Petitioner Bluehouse Global Ltd.

Ex. 1002 (Pages 1-246)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.	: 9,293,545 B2
APPLICATION NO.	: 14/451680
DATED	: March 22, 2016
INVENTOR(S)	: Shunpei Yamazaki et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification At column 3, line 14, "InMO₃(ZnO)_n," should be --InMO₃(ZnO)_m--; At column 9, line 61, "20 nm" should be --20 nm.--; At column 13, line 50, "20 nm" should be --20 nm.--; At column 20, line 22, "5602M" should be --5602_M--; At column 21, line 8, "5621_)" should be --5621_J--; At column 21, line 10, "5621_)" should be --5621_J--; At column 21, line 12, "Ti," should be --5621_J--; At column 21, line 15, "Ti," should be --T1,--; At column 40, line 3, " \in r" should be -- ϵ r--; At column 40, line 3, " \in r" should be -- ϵ r--;

> Signed and Sealed this Thirtieth Day of August, 2016

Michelle K. Lee

Michelle K. Lee Director of the United States Patent and Trademark Office

BLUEHOUSE EXHIBIT 1002 Page 2 of 246

Page 1 of 1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Shunpei YAMAZAKI et al. Serial No. 14/451,680 Filed: August 5, 2014 U.S. Patent No. 9,293,545 For: SEMICONDUCTOR DEVICE

-) Confirmation No. 5776
-) Group Art Unit: 2816
-) Examiner: Jeremy J. Joy

REQUEST FOR CERTIFICATE OF CORRECTION UNDER 37 C.F.R. § 1.322 FOR CORRECTION OF OFFICE MISTAKE

ATTN: Certificate of Correction Branch Honorable Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

As provided in detail in the attached, the patentee respectfully requests that a Certificate of Correction be granted in the above-identified patent to correct a mistake in a patent, incurred through the fault of the Office.

Under 37 C.F.R. 1.322, "The Commissioner may issue a certificate of correction pursuant to 35 U.S.C. 254 to correct a mistake in a patent, incurred through the fault of the Office, which mistake is clearly disclosed in the records of the Office at the request of the patentee or the patentee's assignee."

The patentee furthermore requests <u>Expedited Issuance</u> of this Certificate of Correction in accordance with MPEP § 1480.01. Specifically, this section provides that:

In an effort to reduce the overall time required in processing and granting Certificate of Correction requests, the Office will expedite processing and granting of patentee requests where such requests are accompanied by evidence to show that the error is attributable solely to the Office Where the correction requested was incurred through the fault of the Office, and the matter is clearly disclosed in the records of the

- 2 -

Application Serial No. 14/451,680 U.S. Patent No. 9,293,545 Attorney Docket No. 0756-10566

Office, and is accompanied by documentation that unequivocally supports the patentee's assertion(s), a Certificate of Correction will be expeditiously issued. MPEP § 1480.01

The following errors appear to have occurred through the fault of the Office, and the patentee respectfully requests correction thereof.

At column 3, line 14, "InMO₃(ZnO)_n," should be --InMO₃(ZnO)_m--; At column 9, line 61, "20 nm" should be --20 nm.--; At column 13, line 50, "20 nm" should be --20 nm.--; At column 20, line 22, "5602M" should be --5602_M--; At column 21, line 8, "5621_)" should be --5621_J--; At column 21, line 10, "5621_)" should be --5621_J--; At column 21, line 12, "Ti," should be --T1,--; At column 21, line 15, "Ti," should be --T1,--; At column 40, line 3, " \in r" should be --Er--; At column 40, line 3, " \in r" should be --Er--;

The corrections in the specification are directed to mistakes in the patent incurred through the fault of the Office, possibly resulting from the Office's document scanning processes.

As the errors were incurred through the fault of the Office, a fee is not believed to be necessary. Should it be determined that a fee is necessary, any deficiencies or overages in any fees due in connection with this patent and the requested actions should be applied to Deposit Account No. 50-2280.

- 3 -

Respectfully submitted,

Eric J. Robinson Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, Virginia 22033 (571) 434-6789

PTO/SB/44 (09-07) Approved for use through 08/31/2010, OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. (Also Form PTO-1050) UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION PATENT NO : 9.293.545 DATED : March 22, 2016 : Shunpei YAMAZAKI et al. INVENTOR(S) It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below: At column 3, line 14, "InMO₃(ZnO)_n," should be --InMO₃(ZnO)_m--; At column 9, line 61, "20 nm" should be --20 nm.--; At column 13, line 50, "20 nm" should be --20 nm.--; At column 20, line 22, "5602M" should be --5602 M--; At column 21, line 8, "5621)" should be --5621 J--; At column 21, line 10, "5621)" should be --5621 J--; At column 21, line 12, "Ti," should be --T1,--; At column 21, line 15, "Ti," should be --T1,--; At column 40, line 3, " \in r" should be -- ε r--; At column 42, line 67, "01" should be $-\theta$ 1--.

MAILING ADDRESS OF SENDER:

PATENT NO. 9,293,545

No. of additional copies

Eric J. Robinson Robinson Intellectual Property Law Office 3975 Fair Ridge Drive Suite 20 North Fairfax, Virginia 22033

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Electronic Acknowledgement Receipt						
EFS ID:	26272119					
Application Number:	14451680					
International Application Number:						
Confirmation Number:	5776					
Title of Invention:	SEMICONDUCTOR DEVICE					
First Named Inventor/Applicant Name:	Shunpei YAMAZAKI					
Customer Number:	31780					
Filer:	Eric J. Robinson					
Filer Authorized By:						
Attorney Docket Number:	0756-10566					
Receipt Date:	06-JUL-2016					
Filing Date:	05-AUG-2014					
Time Stamp:	16:29:33					
Application Type:	Utility under 35 USC 111(a)					

Payment information:

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File Listing	g:						
Document Number	Document Description		File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)	
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Information:

Total Files Size (in bytes):

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

W COMPANY		UNITED STATES DEPARTMENT OF COMM United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov			
PPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
14/451,680	03/22/2016	9293545	0756-10566	5776	

31780759003/02/2016Robinson Intellectual Property Law Office, P.C.3975 Fair Ridge DriveSuite 20 NorthFairfax, VA 22033

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Shunpei YAMAZAKI, Setagaya, JAPAN; Semiconductor Energy Laboratory Co., Ltd., Atsugi-shi, JAPAN; Kengo AKIMOTO, Atsugi, JAPAN; Daisuke KAWAE, Yamato, JAPAN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit <u>SelectUSA.gov</u>.

Attorney Docket No. 0756-10566

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Shunpei YAMAZAKI et al. Serial No. 14/451,680 Filed: August 5, 2014 For: SEMICONDUCTOR DEVICE

-) Confirmation No. 5776
-) Group Art Unit: 2816
-) Examiner: Jeremy J. Joy

LETTER REGARDING PAYMENT OF ISSUE FEE

)

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MS Issue Fee Honorable Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

It is respectfully requested that the Issue Fee paid on October 6, 2015 be applied towards the current Issue Fee due February 16, 2016. Also, attached is the new Issue Fee Transmittal Form PTOL-85, along with a copy of the Petition granting the Withdrawal from Issue indicating that the Issue Fee may be reapplied in this matter.

Respectfully submitted,

Eric J. Robinson

Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, Virginia 22033 (571) 434-6789

		I	PART E	B - FEE(S) TRA	NSM	ITTAL						
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14/451,680	08/05/2014	······		Shunpei YAMAZA	\KI				0756-10566	up	5776	
TITLE OF INVENTION	SEMICONDUCTOR I	DEVICE										
APPLN. TYPE	ENTITY STATUS	ISSUE FEE	DUE	PUBLICATION FEE	DUE	PREV. PA	ID ISSUE I	FEE	TOTAL FEE(S) DUE	. T	DATE DU	љ
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"Fee Address" indi	8/122) attached. cation (or "Fee Address" 2 or more recent) attache	' Indication form	n	 (2) The name of a single firm (having as a member a registered attorneys or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. Robinson Intellectual Property Law Office, P.C 								
3. ASSIGNEE NAME A	ND RESIDENCE DATA	TO BE PRINT	TED ON T			•					1	
PLEASE NOTE: Unl recordation as set fort	ess an assignee is ident 1 in 37 CFR 3.11. Comp	fied below, no letion of this fo	assignee rm is NO	data will appear on T a substitute for filin	the pa ig an a	tent. If an issignment	n assignee	is ide	entified below, the d	locume	ent has been	filed for
(A) NAME OF ASSIC				(B) RESIDENCE: (-						
Semiconduc	tor Energy Labor	atory Co., L	td.	Atsugi-sh	ii, Ka	anagawa	a-ken, 、	Japa	n			
Please check the appropri	ate assignce category or	categories (will	l not be pr	inted on the patent):		Individual	Corp	oratio	m or other private gr	oup en	tity 🖵 Gov	/ernment
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Authorized Signature	hig	(Date _		F۹	ebruary 16, 2	2016	3	
Typed or printed name	Eric J. R	obinson				Regist	ration No.		38,285			_



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

Decision Date : October 26, 2015

In re Application of : Shunpei YAMAZAKI

Application No : 144

Application No : 14451680 Filed : 05-Aug-2014

Attorney Docket No : 0756-10566

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed October 26, 2015, to withdraw the above-identified application from issue after payment of the issue fee.

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

The petition is **GRANTED.**

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 2816 for processing of the request for continuing examination under 37 CFR 1.114.

Office of Petitions

Electronic Acknowledgement Receipt						
EFS ID:	24919356					
Application Number:	14451680					
International Application Number:						
Confirmation Number:	5776					
Title of Invention:	SEMICONDUCTOR DEVICE					
First Named Inventor/Applicant Name:	Shunpei YAMAZAKI					
Customer Number:	31780					
Filer:	Eric J. Robinson/Sue Ann Carr					
Filer Authorized By:	Eric J. Robinson					
Attorney Docket Number:	0756-10566					
Receipt Date:	16-FEB-2016					
Filing Date:	05-AUG-2014					
Time Stamp:	14:21:25					
Application Type:	Utility under 35 USC 111(a)					

Payment information:

Submitted with Payment no						
File Listing:						
Document Number	Document Description		File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	(mont (PTO 95P)	IF_16FEB2016.pdf	422941	no	3
•				2cf432791015e09ac9208c27135ee1382a49 e6ca	10	5
Warnings:						
Information:				BLUEHOUS	SE EXHIBIT 10	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

OPAP
FEB 1 6 2016
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BILLI'S TRADEMAN

31780

3975 Fair Ridge Drive Suite 20 North

Fairfax, VA 22033 32717/2316 CCH9U2

31 FC:1531

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to; Mail Mail Stop ISSUE FEE

11/13/2015

36833644 14451689

953.88 62

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fees will be maintenanc maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block I for any change of address)

Robinson Intellectual Property Law Office, P.C.

7590

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR		ATTORNEY	DOCKET NO.	CONFIRMATION NO.	
14/451,680	08/05/2014		Shunpei YAMAZAKI		0756	5-10566	5776	
TITLE OF INVENTION	SEMICONDUCTOR	DEVICE						
APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE			DATE DUE	
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CFN 1.505). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.			(1) The names of up to or agents OR, alternativ	3 registered paten vely,	t attorneys	Eric J. Ro	•	
Address form PTO/SB/122) attached.			(2) The name of a single	e firm (having as a	member a		Intellectual	
PTO/SB/47; Rev 03-0 Number is required.	J2 or more recent) attach	ed. Use of a Customer	registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.					
			THE PATENT (print or typ				· · · · · · · · · · · · · · · · · · ·	
PLEASE NOTE: Un recordation as set fort	less an assignee is ident h in 37 CFR 3.11. Com	ified below, no assignee pletion of this form is NO	data will appear on the part of the part of the substitute for filing an	atent. If an assigne assignment.	ee is identifi	ed below, the do	cument has been filed for	
(A) NAME OF ASSI			(B) RESIDENCE: (CITY					
Semicondu	ctor Energy Labor	atory Co., Ltd.	Atsugi-shi, Ka	anagawa-ken,	Japan			
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4a. The following fee(s)	are submitted:	4	b. Payment of Fee(s): (Plea					
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February 16, 2016 Authorized Signature _ Date Eric J. Robinson 38,285 Typed or printed name Registration No.

Page 2 of 3

OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE **BLUEHOUSE EXHIBIT 1002** Page 15 of 246

UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

31780 7590 11/13/2015 Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, VA 22033 EXAMINER JOY, JEREMY J

ART UNIT PAPER NUMBER
2816

DATE MAILED: 11/13/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	Shunpei YAMAZAKI	0756-10566	5776

TITLE OF INVENTION: SEMICONDUCTOR DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$960	\$960	02/16/2016

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED</u>. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN <u>THREE MONTHS</u> FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. <u>THIS STATUTORY PERIOD CANNOT BE EXTENDED</u>. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u> Mail Stop ISSUE FEE **Commissioner for Patents** P.O. Box 1450 Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

31780 7590 11/13/2015 Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, VA 22033

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

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APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR	I	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	•	Shunpei YAMAZAKI	•	0756-10566	5776
TITLE OF INVENTION	SEMICONDUCTOR I	DEVICE				
APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE	FEE TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$960	\$960	02/16/2016
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JOY, JE	REMY J	2816	257-043000	•		
CFR 1.363). Change of corresp Address form PTO/S	ence address or indicatio ondence address (or Cha B/122) attached. lication (or "Fee Address O or more recent) attach	ange of Correspondence	 2. For printing on the p (1) The names of up to or agents OR, alternativ (2) The name of a singl registered attorney or a 2 registered patent atto listed, no name will be 	> 3 registered patent vely, le firm (having as a m agent) and the names rnevs or agents. If no	nember a ²	
4a. The following fee(s)		4	printed on the patent) : 4b. Payment of Fee(s): (Plea A check is enclosed. Payment by credit car	ise first reapply any	previously paid issue fee	
	# of Copies		_ · ·	authorized to charge	the required fee(s), any def	ficiency, or credits any n extra copy of this form).
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NOTE: This form must b	be signed in accordance v	with 37 CFR 1.31 and 1.3	33. See 37 CFR 1.4 for signa	ature requirements ar	d certifications.	
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			Page 2 of 3		BLUEHOUSE EX	HIBIT 1002 e 17 of 246
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PTOL-85 Part B (10-13) Approved for use through 10/31/2013.

