170901	TW20170102180	20120605
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TWI581339 B	20170501	TW20160110577	20120605
US2012315730 AA	20121213	US20120484670	20120531
US2016163873 AA	20160609	US20160044428	20160216
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US9837545 BB	20171205	US20160044428	20160216

Priority:

JP20110129976 20110610 JP20120121639 20120529 JP20150136608 20150708
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US20120484670 20120531 US20160044428 20160216

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): KOEZUKA JUNICHI ; OHNO SHINJI ; SATO YUICHI ; SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD ; SEMICONDUCTOR ENERGY LABORATORY CO LTD ; YAMAZAKI SHUNPEI

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO

Inventor(s): (std): HIZUKA JUNICHI ; KOEZUKA JUNICHI ; OHNO SHINJI ; ONO HIROSHI ; SATO YUICHI ; YAMAZAKI SHUNPEI

Agent(s): ERIC J; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE PC; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE

Title: CAMERA WITH MOS OR CMOS SENSOR ARRAY

Abstract: Source: US2003146372A A novel MOS or CMOS **based** active sensor array for producing electronic images from electron-hole producing light. Each pixel of the array includes a layered photodiode for converting the electron-hole producing light into electrical charges and MOS and/or CMOS pixel circuits located under the layered photodiodes for collecting the charges. The present invention also provides additional MOS or CMOS circuits in and/or on the same crystalline **substrate** for converting the collected charges into images and manipulating image data. The layered photodiode of each pixel is fabricated as continuous layers of charge generating **material** on top of the MOS and/or CMOS pixel circuits so that extremely small pixels are possible with almost 100 percent packing factors. In a preferred embodiment the sensor is a 0.3 mega pixel (3.2 mmx2.4 mm, 640x480) array of 5 micron square pixels which is compatible with a lens of 1/4.5 inch **optical** format. In a preferred embodiment the sensor along with focusing **optics** is incorporated into a cellular phone camera or a camera attachment the cellular phone to permit transmission of visual images along with the voice communication.

Classifications:

International (ipc 8-9): H01L27/146 C09K8/12 C09K8/24 C09K8/52 C09K8/84 C09K8/86 E21B43/04 G01T1/24 H01L21/4763 H01L23/48 H01L27/00 H01L27/10 H01L27/14 H01L29/40 H01L29/76 H01L29/80 H01L31/00 H01L31/0216 H01L31/036 H01L31/0368 H01L31/0376 H01L31/058 H01L31/06 H01L31/062 H01L31/075 H01L31/105 H01L31/112 H01L31/113 H01L31/18 H04N1/028 H04N3/14 H04N3/15 H04N5/32 H04N5/335 H04N5/353 H04N5/365 H04N5/372 H04N9/07 H04N9/73 (Advanced/Invention); H01L31/105 (Advanced/Non-invention); C09K8/02 C09K8/52 C09K8/60 G01T1/00 H01L27/00 H01L27/146 H01L31/00 H01L31/036 H01L31/06 H01L31/101 H01L31/18 H04N3/14 H04N3/15 H04N5/335 (Core/Invention); G02B H01L (Subclass/Invention)

International (ipc 1-7): C09K7/02 E21B21/00 E21B37/06 E21B37/08 E21B43/04 E21B43/25 G01T1/24 H01L21/4763 H01L23/48 H01L27/00 H01L27/10 H01L27/14 H01L27/146 H01L27/48 H01L29/40 H01L29/76 H01L29/80 H01L31/00 H01L31/036 H01L31/062 H01L31/113 H04N1/028 H04N3/15 H04N5/335

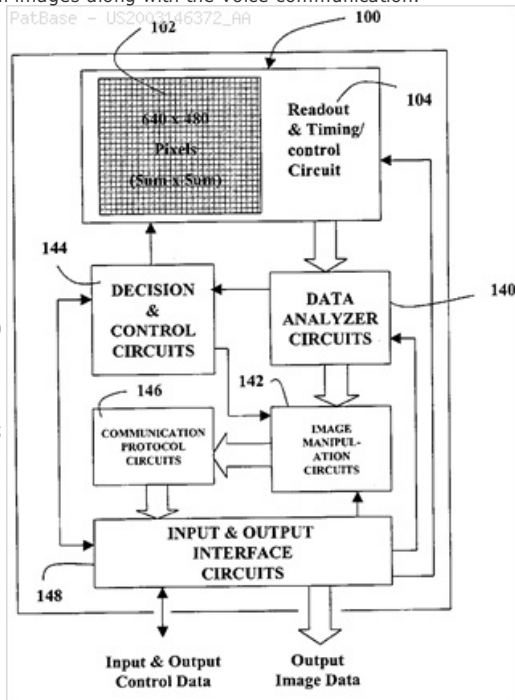
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US: 166/278 166/300 166/300S 166/304 166/307 166/312 166/312S 175/64 175/64S 175/72 175/72S 250/208.1 250/208.100P 250/214.00R 250/214.1 250/214.100P 250/214.100S 250/214R 250/370.08 250/370.14 257/183.1 257/183.100S 257/204 257/204P 257/222 257/226 257/227 257/229 257/233 257/234 257/257 257/258 257/290 257/291 257/292 257/292P 257/292S 257/293 257/368 257/368P 257/431 257/444 257/444P 257/448 257/458 257/461 257/462 257/53 257/55 257/55P 257/59 257/72 257/72P 257/774 257/E27.132S 257/E27.132S 257/E27.133 257/E27.133S 257/E27.134 257/E27.134S 257/E27.135 257/E27.135S 257/E27.136 257/E27.136S 257/E27.138 257/E27.138S 257/E27.142 257/E27.142S 257/E31.007 257/E31.027 257/E31.044 257/E31.044S 257/E31.045 257/E31.045S 257/E31.046 257/E31.046S 257/E31.061 257/E31.062 257/E31.062S 257/E31.067 257/E31.067S 257/E31.073 257/E31.073S 257/E31.083 257/E31.083S 348/294 348/294P 348/308 348/308P 348/317 348/317P 348/E3.011 348/E3.019 348/E30.11S 348/E30.19S 348/E5.037 348/E5.086 348/E50.37S 348/E50.86S 438/48 438/59 438/59S 438/629 438/73 438/79 507/272 507/272S 507/276 507/276S 507/277 507/277S 507/925 507/925S

Family:

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EP1547150 A2	20050629	EP20030791754	20030826
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Probable Assignee: E PHOCUS INC

Assignee(s): (std): CHAO CALVIN ; CALVIN CHAO ; HSIEH TZU CHIANG ; HSIEH TZU CHIAN ; ENGELMANN MICHAEL G ; MARTIN PETER ; ENGELMAN MICHAEL G ; JOHNSON PAUL ; TETRA TECH ; PENDER MILAM ; PHOCUS INC E ; PENDER MILAN ; TETRA TECHNOLOGIES INC ; SEXTON CHRIS ; PHOCOS E ; PHOCUS E

Assignee(s): C PHOCUS ; P PHOCUS ; SEKOS INC ; HSISH TZU CHIANG ; E PHOCUS CORP ; ENGELMANN MICHAEL ; MURPHEY JOE ; MCKENNIS JEFFREY S ; HOSSAINI MOHAMMAD ; JPMORGAN CHASE BANK NA ; E PHOCUS INC ; CARTER TOM S ; E PHOCOS ; E PHOCUS ; E PHOCUS AND LT INC

Inventor(s): (std): CARTER TOM S ; CHAO CALVIN ; ENGELMAN MICHAEL G ; ENGELMANN MICHAEL ; ENGELMANN MICHAEL G ; HOSSAINI MOHAMMAD ; HSIEH TZU CHIAN ; HSIEH TZU CHIANG ; JEFFREY S MCKENNIS ; JOE MURPHEY ; JOHNSON PAUL ; MARTIN PETER ; MCKENNIS JEFFREY S ; MOHAMMAD HOSSAINI ; MURPHEY JOE ; PENDER MILAM ; PENDER MILAN ; SEXTON CHRIS ; TOM S CARTER ; CALVIN CHAO ; YIPING ZHAO ; ZIQIANG XIE

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Agent(s): JOHN R ROSS TREX ENTERPRISES CORP; JOHN R ROSS TREX ENTERPRISES; DAMBROSIO AND ASSOCIATES PLLC; TREX ENTERPRISES CORP; DAMBROSIS AND ASSOCIATES PLLC; JOHN R; ROSS JOHN R

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KM KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

Title: BROADCAST SYSTEM

Abstract: Source: US2016295152A A transmitter **device** is provided. The transmitter **device** includes first to m-th memory cells (m is an integer of 2 or more), first to m-th word lines, a first bit line, and an analog circuit. The i-th word line (i is an integer greater than or equal to 1 and less than or equal to m) is electrically connected to the i-th memory cell. The first to m-th memory cells are electrically connected to the analog circuit through the first bit line. The first to m-th memory cells are capable of retaining a potential corresponding to first data. The first to m-th word lines are supplied with a potential corresponding to second data. The analog circuit is capable of performing a multiply-accumulate operation on the first data and the second data, and the first data or the second data includes image data.

Classifications:

International (IPC 8-9): G02F1/1368 G06F12/00 G11C11/405
G11C11/4093 G11C11/56 H01L21/00 H01L21/28 H01L21/336
H01L21/8242 H01L21/8247 H01L27/108 H01L27/115 H01L27/146
H01L29/417 H01L29/423 H01L29/49 H01L29/786 H01L29/788
H01L29/792 H04N21/426 H04N5/38 H04N5/44 (Advanced/Invention);
H04N5/40 H04N5/455 (Advanced/Non-invention)
CPC: H04N5/44 H01L21/00 H01L27/14621 H01L27/1464 H04N21/426
G11C11/4093 H04N5/40 H04N5/455 H04N5/38
US: 348/723



Family:

Publication number	Publication date	Application number	Application date
JP2016197484 A2	20161124	JP20160067317	20160330
US2016295152 AA	20161006	US20160083716	20160329
US2017301391 AA	20171019	US20170634013	20170627
US9584751 BB	20170228	US20160083716	20160329
US9716852 BB	20170725	US20160083716	20160329

Priority:

JP20150076627 20150403 JP20160067317 20160330 US20160083716 20160329
US20170634013 20170627

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO ; SEMICONDUCTOR ENERGY LABORATORY CO LTD

Inventor(s): (std): KUROKAWA YOSHIMOTO ; KUROKAWA YOSHIYUKI

Agent(s): ERIC J; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE PC

Title: SURFACE MODIFIED CARBONACEOUS MATERIALS

Abstract: Source: US2001024749A Grafting a polymer at the surface of a carbonated material containing carboxyl, amine and/or hydroxyl functions at its surface. This material is suspended in a solution comprising the polymer to be grafted, which includes a carboxyl, amine and/or hydroxyl function, the solution also comprising a solvent of the polymer. This is followed by a treatment causing dehydration into a carboxyl function, an amide and/or hydroxyl function and the polymer is thus grafted on the carbonated material by means of ester or amide bonds. Utilization in the cathode or anode of an electrochemical generator, in a polymer material with low polarity, in an ink, and as a conductive deposit on flexible plastic used as electrical contact, electromagnetic protection and antistatic protection.

Classifications:

International (IPC 8-9): B01F1/00 B01J31/02 B01J31/04 B01J31/06

B01J31/12 B01J31/18 B01J31/22 B01J35/02 C01B31/02 C04B41/83 C07B37/02 C07B37/12 C07B41/00 C07B41/06 C07B61/00 C07C211/63 C07C245/00 C07C25/00 C07C255/00 C07C255/05 C07C255/10 C07C255/13 C07C255/17 C07C255/27 C07C255/31 C07C255/35 C07C255/46 C07C255/65 C07C257/14 C07C309/80 C07C309/85 C07C311/00 C07C311/02 C07C311/03 C07C311/04 C07C311/05 C07C311/09 C07C311/11 C07C311/13 C07C311/15 C07C311/24 C07C311/28 C07C311/29 C07C311/48 C07C317/04 C07C317/08 C07C317/12 C07C317/14 C07C317/22 C07C317/24 C07C317/28 C07C317/34 C07C317/44 C07C325/02 C07C45/46 C07C45/69 C07C49/553 C07C49/84 C07C67/00 C07C67/27 C07C69/732 C07C69/738 C07D207/33 C07D207/337 C07D207/452 C07D213/76 C07D219/10 C07D231/10 C07D231/14 C07D231/18 C07D233/54 C07D233/56 C07D233/58 C07D233/90 C07D239/60 C07D239/62 C07D241/46 C07D241/48 C07D249/02 C07D249/04 C07D249/08 C07D249/10 C07D249/12 C07D251/30 C07D251/66 C07D251/70 C07D253/06 C07D257/04 C07D277/64 C07D277/82 C07D279/20 C07D285/00 C07D285/12 C07D285/125 C07D285/135 C07D285/15 C07D285/16 C07D303/34 C07D303/36 C07D307/54 C07D307/64 C07D311/52 C07D311/58 C07D311/66 C07D311/72 C07D311/80 C07D311/82 C07D311/90 C07D319/06 C07D327/00 C07D333/00 C07D333/16 C07D333/18 C07D333/20 C07D333/24 C07D405/06 C07D407/04 C07D409/12 C07D417/10 C07D417/12 C07D417/14 C07D487/04 C07D487/22 C07D491/22 C07F1/02 C07F1/06 C07F11/00 C07F15/00 C07F15/04 C07F17/02 C07F19/00 C07F7/08 C07F7/10 C07F7/18 C07F9/28 C07F9/6564 C07F9/6584 C07K5/062 C08F10/10 C08F12/04 C08F12/14 C08F12/22 C08F12/26 C08F12/30 C08F14/20 C08F16/12 C08F16/14 C08F16/32 C08F2/00 C08F2/46 C08F2/48 C08F2/50 C08F20/54 C08F216/14 C08F220/44 C08F222/30 C08F228/02 C08F4/00 C08F4/04 C08F4/46 C08F4/60 C08F8/00 C08G59/68 C08G61/12 C08G65/02 C08G65/22 C08G65/329 C08G65/334 C08G65/48 C08G73/00 C08G73/02 C08G73/06 C08G75/00 C08G75/14 C08G77/04 C08G77/388 C08G77/392 C08G77/44 C08G83/00 C08G85/00 C08J3/20 C08J3/24 C08J3/28 C08J5/20 C08J5/22 C08J7/04 C08K5/00 C08K5/315 C08K5/34 C08K5/3445 C08K5/41 C08K5/42 C08L101/00 C08L71/00 C08L75/04 C08L79/00 C09B47/04 C09B51/00 C09B69/00 C09B69/02 C09B69/06 C09B69/10 C09C1/56 C09C3/10 C09D11/00 C09K3/00 C09K9/00 C09K9/02 C25B11/12 C25B3/00 C25B9/00 C8J3/20 C8J5/20 C8K5/315 D06M15/53 G02F1/15 H01B1/04 H01B1/06 H01B1/10 H01B1/12 H01B1/20 H01B3/20 H01G11/00 H01G11/32 H01G11/34 H01G11/48 H01G11/54 H01G11/62 H01G9/02 H01G9/022 H01G9/028 H01G9/035 H01G9/038 H01G9/058 H01M10/05 H01M10/052 H01M10/0525 H01M10/056 H01M10/0565 H01M10/0567 H01M10/0568 H01M10/24 H01M10/36 H01M10/40 H01M2/32 H01M4/00 H01M4/137 H01M4/36 H01M4/40 H01M4/48 H01M4/485 H01M4/505 H01M4/525 H01M4/58 H01M4/581 H01M4/587 H01M4/60 H01M4/62 H01M4/66 H01M4/96 H01M6/00 H01M6/04 H01M6/06 H01M6/14 H01M6/16 H01M6/18 H01M8/00 H1G9/022 H1M2/32 (Advanced/Invention); C07D207/44 C07D233/10 C07D233/54 C07D249/04 C07D249/08 C07D285/00 C07D285/12 C07F15/04 C07F3/02 C07F5/00 C08G73/02 C08G77/04 C08K5/315 C09D11/00 G02F1/15 H01M4/02 H01M4/131 H01M4/133 H01M4/134 H01M4/40 H01M4/48 H01M4/485 H01M4/50 H01M4/505 H01M4/52 H01M4/525 H01M4/58 H01M4/60 H01M4/86 H01M6/04 H01M8/10 (Advanced/Non-invention);

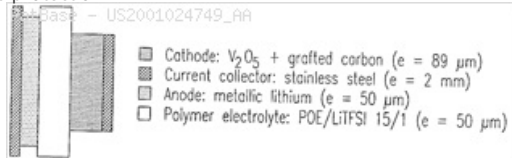
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G02F1/01 H01M4/36 (Core/Non-invention)