OMB 0651-0033

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

	ted States Pate	NT AND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	Shunpei YAMAZAKI	0756-10566	5776
31780 75	90 11/13/2015		EXAM	IINER
Robinson Intellec 3975 Fair Ridge Dr	etual Property Law O	ffice, P.C.	JOY, JE	REMY J
Suite 20 North			ART UNIT	PAPER NUMBER
Fairfax, VA 22033			2816	
			DATE MAILED: 11/13/201	5

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation BLUEHOUSE EXHIBIT 1002

	Application No. 14/451,680	Applicant(s YAMAZAKI	
Notice of Allowability	Examiner JEREMY JOY	Art Unit 2816	AIA (First Inventor to File) Status No
The MAILING DATE of this communication All claims being allowable, PROSECUTION ON THE MERIT herewith (or previously mailed), a Notice of Allowance (PTO NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATE of the Office or upon petition by the applicant. See 37 CFR	IS IS (OR REMAINS) CLOSED in L-85) or other appropriate commun NT RIGHTS. This application is su	this application. If no nication will be mailed	t included in due course. THIS
1. X This communication is responsive to <u>Request for Con</u>	tinued Examination filed on 10/26/2	<u>2015</u> .	
A declaration(s)/affidavit(s) under 37 CFR 1.130(b) was/were filed on <u>.</u>		
2. An election was made by the applicant in response to requirement and election have been incorporated into		during the interview or	n; the restriction
 Image: Second State St	ty office for the corresponding appl	ication. For more info	
4. 🛛 Acknowledgment is made of a claim for foreign priority	vunder 35 U.S.C. § 119(a)-(d) or (f).	
Certified copies:			
a) 🛛 All b) 🗌 Some *c) 🔲 None of the:			
1. 🛛 Certified copies of the priority documents	have been received.		
2. Certified copies of the priority documents			
Copies of the certified copies of the prior		in this national stage	application from the
International Bureau (PCT Rule 17.2(a)).			
* Certified copies not received:			
Applicant has THREE MONTHS FROM THE "MAILING D noted below. Failure to timely comply will result in ABANE THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		a reply complying with	the requirements
5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted.		
including changes required by the attached Exam Paper No./Mail Date	niner's Amendment / Comment or	in the Office action of	
Identifying indicia such as the application number (see 37 each sheet. Replacement sheet(s) should be labeled as suc			(not the back) of
6. DEPOSIT OF and/or INFORMATION about the depos attached Examiner's comment regarding REQUIREMEN			the
Attachment(s) 1. ☑ Notice of References Cited (PTO-892)	5. 🗌 Examiner's	Amendment/Commer	ıt
 Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date <u>10/26/2015</u> 	6. 🛛 Examiner's	Statement of Reasons	s for Allowance
3. 🗌 Examiner's Comment Regarding Requirement for Dep	osit 7. 🗌 Other	_·	
of Biological Material 4. Interview Summary (PTO-413), Paper No./Mail Date			
/JEREMY JOY/			
Examiner, Art Unit 2816			

Application/Control Number: 14/451,680 Art Unit: 2816

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/26/2015 has been entered.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/26/2015 was filed after the mailing date of the Notice of Allowance on 07/06/2015. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Allowable Subject Matter

3. Claims **2-21** are allowed over the prior art.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

4. Claims 2-21 are allowed because the prior art of record neither anticipate nor rendered obvious the limitations of base claims 2 and 11 including "a first metal film and a second metal film over the gate insulating film; ... wherein a side surface of the first metal film faces a side surface of the second metal film, and wherein each of the side surface of the first metal film and the side surface of the second metal film has a step in a lower end portion thereof" and the limitations of base claim. In particular, the prior art of record falls short with regards to teaching a step portion formed in a lower portion of a side surface of a first metal film and a second metal film that face each other.

In example:

(i) *Furukawa et al.* (**U.S. Patent Pub. No. 2008/0099757**) teaches a glass substrate; a gate electrode over the glass substrate; a gate insulating film over the gate electrode; a first conductive film and a second conductive film over the gate insulating film; an organic semiconductor film in contact with the first and second conductive films; wherein a side surface of the first conductive film faces a side surface of the second conductive film; and wherein each of the side surface of the first conductive film and the side surface of the second conductive film has a step in a lower end portion thereof, but fails to specifically teach the first and second conductive films are first and second metal films and an oxide semiconductor film formed on the first and second metal films rather than the organic semiconductor film as disclosed

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(ii) *Akimoto* (**U.S. Patent Pub. No. 2007/0108446**) teaches using a metal film to form a portion of the first and second conductive films (source/drain electrodes) and an oxide semiconductor film formed the first and second conductive films in a display device similar to that of the applicant, but fails to specifically teach that the metal film that forms a portion of the first and second conductive films would not be obvious to modify *Furukawa* with such that the first and second metal film portions would have a step in a lower portion thereof.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY JOY whose telephone number is (571)270-7445. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571)272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number: 14/451,680 Art Unit: 2816

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEREMY JOY/ Examiner, Art Unit 2816 November 2, 2015

/MARVIN PAYEN/ Primary Examiner, Art Unit 2816

Notice of References Cited	Application/Control No. 14/451,680	Applicant(s)/Pater Reexamination YAMAZAKI ET AL	
Notice of Helefences Cited	Examiner	Art Unit	
	JEREMY JOY	2816	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	А	US-2007/0108446 A1	05-2007	Akimoto; Kengo	H01L29/41733	257/61
*	В	US-2007/0172591 A1	07-2007	SEO; O-gweon	C23C16/0272	427/248.1
*	С	US-2008/0038882 A1	02-2008	Takechi; Kazushige	H01L29/4908	438/151
*	D	US-2009/0114917 A1	05-2009	YAMAZAKI; Shunpei	H01L29/78696	257/59
*	ш	US-2010/0044711 A1	02-2010	IMAI; Shinji	H01L27/14676	257/59
*	F	US-2005/0056897 A1	03-2005	Kawasaki, Masahiro	H01L51/0021	257/359
*	G	US-2006/0033098 A1	02-2006	Shih; Ishiang	H01L51/0021	257/40
*	Н	US-2006/0027804 A1	02-2006	Yamazaki; Shunpei	G02F1/1368	257/59
*	—	US-2006/0292726 A1	12-2006	Akimoto; Kengo	H01L21/3221	438/30
*	J	US-2008/0073653 A1	03-2008	Iwasaki; Tatsuya	H01L29/7869	257/79
*	К	US-2005/0205870 A1	09-2005	Yamazaki, Shunpei	G02F1/133553	257/72
*	L	US-2004/0108562 A1	06-2004	Nagayama, Kenichi	H01L51/0021	257/434
*	М	US-2008/0099757 A1	05-2008	Furukawa; Shinobu	C07D209/88	257/40

FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Part of Paper No. 20151030

BLUEHOUSE EXHIBIT 1002 Page 25 of 246

Notice of References Cited	Application/Control No. 14/451,680	Applicant(s)/Patent Under Reexamination YAMAZAKI ET AL.	
Notice of neierences cited	Examiner	Art Unit	
	JEREMY JOY	2816	Page 2 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	А	US-2007/0072439 A1	03-2007	Akimoto; Kengo	H01L27/1225	438/795
*	В	US-2011/0062419 A1	03-2011	Kikuchi; Hiroaki	B82Y10/00	257/24
*	С	US-2008/0036698 A1	02-2008	Kawasaki; Masahiro	G02F1/1368	345/55
*	D	US-7,696,513 B2	04-2010	Hayashi; Ryo	H01L27/3211	257/40
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NON-PATENT DOCUMENTS

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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Part of Paper No. 20151030

BLUEHOUSE EXHIBIT 1002 Page 26 of 246

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2816

Symbol				Туре	Version	
H01L	29	4	1733	F	2013-01-01	
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H01L	51	1	05	1	2013-01-01	
H01L	21	0	2554	А	2013-01-01	
H01L	21	0	2565	А	2013-01-01	
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H01L	27	1	288		2013-01-01	

CPC Combination Sets				
Symbol	Туре	Set	Ranking	Version

/JEREMY JOY/ Examiner.Art Unit 2816	11/02/2015	Total Clain	ns Allowed:
(Assistant Examiner)	(Date)	2	0
/MARVIN PAYEN/ Primary Examiner.Art Unit 2816	11/03/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2
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U.S. Patent and Trademark Office

Part of Paper No. 20151030

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2816

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/JEREMY JOY/ Examiner.Art Unit 2816	11/02/2015	Total Clain	ns Allowed:
(Assistant Examiner)	(Date)	2	0
/MARVIN PAYEN/ Primary Examiner.Art Unit 2816	11/03/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2816

	Claims re	numbere	d in the s	ame orde	r as prese	ented by a	applicant		СР] T.D.	[] R.1.	47	
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/JEREMY JOY/ Examiner.Art Unit 2816	11/02/2015	Total Claims Allowed:			
(Assistant Examiner)	(Date)	2	0		
/MARVIN PAYEN/ Primary Examiner.Art Unit 2816	11/03/2015	O.G. Print Claim(s)	O.G. Print Figure		
(Primary Examiner)	(Date)	1	2		

U.S. Patent and Trademark Office

Part of Paper No. 20151030

PTO/SB/08A (07-06)

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Substitute for form 144	9/PTO			Co	mplete if Known
		eni	Nelide	Application Number	14/451,680
				Filing Date	August 5, 2014
STATEM	ENT BY A	APPL	ICANI	First Named Inventor	Shunpei YAMAZAKI
				Art Unit	2816
(Use	as many sheets as	necessary)	Examiner Name	J. JOY
Sheet	1	of	5	Attorney Docket Number	0756-10566

Examiner Cite		Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant
Initials*	No.1	Number-Kind Code ^{2 (If known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear
		US-8,937,580	01-20-2015	Miyagawa.K	
		US-2015/0123109	05-07-2015	Miyagawa.K	
		US-2015/0248859	09-03-2015	Miyagawa.K	
		US-8,243,055	08-14-2012	Abe.K	
		US-8,477,085	07-02-2013	Shishido.H	
		US-7,224,333	05-29-2007	Yamazaki.S et al.	
		US-9,153,168	10-06-2015	Osame.M et al.	
		US-7,375,705	05-20-2008	Morita.A	
		US-2011/0057958	03-10-2011	Morita.A	
		US-7,250,928	07-31-2007	Yamazaki.S et al.	
		US-2008/0036698	02-14-2008	Kawasaki.M et al.	
		US-7,696,513	04-13-2010	Hayashi.R et al.	
		US-6,462,722	10-08-2002	Kimura.M et al.	
		US-6,522,315	02-18-2003	Ozawa.T et al.	
		US-6,839,045	01-04-2005	Ozawa.T et al.	
		US-7,180,483	02-20-2007	Kimura.M et al.	
		US-7,221,339	05-22-2007	Ozawa.T et al.	
		US-7,253,793	08-07-2007	Ozawa.T et al.	
		US-7,710,364	05-04-2010	Ozawa.T et al.	

	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	τ ^ε				
Initials*	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear					
		JP-2005-092188A	04-07-2005			Abst.				
		JP-2008-176287A	07-31-2008			Abst.				
		JP-2008-151963A	07-03-2008			Abst.				
		JP-2003-280587A	10-02-2003			Abst.				
		JP-2006-227238A	08-31-2006			Abst.				
		JP-2004-046218A	02-12-2004			Abst.				

Examiner Signature	/Jeremy Joy/	Date Considered	11/02/2015
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Substitute for form 1449/PTO				Complete if Known		
			NOLIDE	Application Number	14/451,680	
INFORMATION DISCLOSURE				Filing Date	August 5, 2014	
	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI	
				Art Unit	2816	
(Use	(Use as many sheets as necessary)			Examiner Name	J. JOY	
Sheet	2	of	5	Attorney Docket Number	0756-10566	

U. S. PATENT DOCUMENTS							
Examiner Cite		Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant		
Initials*	No.1	Number-Kind Code ^{2 (f known)}	MM-DD-YYTT	Applicant of Cited Document	Figures Appear		
		US-7,880,696	02-01-2011	Ozawa.T et al.			
		US-8,154,199	04-10-2012	Ozawa.T et al.			
		US-8,188,647	05-29-2012	Kimura.M et al.			
		US-8,247,967	08-21-2012	Ozawa.T et al.			
		US-8,354,978	01-15-2013	Ozawa.T et al.			
		US-8,362,489	01-29-2013	Kimura.M et al.			
		US-2003/0231273	12-18-2003	Kimura.M et al.			
	···············	US-2008/0246700	10-09-2008	Ozawa.T et al.			
		US-2012/0299902	11-29-2012	Ozawa.T et al.			
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	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant	T ⁶				
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		JP-2008-241783A	10-09-2008			Abst.				
		JP-2005-266346A	09-29-2005			Abst.				
		JP-2006-165527A	06-22-2006			Abst.				
		JP-2006-286719A	10-19-2006			Abst.				
		JP-2003-195814A	07-09-2003		******	Abst.				
		JP-2008-042043A	02-21-2008			Abst.				

Examiner	/Jeremv Jov/	Date	
Signature	· · · · · · · · · · · · · · · · · · ·	Considered	11/02/2015

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Substitute for form 1449/PTO				Complete if Known		
INFORMA		eci /	SCHE	Application Number	14/451,680	
				Filing Date	August 5, 2014	
STATEMENT BY APPLICANT				First Named Inventor	Shunpei YAMAZAKI	
				Art Unit	2816	
(Use a	(Use as many sheets as necessary)			Examiner Name	J. JOY	
Sheet	3	of	5	Attorney Docket Number	0756-10566	

	U. S. PATENT DOCUMENTS								
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant				
Initials*	No.1	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear				

	FOREIGN PATENT DOCUMENTS									
Examiner	Cite	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant	6				
Initials*	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)			Figures Appear					
		JP-2007-250984A	09-27-2007			Abst.				
		JP-2005-354036A	12-22-2005			Abst.				
		WO-1998/036407	08-20-1998			Abst.				
		WO-2008/075697	06-26-2008			Eng.				
		WO-2007/119321	10-25-2007			Eng.				
		EP-0895219A	02-03-1999			Eng.				

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Examiner	/Jeremy Joy/	Date	11/02/2015
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Substitute for form 1449	(PTO			Complete if Known			
INFORMA			SOLIDE	Application Number	14/451,680		
				Filing Date	August 5, 2014		
STATEMENT BY APPLICANT				First Named Inventor	Shunpei YAMAZAKI		
0.1				Art Unit	2816		
(Use as many sheets as necessary)				Examiner Name	J. JOY		
Sheet	4	of	5	Attorney Docket Number	0756-10566		

	U. S. PATENT DOCUMENTS									
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant					
Initials*	No. ¹	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear					
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	FOREIGN PATENT DOCUMENTS									
'Examiner	Cite	Cite Foreign Patent Document	Publication Date Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	- ⁶					
Initials*	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear					
		EP-0917127A	05-19-1999			Eng.				
		EP-1255240A	11-06-2002			Eng.				
		EP-1336953A	08-20-2003			Eng.				
		EP-1337131A	08-20-2003			Eng.				
		EP-1359789A	11-05-2003			Eng.				
		EP-1363265A	11-19-2003			Eng.				

Signature /Jeremy Joy/ Considered 11/02/2015	Examiner Signature /Jeremy Joy/	Date	11/02/2015
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Substitute for form 1449	/PTO			Complete if Known			
			Nelide	Application Number	14/451,680		
INFORMATION DISCLOSURE				Filing Date	August 5, 2014		
STATEMENT BY APPLICANT			ICAN I	First Named Inventor	Shunpei YAMAZAKI		
			,	Art Unit	2816		
(Use a	(Use as many sheets as necessary)			Examiner Name	J. JOY		
Sheet	5	of	5	Attorney Docket Number	0756-10566		

	U. S. PATENT DOCUMENTS									
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	FOREIGN PATENT DOCUMENTS								
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	т ⁶			
Initials*	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	htry Code ³ -Number ⁴ -Kind Code ⁵ (if known) MM-DD-YYYY Applicant of Cited Document Figures Appear Figures Appear						
		EP-1619654A	01-25-2006			Eng.			
		EP-1830342A	09-05-2007			Eng.			
		EP-1830343A	09-05-2007			Eng.			
		EP-1830344A	09-05-2007			Eng.			