International (IPC 1-7): B01J31/02 B02F1/15 B32B3/02 C04B41/00 C04B41/83 C07B245/02 C07B245/08 C07B37/02 C07B37/12 C07B41/00 C07B41/06 C07B61/00 C07C255/05 C07C255/07 C07C255/13 C07C255/17 C07C255/24 C07C255/27 C07C255/31 C07C255/35 C07C255/46 C07C255/65 C07C309/80 C07C311/02 C07C311/03 C07C311/05 C07C311/09 C07C311/48 C07C313/00 C07C317/26 C07C317/28 C07C317/44 C07C325/02 C07C331/20 C07D207/33 C07D207/452 C07D213/76 C07D213/77 C07D219/10 C07D231/10 C07D231/18 C07D233/00 C07D233/01 C07D233/02 C07D233/56 C07D233/58 C07D233/64 C07D233/90 C07D239/60 C07D239/62 C07D241/46 C07D241/48 C07D249/02 C07D249/04 C07D249/08 C07D249/10 C07D251/66 C07D251/70 C07D253/06 C07D257/04 C07D277/64 C07D277/82 C07D279/20 C07D285/00 C07D285/125 C07D285/135 C07D285/15 C07D285/16 C07D303/34 C07D303/36 C07D307/36 C07D307/54 C07D307/64 C07D311/58 C07D311/72 C07D311/80 C07D311/82 C07D319/06 C07D333/16 C07D333/20 C07D333/24 C07D343/00 C07D405/06 C07D407/04 C07D409/12 C07D417/10 C07D417/14 C07D455/08 C07D487/04 C07D487/22 C07D491/22 C07F1/00 C07F1/02 C07F1/06 C07F11/00 C07F15/00 C07F17/00 C07F17/02 C07F5/00 C07F7/10 C07F7/18 C07F7/22 C07F9/53 C07F9/6564 C07F9/6584 C07K5/062 C08F112/14 C08F116/14 C08F12/22 C08F12/26 C08F12/30 C08F122/40 C08F128/02 C08F16/14 C08F2/00 C08F2/48 C08F2/50 C08F216/14 C08F220/44 C08F222/30 C08F228/02 C08F283/00 C08F4/00 C08F4/60 C08F8/28 C08G59/68 C08G63/91 C08G65/22 C08G65/48 C08G69/48 C08G73/00 C08G73/02 C08G73/06 C08G75/00 C08G75/14 C08G77/04 C08G77/388 C08G77/44 C08G85/00 C08J3/24 C08J7/28 C08J7/04 C08K3/04 C08L101/00 C08R3/04 C09B47/04 C09B57/00 C09C1/56 C09C3/10 C09D11/00 C09K3/00 G02F1/15 H01B1/00 H01B1/04 H01B1/06 H01B1/12 H01B3/20 H01C1/00 H01G4/04 H01G9/02 H01M10/00 H01M10/24 H01M10/40 H01M4/40 H01M4/48 H01M4/52 H01M4/58 H01M4/60 H01M4/62 H01M4/66 H01M4/96 H01M6/00 H01M6/04 H01M6/06 H01M6/14 H01M6/16 H01M6/18

CPC: Y10S430/127 Y02E60/13 B01J31/0215 B01J31/0225 B01J31/0227 B01J31/0235 B01J31/0251 B01J31/0252 B01J31/0267 B01J31/0281 B01J31/0288 B01J31/0289 B01J31/06 B01J31/068 B01J31/124 B01J31/1815 B01J31/2208 B01J2231/14 B01J2231/326 B01J2231/341 B01J2231/348 B01J2231/4205 B01J2231/543 B01J2531/35 B01J2531/824 C07C317/44 G02F2001/151 H01G11/02 H01M4/00 H01M4/02 H01M4/131 H01M4/133 H01M4/134 H01M4/382 H01M4/405 H01M4/48 H01M4/485 H01M4/505 H01M4/525 H01M4/5815 H01M4/5825 H01M4/625 H01M4/661 H01M6/04 H01M6/164 H01M10/052 H01M10/0567 H01G9/038 B01J31/0222 B01J31/0224 B01J31/0239 B01J31/0247 B01J2231/122 B01J31/0271 C07B37/02 B01J31/04 C07B37/12 C07C45/46 C07C45/69 C07C67/00 C07C255/10 C07C255/17 C07C255/27 C07C255/46 C07C255/65 C07C257/14 C07C311/03 C07C311/04 C07C311/09 C07C311/48 C07C317/04 C07C317/08 C07C317/14 C07C317/22 C07C317/24 C07C317/34 C07D207/452 C07D213/76 C07D219/10 C07D231/10 C07D233/90 C07D239/60 C07D241/42 C07D249/04 C07D249/10 C07D249/12 C07D251/70 C07D277/64 C07D277/82 C07D285/125 C07D285/135 C07D285/15 C07D285/16 C07D303/34 C07D307/54 C07D307/64 C07D311/52 C07D311/58 C07D311/82 C07D319/06 C07D333/16 C07D333/24 C07D405/06 C07D409/12 C07D417/10 C07D417/14 C07F17/02 C08F4/04 C08G65/334 C09B69/00 C09B69/02 C09B69/10 G02F1/1525 H01B1/122 H01B1/128 H01G9/022 H01G11/56 H01G11/62 H01M4/60 H01M6/00 H01M6/166 H01M6/168 H01M6/181 H01M6/183 H01M10/0525 H01M10/0565 H01M10/0568 H01G11/58 H01G11/48 Y10T29/49108 Y10T428/2918 C07C2601/10 C07C2602/42

European: B01J31/02C B01J31/02C10 B01J31/02C10B B01J31/02C8 B01J31/02C8B B01J31/02E2 B01J31/02E2F B01J31/02E2L2 B01J31/02E2L8 B01J31/02E2M B01J31/02E4F B01J31/02E6 B01J31/02G2D B01J31/02G3B B01J31/02G3D B01J31/04 B01J31/06 B01J31/06F B01J31/12P2 B01J31/18B2B B01J31/22B2 C07B37/02 C07B37/12 C07B44/06 C07C255/10 C07C255/17 C07C255/27 C07C255/46 C07C255/65 C07C257/14 C07C311/03 C07C311/04 C07C311/09 C07C311/48 C07C317/04 C07C317/08 C07C317/14 C07C317/22 C07C317/24 C07C317/34 C07C317/44 C07C45/46 C07C45/69 C07C67/00 C07D207/452 C07D213/76 C07D219/10 C07D231/18 C07D233/90 C07D239/60 C07D241/42 C07D249/04 C07D249/10 C07D249/12 C07D251/70 C07D277/64 C07D277/82 C07D285/125 C07D285/135 C07D285/15 C07D285/16 C07D303/34 C07D307/54 C07D307/64 C07D311/52 C07D311/58 C07D311/82 C07D319/06 C07D333/16 C07D333/24 C07D405/06 C07D409/12 C07D417/10 C07D417/14 C07F17/02 C08F4/04 C08G65/334 C09B69/00 C09B69/02 C09B69/10 H01B1/12F H01B1/12H6 H01G11/02 H01G11/56 H01G11/62 H01G9/022 H01G9/038 H01M10/052 H01M10/0525 H01M10/0565



H01M10/0567 H01M10/0568 H01M10/40B H01M4/00 H01M4/38A3 H01M4/58B2 H01M4/62C2 H01M6/00 H01M6/16E3
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US: 250/62.2 252/500 252/500P 252/500S 252/510 252/511 252/518.1 252/519.2 252/519.3 252/62.2 29/623.1 345/49
359/265 359/270 361/327 428/317 428/367 428/64.8 428/64.800P 429/122 429/122P 429/188 429/188P 429/194 429/199
429/199P 429/200 429/213 429/213S 429/218.1 429/218.100S 429/223 429/223S 429/231.1 429/231.100S 429/231.3
429/231.300S 429/231.5 429/231.500S 429/231.95 429/231.950S 429/245 429/303 429/306 429/307 429/310 429/314
429/314P 429/315 429/315S 429/316 429/316S 429/317 429/317S 429/324 429/324S 429/336 429/337 429/337S 429/339
429/339S 429/34 429/340 429/340S 429/341 429/341S 430/541 430/926 502/102 502/300 502/302 522/162 522/162S
524/495 524/496 525/183 525/263 525/419 525/419S 525/66 534/838 546/256 546/96 548/262.2 548/267.8 548/268.2
548/300.1 548/340.1 549/14 549/357 552/1 552/1S 556/1 556/143 558/167 558/17 558/17S 558/386 558/437 558/437S
558/440 558/453 561/27 562/125 562/125S 564/291 564/291S 564/86 564/86S 564/96 564/98 568/27 568/35 568/35S
568/36 568/36S

Family:

Publication number	Publication date	Application number	Application date
CA2194127 AA	19980630	CA19962194127	19961230
CA2199231 AA	19980905	CA19972199231	19970305
CA2244979 AA	19980727	CA19972244979	19971230
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CA2248244 AA	19980831	CA19972248244	19971230
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CA2248303 AA	19980827	CA19972248303	19971230
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CA2805188 C	20151208	CA19972805188	19971230
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DE69715799 D1	20021031	DE19976015799	19971230
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DE69721748 T2	20040311	DE19976021748T	19971230
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DE69739501 D1	20090903	DE19976039501	19971230
DE69740457 D1	20121011	DE19976040457	19971230
EP0850920 A2	19980701	EP19970403187	19971230
EP0850920 A3	19980708	EP19970403187	19971230
EP0850920 B1	20020911	EP19970403187	19971230
EP0850921 A1	19980701	EP19970403189	19971230
EP0850921 B1	20020925	EP19970403189	19971230
EP0850932 A1	19980701	EP19970403190	19971230
EP0850932 B1	20090722	EP19970403190	19971230
EP0850933 A1	19980701	EP19970403188	19971230
EP0889863 A2	19990113	EP19970951051	19971230
EP0889863 B1	20030507	EP19970951051	19971230
EP0890176 A1	19990113	EP19970951052	19971230
EP0890176 B1	20010620	EP19970951052	19971230
EP1201650 A2	20020502	EP20010129670	19971230
EP1201650 A3	20040102	EP20010129670	19971230
EP1201650 B1	20061122	EP20010129670	19971230
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EP1391952 A3	20160427	EP20030292436	19971230
EP2380882 A1	20111026	EP20090166055	19971230
EP2380882 B1	20120815	EP20090166055	19971230
JP2000508114 T2	20000627	JP19980529517T	19971230
JP2000508346 T2	20000704	JP19980529516T	19971230
JP2000508676 T2	20000711	JP19980529514T	19971230
JP2000508677 T2	20000711	JP19980529515T	19971230
JP2000508678 T2	20000711	JP19980529518T	19971230
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US2005123831 AA	20050609	US20040926283	20040825
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US6365068 BA	20020402	US20000609362	20000630
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WO9829358 A2	19980709	WO1997CA01008	19971230
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Priority:

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Probable Assignee: CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE

Assignee(s): (std): ARMAND MICHEL ; CENTRE NAT DE LA RECH SCIENT ; CENTRE NAT RECH SCIENT ; CHOBUEITE YVES ; HYDRO QUEBEC ; KAPFER BRUNO ; GAUTHIER MICHEL ; CT NAT POUR LA RECH SCIENT CNRS ; MICHOT CHRISTOPHE ; CHOQUETTE YVES

Assignee(s): CENTRE NATIONAL DELA RECHERCHE SCIENTIFIQUE CNRS ; HYDRO QUEBEC MONTREAL ; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS PARIS ; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE C N R S PARIS ; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE C N R S ; CENTRE NATIONAL POUR LA RECHERCHE SCIENTIFIQUE CNRS ; CENTRE NATIONAL DE ; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE ; CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS

Inventor(s): (std): ARMAND MICHEL ; CHOBUEITE YVES ; CHOQUETTE YVES ; GAUTHIER MICHEL ; KAPFER BRUNO ; MICHOT CHRISTOPHE

Agent(s): SWABEY OGILVY RENAULT; OGILVY RENAULT LLP SENCRL SRL; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; NORTON ROSE CANADA SENCRL SRL LLP; SUEUR YVETTE; GOULARD SOPHIE; ONO SHINJIRO; CHIBA AKIO; NOYA HIROAKI; TOMITA HIROYUKI; KOBAYASHI YASUSHI; SHAMOTO ICHIO; EJIRI HIROKO; NAKAMURA MITSUTOSHI; TAKEUCHI SHIGEO; YAMAMOTO OSAMU; PATENT GROUP CHOATE HALL AND STEWART; PATENT GROUP, CHOATE HALL AND STEWART; CHOATE HALL AND STEWART LLP

Designated states: AT BE CA CH DE DK ES FI FR GB GR IE IT JP LI LU MC NL PT SE US

Title: SEMICONDUCTOR **DEVICE**, MANUFACTURING METHOD OF SEMICONDUCTOR **DEVICE**, AND ELECTRONIC **DEVICE**

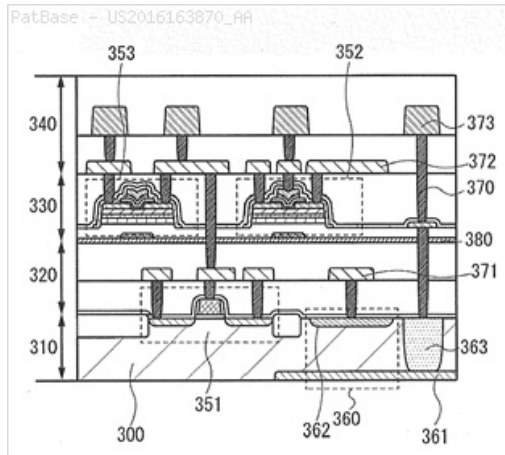
Abstract: Source: US2016163870A Provided is a semiconductor **device** which can suppress an increase in oxygen vacancies in an **oxide** semiconductor layer and a manufacturing method of the semiconductor **device**. The semiconductor **device** includes a first **oxide** semiconductor layer over the first insulating layer; a second **oxide** semiconductor layer over the first **oxide** semiconductor layer; a third **oxide** semiconductor layer over the second **oxide** semiconductor layer; a source electrode layer and a drain electrode layer each over the third **oxide** semiconductor layer; a fourth semiconductor layer over the source and drain electrode layers, and the third **oxide** semiconductor layer; a gate insulating layer over the fourth **oxide** semiconductor layer; a gate electrode layer over the gate insulating layer and overlapping with the source and drain electrode layers, and the fourth **oxide** semiconductor layer; and a second insulating layer over the first insulating layer, and the source, gate, and drain electrode layers.

Classifications:

International (IPC 8-9): G02F1/1368 H01L21/02 H01L21/336
H01L21/467 H01L21/4763 H01L21/8234 H01L21/8238 H01L21/8242
H01L21/8247 H01L27/06 H01L27/08 H01L27/088 H01L27/092
H01L27/108 H01L27/115 H01L27/12 H01L27/146 H01L29/66
H01L29/786 H01L29/788 H01L29/792 H01L51/50
H05B33/14 (Advanced/Invention)

CPC: H01L29/7869 H01L29/78696 H01L29/78606 H01L29/66969
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H01L21/02554 H01L21/02565 H01L21/02631 H01L27/1225
H01L27/1207 H01L27/1248

US: 257/43 438/104



Family:

Publication number	Publication date	Application number	Application date
JP2016111369 A2	20160620	JP20150238704	20151207
US2016163870 AA	20160609	US20150961016	20151207
US9768317 BB	20170919	US20150961016	20151207

Priority:

JP20140247754 20141208 JP20150238704 20151207

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO ; SEMICONDUCTOR ENERGY LABORATORY CO LTD

Inventor(s): (std): ITO DAIGO ; ISHIYAMA TAKAHISA ; HANAOKA KAZUYA

Agent(s): HUSCH BLACKWELL LLP

Title: SEMICONDUCTOR THIN FILM FORMING METHOD, PRODUCTION METHODS FOR SEMICONDUCTOR **DEVICE** AND ELECTROOPTICAL **DEVICE**, **DEVICES** USED FOR THESE METHODS, AND SEMICONDUCTOR **DEVICE** AND ELECTROOPTICAL **DEVICE**

Abstract: Source: US2003013280A An object of the present invention is to provide a method for easily forming a polycrystalline semiconductor thin-film, such as polycrystalline silicon having high crystallinity and high quality, or a single crystalline semiconductor thin-film at inexpensive cost, the crystalline semiconductor thin-film having a large area, and to provide an apparatus for processing the method described above. In forming a polycrystalline (or single crystalline) semiconductor thin-film (7), such as a polycrystalline silicon thin-film, having high crystallinity and a large grain size on a **substrate** (1), or in forming a semiconductor **device** having the polycrystalline (or single crystalline) semiconductor thin-film (7) on the **substrate** (1), a method comprises forming a low-crystallization semiconductor thin-film (7A) on the **substrate** (1), and subsequently heating and cooling this low-crystallization semiconductor thin-film (7A) to a fusion, a semi-fusion, or a non-fusion state by flash lamp annealing to facilitate the crystallization of the low-crystallization semiconductor thin-film (7), whereby a polycrystalline (single crystalline) semiconductor thin-film (7) is obtained. A method for forming the semiconductor **device** and an apparatus for processing the methods are also disclosed.