Examiner Signature /Jeremy Joy/	Date Considered	11/02/2015
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BIB DATA SHEET

CONFIRMATION NO. 5776

SERIAL NUMBER 14/451,680	FILING or 371(c) DATE 08/05/2014	CLASS 257	GROUP AR 2816		ATTORNEY DOCKET NO. 0756-10566					
	RULE									
APPLICANTS Semiconductor Energy Laboratory Co., Ltd., Atsugi-shi, JAPAN; INVENTORS										
Shunpei YAMAZAKI, Setagaya, JAPAN; Kengo AKIMOTO, Atsugi, JAPAN; Daisuke KAWAE, Yamato, JAPAN;										
** CONTINUING DATA										
This application is a CON of 13/763,874 02/11/2013 PAT 8803146 which is a CON of 12/613,769 11/06/2009 PAT 8373164 which is a CON of 12/606,262 10/27/2009 ABN										
** FOREIGN APPLICATIONS ************************************										
** IF REQUIRED, FORI 08/13/2014	EIGN FILING LICENS	E GRANTED **								
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3975 Fair Ridge I Suite 20 North	Drive									
Fairfax, VA 22033										
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EAST Search History

EAST Search History (Prior Art)

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S1	2	"US 20100117077"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 14:18
S2	1806	"257/43".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S3	128	"257/E21.459".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S4	1431	"438/158".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S5	537	"257/E29.296".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S6	1194	"257/57".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32

BLUEHOUSE EXHIBIT 1002 Page 36 of 246

S7	1225	"438/104".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S8	5416	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:35
S9	274	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:35
S10	54	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:36
S11	109	("20080128689" "20030189401" "20080308796" "20080308806" "7061014" "20060110867" "20060284172" "20080258141" "2006024107" "5847410" "6563174" "20020132454" "20070054507" "20070152217" "20070287296" "20080224133" "2006018529" "20080125413" "6294274" "7402506" "7411209" "20060169973" "20060113565" "20060169973" "20060128974" "20060169973" "20080050595" "20080268139" "2006018529" "20080203387" "2009008639" "20070024187" "20070187678" "20070024187" "2008006877" "2008003850" "2008008677" "2008003850" "20080254569" "20070194379" "20080068377" "20080038350" "2008008677" "20080038350" "20080086877" "20070172591" "20080086877 "20080038350" "20080026568" "20070172591" "20080265688" "2006013539" "200700722025" "7211825" "7453065" 6532045" "2006013539" "200700722025" "7211825" "7453065" 6532045" "20070158652" "20080182358" "2007018760" "20080388797"	US-PGPUB; USPAT		ON	2012/04/04
S12	6	"2007123861"	US-PGPUB;	OR	ON	2012/04/04

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			USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB			14:47
S13	7	"2007096055"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB		ON	2012/04/04 14:47
514	41	("20020153587" "20030013261" "20030047785" "20030111663" "20030207502" "20030218221" "20030218222" "20030219530" "20040023432" "4887255" "5744864" "6225655" "6255130" "6362499" "6563174" "7067843").PN. OR ("7282782").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:20
S15	51	("20020171085" "20030047785" "20030111663" "20030218221" "20030218222" "20040023432" "20040127038" "20050017244" "3294660" "5289016" "5744864" "6362499" "6391462" "6727522").PN. OR ("7297977").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:21
S16	132	("20010046027" "20020056838" "20020109796" "20020132454" "20040038446" "20040127038" "20050199959" "20050017302" "20050199959" "20050259206" "20050275038" "20060035452" "20060108529" "20060108636" "20060110867" "20060113536" "20060113565" "20060113549" "20060113565" "20060163743" "20060113565" "20060163743" "20060169973" "20060170067" "20060208977" "20060238135" "20060208977" "2006028974" "20060231882" "20060286737" "20060284172" "20060286737" "20060292777" "20070024187" "20060292777" "20070052025" "20070054507" "20070172591" "20070158652" "20070172591" "20070158652" "20070187760" "20070194379" "20070252928" "20070194379" "20070252928" "20070194379" "20080038882" "2008006877" "20080038882" "20080073653" "20080050595" "20080129195" "20080128689" "20080129195" "20080128689" "20080182358" "20080198108" "20080182358" "20080254569" "20080224133" "20080254569" "20080258139" "20080254569"	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:23

		"20080258141" "20080258143" "20080308796" "20080308797" "20080308804" "20080308805" "20080308806" "20090008639" "20090073325" "20090114910" "20090114911" "20090134399" "20090152541" "20090153762" "20090186437" "20090186445" "20090186437" "20090186445" "20090189155" "20090189156" "5530265" "5696011" "5701167" "5731856" "5817548" "6294274" "6532045" "6674136" "6727522" "6852998" "6900461" "7009204" "7049190").PN. OR ("7061014" "7049346" "7075614" "7105868" "7211825" "7282782" "7297977" "7323356" "7402506" "7411209" "7453065" "7453087" "7462862" "7468304" "7501293").PN. OR ("7674650").URPN.				
S17	9604	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:25
S18	4685	S17 and ((semiconductor adj oxide) ((zinc indium gallium zn in ga) adj oxide))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:25
S19	322	(((semiconductor adj oxide) ((zinc indium gallium zn in ga) adj oxide)) near3 channel)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:26
S20	118	S17 and S19	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:26
S21	1	("7638360").PN.	US-PGPUB; USPAT	OR	OFF	2012/04/04 16:33
S22	7	("20050017302" "20060244107" "20070048970" "20070072439" "20070184571" "20080254569").PN. OR ("7638360").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:33
S23	2	"US 8134156"	US-PGPUB; USPAT; USOCR; DERWENT		ON	2012/04/04 16:36
S24	3	"US 20070108446"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 16:36
S25	177	("20010046027" "20020011978" "20020044111" "20020056838" "20020106839" "20020109796" "20020110703" "20020132454" "20030047785" "20030207506" "20030218222" "20040038446" "20040127038" "20040132293" "20040252270" "20050017302" "20050082541" "20050084999" "20050104071" "20050164423" "20050199959" "20050231107" "20050233509" "20050250308" "20050259206" "20050275038" "20060035452" "20060043377" "20060054888" "20060086933"	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:36 OUSE EXHIBIT 10

1	"20060091793"	"200ec)108529"			
	"20060091793)1108529			
	"20060108036")113539"			
	"20060113549")113565"			
	"20060113549)169973"			
	20060170067")170111"			
	20060183274")197092"			
	"20060208977")228974"			
	"20060231882")238135"			
	"20060244107")249733"			
	"20060284171")284172"			
	"20060286737")292777"			
	20070024187"		046191"			
	"20070052025"		054507"			
	"20070072439"		090365"			
	"20070108446")141784"			
	"20070152217"		158652"			
	"20070172591"		187678"			
	"20070187760")194379"			
	"20070238228")252928"			
	"20070272922")287296"			
	"20080006877"		038882"		10000	
	"20080038929"		050595"			
	"20080073653"	"20080	083950"			
	"20080106191"	"20080)108198"			
	"20080128689"	"20080)129195"			
	"20080166834"	"20080)174710"			
	"20080182358"	"20080)198108"			
	"20080224133"	"20080)254569"			
	"20080258139")258140"			
	"20080258141"	"20080	258143"			
	"20080308796").	PN. OR				
	("20080308797"	"2008	0308804"			
	"20080308805"	['] "20080	308806"			
	"20090008639"	"20090	068773"			
	"20090073325"	"20090)114910"			
	"20090114911"	"20090)134399"			
	"20090152541"	"20090)153762"			
	"20090186437"	"20090)186445"			
	"20090189155")189156"			
	"20090239335"		278122"			
	"20090280600"		305461"			
	"20100003783"		038639"			
	"20100085283")240157"			
	"20110012119"		024787"		******	
		30265"	"5696011"			
		31856"	"5803975"			
		38410"	"5930607"			
		94157"	"6294274"		******	
		29251"	"6532045"			
		74136"	"6727522"			
		52998"	"6900461"			
)9204"	"7012658"			
		51014" 51014"	7012656			
		75614"	"7105868"			
		11825"	"7264979"			
		32782"	"7297977"			
		30234"	"7339187"			
		35224"	"7391055"		******	
		11209"	"7453065"			
		56430"	"7462862"			
		70607"	"7485478"			
1	"7501293" "756	60396"	"7633471"			
:				C 8	• 6	

		"RE38292").PN. OR ("8134156").URPN.				
526	95	S25 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:44
S27	0	(buffer near5 (source drain) with (ozide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:48
S28	0	(buffer with (source drain) with (ozide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:48
S29	0	(source drain) with (ozide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04/04/04/04/04/04/04/04/04/04/04/04/
S30	5583	(source drain) with (oxide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04/04/04/04/04/04/04/04/04/04/04/04/
S31	371	(buffer with (source drain) with (oxide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S32	118	(buffer with (source drain) with (oxide near2 semiconductor) with channel)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S33	24	S32 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:04
		"20020132454" "20030189401" "20030218222" "20040038446" "20040127038" "20050017302" "20050199959" "20060035452" "20060108529" "20060108636" "20060110867" "20060113536" "20060113539" "20060113549" "20060113565" "20060169973" "20060170111" "20060197092" "20060208977" "2006028974" "20060231882" "20060284171" "20060244107" "20060284171" "20060284172" "20060284171" "20060284172" "20060292777" "20070052025" "20070054507" "20070072439" "20070054507" "20070172591" "20070152217" "2007018446" "20070152217" "2007018446" "20070152217" "2007018446" "20070194379" "20070187760" "20070194379" "20070252928" "20070194379" "20070287296" "2008006877" "20080038882" "2008006877" "20080038882" "20080106191" "20080128689" "20080129195" "20080166834" "20080182358" "20080166834" "20080258139" "20080258140" "20080258139" "20080258141" "20080258139" "20080258143" "20080308797" "20080308804" "20080308805" "20080308804" "20080308805"	USPAT; USOCR		BLUEH	17:08

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S35	43	S34 and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:10
S36	0	S34 and ((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:10
S37	54124	((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
S38	217	S37 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
S39	164	S38 not (angle adj implant\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:15
S40	3037	((taper incline decline angle) near3 (side sidewall surface) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:23
S41	178	(tft (thin adj film adj transistor)) and S40	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:24
S42	10	"US 7081641"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 17:29
S43	11	("20050056897" "6569707" "6858527").PN. OR ("7081641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:30
S44	48	((taper near2 angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:40
S45	32689	((taper angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:41
S46	161	S45 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S47	243	((taper angle) near3 ((source drain) adj electrode))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S48	243	(taper angle) near3 ((source drain) adj electrode)	US-PGPUB; USPAT;	OR	ON	2012/04/04 17:42 USE EXHIBIT 100

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			USOCR			
S49	206	(tft (thin adj film adj transistor)) and S48	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:43
S50	69	S25 and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:53
S51	519	(source drain) near3 (tilt adj angle)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56
S52	54	S51 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56
S53	5614	S8 S9 S10	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
S54	3354	S53 and (tft (thin adj film)) and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
S55	145	S53 and (tft (thin adj film)) and ((angle taper) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:00
S56	5	"US 7564058"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 18:04
557	20	("20020043662" "20030148561" "20030213959" "20030234424" "20040189188" "4797108" "5028551" "5151806" "5640067" "6037197" "6121660" "6388270" "6433363" "6448116" "6476416" "6639244" "6709901").PN. OR ("7564058").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:04
S58	8	S57 and angle	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:05
S59	218	("20030189401" "20080128689" "20080308796" "20080308806" "7061014" "20060110867" "20060284172" "20080258141" "20090068773" "20060244107" "5847410" "6563174" "20020132454" "20060231882" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090152541" "6294274" "7402506" "7411209" "20110012118" "7915075" "7462862" "20060108529" "20060113565" "20060169973" "2006028974" "20080106191" "5731856" "7385224" "7732819" "20080203387" "2009008639" "20100025678" "20030218222" "20070024187" "20070187678" "20070194379" "20080038929"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/18 18:08

EAST Search	History
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S60 18460 S61 133336 S61 133336 S62 10304 S63 1628 S64 34920 S65 193 S66 1 S67 10 S68 11	Step gradation stair) near3 (source drain)) 336 ((angle taper step gradation stair) near3 (source drain)) 04 (tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate) 33 S61 and S62	US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB US-PGPUB; USPAT;	OR OR OR OR OR OR	ON ON ON ON ON OFF ON	2012/09/18 18:28 2012/09/18 18:29 2012/09/18 18:29 2012/09/18 18:29 2012/09/18 18:30 2012/09/18 18:30 2012/09/26 22:01 2012/09/26 22:01 2012/09/26 22:01
S61 133336 S62 10304 S63 1628 S64 34920 S65 193 S66 1	"7323356").PN.30(tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain))336((angle taper step gradation stair) near3 (source drain))34(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)35S61 and S6220((angle taper gradation stair) near3 (source drain))35S64 and S6236("20120132910").PN.	USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT;	OR OR OR OR OR OR	ON ON ON ON OFF	18:28 2012/09/18 18:29 2012/09/18 18:29 2012/09/18 18:29 2012/09/18 18:30 2012/09/18 18:30 2012/09/26 22:00
S61 133336 S62 10304 S63 1628 S64 34920 S65 193	"7323356").PN.30(tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain))336((angle taper step gradation stair) near3 (source drain))34(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)35S61 and S6220((angle taper gradation stair) near3 (source drain))35S64 and S62	USPAT; USOCR US-PGPUB; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR	OR OR OR OR OR	ON ON ON ON ON	18:28 2012/09/18 18:29 2012/09/18 18:29 2012/09/18 18:29 2012/09/18 18:30 2012/09/18 18:30
S61 133336 S62 10304 S63 1628	 "7323356").PN. (tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain)) ((angle taper step gradation stair) near3 (source drain)) ((tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate) S61 and S62 ((angle taper gradation stair) near3 	USPAT; USOCR US-PGPUB; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USOCR	OR OR OR	ON ON ON	18:28 2012/09/18 18:29 2012/09/18 18:29 2012/09/18 18:29 2012/09/18
S61 133336 S62 10304	"7323356").PN.30(tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain))336((angle taper step gradation stair) near3 (source drain))34(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT;	OR	ON	18:28 2012/09/18 18:29 2012/09/18 18:29 2012/09/18
S61 133336	 "7323356").PN. (tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain)) ((angle taper step gradation stair) near3 (source drain)) (tft (thin adj film adj transistor)) and 	USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT;	OR	ON	18:28 2012/09/18 18:29 2012/09/18
	 "7323356").PN. (tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain)) ((angle taper step gradation stair) 	USPAT; USOCR US-PGPUB; USPAT;			18:28 2012/09/18
S60 18460	"7323356").PN. (tft (thin adj film)) and ((angle taper step gradation stair) near3 (source	USPAT;	OR	ON	
	"20010046027" "20020056838" "20060113539" "20060208977" "20060238135" "20070052025" "7211825" "7453065" "7674650" "20080182358" "20090073325" "7453087" "7501293" "20070072439" "7282782" "20070187760" "20080308797" "5744864" "6586346" "6727522" "6960812" "7301211" "20060035452" "200600113549" "20060198636" "20060113549" "20060197092" "20070090365" "20080166834" "20090134399" "7064346" "7468304" "20050199959" "20070108446" "7297977" "20080308804" "20080308805" "20090065771" "20040038446" "20040127038" "20050017302" "20060043377" "20060113536" "20060170111" "20070046191" "20070252928" "200801291995" "20080073653" "200801291995" "20080073653"				