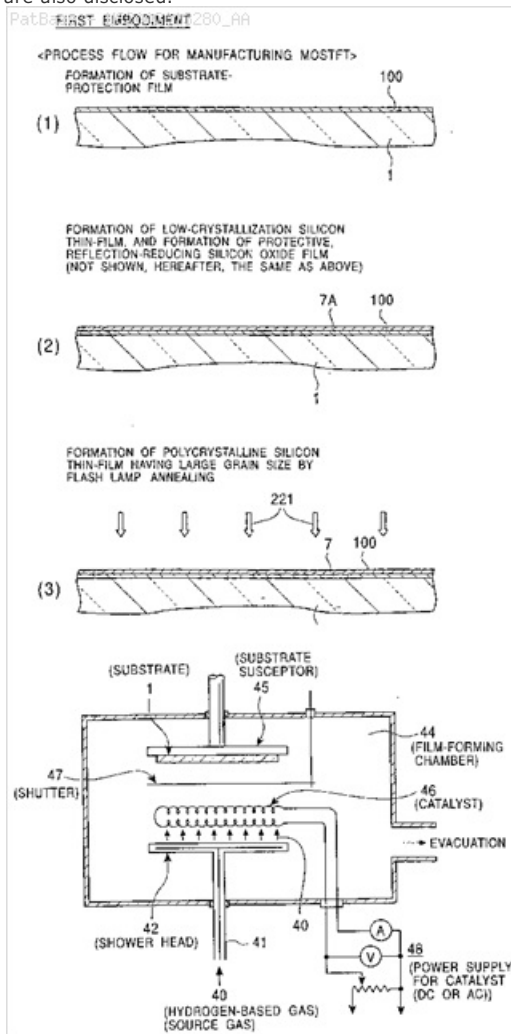
Classifications:

International (IPC 8-9): C23C16/24 C23C16/56 C30B13/24 F25B3/30 G02F1/1368 H01J29/04 H01J29/96 H01J31/12 H01J9/02 H01L21/00 H01L21/20 H01L21/26 H01L21/265 H01L21/31 H01L21/336 H01L21/469 H01L21/84 H01L29/04 H01L29/786 H01L31/04 (Advanced/Invention); H01L21/20 (Advanced/Non-invention); C23C16/22 C23C16/56 C30B13/00 G02F1/13 H01J29/00 H01J29/04 H01J31/12 H01J9/02 H01L21/00 H01L21/02 H01L21/70 H01L29/66 H01L31/04 (Core/Invention); H01L29/04 (Core/Non-invention)

International (IPC 1-7): C23C16/00 C30B1/00 C30B23/00 C30B25/00 C30B28/12 C30B28/14 G02F1/1368 G09F9/30 H01J1/304 H01J9/02 H01L21/00 H01L21/20 H01L21/205 H01L21/26 H01L21/336 H01L21/36 H01L29/786 H01L31/04

CPC: Y02E10/50 H01L29/78684 C23C16/24 C23C16/56 C30B13/24 H01L21/2022 H01L27/3248 H01L27/3272 H01L29/66757 H01L29/66765 H01L29/6678 H01L29/78648 H01L29/78675 H01L29/78678 H01L29/78681 H01L51/5284 H01L2251/5315 H01L27/3211

European: C23C16/24 C23C16/56 C30B13/24 H01L21/20D H01L29/66M6T6F15A2 H01L29/66M6T6F15A3 H01L29/66M6T6F15C2 H01L29/786D H01L29/786D2 H01L29/786E4C2 H01L29/786E4C4 H01L29/786F H01L29/786G T01L251/53A1 T01L27/32C4 T01L27/32M2C T01L27/32M2S T01L51/52E2 Y02E10/50 **US:** 117/84 117/84S 117/88 117/88S 117/89 117/89S 118/715 118/715S 118/725 118/725S 257/E21.133 257/E21.133S 257/E21.413 257/E21.413S 257/E21.414 257/E21.414S 257/E21.416 257/E21.416S 257/E21.475 257/E29.275 257/E29.275S 257/E29.293 257/E29.293S 257/E29.294 257/E29.294S 257/E29.296 257/E29.296S 257/E29.297 257/E29.297S 392/411 438/166 438/166P 438/287 438/287S 438/486 438/486S 438/487 438/487P 438/492 438/492S 438/785 438/785S 438/795 438/97 438/97S



Family:

Publication number	Publication date	Application number	Application date
JP2002252174 A2	20020906	JP20010368624	20011203
JP4092541 B2	20080528	JP20010368624	20011203
KR100882234 B1	20090209	KR20027010225	20011207
KR20020086507 A	20021118	KR20027010225	20011207
KR20080047601 A	20080529	KR20087008748	20011207
TWI313059 B	20090801	TW20010130202	20011206
US2003013280 AA	20030116	US20020182784	20020801
US2007087492 AA	20070419	US20060556306	20061103
US7183229 BB	20070227	US20020182784	20020801
WO0247137 A1	20020613	WO20011P10733	20011207

Priority:

JP20000373826	20001208	JP20010368624	20011203	KR20027010225	20020808
US20060556306	20061103	US20020182784	20020801	WO20011P10733	20011207
WO20011P10733	20020808				

Probable Assignee: SONY CORP

Assignee(s): (std): SONY CORP ; SONY CORPORATIO ; YAMANAKA HIDEO

Assignee(s): SONY CORPORATIOJP

Inventor(s): (std): YAMANAKA HIDEO ; HIDEO YAMANAKA

Agent(s): DAVID R METZGER SONNENSCHN NATH AND ROSENTHAL; SONNENSCHN NATH AND ROSENTHAL LLP

Designated states: KR US

Title: SEMICONDUCTOR **DEVICE** AND METHOD FOR MANUFACTURING SEMICONDUCTOR **DEVICE**

Abstract: Source: US2013009220A A transistor which is formed using an **oxide** semiconductor layer and has electric characteristics needed for the intended use, and a semiconductor **device** including the transistor are provided. The transistor is formed using an **oxide** semiconductor stack including at least a first **oxide** semiconductor layer in contact with a source electrode layer and a drain electrode layer and a second **oxide** semiconductor layer which is provided over the first **oxide** semiconductor layer and has an **energy** gap different from that of the first **oxide** semiconductor layer. There is no limitation on the stacking order of the first **oxide** semiconductor layer and the second **oxide** semiconductor layer as long as their **energy** gaps are different from each other.

Classifications:

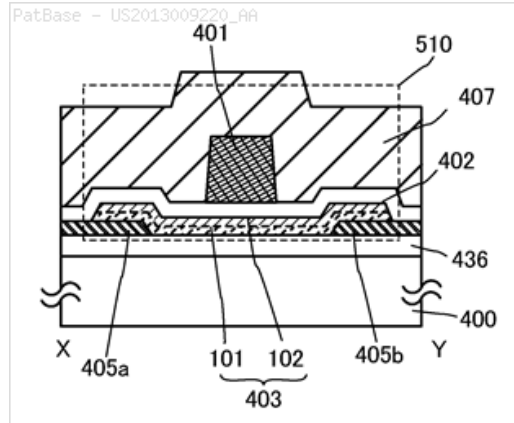
International (IPC 8-9): G02F1/1368 G09F9/30 H01L21/336

H01L23/52 H01L27/146 H01L27/32 H01L29/78

H01L29/786 (Advanced/Invention)

CPC: H01L29/78696 H01L29/7869

US: 257/288 257/43 257/E21.411 257/E29.273 438/151



Family:

Publication number	Publication date	Application number	Application date
JP2013038401 A2	20130221	JP20120152146	20120706
JP2016225637 A2	20161228	JP20160146136	20160726
JP5980015 B2	20160831	JP20120152146	20120706
JP6259025 B2	20180110	JP20160146136	20160726
TW201310644 A	20130301	TW20120123712	20120702
TW201620144 A	20160601	TW20160105941	20120702
TW201735371 A	20171001	TW20170111409	20120702
TWI535016 B	20160521	TW20120123712	20120702
TWI589002 B	20170621	TW20160105941	20120702
US2013009220 AA	20130110	US20120533121	20120626
US8748886 BB	20140610	US20120533121	20120626

Priority:

JP20110152190 20110708 JP20120152146 20120706 JP20160146136 20160726

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD ; SEMICONDUCTOR ENERGY LABORATORY CO LTD ; SHINOHARA SATOSHI ; YAMAZAKI SHUNPEI

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO

Inventor(s): (std): SHINOHARA SATOSHI ; SHINOHARA SOJI ; YAMAZAKI SHUNPEI

Agent(s): ERIC J; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE PC

Title: TRANSPARENT CONDUCTIVE LAYER FORMING METHOD, TRANSPARENT CONDUCTIVE LAYER FORMED BY THE METHOD, AND **MATERIAL** COMPRISING THE LAYER

Abstract: Source: US2003207093A A transparent conductive layer forming method is disclosed which comprises the steps of introducing a reactive gas to a discharge space, **exciting** the reactive gas in a plasma state by discharge at atmospheric pressure or at approximately atmospheric pressure, and exposing a **substrate** to the reactive gas in a plasma state to form a transparent conductive layer on the **substrate**, wherein the reactive gas comprises a reducing gas.