			EPO; JPO; DERWENT IBM_TDB			
S69	5731	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S70	294	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S71	62	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S72	5942	S69 S70 S71	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2012/09/26 22:04
S73	5403	S72 and (tft (thin\$1film) (thin adj film))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S74	3556	S73 and (angle taper)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2012/09/26 22:04
S75	878	S73 and ((angle taper) with electrode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB		ON	2012/09/26 22:05
S76	133560	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S77	10334	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S78	1631	S76 and S77	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S79	532	S72 and S78	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:06
S80	89	((angle taper gradation stair) near3 (source drain)) and S77 and S72	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:08
S81	5466	(257/59).OCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:19
S82	5099	(257/72).OCLS.	US-PGPUB;	OR	OFF	2012/09/26 USE EXHIBIT 100

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		<u> </u>	USPAT	<u></u>		22:19
S83	45	((angle taper gradation stair) near3 (source drain)) and S77 and S81	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S84	40	((angle taper gradation stair) near3 (source drain)) and S77 and S82	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S85	60	S83 S84	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S86	674	(257/e29.277).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:21
S87	311	(257/e21.535).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:24
S88	1543	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:27
S89	15	((angle taper gradation stair) near3 (source drain)) and S77 and S88	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:27
S90	3682	(438/149).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:28
S91	17	((angle taper gradation stair) near3 (source drain)) and S77 and S90	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:28
S95	6242	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S96	356	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S97	75	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S98	6489	S95 S96 S97	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2013/07/01 10:27
S99	142606	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S100	11746	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S101	1860	S99 and S100	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S102	600	S98 and S101	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2013/07/01 10:27
S103	5191	(semiconductor near5 ((indium in) and (gallium ga) and (zinc zn)))	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2013/08/12 02:30

			EPO; JPO; DERWENT; IBM_TDB			
S104	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30
S105	1268	S103 and S104	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30
S106	1058	(IN\$2ga\$2zn)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2013/08/12 02:33
S107	268	("20030189401" "20050050897" "20060110867" "20060284172" "20080308796" "20080258141" "20080308796" "20080308806" "20090068773" "7061014" "20090189155" "20020132454" "20060231882" "20060244107" "20060284171" "2007054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090114917" "20090152541" "20120132910" "5847410" "6294274" "6563174" "7323368" "7402506" "7411209" "8030663" "8115201" "8158464" "20060108529" "20060113565" "20060169973" "20060228974" "20060108529" "2006013565" "20060169973" "2006028974" "200601292777" "20080050595" "20080106191" "20100065844" "20100117086" "5731856" "7385224" "7462862" "7732819" "20070024187" "2008006877" "2008008882" "2008008877" "20080083950" "2008027804" "20070194379" 2008008877" "2008008639" "2008027804" "2009008639" "20080288140" "2009008639" "20080288140" "2009008639" "20080258140" "2009008639" "2008025678" "7049190" "20090189156" "3134156" "20010046027" "2008028660" "2010025678" "7049190" "20090189156" "3134156" "20010046027" "20080289568" "20060113539" "200802895688" "20060113539" "200802895688" "20060113539" "200802895688" "20060113539" "2008028957" "20060238135" "20080289568" "20060113539" "200802895688" "20070172591" "200802895688" "2009073325" "20080182358" "2009073325" "20080182358" "20090073325" "20080182358" "20090073325" "2006018636" "20060113549" "2006018636" "20070172591" "2006018636" "20060113549" "2006018636" "20060113549" "20060197092" "2007072439" "20060197092" "20070158652" "20070187760" "20080166834" "20080182356" "20070158652" "20090152506" "5744864"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01

		"6586346" "6727522" "6960812" "7064346" "7282782" "7298084" "7301211" "7468304" "20090186445" "8368079" "20040038446" "20040127038" "20050017302" "20050199959" "20060043377" "20060113536" "20060170111" "20060292726" "20070046191" "20070108446" "20070252928" "20070272922" "20080073653" "20080129195" "20080258143" "20080308804" "20080308805" "20090065771" "20090114910" "20100092800"				
S108	6320	"20120058599" "7105868" "7297977" "7323356" "20100003783").PN. ((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB;	OB	ON	2013/08/12
			USPAT			09:01
S109	368	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S110	77	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S111	6569	S108 S109 S110	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2013/08/12 09:01
S112	143950	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S113	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S114	1895	S112 and S113	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S115	617	S111 and S114	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB		ON	2013/08/12 09:01
S116	133	("20030189401" "20050050897" "20060110867" "20060284172" "20080128689" "20080258141" "20080308796" "20080308806" "20090068773" "7061014" "20090189155" "20020132454" "20060231882" "20060244107" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090114917" "2010318916" "20120132910" "5847410" "6294274" "6563174" "7323368" "7402506" "7411209" "8030663"	US-PGPUB; USPAT; FPRS; EPO; JPO; IBM_TDB	OR	ON BLUEHC	2013/08/12 09:02

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			US-PGPUB;			
S121	82	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/1 ⁻ 02:41
S120	385	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/1 ⁻ 02:41
S119	6558	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/1 02:41
S118	1	("20060033098").PN.	US-PGPUB; USPAT	OR	OFF	2013/12/1 01:57
S117		"US 20130214270"	USPAT; USOCR; DERWENT	OR	ON	2013/12/1 01:46
		"8115201" "8158464" "20060108529" "20060113565" "20060292777" "20080050595" "20080106191" "20100065844" "20100117086" "5731856" "7385224" "7462862" "7732819" "20070024187" "20060027804" " "20070194379" "2008006877" " "20080038882" "20080038929" " "20080038882" "200800258140" " "2009008639" "20080258140" " "2009008639" "20080258140" " "2009008639" "20090278122" " "20090280600" "20100125678" " "7049190" "20060218315" " "20020056838" "20060113539" " "20080296568" "20100109002" " "7211825" "7453087" "7501293" "7674650" "8021917" " "2006018636" "20070072439" " "2006018636" "20070172439" " "20060197092" "20070072439" " "2007018760" "2080186834" " <td></td> <td></td> <td></td> <td></td>				

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB			02:41
S123	148280	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
S124	12541	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
S125	1990	S123 and S124	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
S126	649	S122 and S125	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/11 02:41
S127	6765	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S128	395	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S129	87	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S130	7028	S127 S128 S129	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM TDB	OR	ON	2014/03/23 19:33
S131	151627	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S132	13059	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S133	2067	S131 and S132	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S134	680	S130 and S133	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2014/03/23 19:33
S135		"2008205451"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2014/03/23 19:34
S136	10	"2005223049"	US-PGPUB;	OR		2014/03/23 OUSE EXHIBIT 10

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM TDB			19:34
S137	3	"07064112"		OR	ON	2014/03/23 19:34
S138	13059	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S139	6584	(257/59).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S140	48	((angle taper gradation stair) near3 (source drain)) and S138 and S139	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S141	4077	(438/149).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S142	18	((angle taper gradation stair) near3 (source drain)) and S138 and S141	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S143	1947	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S144	17	((angle taper gradation stair) near3 (source drain)) and S138 and S143	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S145	17	S144	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S146	320	(257/e21.535).OCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S147	72	S140 S142 S144	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2014/03/23 19:58
S151	7097	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S152	423	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S153	98	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S154	7378	S151 S152 S153	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT I BM_TDB	OR	ON	2014/08/25 07:57
S155	157340	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT;	OR	ON	2014/08/25 07:57 DUSE EXHIBIT 10

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			USOCR			
156	13935	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
157	2186	S155 and S156	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
6158	721	S154 and S157	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB		ON	2014/08/25 07:57
5159	318	("20080128689" "20030189401" "20080308796" "20080308806" "7061014" "20060110867" "20060284172" "20080258141" "20090068773" "20050050897" "7323368" "20060244107" "5847410" "6563174" "20020132454" "20060231882" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090152541" 6294274" "7402506" "7411209" "20110318916" "8030663" "8115201" "20120132910" "20090114917" "20100044711" "20060108529" "20060113565" "20060169973" "20060228974" "20060169973" "20060228974" "20060169973" "20080250595" "20080106191" "5731856" "7385224" "7462862" "7732819" "20100117086" "20080203387" "2009008639" "2010025678" "2009008639" "2010025678" "20090187678" "20070194379" "2008006877" "20080028882" "2008006877" "20080028882" "20080054569" "20080258140" "20080254569" "2008028882" "20080088929" "20080083950" "20080254569" "2008028882" "20080038929" "20080258140" "20090278122" "20080028660" "7049190" "2006027804" "20060113539" "2006028977" "20080284135" "20070152025" "7211825" "7453065" 6532045" "7049190" "20080182358" "2009007325" "453087" "2009007325" "453087" "2009007325" "453087" "2009007325" "453087" "2008018238" "2009007325" "453087" "2008018634" "20070158652" "7298084" "20070187760" "2008018634" "200701934399" "20060197092" "2007019846" "20080136349" "2007019846" "20080136349" "20070108446" "2007007272922" "20070108446" "2007017272922" "20080308804"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2014/08/25 08:16

		"20080308805" "20090065771" "20040038446" "20040127038" "20050017302" "20050199959" "20060043377" "20060113536" "20060170111" "20070046191" "20070252928" "20080073653" "20080129195" "20080258143" "20090114910" "7105868" "7297977" "7323356" "20120058599" "20060292726").PN.				
S160	1802	S157 and ("257".clas. "438".clas.)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 08:50
S161	11	("3890632" "4015279" "4054894" "4252574" "4272880" "5041913" "5075244" "5498894" "5652453" "5698885" "6060751").PN. OR ("6600196").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 08:56
S162	23	("2005/0205870").URPN.	USPAT	OR	ON	2014/08/25 09:00
S163	34	S161 S162	USPAT	OR	ON	2014/08/25 09:13
S164	5	("2006/0033098").URPN.	USPAT	OR	ON	2014/08/25 09:46
S165	59	("20010046611" "20020045289" "20020093283" "20020101154" "20020121860" "20020139303" "20030015698" "20030085398" "20030092214" "20030092232" "20030213952" "20030218166" "20040012017" "20040075093" "20040108562" "20040161192" "20040206959" "20050042548" "20050057136" "20050084712" "20050098207" "20050170208" "20050248267" "20060033098" "20060020136" "20060033098" "20060020136" "20060033098" "20060028822" "20060180812" "2006028822" "20060232203" "2006027731" "20060238112" "20060277066" "20060238112" "2006027731" "20060238112" "20060277066" "20060237333" "2007007516" "20070031701" "20080048183" "20080099757" "20090267077" "4981768" "5487953" "6486601" "6589673" "6951694" "7158161" "7387904" "7462883" "7521855" "7545840" "7649197" "7667389" "7626198" "7649197" "7667389" "7683532" "7714501").PN. OR ("8049208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25
S166	17	("2004/0012017").URPN.	USPAT	OR	ON	2014/08/25 09:51
S167	11	("2004/0108562").URPN.	USPAT	OR	ON	2014/08/25 09:53
S168	1	("20090134383").PN.	US-PGPUB; USPAT	OR	OFF	2014/08/25 10:08
S169	9	"2006126363"	US-PGPUB; USPAT;	OR	ON	2014/08/25

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			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S170	40	(US-20100117077-\$ or US- 20050017302-\$ or US-20060043377-\$ or US-20060197092-\$ or US- 20060228974-\$ or US-20060231882-\$ or US-20070090365-\$ or US- 20070108446-\$ or US-20070172591-\$ or US-20080038882-\$ or US- 20080283831-\$ or US-20090166616-\$ or US-20090186437-\$ or US- 20100301325-\$ or US-20100117086-\$ or US-20090114917-\$ or US- 20100044711-\$ or US-20050056897-\$ or US-20090114917-\$ or US- 20100044711-\$ or US-20050056897-\$ or US-20060027804-\$ or US- 20060292726-\$ or US-20080073653-\$ or US-20130214270-\$ or US- 20060033098-\$ or US-20050205870-\$ or US-20040108562-\$ or US- 20080099757-\$).did. or (US- 20090134383-\$).did. or (US- 80090134383-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (US- 20090126361-\$ or US-8049208-\$).did. or (WO-2006126363-\$).did. or (JP- 2007123861-\$ or JP-2007096055-\$ or JP-07064112-\$ or JP-2005223049- \$).did. or (US-20070072439-\$ or JP- 2007096055-\$ or JP-2008205451- \$).did.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2014/08/25
S171	16	S170 and buffer	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2014/08/25 10:56
S173	7408	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
S174	447	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
S175	102	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
S176	7696	S173 S174 S175	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:41
S177	161896	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41
S178	14662	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41
S179	2301	S177 and S178	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41

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S180	767	S176 and S179	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2014/12/23 22:41
S181	40	(US-20100117077-\$ or US- 20050017302-\$ or US-20060043377-\$ or US-20060197092-\$ or US- 20060228974-\$ or US-20060231882-\$ or US-20070090365-\$ or US- 20070108446-\$ or US-20070172591-\$ or US-20080038882-\$ or US- 20080283831-\$ or US-20090166616-\$ or US-20090186437-\$ or US- 20100301325-\$ or US-20100117086-\$ or US-20090114917-\$ or US- 20100044711-\$ or US-20050056897-\$ or US-20060027804-\$ or US- 20060292726-\$ or US-20080073653-\$ or US-20130214270-\$ or US- 20060033098-\$ or US-20050205870-\$ or US-20040108562-\$ or US- 20080099757-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (US- 200901364383-\$).did. or (US- 200901364383-\$).did. or (US- 200901364383-\$).did. or (US- 200901364383-\$).did. or (US- 2007123861-\$ or US-2007096055-\$ or JP-07064112-\$ or JP-2005223049- \$).did. or (US-20070072439-\$ or JP- 2007096055-\$ or JP-2008205451- \$).did.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2014/12/23
S182	3792	(257/43).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:46
S183	2191	(257/e29.151).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:46
S184	2413	(257/e21.414).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S185	2127	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S186	2423	(438/104).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S187	127	S185 and S186	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2014/12/23 22:48
S188	1321	S178 and S182	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2014/12/23 22:48
S189	453	S178 and S183	US-PGPUB; USPAT; USOCR;	OR	ON	2014/12/23 22:48

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				FPRS; EPO; JPO; DERWENT IBM_TDB			
S190	919	S178 and S184		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB		ON	2014/12/23 22:48
5191	2471	S188 S189 S190		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB		ON	2014/12/23 22:48
S192	416	S179 and (S185 S	5186)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB		ON	2014/12/23 22:49
S193	4	"42621714".FMID		US-PGPUB; USPAT; FPRS	OR	ON	2014/12/23 22:51
S194	137	("20010046027" "20020132454" "20030218222" "20050199959" "20060043377" "20060108529" "20060110867" "20060113565" "20060113565" "20060197092" "2006028974" "2006028974" "20060284171" "20060284171" "20060284171" "20060284171" "20060284171" "20070054507" "20070054507" "20070172591" "20070187760" "20070187760" "20070252928" "20080038882" "20080128689" "20080128689" "20080128689" "20080258140" "20080258143" "20080258143"	"20020056838" "20030189401" "20040038446" "20050017302" "20060035452" "20060091793" "20060113536" "20060113536" "20060113549" "20060154397" "2006028477" "20060284172" "20060284172" "20060284172" "20070052025" "20070052025" "20070057261" "20070057261" "20070152217" "20070152217" "20070152217" "20070187678" "20070194379" "2008006877" "2008006877" "20080182358" "20080129195" "20080258139" "20080258141" "20080308797"	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23

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		<i>´</i>	USPAT			01:39
S202	7544	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
S203	462	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
S204	107	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
S205	7840	S202 S203 S204	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2015/02/26 02:17
S206	164051	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
S207	15029	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
S208	2358	S206 and S207	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
S209	787	S205 and S208	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT IBM_TDB	OR	ON	2015/02/26 02:17

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	107					
S210	167	US-7323368-\$.DID. OR US-	US-PGPUB;	ЮК	ON	2015/02/26
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		20070158652-\$.DID. OR US-	USOCR;			
		20080128689-\$.DID. OR US-7298084-	JPO			
		\$.DID. OR US-6532045-\$.DID. OR US-				
		20070108446-\$.DID. OR US-				
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		\$.DID. OR US-6586346-\$.DID. OR US-				
		20030189401-\$.DID. OR US-6960812-				
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		US-20080308805-\$.DID. OR US-				
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		20080083950-\$.DID. OR US-				
					BLUEHOU	SE EXHIBIT 100

20080258141-\$.DID. OR US-20080224133-\$.DID. OR US-20090134399-\$.DID. OR US-7211825-\$.DID. OR US-20070024187-\$.DID. OR US-20010046027-\$.DID. OR US-20080038882-\$.DID. OR US-7049190-\$.DID. OR US-20040038446-\$.DID. OR US-20060228974-\$.DID. OR US-20060113565-\$.DID. OR US-20090114910-\$.DID. OR US-20080038929-\$.DID. OR US-20070287296-\$.DID. OR JP-63239117-\$.DID. OR JP-10051986-\$.DID. OR JP-63265818-\$.DID. OR JP-11021988-\$.DID. OR EP-2226847-\$.DID. OR EP-09082010-\$.DID. OR US-1737044-\$.DID. OR US-20060113549-\$.DID. OR US-7411209-\$.DID. OR US-20070090365-\$.DID. OR US-7453087-\$.DID. OR US-20080073653-\$.DID. OR US-7468304-\$.DID. OR US-20070054507-\$.DID. OR US-20060113536-\$.DID. OR US-20070046191-\$.DID. OR US-20060108529-\$.DID. OR US-20060113539-\$.DID. OR US-20060108636-\$.DID. OR US-20070052025-\$.DID. OR US-20060110867-\$.DID. OR US-20050199959-\$.DID. OR US-20050017302-\$.DID. OR US-7462862-\$.DID. OR US-20060043377-\$.DID. OR US-7297977-\$.DID. OR JP-2002076356-\$.DID. OR JP-03152002-\$.DID. OR JP-2004273732-\$.DID. OR JP-09302004-\$.DID. OR JP-2004273614-\$.DID. OR JP-2008205451-\$.DID. OR JP-09042008-\$.DID. OR US-20080254569-\$.DID. OR US-20060197092-\$.DID. OR US-7282782-\$.DID. OR US-20080006877-\$.DID. OR US-20030218222-\$.DID. OR US-20090280600-\$.DID. OR US-20090278122-\$.DID. OR US-7323356-\$.DID. OR US-6294274-\$.DID. OR US-7453065-\$.DID. OR US-7732819-\$.DID. OR US-20060170111-\$.DID. OR US-20060169973-\$.DID. OR US-20090152506-\$.DID. OR US-20100092800-\$.DID. OR US-20100109002-\$.DID. OR US-20100065844-\$.DID. OR US-20050056897-\$.DID. OR JP-2005223049-\$.DID. OR JP-08182005-\$.DID. OR US-8021917-\$.DID. OR US-20110318916-\$.DID. OR US-8030663-\$.DID. OR US-20120058599-\$.DID. OR US-8115201-\$.DID. OR US-20120132910-\$.DID. OR US-20060027804-\$.DID. OR US-20100117086-\$.DID. OR US-20090114917-\$.DID. OR US-20100044711-\$.DID. OR US-20050050897-\$.DID. OR US-

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S211	2241	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2015/06/08 14:15
S212	2	"US 20140339556"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2015/06/18 00:26
S213	43	(US-20100117077-\$ or US- 20050017302-\$ or US-20060043377-\$ or US-20060197092-\$ or US- 20060228974-\$ or US-20060231882-\$ or US-20070090365-\$ or US- 20070108446-\$ or US-20070172591-\$ or US-20080038882-\$ or US- 20080283831-\$ or US-20090166616-\$ or US-20090186437-\$ or US- 20100301325-\$ or US-20100117086-\$ or US-20090114917-\$ or US- 20100044711-\$ or US-20050056897-\$ or US-20060027804-\$ or US- 20060292726-\$ or US-20080073653-\$ or US-20060027804-\$ or US- 20060033098-\$ or US-20050205870-\$ or US-20040108562-\$ or US- 20080099757-\$).did. or (US- 20080099757-\$).did. or (US- 20090134383-\$ or US-20100213461-\$ or US-20070072439-\$ or US- 20140339556-\$).did. or (US- 8134156-\$ or US-7208756-\$ or US-7564058-\$ or US-6600196-\$ or US-8049208-\$).did. or (WO-2006126363-\$).did. or (JP- 2007123861-\$ or JP-2007096055-\$ or JP-07064112-\$ or JP-2007223049- \$).did. or (US-20070072439-\$ or JP- 2007096055-\$ or JP-2008205451- \$).did.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18
S214	11296	H01L29/7869.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
S215	6973	H01L27/1225.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
S216	4396	H01L29/41733.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
S217	8780	H01L29/4908.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT		ON	2015/06/18 00:34

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S218	1346	H01L51/105.cpc.	US-PGPUB;	OR	ON	2015/06/18
00			USPAT; FPRS; JPO;			00:34
			DERWENT			
S219	1927	H01L51/0508.cpc.	US-PGPUB; USPAT; FPRS; JPO;	OR	ON	2015/06/18 00:34
			DERWENT			
S220	2050	H01L51/0512.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
S221	8728	H01L51/0545.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:35
S223	11749	S219 S220 S221	US-PGPUB;		ON	2015/06/18
5225	11749	SZ 19 SZ 20 SZ 21	USPAT; FPRS; JPO; DERWENT	Un	UN	00:35
S225	6927	S215 not S223	US-PGPUB;	OR	ON	2015/06/18
			USPAT; FPRS; JPO; DERWENT			00:35
S227	13924	S216 S217 S218	US-PGPUB;		ON	2015/06/18
SELI	13324		USPAT; FPRS; JPO; DERWENT			00:36
0000	10057	(2007 pet (2000 2005)				
5228	12057	S227 not (S223 S225)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	UK	ON	2015/06/18 00:36
S229	167947	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2015/06/18 00:37
S230	412	S229 and S223	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
S231	660	S229 and S225	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
S232	1225	S229 and S228	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
S233	2297	S230 S231 S232	US-PGPUB;	OR	ON	2015/06/18
		N	1 1			JSE EXHIBIT 100

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			USPAT; FPRS; JPO; DERWENT			00:37
S234	2073	S233 and ((thin adj film) tft)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
S235	1364	S234 and ((source drain) with metal)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
S236	6390	(angle taper\$3 step\$3 gradation stair indent\$5) near3 ((source drain) adj (layer electrode film))	US-PGPUB; USPAT; USOCR	OR	ON	2015/06/18 00:39
S237	3100	S236 and ((thin adj film) tft) and ((source drain) with metal)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
S238	216	S237 and S223	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
S239	578	S237 and S225	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
S240	380	S237 and S228	US-PGPUB; USPAT; FPRS; JPO; DERWENT		ON	2015/06/18 00:40
S241	1174	SZ38 SZ39 SZ40	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
S242	454	S241 and (@ay<"2010")	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:42
S243	4169	(shape) near3 ((source drain) adj (layer electrode film))	US-PGPUB; USPAT; USOCR	OR	ON	2015/06/18 01:06
S244	1986	S243 and ((thin adj film) tft) and ((source drain) with metal)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 01:07
S245	1111	S244 and (@ay<"2010")	US-PGPUB; USPAT; FPRS; JPO; DERWENT		ON	2015/06/18 01:07 JSE EXHIBIT 100

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2015/10/27 18:17	ON	OR	US-PGPUB; USPAT;		S251
10.17			USPAT; USOCR;	20150123109-\$.DID. OR US- 20150248859-\$.DID. OR US-8243055-	
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				7224333-\$.DID. OR US-9153168-\$.DID.	
				OR US-7375705-\$.DID. OR US-	
				20110057958-\$.DID. OR US-7250928-	
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				OR US-7221339-\$.DID. OR US-	
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				OR US-8188647-\$.DID. OR US-	
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				20120299902-\$.DID. OR JP-	
				2003195814-\$.DID. OR JP-07092003-	
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				JP-09272007-\$.DID. OR WO- 2007119321-\$.DID. OR EP-0917127-	
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				1255240-\$.DID. OR US-1336953-\$.DID.	
				24 - 21 '	
				\$.DID.	
				OR US-1337131-\$.DID. OR US- 1359789-\$.DID. OR US-1363265-\$.DID. OR EP-1619654-\$.DID. OR EP- 01252006-\$.DID. OR EP-1830342- \$.DID. OR EP-09052007-\$.DID. OR US- 1830343-\$.DID. OR US-1830344-	

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S92	1300	(257/57).OCLS.	US- PGPUB; USPAT	OR	OFF	2012/09/26 22:18
S93	16	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and oxide and (angle with (bottom top))).clm.	US- PGPUB; USPAT	OR	ON	2012/09/26 23:11
S94	9	(((source adj electrode) with (angle with (bottom top))) and ((drain adj electrode) with (angle with (bottom top)))).clm.	US- PGPUB; USPAT		ON	2012/09/26 23:13
S148	1694	(257/57).OCLS.	US- PGPUB; USPAT		OFF	2014/03/23 19:32
S149	12	(((source adj electrode) with (angle with (bottom top))) and ((drain adj electrode) with (angle with (bottom top)))).clm.	US- PGPUB; USPAT		ON	2014/03/23 19:32
S150	21	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and oxide and (angle with (bottom top))).clm.	US- PGPUB; USPAT	OR	ON	2014/03/23 19:32
S172	1	"Term Removed"	USPAT	OR	ON	2014/08/25 10:56

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S195	1	"Term Removed"	USPAT	OR	ON	2014/12/23 22:41
S196	1827	(257/57).CCLS.	US- PGPUB; USPAT	OR	OFF	2014/12/23 22:41
S197	179	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and (oxide adj semiconductor) and (step near5 (source drain))).clm.	US- PGPUB; USPAT	OR	ON	2014/12/23 22:42
S198	311	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and (oxide adj semiconductor) and (step with step with (source drain))).clm.	US- PGPUB; USPAT	OR	ON	2014/12/23 22:43
S199	9	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and (oxide adj semiconductor) and (step with side with (source drain))).clm.	US- PGPUB; USPAT		ON	2014/12/23 22:43
S200	180	("20010030323" "20010046027" "20020044111" "20020185466" "20020132454" "20020185222" "20040038446" "20040127038" "20040263757" "20060035452" "20060138529" "20060035452" "20060138529" "2006013536" "200601108529" "20060113536" "20060113539" "20060113549" "20060113565" "2006013549" "20060113565" "2006013549" "2006013565" "2006013549" "2006013822" "2006013549" "2006013856" "200601973" "2006013821" "2006028977" "2006028977" "2006028974" "20060284171" "20060284172" "20060284171" "20070052025" "20070054507" "20070052025" "20070190365" "20070172439" "20070190365" "20070172591" "20070187676" "20070187760" "2007018768" "20070172591" "200701287296" "20080088929" "20080128689" "20080016834" "200801286	US- PGPUB; USPAT	OR	ON	2014/12/23 22:43

		"20090134399" "20090140438" "20090148970").PN. OR ("20090152506" "20090152541" "2009018437" "20090186445" "20090278122" "20090280600" "20100025678" "20100051934" "20100051949" "20100059742" "2010005839" "20100065840" "20100072467" "20100084650" "20100092800" "20100102312" "20100102315" "20100105162" "20100109002" "20100105164" "20100109002" "20100105164" "20100109002" "20100105164" "20100109002" "20100123055" "20100301329" "20100283055" "20100301329" "20110062433" "20110062436" "20110017698" "20120286267" "5256897" "5338959" "5731856" "5744864" "5755938" "5847410" "6124606" "6294274" "6359672" "6558987" "6563174" "6586346" "6727522" "6762802" "6767847" "6838308" "6900872" "6960812" "7049190" 7061014" 7064346" "7071037" 7105868" 7199846" "7211825" 7282782" 7297977" "735224" "7402506" 7411209" "7453065" 7453087" 7462862" "7468304" 7501293" 7674650" "7714329" 7732819" 77675055" "7772021" 7998372" 8030195" "8168544" 8207756" 82366355" "8242494" 8304765" 8309961" "8319215" "8343799").PN. OR ("8686417").URPN.				
S246	1	"Term Removed"	USPAT	OR	ON	2015/06/18 00:28
S247	1028	H01L29/41733.cpc.	US- PGPUB	OR	ON	2015/06/18 01:05
S248	911	H01L29/41733.cpc.	USPAT	OR	ON	2015/06/18 01:05
S249	1309	(substrate and gate and source and drain and ((sidewall (side adj surface)) near5 step)).clm.	US- PGPUB; USPAT	OR	ON	2015/06/18 01:11
S250	88	(substrate and gate and source and drain and ((sidewall (side adj surface)) near5 step) and (oxide adj semiconductor) and metal).clm.	US- PGPUB; USPAT	OR	ON	2015/06/18 01:11

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"20090134399" | "20090140438" |

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2896

CPC- SEARCHED				
Symbol	Date	Examiner		
H01L29/7869, 49080	6/17/2015	Jeremy J. Joy		
H01L27/1225	6/17/2015	Jeremy J. Joy		
H01L51/105, 0508, 0512, 0545	6/17/2015	Jeremy J. Joy		

CPC COMBINATION SETS - SEARCHED				
Symbol	Date	Examiner		

US CLASSIFICATION SEARCHED					
Class	Subclass	Date	Examiner		

SEARCH NOTES				
Search Notes	Date	Examiner		
See search notes from parent applications 12/613,769 and 13/763874	8/25/2014	Jeremy J. Joy		
General keyword and EAST search is attached.	8/25/2014	Jeremy J. Joy		
General keyword and EAST search is attached.	2/26/2015	Jeremy J. Joy		
General keyword, interference and EAST search is attached.	6/18/2015	Jeremy J. Joy		
General keyword, interference and EAST search is attached.	11/2/2015	Jeremy J. Joy		

INTERFERENCE SEARCH							
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner				
H01L29	41733	6/18/2015	Jeremy J. Joy				

/JEREMY JOY/ Examiner.Art Unit 2816	November 2, 2015

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

PATENT WITHDRAWAL NO	TICE
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DATE WITHDRAWN

WITHDRAWAL NUMBER

10/27/2015

14451680

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30928

9184249

The following application has been **WITHDRAWN** from the

11/10/2015 issue.

SERIAL NO.