Classifications:

International (IPC 8-9): B01J19/08 C23C14/08 C23C14/34 C23C16/30 C23C16/40 C23C16/455 C23C16/50 C23C16/505 C23C16/513 G02F1/1333 G02F1/1343 H01B13/00 H01B5/14 H01L21/20 H01L21/205 H01L21/36 H01M14/00 H05H1/24 (Advanced/Invention); C23C16/44 H01L21/205 H01L31/04 H01M14/00 (Advanced/Non-invention);

B01J19/08 C23C14/08 C23C14/34 C23C16/30 C23C16/40 C23C16/455 C23C16/50 G02F1/13 H01B13/00 H01B5/14 H01L21/00 H01M14/00 H05H1/24 (Core/Invention); C23C16/44 H01L21/205 H01L31/04 H01M14/00 (Core/Non-invention)

International (IPC 1-7): B01J19/08 B32B17/00 C23C16/30 C23C16/40 C23C16/50 C23C16/505 C23C16/513 G02F1/1333 G02F1/1343 H01B13/00 H01B5/14 H01L21/205 H01M14/00

CPC: Y02E10/50 Y10T428/24917 C23C16/45595 C23C16/407 C23C16/50

European: C23C16/40L C23C16/455T C23C16/50 M23C16/44E32 Y02E10/50

US: 427/569 428/209 438/485 438/57 438/87 438/96

PatBase - US2003207093_A1

Patent Application Publication Nov. 6, 2003 Sheet 1 of 6 US 2003/0207093 A1

FIG. 1

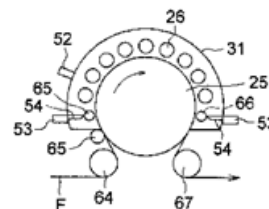
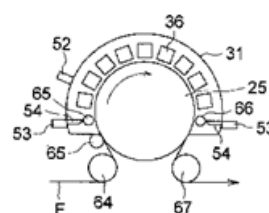


FIG. 2

**Family:**

Publication number	Publication date	Application number	Application date
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CN1422979 A	20030611	CN20021052989	20021129
DE60218109 D1	20070329	DE20026018109	20021128
DE60218109 T2	20070621	DE20026018109T	20021128
EP1316626 A2	20030604	EP20020026492	20021128
EP1316626 A3	20030806	EP20020026492	20021128
EP1316626 B1	20070214	EP20020026492	20021128
JP2003234028 A2	20030822	JP20020167088	20020607
JP4192505 B2	20081210	JP20020167088	20020607
KR20030045607 A	20030611	KR20020075612	20021130
TW200301514 A	20030701	TW20020134199	20021125
TWI307920 B	20090321	TW20020134199	20021125
US2003207093 AA	20031106	US20020301912	20021122
US2007036914 AA	20070215	US20060536910	20060929
US7442627 BB	20081028	US20060536910	20060929

Priority:

JP20010368412 20011203 JP20020167088 20020607 US20020301912 20021122
US20060536910 20060929

Probable Assignee: KONICA CORP

Assignee(s): (std): ITOH HIROTO ; KIYOMURA TAKAKAZU ; KONICA CORP ; KONISHIROKU PHOTO IND ; TSUJI TOSHIO

Assignee(s): KONICA CORPORATIONJP

Inventor(s): (std): HIROHITO ITO ; ITO HIROHITO ; ITO HIROTO ; ITOH HIROTO ; KITOSHI KIYOMURA ; KITOSHI TSUJI TOSHIO ITO HIROH ; KIYOMURA KITOSHI ; KIYOMURA TAKAKAZU ; KIYOMURA TAKATOSHI ; TOSHIO TSUJI ; TSUJI TOSHIO

Inventor(s): TSUJI TOSHIO ITO HIROHITO KIYOMURA KITOSHI

Agent(s): LUCAS AND MERCANTI LLP

Designated states: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

Title: COLOR ENHANCEMENT UTILIZING UP CONVERTERS AND DOWN CONVERTERS

Abstract: Source: US2012064134A A light emitting composition including first color emitters and second color emitters. The first color emitters are configured to emit, upon exposure to an **energy** source, visible light at a target color in response to **absorption of energy** across a first band of **wavelengths**. The second color emitters are configured to emit, upon exposure to the **energy** source, visible light at the target color in response to **absorption of energy** across a second band of **wavelengths**. The light intensity observable at the target color is enhanced relative to reflected white light without emission from the first and second color emitters. The light emitting composition can be a part of a paint, an ink, a fabric, a thread, a road sign, a highway marking, an automobile, a boat, a plane, a reflector, a building product, a concrete product, an epoxy product, a jewelry product, colored contact lens, a candle product, a rubber product, a plastic product, or other colored surface.

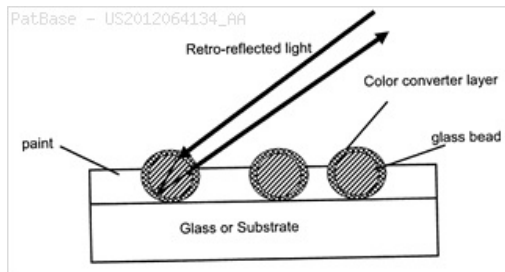
Classifications:

International (IPC 8-9): A61K8/02 A61K8/19 A61K8/20 A61K8/21 A61K8/23 A61K8/24 A61K8/25 A61K8/26 A61K8/29 A61Q1/02 A61Q1/04 A61Q1/08 A61Q1/10 A61Q17/04 A61Q19/00 A61Q5/00 B32B5/16 B82Y30/00 C09D1/00 C09D11/00 C09D11/50 C09D5/22 C09D5/29 C09D7/12 C09K11/08 C09K11/54 C09K11/55 C09K11/58 C09K11/59 C09K11/60 C09K11/62 C09K11/64 C09K11/67 C09K11/77 C09K11/78 C09K11/80 C09K11/81 C09K11/82 C09K11/84 C09K11/85 C09K11/87 C09K11/88 F21V9/06 F21V9/16 G02B5/00 G02B5/23 H01J1/62 (Advanced/Invention); B82Y30/00 (Advanced/Non-invention)

CPC: C09D7/66 A61Q17/04 A61K8/19 A61K8/20 A61K8/21 A61K8/23 A61K8/24 A61K8/25 A61K8/29 A61K2800/42 A61K2800/434 A61Q1/02 A61Q1/04 A61Q1/10 B82Y30/00 C09D5/22 C09D5/29 C09D11/50 G02B5/008 G02B5/23

European: A61K8/19 A61K8/20 A61K8/21 A61K8/23 A61K8/24 A61K8/25 A61K8/29 A61Q1/02 A61Q1/04 A61Q1/10 A61Q17/04 B82Y30/00 C09D11/50 C09D5/22 C09D5/29 C09D7/12N G02B5/00P G02B5/23 K61K201/023 K61K800/42 K61K800/434

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**Family:**

Publication number	Publication date	Application number	Application date
CN103180132 A	20130626	CN201180048021	20110805
CN103180132 B	20160210	CN201180048021	20110805
CN105349145 A	20160224	CN201510691063	20110805
EP2601042 A2	20130612	EP20110815361	20110805
EP2601042 A4	20150527	EP20110815361	20110805
TW201302231 A	20130116	TW20110128053	20110805
TWI589304 B	20170701	TW20110128053	20110805
US2012064134 AA	20120315	US20110204355	20110805
WO12019081 A2	20120209	WO2011US46709	20110805
WO12019081 A3	20120405	WO2011US46709	20110805

Priority:

CN201180048021 20110805 US20100371549P 20100806 US20110204355 20110805
WO2011US46709 20110805

Probable Assignee: IMMUNOLIGHT LLC

Assignee(s): (std): BOURKE FREDERIC A JR ; BOURKE JR FREDERIC J ; IMMUNOLIGHT LLC ; WALDER HAROLD

Assignee(s): BOURKE FREDERIC A

Inventor(s): (std): BOURKE FREDERIC A JR ; BOURKE JR FREDERIC J ; WALDER HAROLD

Inventor(s): BOURKE FREDERIC A

Agent(s): REBOUSSIN YOHANN MICKAEL NOEL; MASON J DEREK ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: SEMICONDUCTOR **DEVICE** AND METHOD FOR MANUFACTURING THE SAME

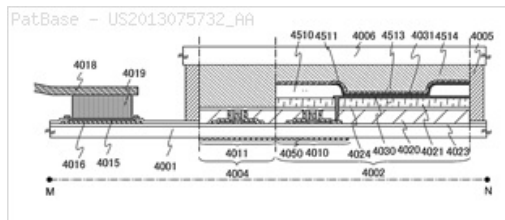
Abstract: Source: US2013075732A A miniaturized transistor having high electric characteristics is provided with high yield. In a semiconductor **device** including the transistor, high performance, high reliability, and high productivity are achieved. In a semiconductor **device** including a transistor in which an **oxide** semiconductor film, a gate insulating film, and a gate electrode layer on side surfaces of which sidewall insulating layers are provided are stacked in this order, source and drain electrode layers are provided in contact with the **oxide** semiconductor film and the sidewall insulating layers. In a process for manufacturing the semiconductor **device**, a conductive film and an interlayer insulating film are stacked to cover the **oxide** semiconductor film, the sidewall insulating layers, and the gate electrode layer, and the interlayer insulating film and the conductive film over the gate electrode layer are removed by a chemical mechanical polishing method, so that the source and drain electrode layers are formed.