PATENT NUMBER

TITLE

SEMICONDUCTOR DEVICE

NAME AND ADDRESS

SHUNPEI YAMAZAKI Setagaya, JP

REASON FOR WITHDRAWAL

Auto-petition to withdraw - Granted

APPROVED

/Kimberly Terrell/, Manager

Patent Publication Branch Office of Data Management

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FORM PTO-302 -- (REV. 05-2009)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

	REQ	JEST FC		D EXAMINATIC d Only via EFS	N(RCE)TRANSMI	TTAL	
Application Number	14/451,680	Filing Date	2014-08-05	Docket Number (if applicable)	0756-10566	Art Unit	2816
First Named Inventor	Shunpei YAMAZ	AKI et al.	1	Examiner Name	Jeremy J. Joy		1
Request for C	ontinued Examina	ation (RCE)	practice under 37 C		above-identified applica oply to any utility or plant a WWW.USPTO.GOV		l prior to June 8,
		S	UBMISSION REQ	UIRED UNDER 37	CFR 1.114		
in which they	were filed unless	applicant ins		applicant does not wi	nents enclosed with the R sh to have any previously		
	y submitted. If a fi on even if this box			any amendments file	d after the final Office act	ion may be cor	sidered as a
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			MIS	CELLANEOUS			
				requested under 37 ler 37 CFR 1.17(i) re	CFR 1.103(c) for a period quired)	d of months	
X Other	Petition to Withdra	aw from Issu	Je				
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🗙 The Dire	ctor is hereby aut			FR 1.114 when the F ment of fees, or cred	RCE is filed. it any overpayments, to		
		SIGNATUF	RE OF APPLICAN	T, ATTORNEY, OF	R AGENT REQUIRED		
	Practitioner Sign ant Signature	ature					_

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Signature of Registered U.S. Patent Practitioner					
Signature	/Eric J. Robinson/	Date (YYYY-MM-DD)	2015-10-26		
Name	Eric J. Robinson	Registration Number	38285		

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Patent Application of:
Shunpei YAMAZAKI et al.
Serial No. 14/451,680
Filed: August 5, 2014
For: SEMICONDUCTOR DEVICE AND
MANUFACTURING METHOD
THEREOF

Confirmation No. 5776

Group Art Unit: 2816

Examiner: Jeremy J. Joy

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

In accordance with the provisions of 37 C.F.R. § 1.56 and 37 C.F.R. §§ 1.97-1.99, Applicant submits herewith a Form PTO-1449 listing information known to Applicant and requests that this information be made of record in the above identified application. Copies are submitted herewith in accordance with 37 C.F.R. § 1.98(a).

Except as provided below, in accordance with 37 C.F.R. § 1.97(e), it is certified that each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.

Unless otherwise noted, the references submitted were cited by the Japanese Patent Office in counterpart Japanese Patent Application No. 2014-206901 in an Office Action mailed October 13, 2015.

U.S. Patent No. 8,937,580 and U.S. Publication Nos. 2015/0123109 and 2015/0248859 are in the family of JP 2005-092188. These references were not directly

cited by the foreign patent office, but are submitted herewith for consideration by the Examiner.

- 2 -

U.S. Patent No. 8,243,055 and WO 2008/075697 are in the family of JP 2008-176287. These references were not directly cited by the foreign patent office, but are submitted herewith for consideration by the Examiner.

U.S. Patent No. 8,477,085 is in the family of JP 2008-151963. This reference was not directly cited by the foreign patent office, but is submitted herewith for consideration by the Examiner.

U.S. Patent No. 7,224,333 is in the family of JP 2003-280587. This reference was not directly cited by the foreign patent office, but is submitted herewith for consideration by the Examiner.

U.S. Patent No. 9,153,168 is in the family of JP 2004-046218. This reference was not directly cited by the foreign patent office, but is submitted herewith for consideration by the Examiner.

U.S. Patent No. 7,375,705 and U.S. Publication No. 2011/0057958 are in the family of JP 2005-266346. These references were not directly cited by the foreign patent office, but are submitted herewith for consideration by the Examiner.

U.S. Patent No. 7,250,928 is in the family of JP 2003-195814. This reference was not directly cited by the foreign patent office, but is submitted herewith for consideration by the Examiner.

U.S. Publication No. 2008/0036698 is in the family of JP 2008-042043. This reference was not directly cited by the foreign patent office, but is submitted herewith for consideration by the Examiner.

U.S. Patent No. 7,696,513 and WO 2007/119321 are in the family of JP 2007-250984. These references were not directly cited by the foreign patent office, but are submitted herewith for consideration by the Examiner.

U.S. Patent Nos. 6,462,722; 6,522,315; 6,839,045; 7,180,483; 7,221,339; 7,253,793; 7,710,364; 7,880,696; 8,154,199; 8,188,647; 8,247,967; 8,354,978;

- 3 - Application Serial No. 14/451,680 Attorney Docket No. 0756-10566

8,362,489; U.S. Publication Nos. 2003/0231273; 2008/0246700; 2012/0299902; EP 0 895 219; EP 0 917 127; EP 1 255 240; EP 1 336 953; EP 1 337 131; EP 1 359 789; EP 1 363 265; EP 1 619 654; EP 1 830 342; EP 1 830 343 and EP 1 830 344 are in the family of WO 1998/036407. These references were not directly cited by the foreign patent office, but are submitted herewith for consideration by the Examiner.

This Information Disclosure Statement is being submitted with a RCE. Therefore, no fee is required.

The Commissioner is hereby authorized to charge fees under 37 C.F.R. §§ 1.16, 1.17, 1.20(a), 1.20(b), 1.20(c), and 1.20(d) (except the Issue Fee) which may be required now or hereafter, or credit any overpayment to Deposit Account No. 50-2280.

Respectfully submitted,

Eric J. Robinson

Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, Virginia 22033 (571) 434-6789

Approved for use through 03/31/2007. OMB 0651-0031

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Substitute for form 1449/PTO				Co	mplete if Known
		eni (Nelide	Application Number	14/451,680
				Filing Date	August 5, 2014
STATEM	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI
				Art Unit	2816
(Use	(Use as many sheets as necessary)			Examiner Name	J. JOY
Sheet	1	of	5	Attorney Docket Number	0756-10566

Examiner Cite		Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	
	No.1	Number-Kind Code ^{2 (If known)}	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	
		US-8,937,580	01-20-2015	Miyagawa.K		
		US-2015/0123109	05-07-2015	Miyagawa.K		
		US-2015/0248859	09-03-2015	Miyagawa.K		
		US-8,243,055	08-14-2012	Abe.K		
		US-8,477,085	07-02-2013	Shishido.H		
		US-7,224,333	05-29-2007	Yamazaki.S et al.		
		US-9,153,168	10-06-2015	Osame.M et al.		
		US-7,375,705	05-20-2008	Morita.A		
		US-2011/0057958	03-10-2011	Morita.A		
		US-7,250,928	07-31-2007	Yamazaki.S et al.		
		US-2008/0036698	02-14-2008	Kawasaki.M et al.		
		US-7,696,513	04-13-2010	Hayashi.R et al.		
		US-6,462,722	10-08-2002	Kimura.M et al.		
		US-6,522,315	02-18-2003	Ozawa.T et al.		
		US-6,839,045	01-04-2005	Ozawa.T et al.		
		US-7,180,483	02-20-2007	Kimura.M et al.		
		US-7,221,339	05-22-2007	Ozawa.T et al.		
		US-7,253,793	08-07-2007	Ozawa.T et al.		
		US-7,710,364	05-04-2010	Ozawa.T et al.		

	FOREIGN PATENT DOCUMENTS						
Examiner C	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	T ⁶	
Initials*	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear		
		JP-2005-092188A	04-07-2005			Abst.	
		JP-2008-176287A	07-31-2008			Abst.	
		JP-2008-151963A	07-03-2008			Abst.	
		JP-2003-280587A	10-02-2003			Abst.	
		JP-2006-227238A	08-31-2006			Abst.	
		JP-2004-046218A	02-12-2004			Abst.	

Examiner	Date	
Signature	Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at <u>www.uspto.oov</u> or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the relign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. O NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449/PTO				Complete if Known		
			NOLIDE	Application Number	14/451,680	
	-			Filing Date	August 5, 2014	
	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI	
41				Art Unit	2816	
(Use a	(Use as many sheets as necessary)			Examiner Name	J. JOY	
Sheet	2	of	5	Attorney Docket Number	0756-10566	

			U. S. PATENT DOCU	MENTS		
Examiner Cite Initials* No. ¹		Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant	
	110.	Number-Kind Code ^{2 (if known)}			Figures Appear	
		US-7,880,696	02-01-2011	Ozawa.T et al.		
		US-8,154,199	04-10-2012	Ozawa.T et al.		
		US-8,188,647	05-29-2012	Kimura.M et al.		
		US-8,247,967	08-21-2012	Ozawa.T et al.		
		US-8,354,978	01-15-2013	Ozawa.T et al.		
		US-8,362,489	01-29-2013	Kimura.M et al.		
		US-2003/0231273	12-18-2003	Kimura.M et al.		
		US-2008/0246700	10-09-2008	Ozawa.T et al.		
		US-2012/0299902	11-29-2012	Ozawa.T et al.		
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	FOREIGN PATENT DOCUMENTS							
Examiner C	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	T ₆		
Initials*	No. ¹	Country Code3 -Number4 -Kind Code5 (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear			
		JP-2008-241783A	10-09-2008			Abst.		
		JP-2005-266346A	09-29-2005			Abst.		
		JP-2006-165527A	06-22-2006			Abst.		
		JP-2006-286719A	10-19-2006			Abst.		
		JP-2003-195814A	07-09-2003		·····	Abst.		
		JP-2008-042043A	02-21-2008			Abst.		

Examiner	Date	
Signature	Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at <u>www.uspt0.gov</u> or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WPO Standard ST.3). 4 For Japanese patent documents, the indication of the region of the Emperor must precede the serial number of the patent document. 5 Kind of document by the symposite symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449/PTO				Complete if Known		
			nelide	Application Number	14/451,680	
INFORMATION DISCLOSURE				Filing Date	August 5, 2014	
STATEMENT BY APPLICANT			ICANI	First Named Inventor	Shunpei YAMAZAKI	
<i>(</i>)				Art Unit	2816	
(Use as many sheets as necessary)			0	Examiner Name	J. JOY	
Sheet	3	of	5	Attorney Docket Number	0756-10566	

U. S. PATENT DOCUMENTS Examiner Initials* Cite No.* Document Number Number-Kind Code² (Krown) Publication Date MM-DD-YYYY Name of Patentee or Applicant of Cited Document Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear Image: Imag

	FOREIGN PATENT DOCUMENTS							
Examiner Cite	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	f ⁶		
Initials*	No.1	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear			
		JP-2007-250984A	09-27-2007			Abst.		
		JP-2005-354036A	12-22-2005			Abst.		
		WO-1998/036407	08-20-1998			Abst.		
		WO-2008/075697	06-26-2008			Eng.		
		WO-2007/119321	10-25-2007			Eng.		
		EP-0895219A	02-03-1999			Eng.		

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Examiner	Date	
Signature	Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at <u>www.uspto.gov</u> or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPC Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document by Sind Vdocument by the appropriate symbols as indicated on the document under WIPC Standard ST.3. If if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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Approved for use through 03/31/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449/PTO				Co	Complete if Known		
			SUIDE	Application Number	14/451,680		
INFORMATION DISCLOSURE				Filing Date	August 5, 2014		
STATEMENT BY APPLICANT				First Named Inventor	Shunpei YAMAZAKI		
(A.)				Art Unit	2816		
(Use as many sheets as necessary)			()	Examiner Name	J. JOY		
Sheet	4	of	5	Attorney Docket Number	0756-10566		

	U. S. PATENT DOCUMENTS						
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant		
Initials*	No. ¹	Number-Kind Code ^{2 (If known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear		
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	FOREIGN PATENT DOCUMENTS						
	Cite			Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	76	
	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	D-YYYY Applicant of Cited Document	Figures Appear		
		EP-0917127A	05-19-1999		,	Eng.	
		EP-1255240A	11-06-2002			Eng.	
		EP-1336953A	08-20-2003			Eng.	
		EP-1337131A	08-20-2003			Eng.	
	· .	EP-1359789A	11-05-2003			Eng.	
		EP-1363265A	11-19-2003			Eng.	

Examiner	Date	
Signature	Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at <u>www.uspto.gov</u> or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the relign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449/PTO				Complete if Known		
		eri r	Nelide	Application Number	14/451,680	
INFORMATION DISCLOSURE				Filing Date	August 5, 2014	
SIAIEM	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI	
				Art Unit	2816	
(Use as many sheets as necessary))	Examiner Name	J. JOY	
Sheet	5	of	5	Attorney Docket Number	0756-10566	

U. S. PATENT DOCUMENTS						
Examiner	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	
Initials*	No. ¹	Number-Kind Code ^{2 (If known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear	
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	FOREIGN PATENT DOCUMENTS						
Examiner	Cite		Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	T ₆	
Initials* No. ¹	No. ¹	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear	,	
		EP-1619654A	01-25-2006			Eng.	
		EP-1830342A	09-05-2007			Eng.	
		EP-1830343A	09-05-2007			Eng.	
		EP-1830344A	09-05-2007			Eng.	

Examiner	Date	
Signature	Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at <u>www.uspto.gov</u> of MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WPO Standard ST.3). 4 For Japanese patent documents, the indication of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

bocument Description: Petition a	Department of commerce						
Electronic Petition Request	PETITION TO WITHDRAW AN APPLIC THE ISSUE FEE UNDER 37 CFR 1.313(c	ATION FROM ISSUE AFTER PAYMENT OF					
Application Number	14451680						
Filing Date	05-Aug-2014						
First Named Inventor	Shunpei YAMAZAKI						
Art Unit	2816						
Examiner Name	JEREMY JOY	JEREMY JOY					
Attorney Docket Number	0756-10566	0756-10566					
Title	SEMICONDUCTOR DEVICE	SEMICONDUCTOR DEVICE					
withdraw an application from is	wn from issue for further action upon petition by t ssue, applicant must file a petition under this secti reasons why withdrawal of the application from i	on including the fee set forth in § 1.17(h) and a					
A grantable petition requires the (1) Petition fee; and (2) One of the following reasons (a) Unpatentability of one or mo are unpatentable, an amendme claims to be patentable; (b) Consideration of a request for		equivocal statement that one or more claims to how the amendment causes such claim or 114 (for a utility or plant application only); or					
Petition Fee							
Small Entity							
O Micro Entity							

Regular Undiscounted

Reason for withdrawal from issue

One or more claims are unpatentable					
• Consideration of a request for co	ontinued examination (RCE) (List of Required Documents and Fees)				
 Applicant hereby expressly abar have power of attorney pursuar 	ndons the instant application (any attorney/agent signing for this reason must ht to 37 CFR 1.32(b)).				
RCE request, submission, and fee.					
	I certify, in accordance with 37 CFR 1.4(d)(4) that : The RCE request ,submission, and fee have already been filed in the above-identified application on				
Are attached.					
THIS PORTION MUST BE COMPLETE	D BY THE SIGNATORY OR SIGNATORIES				
l certify, in accordance with 37 CFR	1.4(d)(4) that I am:				
 An attorney or agent registered in this application. 	to practice before the Patent and Trademark Office who has been given power of attorney				
 An attorney or agent registered 	to practice before the Patent and Trademark Office, acting in a representative capacity.				
A sole inventor					
ightarrow A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application					
○ A joint inventor; all of whom are signing this e-petition					
Signature	/Eric J. Robinson/				
Name	Eric J. Robinson				
Registration Number	38285				

Electronic Patent Application Fee Transmittal						
Application Number:	1445	51680				
Filing Date:	05-A	ug-2014				
Title of Invention:	SEMICONDUCTOR DEVICE					
First Named Inventor/Applicant Name:	Shunpei YAMAZAKI					
Filer:	Eric J. Robinson/Adele Stamper					
Attorney Docket Number:	0756	5-10566				
Filed as Large Entity						
Filing Fees for Utility under 35 USC 111(a)						
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)	
Basic Filing:						
Petition fee- 37 CFR 1.17(h) (Group III)		1464	1	140	140	
Request for Continued Examination		1801	1	1200	1200	
Pages:						
Claims:						
Miscellaneous-Filing:						
Petition:						
Patent-Appeals-and-Interference:						

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
	Tot	al in USD) (\$)	1340



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450 www.uspto.gov

Decision Date :	October 26, 2015	
In re Application of :		
Shunpei YAMAZAKI		DECISION ON PETITION
		UNDER CFR 1.313(c)(2)
Application No : 1	4451680	
Filed :	05-Aug-2014	
Attorney Docket No :	0756-10566	

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed October 26, 2015, to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED.**

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 2816 for processing of the request for continuing examination under 37 CFR 1.114.