Classifications:

International (IPC 8-9): G02F1/1368 H01L21/28 H01L21/336
H01L21/8242 H01L21/8247 H01L27/108 H01L27/115 H01L27/146
H01L29/40 H01L29/78 H01L29/786 H01L29/788 H01L29/792
H01L51/50 H05B33/14 (Advanced/Invention);
H01L27/12 (Advanced/Non-invention)

CPC: H01L29/41733 H01L29/66742 H01L29/7869 H01L27/1225

US: 1/1 257/57 257/E21.411 257/E29.273 438/151



Family:

Publication number	Publication date	Application number	Application date
JP2013102131 A2	20130523	JP20120202541	20120914
JP6077806 B2	20170208	JP20120202541	20120914
KR20130032836 A	20130402	KR20120104934	20120921
TW201318172 A	20130501	TW20120133490	20120913
TWI545764 B	20160811	TW20120133490	20120913
US2013075732 AA	20130328	US20120604962	20120906
US9431545 BB	20160830	US20120604962	20120906

Priority:

JP20110208229 20110923 JP20110225519 20111013 JP20120202541 20120914

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): HANAOKA KAZUYA ; ISHIZUKA AKIHIRO ; ISOBE ATSUO ; KOEZUKA JUNICHI ; KURATA MOTOMU ; SASAGAWA SHINYA ; SAITO TOSHIHIKO ; SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO ; SEMICONDUCTOR ENERGY LABORATORY CO LTD

Inventor(s): (std): HANAOKA KAZUYA ; HIZUKA JUNICHI ; ISHIZUKA AKIHIRO ; ISOBE ATSUO ; KOEZUKA JUNICHI ; KURATA MOTOMU ; SAITO TOSHIHIKO ; SASAGAWA SHINYA

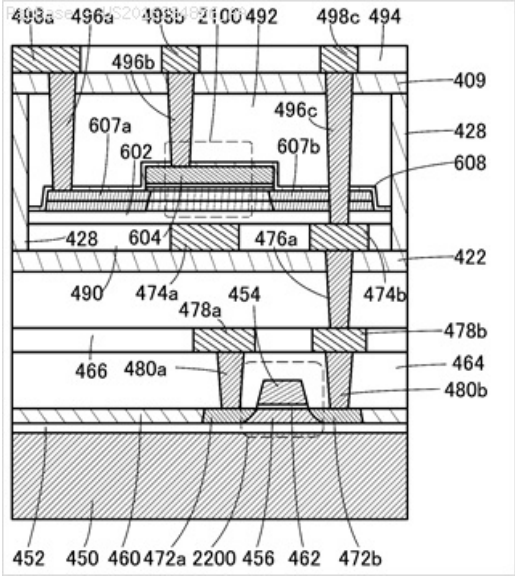
Agent(s): ERIC J; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE

Title: SEMICONDUCTOR **DEVICE**

Abstract: Source: US2016284856A A semiconductor **device** including a miniaturized transistor is provided. The semiconductor **device** includes a first insulator, a second insulator, a semiconductor, and a conductor. The semiconductor is over the first insulator. The second insulator is over the semiconductor. The conductor is over the second insulator. The semiconductor includes a first region, a second region, and a third region. The first region is a region where the semiconductor overlaps with the conductor. Each of the second region and the third region is a region where the semiconductor does not overlap with the conductor. The second region and the third region each have a region with a spinel crystal structure.

Classifications:

International (IPC 8-9): G02F1/1368 H01L21/8234 H01L21/8238 H01L21/8242 H01L27/06 H01L27/08 H01L27/088 H01L27/092 H01L27/10 H01L27/108 H01L27/12 H01L27/146 H01L27/32 H01L29/24 H01L29/772 H01L29/786 (Advanced/Invention)
CPC: H01L29/7869 H01L29/24 H01L29/78603 H01L27/1225 H01L27/3262 G02F1/1368
US: 349/43



Family:

Publication number	Publication date	Application number	Application date
JP2016189461 A2	20161104	JP20160060539	20160324
US2016284856 AA	20160929	US20160077029	20160322
US9806200 BB	20171031	US20160077029	20160322

Priority:

JP20150067235 20150327 JP20160060539 20160324

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO ; SEMICONDUCTOR ENERGY LABORATORY CO LTD

Inventor(s): (std): KIMURA MASAYUKI ; MATSUBAYASHI DAISUKE ; SHIMOMURA AKIHISA ; TANAKA TETSUHIRO ; TOKUMARU RYO ; YAMANE YASUMASA

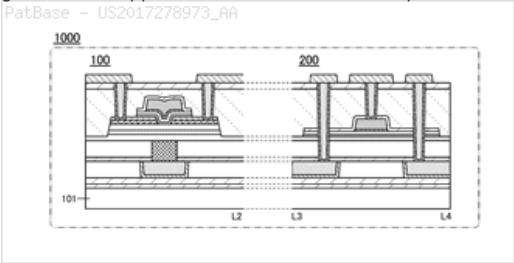
Agent(s): ERIC J; ROBINSON INTELLECTUAL PROPERTY LAW OFFICE

Title: TRANSISTOR, SEMICONDUCTOR **DEVICE**, AND ELECTRONIC **DEVICE**

Abstract: Source: US2017278973A To provide a semiconductor **device** with high design flexibility. A first transistor and a second transistor having different electrical characteristics from those of the first transistor are provided over the same layer without significantly increasing the number of manufacturing steps. A semiconductor layer where a channel of the first transistor is formed and a semiconductor layer where a channel of the second transistor is formed are formed using semiconductor **materials** having different electron affinities. When an **oxide** semiconductor is used for the semiconductor layer, an insulating layer containing excess oxygen is used as an insulating layer below the semiconductor layer. By increasing the thickness of the insulating layer, a large amount of oxygen can be supplied to the semiconductor layer.

Classifications:

International (IPC 8-9): G02F1/1368 H01L21/336 H01L21/8242
H01L27/108 H01L27/12 H01L27/146 H01L29/66 H01L29/786
H01L51/50 H05B33/14 (Advanced/Invention)
CPC: H01L29/7869 H01L27/1225 H01L27/124 H01L27/1248
H01L27/127 H01L29/66969



Family:

Publication number	Publication date	Application number	Application date
JP2017183718 A2	20171005	JP20170056832	20170323
US2017278973 AA	20170928	US20170464517	20170321

Priority:

JP20160061869 20160325 JP20170056832 20170323

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO ; SEMICONDUCTOR ENERGY LABORATORY CO LTD

Inventor(s): (std): ANDO YOSHINORI

Title: METHOD FOR FORMING THIN SEMICONDUCTOR FILM, METHOD FOR FABRICATING SEMICONDUCTOR **DEVICE**, SYSTEM FOR EXECUTING THESE METHODS AND ELECTROOPTIC **DEVICE**

Abstract: Source: US2003148565A The present invention provides a method capable of easily forming a polycrystalline or monocrystalline semiconductor thin film of polycrystalline silicon with a high degree of crystallization and high quality at low cost, and an apparatus for carrying out the method. In a method of forming a polycrystalline (or monocrystalline) semiconductor thin film, a method of manufacturing a semiconductor **device** and an apparatus for carrying out these methods, in order to form a large-grain polycrystalline (or monocrystalline) semiconductor thin film (7) such as a polycrystalline silicon film with a high degree of crystallization on a **substrate** (1) or manufacturing a semiconductor **device** having the polycrystalline (or monocrystalline) semiconductor thin film (7), a low-crystalline semiconductor thin film (7A) is formed on the **substrate** (1), and then heated in a molten, semi-molten or non-molten state by laser annealing with ultraviolet rays (UV) or/and deep ultraviolet rays (DUV) and cooled to promote crystallization of the low-crystalline semiconductor thin film (7A), obtaining the polycrystalline (or monocrystalline) semiconductor thin film (7).