Office of Petitions

Electronic Ac	Electronic Acknowledgement Receipt						
EFS ID:	23867499						
Application Number:	14451680						
International Application Number:							
Confirmation Number:	5776						
Title of Invention:	SEMICONDUCTOR DEVICE						
First Named Inventor/Applicant Name:	Shunpei YAMAZAKI						
Customer Number:	31780						
Filer:	Eric J. Robinson/Adele Stamper						
Filer Authorized By:	Eric J. Robinson						
Attorney Docket Number:	0756-10566						
Receipt Date:	26-OCT-2015						
Filing Date:	05-AUG-2014						
Time Stamp:	13:11:50						
Application Type:	Utility under 35 USC 111(a)						

Payment information:

Electronic Funds Transfer
\$1340
10131

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing]:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.	
1	Other Reference-Patent/App/Search	JP_2005092188.pdf	6102017	no	35	
'	documents	51_2005092100.pdf	80cbcc6c49fffb7f518dc4581c729e0a680c4 d8d	110	55	
Warnings:						
Information:						
2	Other Reference-Patent/App/Search	JP_2008176287.pdf	5314665	no	33	
L	documents	Ji _2000170207.pdf	8ba90d8d6be8b30cbe0b15fad92c93a55e6 43f38	110	55	
Warnings:						
Information:						
3	Other Reference-Patent/App/Search	JP_2008151963.pdf	14170885	no	82	
5	documents	51_2000151503.par	35419b16d4252fe8f3c368bc39aca810013a 53de	110		
Warnings:						
Information:						
4	Other Reference-Patent/App/Search	JP_2003280587.pdf	3495812	no	20	
·	documents	52000200000, ipai	1aa6e81c1e6097a7dde2cb508f318b30146 d9e9a			
Warnings:						
Information:						
5	Other Reference-Patent/App/Search	JP_2006227238.pdf	3322077	no	21	
_	documents	••	bda5e1f3273ee13ecd6ce74ec3f19905369c 484e			
Warnings:						
Information:						
6	Other Reference-Patent/App/Search	JP_2004046218.pdf	2431615	no	14	
	documents		d9aad8c971256bda6aad9f7e91faefad29f4 7245		14	
Warnings:						
Information:						
7	Request for Continued Examination	RCE_26OCT2015.pdf	697933	no	3	
,	(RCE)	<u></u> 200012010.pdf	27272e48a688490a47e78af90d55154228f0 142b		5	
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8	Other Reference-Patent/App/Search documents	JP_2008241783.pdf	3319194 3c73e2343ba2f38bcdbb6a8af221f517a393	no	21	
			8d30			
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9	Other Reference-Patent/App/Search documents	JP_2005266346.pdf	6137994	no	38	
			fcd82b8156e36deb67687d0e9405f24b658 f539c			
Warnings:						
Information:						
10	Other Reference-Patent/App/Search documents	JP_2006165527.pdf	5059391	no	38	
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Information:						
11	Other Reference-Patent/App/Search documents	JP_2006286719.pdf	2436966	no	16	
			661054eb565973c48bb5281e0e61280c50f d6b82			
Warnings:						
Information:						
12	Other Reference-Patent/App/Search documents	JP_2003195814.pdf	7355604	no	37	
	documents		19524f2b45764066248837250889eec1823 cdc5a			
Warnings:						
Information:						
13	Other Reference-Patent/App/Search documents	JP_2008042043.pdf	3605649	no	21	
	documents		10446fe2820c6722ec1420de71bfd81798a3 ade8			
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14	Other Reference-Patent/App/Search documents	JP_2007250984.pdf	3280528	no	21	
	uocuments		9441995883ce7b01900177a691bc452dba1 a0b9c			
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15	Other Reference-Patent/App/Search	JP_2005354036.pdf	1625586	no	11	
<u>ر</u> ا	documents	52005554050.put	2b2a0f1c8964c2a31e5872b2469801c9db8 267a1			
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16	Other Reference-Patent/App/Search	WO_98036407.pdf	9866975	no	89	
	documents		a62fe019614c3f8228e8c5284659736f50e5 976d			
Warnings:						
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17	Other Reference-Patent/App/Search documents	WO_2008075697.pdf	9769101 af25e18b5f4b8edad9dd24687c3cebddb36	no	90	
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Information:						
			4786612			
18	Other Reference-Patent/App/Search documents	WO_2007119321.pdf no		no	44	
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			8859922			
19	Other Reference-Patent/App/Search documents	EP_0895219.pdf	303d1b051bcc80c757d87d849012bf1ad8d	no	52	
			a3e9b			
Warnings:						
Information:						
20	Other Reference-Patent/App/Search	EP_0917127.pdf	1308930	no	20	
20	documents			10		
Warnings:						
Information:			1 1			
21	21 Other Reference-Patent/App/Search		7123418	no	52	
21	documents	EP_1255240.pdf	75d314da31c6a46b25e6c6baeaff95e118e9 1192		52	
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Information:						
22	Other Reference-Patent/App/Search	EP_1336953.pdf	7049836	no	50	
	documents	_,,pai	e93159c490b640f11fdd0609a23550afa0ea 1831	110		
Warnings:						
Information:						
	Other Reference-Patent/App/Search		1080013			
23	documents	EP_1337131.pdf	7a07c1b3af1989335e27bf90b4a11b9fcf96 d45b	no	19	
Warnings:			1		1	
Information:						
	Other Reference-Patent/App/Search		7095070			
24	documents	EP_1359789.pdf		no	52	
Warnings:	I					
Information:						
25	Other Reference-Patent/App/Search	EP_1363265.pdf	2892285	20	19	
د ∠	documents	Lī _1303203.pul	7551aab94f79081c4a24c4e297b0de03b07 99f9b	no	19	
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Information:			BLUEHOUS	E EXHIBIT 1 Page 87 of		

26	Other Reference-Patent/App/Search	EP_1619654.pdf	2951136	no	21
	documents		6e180bc76783132ec42407d6944f2378191 b21a3		
Warnings:					
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27	Other Reference-Patent/App/Search	EP_1830342.pdf	7187749	no	50
	documents		b841a20fd0cf0161e0875a537ce55159c093 dbbb		
Warnings:					
Information:			· · · · · ·		
28	Other Reference-Patent/App/Search	EP_1830343.pdf	7124001	no	50
	documents		850fd2493f40feee10d896da8e367eb491bc ae92		
Warnings:					
Information:					
29	Other Reference-Patent/App/Search	EP_1830344.pdf	7120962	20	49
29	documents	LF_1830344.pui	5d8ea9eaa30136fb8bfe986f6732551b1fdc eff1	no	
Warnings:					
Information:					
30		IDS_260CT2015_075610556.	1300262	yes	8
50		pdf d08ab91b67c21179db5796ac085b248ebf f2044		yes	0
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	Other Reference-Patent/Ap	p/Search documents	1		3
	Other Reference-Patent/App/Search documents		4	٤	3
Warnings:					
Information:					
31	Petition automatically granted by EFS	petition-request.pdf	31509	50	2
ı د	retition automatically granted by EFS	pennon-request.pui	4d34688bf8dcec36247b515cb911fabb27f8 04b0	no	2
Warnings:			· I	I	
Information:					
32	Fee Worksheet (SB06)	fee-info.pdf	32396	no	2
	. ,		d33746f3ca6f873cc9305c441c3f7fd6eee55 877		
Warnings: Information:		Total Files Size (in bytes)	1		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.iispto.gov

APPLICATION NO.	ISSUE DAT	TE PATENT NO.	ATTORNEY DOCKET	NO. CONFIRMATION NO.
14/451,680	11/10/201	5 9184249	0756-10566	5776
31780	7590 10/21/	2015		

Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, VA 22033

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Shunpei YAMAZAKI, Setagaya, JAPAN; Semiconductor Energy Laboratory Co., Ltd., Atsugi-shi, JAPAN; Kengo AKIMOTO, Atsugi, JAPAN; Daisuke KAWAE, Yamato, JAPAN;

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u> Mail Stop ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

31780759007/06/2015Robinson Intellectual Property Law Office, P.C.3975 Fair Ridge DriveSuite 20 NorthFairfax, VA 22033

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmitted is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

			FIRST NAMED INVENTOR	ATT	ORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	14/451,680 08/05/2014			· · · · · · ·	0756-10566	5776
TITLE OF INVENTION:	SEMICONDUCTOR I	DEVICE				
APPLN, TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$O	\$960	10/06/2015
EXAME	VER	ART UNIT	CLASS-SUBCLASS			
JOY, JERI	EMY J	2816	257-043000			
 Change of corresponden CFR 1.363). Change of correspon Address form PTO/SB/ "Fee Address" indic PTO/SB/47; Rev 03-02 Number is required. 	ndence address (or Cha 122) attached. ation (or "Fee Address'	nge of Correspondence ' Indication form	or agents OR, alternativ (2) The name of a single registered attorney or a	3 registered patent attor rely, e firm (having as a mem gent) and the names of rneys or agents. If no names at the name of the	ber a Robinson	binson, Intellectual .aw Office, P.C.
(A) NAME OF ASSIG Semiconduct Please check the appropria	or Energy Labor		•	nagawa-ken, Japa	in	ap entity 🖵 Governmen
4a. The following fee(s) ar Issue Fee Publication Fee (No Advance Order - # c	small entity discount g		 b. Payment of Fee(s): (Plea A check is enclosed. Payment by credit care The director is hereby overpayment, to Deposite 	d. Form PTO-2038 is att	ached.	
5. Change in Entity Statu Applicant certifying Applicant asserting Applicant changing	micro entity status. Se small entity status. See	e 37 CFR 1.29 37 CFR 1.27	<u>NOTE</u> : Absent a valid cer fee payment in the micro <u>NOTE</u> : If the application to be a notification of loss <u>NOTE</u> : Checking this box entity status, as applicable	entity amount will not be was previously under mi of entitlement to micro ; will be taken to be a no	é accepted at the risk of a cro entity status, checkir entity status.	application abandonment. ag this box will be taken
NOTE: This form must be	signed in accordance w	vith 37 CFR 1.31 and 1.3	3. See 37 CFR 1.4 for signa		ertifications.	
Authorized Signature	L-	Le~~	99	Date	October 6, 20	D15
	and the second se				38,285	

PTOL-85 Part B (10-13) Approved for use through 10/31/2013.

BLUEHOUSE EXHIBIT 1002 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTAGENT OF 245 MMERCE

Electronic Patent Application Fee Transmittal								
Application Number:	144	451680						
Filing Date:	05-	Aug-2014						
Title of Invention:	SEMICONDUCTOR DEVICE							
First Named Inventor/Applicant Name:	Sh	unpei YAMAZAKI						
Filer:	Erio	c J. Robinson/Sue A	nn Carr					
Attorney Docket Number:	075	56-10566						
Filed as Large Entity								
Filing Fees for Utility under 35 USC 111(a)								
Description		Fee Code	Quantity	Amount	Sub-Total in USD(\$)			
Basic Filing:								
Pages:								
Claims:								
Miscellaneous-Filing:								
Petition:								
Patent-Appeals-and-Interference:								
Post-Allowance-and-Post-Issuance:								
Utility Appl Issue Fee		1501	1	960	960			

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Printed Copy of Patent - No Color	8001	2	3	6
	Tot	al in USD	(\$)	966

Electronic Ac	knowledgement Receipt
EFS ID:	23695675
Application Number:	14451680
International Application Number:	
Confirmation Number:	5776
Title of Invention:	SEMICONDUCTOR DEVICE
First Named Inventor/Applicant Name:	Shunpei YAMAZAKI
Customer Number:	31780
Filer:	Eric J. Robinson/Sue Ann Carr
Filer Authorized By:	Eric J. Robinson
Attorney Docket Number:	0756-10566
Receipt Date:	06-OCT-2015
Filing Date:	05-AUG-2014
Time Stamp:	08:10:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Electronic Funds Transfer
\$966
8490

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

File Listing:

	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.
1	Issue Fee Payment (PTO-85B)	IF.pdf	220916		1
I	issue ree rayment (r10-65b)	ir.pui	8e23fb0456be979119f94097b754a5653b3 e0564	no	I
Warnings:	•	·		•	
Information:					
			32238		
2	Fee Worksheet (SB06)	fee-info.pdf	3a92928a1360f3ecc9628ed2a37dd685b54 e0fb3	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	25	53154	
characterized b Post Card, as de <u>New Applicatio</u> If a new applica	gement Receipt evidences receipt of y the applicant, and including page escribed in MPEP 503. <u>Ins Under 35 U.S.C. 111</u> tion is being filed and the application MPEP 506), a Filing Receipt (37 CFR ent Receipt will establish the filing a	o counts, where applicable. on includes the necessary c 1.54) will be issued in due o	It serves as evidence omponents for a filin	of receipt si g date (see	milar to 37 CFR
Acknowledgem					
<u>National Stage</u> If a timely subm U.S.C. 371 and d	of an International Application und ission to enter the national stage o other applicable requirements a For submission under 35 U.S.C. 371 will	f an international applicati m PCT/DO/EO/903 indicati	ng acceptance of the	application	

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application. UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

31780 7590 07/06/2015 Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, VA 22033 EXAMINER JOY, JEREMY J

ART UNIT PAPER NUMBER
2816

DATE MAILED: 07/06/2015

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	Shunpei YAMAZAKI	0756-10566	5776

TITLE OF INVENTION: SEMICONDUCTOR DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$O	\$960	10/06/2015

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. <u>PROSECUTION ON THE MERITS IS CLOSED</u>. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN <u>THREE MONTHS</u> FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. <u>THIS STATUTORY PERIOD CANNOT BE EXTENDED</u>. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: <u>Mail</u> Mail Stop ISSUE FEE **Commissioner for Patents** P.O. Box 1450 Alexandria, Virginia 22313-1450

or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

31780 7590 07/06/2015 Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, VA 22033

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's	name)
(Sign	nature)
	(Date)