Classifications:

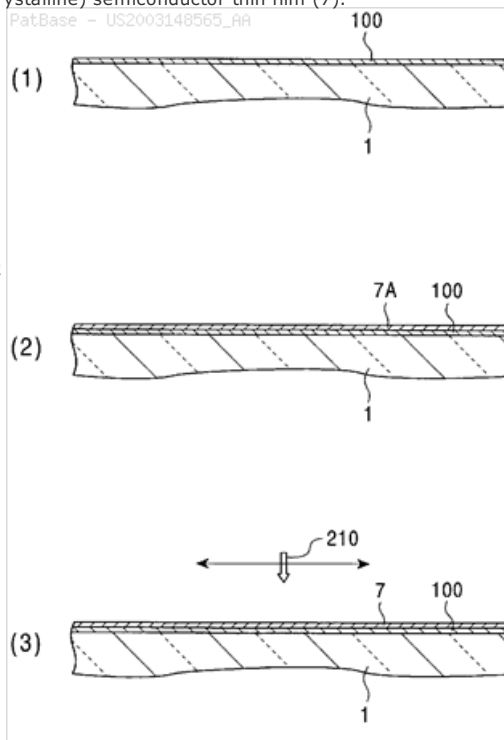
International (IPC 8-9): B23K26/00 G02F1/1368 G09F9/30 H01J9/02 H01L21/20 H01L21/268 H01L21/336 H01L27/08 H01L27/32 H01L29/786 H01L31/04 (Advanced/Invention); B23K26/00 G02F1/13 G09F9/30 H01J9/02 H01L21/02 H01L27/08 H01L27/28 H01L29/66 H01L31/04 (Core/Invention)

International (IPC 1-7): B23K26/00 G02F1/1368 G09F9/30 H01L21/20 H01L21/268 H01L21/336 H01L21/8238 H01L27/08 H01L27/092 H01L29/04 H01L29/786 H01L31/04

CPC: H01L29/66757 H01L21/2026 H01L29/66765 H01L29/78648 H01L29/78675 H01L29/78678 H01L27/1285

European: H01L21/20D2 H01L27/12T H01L29/66M6T6F15A2 H01L29/66M6T6F15A3 H01L29/786D H01L29/786D2 H01L29/786E4C2 H01L29/786E4C4

US: 257/E21.134 257/E21.134S 257/E21.413 257/E21.413S 257/E21.414 257/E21.414S 257/E29.275 257/E29.275S 257/E29.293 257/E29.293S 257/E29.294 257/E29.294S 438/200 438/200P



Family:

Publication number	Publication date	Application number	Application date
JP2002231628 A2	20020816	JP20010024999	20010201
TW552707 B	20030911	TW20020101650	20020131
US2003148565 AA	20030807	US20020240439	20021001
WO02061816 A1	20020808	WO2002JP00799	20020131

Priority:

JP20010024999 20010201

Probable Assignee:

SONY CORP

Assignee(s): (std):

SONY CORP ; YAMANAKA HIDEO

Inventor(s): (std):

YAMANAKA HIDEO

Designated states:

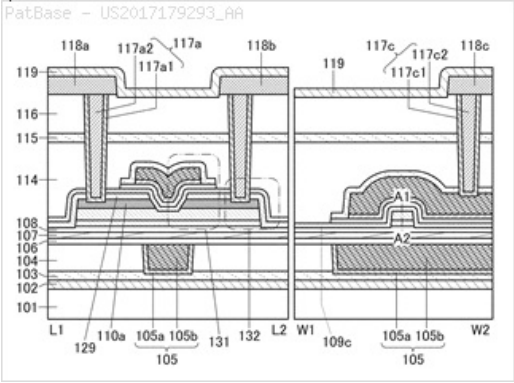
CA US

Title: TRANSISTOR, SEMICONDUCTOR **DEVICE**, AND ELECTRONIC **DEVICE**

Abstract: Source: US2017179293A To provide a transistor with favorable electrical characteristics, a transistor with stable electrical characteristics, or a highly integrated semiconductor **device**. An electrode is provided over an **oxide** semiconductor layer A, the **oxide** semiconductor layer A and the electrode are covered with a layer C, and then heat treatment is performed; thus, oxidation of the electrode which is caused in the heat treatment is prevented. For the layer C, for example, an **oxide** semiconductor can be used. By covering a side surface of the **oxide** semiconductor layer A where a channel is formed with the layer C and the **oxide** semiconductor layer B, diffusion of impurities from the side surface of the **oxide** semiconductor layer A into the **oxide** semiconductor layer A is prevented.

Classifications:

International (IPC 8-9): G02F1/1368 H01L21/28 H01L21/82 H01L21/8234 H01L27/088 H01L27/12 H01L29/417 H01L29/423 H01L29/49 H01L29/786 H01L51/50 H05B33/14 (Advanced/Invention)
CPC: H01L29/7869 H01L29/78696 H01L27/1225 H01L27/1255



Family:

Publication number	Publication date	Application number	Application date
JP2017112374 A2	20170622	JP20160242167	20161214
US2017179293 AA	20170622	US20160378143	20161214

Priority:

JP20150245021 20151216 JP20160242167 20161214

Probable Assignee: SEMICONDUCTOR ENERGY LABORATORY CO LTD

Assignee(s): (std): SEMICONDUCTOR ENERGY LAB ; SEMICONDUCTOR ENERGY LAB CO LTD

Assignee(s): SEMICONDUCTOR ENERGY LABORATORY CO LTD ; SEMICONDUCTOR ENERGY LABORATORY CO

Inventor(s): (std): YAMAZAKI SHUNPEI

Title: THIN FILM SOLAR CELL CONFIGURATION AND FABRICATION METHOD

Abstract: Source: US2003230338A A new photovoltaic **device** configuration **based** on an n-copper indium selenide absorber and a p-type window is disclosed. A fabrication method to produce this **device** on flexible or rigid **substrates** is described that reduces the number of cell components, avoids hazardous **materials**, simplifies the process steps and hence the costs for high volume solar cell manufacturing.

Classifications:

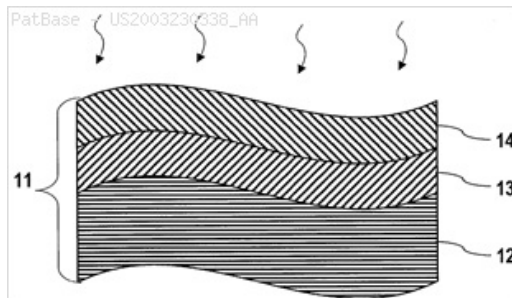
International (ipc 8-9): G02B6/36 G02B6/42 H01L25/04 H01L29/26 H01L31/00 H01L31/0203 H04B10/02 (Advanced/Invention); G02B6/36 G02B6/42 H01L25/04 H01L29/02 H01L31/00 H01L31/0203 H04B10/02 (Core/Invention)

International (ipc 1-7): G02B6/36 G02B6/42 H01L25/04 H01L29/26 H01L31/00 H01L31/0203 H04B10/02

CPC: H01L2224/16225 H01L2224/48091 H01L31/0749 H01L31/0322 Y02E10/541 H01L31/032 H01L31/18 H01L2924/3025 H01L51/426 Y02E10/549 H01L31/06 Y02P70/521 H01L21/02568 H01L21/02614 H01L21/02628 H01L2924/181 H01L2924/00014

European: H01L31/032C H01L31/0749 H01L31/18 Y02E10/50 Y02E10/54B

US: 136/252 136/252S 136/262 136/263 136/264 136/264S 136/265 257/80 257/82 385/14 385/15 385/92 385/92P 438/57 438/82 438/87 438/93 438/94 438/95 438/95S

**Family:**

Publication number	Publication date	Application number	Application date
DE10227544 A1	20040108	DE20021027544	20020617
DE10227544 B4	20070802	DE20021027544	20020617
US2003230338 AA	20031218	US20030460872	20030614
US2003231842 AA	20031218	US20030462956	20030617
US6897485 BB	20050524	US20030462956	20030617
US7560641 BB	20090714	US20030460872	20030614
US8742253 BA	20140603	US20060420674	20060526

Priority:

DE20021027544 20020617 US20020431268P 20021206 US20030460872 20030614
US20060420674 20060526

Probable Assignee: INTERPHASES RESEARCH

Assignee(s): (std): INFINEON TECHNOLOGIES AG ; INTERPHASES SOLAR ; LI YAN ; MENEZES SHALINI ; MENEZES SHARMILA JACQUELINE

Assignee(s): FINISAR CORP ; KROPP JORG REINHARDT ; INTERPHASES RESEARCH

Inventor(s): (std): KROPP JOERG REINHARDT ; MENEZES SHALINI ; MENEZES SHARMILA JACQUELINE ; LI YAN ; KROPP JORG REINHARDT

Agent(s): GREENBERG LAURENCE A; STEMER WERNER H; LOCHER RALPH E; LAURENCE A; RALPH E; WERNER H