APPLICATION NO.	FILING DATE		FIRST NAMED INVENTOR	AT	TORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	•	Shunpei YAMAZAKI	•	0756-10566	5776
TITLE OF INVENTION	I: SEMICONDUCTOR I	DEVICE				
APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FE	E TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	10/06/2015
EXAM	IINER	ART UNIT	CLASS-SUBCLASS	1		
JOY, JE	REMY J	2816	257-043000	3		
CFR 1.363). Change of corresp Address form PTO/S "Fee Address" inc PTO/SB/47; Rev 03- Number is required 3. ASSIGNEE NAME A	ND RESIDENCE DATA less an assignee is ident th in 37 CFR 3.11. Com	inge of Correspondence " Indication form ed. Use of a Custome A TO BE PRINTED ((1) The names of up to or agents OR, alternati (2) The name of a sing	 3 registered patent attively, le firm (having as a me agent) and the names or rneys or agents. If no n printed. pe) atent. If an assignee is assignment. 	mber a 2f up to ame is 3s identified below, the de	ocument has been filed for
4a. The following fee(s) Issue Fee Publication Fee (1) 		permitted)	4b. Payment of Fee(s): (Plea A check is enclosed. Payment by credit car The director is hereby	ase first reapply any p rd. Form PTO-2038 is a	reviously paid issue fee ttached. e required fee(s), any def	
 Applicant certifyi Applicant assertin Applicant changin 	ntus (from status indicate ng micro entity status. Se ng small entity status. See ng to regular undiscounte pe signed in accordance y	ee 37 CFR 1.29 9 37 CFR 1.27 d fee status.	<u>NOTE:</u> Absent a valid ce fee payment in the micro <u>NOTE:</u> If the application to be a notification of los <u>NOTE:</u> Checking this bo entity status, as applicabl 1.33. See 37 CFR 1.4 for sign	was previously under r s of entitlement to micr x will be taken to be a r e.	nicro entity status, check o entity status. otification of loss of enti	0
Authorized Signature						
Typed or printed nam				Registration No		
PTOL-85 Part B (10-13)	Approved for use throug	gh 10/31/2013.	Page 2 of 3 OMB 0651-0033 U	J.S. Patent and Tradem	BLUEHOUSE EX Pag ark Office; U.S. DEPAR'	HIBIT 1002 e 97 of 246 IMENT OF COMMERCE

	TED STATES PATE	NT AND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 223 www.uspto.gov	Trademark Office OR PATENTS
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	Shunpei YAMAZAKI	0756-10566	5776
31780 75	90 07/06/2015		EXAM	IINER
Robinson Intellec 3975 Fair Ridge Di	ctual Property Law O	ffice, P.C.	JOY, JE	REMY J
Suite 20 North			ART UNIT	PAPER NUMBER
Fairfax, VA 22033			2816	
			DATE MAILED: 07/06/201	5

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

- 1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
- 4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation BLUEHOUSE EXHIBIT 1002

	Application No.	Applicant(
	14/451,680 Examiner	YAMAZAKI	AIA (First Inventor to
Notice of Allowability	JEREMY JOY	2816	File) Status No
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT F of the Office or upon petition by the applicant. See 37 CFR 1.31	6 (OR REMAINS) CLOSED in) or other appropriate commu RIGHTS. This application is s	this application. If no inication will be mailed	ot included d in due course. THIS
1. X This communication is responsive to <u>response after final a</u>			
A declaration(s)/affidavit(s) under 37 CFR 1.130(b) wa	s/were filed on <u>.</u>		
2. An election was made by the applicant in response to a response to a requirement and election have been incorporated into this a		during the interview o	n; the restriction
 3.	ice for the corresponding app	lication. For more info	
4. 🛛 Acknowledgment is made of a claim for foreign priority und	ler 35 U.S.C. § 119(a)-(d) or (f).	
Certified copies:			
a) ⊠ All b) □ Some *c) □ None of the:			
1. Certified copies of the priority documents hav			
 2. Certified copies of the priority documents hav 3. Copies of the certified copies of the priority do 			application from the
International Bureau (PCT Rule 17.2(a)).	bouments have been received	i in this national stage	application nom the
* Certified copies not received:			
Applicant has THREE MONTHS FROM THE "MAILING DATE' noted below. Failure to timely comply will result in ABANDONI THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		a reply complying wit	h the requirements
5. CORRECTED DRAWINGS (as "replacement sheets") mus	st be submitted.		
including changes required by the attached Examiner Paper No./Mail Date	's Amendment / Comment or	in the Office action of	
Identifying indicia such as the application number (see 37 CFR each sheet. Replacement sheet(s) should be labeled as such in			t (not the back) of
6. DEPOSIT OF and/or INFORMATION about the deposit of attached Examiner's comment regarding REQUIREMENT F			the
Attachment(s)			
1. X Notice of References Cited (PTO-892)	—	Amendment/Comme	
2. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date	6. 🛛 Examiner's	Statement of Reason	is for Allowance
3. Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. 🗌 Other		
4. 🔲 Interview Summary (PTO-413), Paper No./Mail Date			
/JEREMY JOY/ Examiner, Art Unit 2816			

Application/Control Number: 14/451,680 Art Unit: 2816

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 05/15/2015, with respect to the previous rejection have been fully considered and are persuasive. Therefore it has been withdrawn.

Allowable Subject Matter

2. Claims **2-21** are allowed over the prior art.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

3. Claims 2-21 are allowed because the prior art of record neither anticipate nor rendered obvious the limitations of base claims 2 and 11 including "a first metal film and a second metal film over the gate insulating film; ... wherein a side surface of the first metal film faces a side surface of the second metal film, and wherein each of the side surface of the first metal film and the side surface of the second metal film has a step in a lower end portion thereof" and the limitations of base claim. In particular, the prior art of record falls short with regards to teaching a step portion formed in a lower portion of a side surface of a first metal film and a second metal film that face each other.

Application/Control Number: 14/451,680 Art Unit: 2816

In example:

(i) *Furukawa et al.* (**U.S. Patent Pub. No. 2008/0099757**) teaches a glass substrate; a gate electrode over the glass substrate; a gate insulating film over the gate electrode; a first conductive film and a second conductive film over the gate insulating film; an organic semiconductor film in contact with the first and second conductive films; wherein a side surface of the first conductive film faces a side surface of the second conductive film; and wherein each of the side surface of the first conductive film and the side surface of the second conductive film has a step in a lower end portion thereof, but fails to specifically teach the first and second conductive films are first and second metal films and an oxide semiconductor film formed on the first and second metal films rather than the organic semiconductor film as disclosed

(ii) *Akimoto* (**U.S. Patent Pub. No. 2007/0108446**) teaches using a metal film to form a portion of the first and second conductive films (source/drain electrodes) and an oxide semiconductor film formed the first and second conductive films in a display device similar to that of the applicant, but fails to specifically teach that the metal film that forms a portion of the first and second conductive films would not be obvious to modify *Furukawa* with such that the first and second metal film portions would have a step in a lower portion thereof.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY JOY whose telephone number is (571)270-7445. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571)272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEREMY JOY/ Examiner, Art Unit 2816 June 18, 2015

/MARVIN PAYEN/ Primary Examiner, Art Unit 2816

Notice of References Cited	Application/Control No. 14/451,680	Applicant(s)/Patent Under Reexamination YAMAZAKI ET AL.	
Notice of Hereferices Cited	Examiner	Art Unit	
	JEREMY JOY	2816	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	А	US-2007/0108446	05-2007	Akimoto, Kengo	257/061
*	В	US-2007/0172591	07-2007	SEO et al.	427/248.1
*	С	US-2008/0038882	02-2008	Takechi et al.	438/151
*	D	US-2009/0114917	05-2009	YAMAZAKI et al.	257/59
*	Е	US-2010/0044711	02-2010	IMAI, Shinji	257/59
*	F	US-2007/0072439	03-2007	Akimoto et al.	438/795
*	G	US-2006/0033098	02-2006	Shih et al.	257/040
*	Н	US-2006/0027804	02-2006	Yamazaki et al.	257/059
*	Ι	US-2006/0292726	12-2006	Akimoto et al.	438/030
*	J	US-2008/0073653	03-2008	Iwasaki, Tatsuya	257/79
*	К	US-2005/0205870	09-2005	Yamazaki, Shunpei	257/072
*	L	US-2004/0108562	06-2004	Nagayama et al.	257/434
*	М	US-2008/0099757	05-2008	Furukawa et al.	257/40

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	Ν					
	0					
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	v	
	w	
	x	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Part of Paper No. 20150618

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2896

CPC- SEARCHED		
Symbol	Date	Examiner
H01L29/7869, 49080	6/17/2015	Jeremy J. Joy
H01L27/1225	6/17/2015	Jeremy J. Joy
H01L51/105, 0508, 0512, 0545	6/17/2015	Jeremy J. Joy

CPC COMBINATION SETS - SEAR	CHED	
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED									
Class	Subclass	Date	Examiner						

SEARCH NOTES						
Search Notes	Date	Examiner				
See search notes from parent applications 12/613,769 and 13/763874	8/25/2014	Jeremy J. Joy				
General keyword and EAST search is attached.	8/25/2014	Jeremy J. Joy				
General keyword and EAST search is attached.	2/26/2015	Jeremy J. Joy				
General keyword, interference and EAST search is attached.	6/18/2015	Jeremy J. Joy				

	INTERFERENCE SEARCH		
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
H01L29	41733	6/18/2015	Jeremy J. Joy

/JEREMY JOY/ Examiner.Art Unit 2816	June 18, 2015

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BIB DATA SHEET

CONFIRMATION NO. 5776

SERIAL NUMBER FILING or DATI 14/451,680 08/05/2					CLASS 257	GROUP ART UNIT			ATTORNEY DOCKET NO. 0756-10566	
14/401,00	RU					2010		0730-10300		
APPLICANTS Semiconductor Energy Laboratory Co., Ltd., Atsugi-shi, JAPAN; INVENTORS Shunpei YAMAZAKI, Setagaya, JAPAN; Kengo AKIMOTO, Atsugi, JAPAN; Daisuke KAWAE, Yamato, JAPAN; *** CONTINUING DATA **********************************										
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3975 Fair Suite 20 I	ADDRESS Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, VA 22033									
TITLE SEMICON	NDUCT	OR DEVICE								
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					A	Application/Control No.				Applic	Applicant(s)/Patent Under Reexamination					
	Ina	lex of (Claim	S	1	14451680					YAMAZAKI ET AL.					
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Claims renumbered in the same or				order as p	resented by a	applica	ant		_ СРА	C] т.с	D. □	R.1.47			
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Fi	inal	Original	08/25/20	014	02/26/201	5 06/18/2015										
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-	18	17	✓		\checkmark	=										
-	19	18	✓		\checkmark	=										
2	20	19	✓		\checkmark	=										
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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L188	2	"US 20140339556"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2015/06/18 00:26
L189	43	or US-20060197092-\$ or US-			ON	2015/06/18 00:28
L191	11296	H01L29/7869.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
L192	6973	H01L27/1225.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
L193	4396	H01L29/41733.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
L194	8780	H01L29/4908.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
L195	1346	H01L51/105.cpc.	US-PGPUB; USPAT;	OR	ON	2015/06/18 00:34

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file:///Cl/Users/jjoy/Documents/e-Red%20Folder/14451680/EASTSearchHistory.14451680_AccessibleVersion.htm[6/18/2015 1:13:57 AM]

			FPRS; JPO; DERWENT			
.196	1927	H01L51/0508.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
_197	2050	H01L51/0512.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:34
_198	8728	H01L51/0545.cpc.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:35
L200	11749	196 197 198	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:35
L202	6927	192 not 200	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:35
L204	13924	193 194 195	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:36
L205	12057	204 not (200 202)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:36
L206	167947	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2015/06/18 00:37
L207	412	L206 and 200	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
L208	660	L206 and 202	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
L209	1225	L206 and 205	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
L210	2297	207 208 209	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
L211	2073	210 and ((thin adj film) tft)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
L212	1364	211 and ((source drain) with metal)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:37
L213	6390	(angle taper\$3 step\$3 gradation stair	US-PGPUB;	OR	ON	2015/06/18

		indent\$5) near3 ((source drain) adj (layer electrode film))	USPAT; USOCR			00:39
L214	3100	213 and ((thin adj film) tft) and ((source drain) with metal)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
L215	216	214 and 200	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
L216	578	214 and 202	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
L217	380	214 and 205	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
L218	1174	215 216 217	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:40
L219	454	218 and (@ay<"2010")	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 00:42
L222	4169	(shape) near3 ((source drain) adj (layer electrode film))	US-PGPUB; USPAT; USOCR	OR	ON	2015/06/18 01:06
L223	1986	222 and ((thin adj film) tft) and ((source drain) with metal)	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2015/06/18 01:07
L224	1111	223 and (@ay<"2010")	US-PGPUB; USPAT; FPRS; JPO; DERWENT		ON	2015/06/18 01:07
S1	2	"US 20100117077"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 14:18
S2	1806	"257/43".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04
S3	128	"257/E21.459".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S4	1431	"438/158".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S5	537	"257/E29.296".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S6	1194	"257/57".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S7	1225	"438/104".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S8	5416	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:35
S9	274	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:35

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1	54	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:36
S11	109	["20080128689"] "20030189401"] "20080308796"] "20080308806"] "7061014"] "20060110867"] "20060284172"] "20080258141"] "20060241107"] "5847410"] "6563174"] "20060284171"] "20060231882"] "20060284171"] "20070287296"] "20080224133"] "20070287296"] "20080228139"] "2006018529"] "2006013565"] "2006018529"] "2006023874"] "2006018529"] "2006028839"] "2006018529"] "2006028874"] "20080203387"] "20080050595"] "20080106191"] "5731856"] "7385224"] "7462862"] "7732819"] "20080203387"] "20030218222"] "20070024187" "20030218222"] "20070024187" "20080083950" "20080258549"] "20080258140" "20090278122"] "20080258140" "2008026838"] "20070172591" "2008026838"] "20070172591" "2008028838"] "20070172591" "2006028977"] "2006013535" </td <td>US-PGPUB; USPAT</td> <td>OR</td> <td>ON</td> <td>2012/04/04 14:36</td>	US-PGPUB; USPAT	OR	ON	2012/04/04 14:36
S12	6	"7323356").PN. "2007123861"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	OR	ON	2012/04/04 14:47
			DERWENT;			

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			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			14:47
S14	41	("20020153587" "20030013261" "20030047785" "20030111663" "20030207502" "20030218221" "20030218222" "20030219530" "20040023432" "4887255" "5744864" "6225655" "6255130" "6362499" "6563174" "7067843").PN. OR ("7282782").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:20
S15	51	("20020171085" "20030047785" "20030111663" "20030218221" "20030218222" "20040023432" "20040127038" "20050017244" "3294660" "5289016" "5744864" "6362499" "6391462" "6727522").PN. OR ("7297977").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:21
S16	132	("20010046027" "20020056838" "20020109796" "20020132454" "20040038446" "20040127038" "20040132293" "20050017302" "20050199959" "20050259206" "20050275038" "20060035452" "20060108529" "20060113536" "20060113667" "20060113536" "20060118679" "20060113536" "20060113509" "20060113549" "20060113565" "2006013549" "20060169973" "20060170067" "20060208977" "20060228974" "20060284172" "20060286737" "20060284172" "20060286737" "20070046191" "20070052025" "20070054507" "20070072439" "20070158652" "20070187760" "20070187678" "20070252928" "20070272922" "20070287296" "2008006877" "2008018882" "2008006877" "2008018882" "20080129195" "20080128689" "20080129195" "20080128689" "20080129195" "20080128689" "20080258141" "20080258143" "20080258141" "20080258143" "2008038804" "2008038805" "2008038806" "2009008639" "2008038806" "2009008639" "2008038806" "2009008639"	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04

		"5731856" "5817548" "6294274" "6532045" "6674136" "6727522" "6852998" "6900461" "7009204" "7049190").PN. OR ("7061014" "7064346" "7075614" "7105868" "7211825" "7282782" "7297977" "7323356" "7402506" "7411209" "7453065" "7453087" "7462862" "7468304" "7501293").PN. OR ("7674650").URPN.				
S17	9604	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:25
S18	4685	S17 and ((semiconductor adj oxide) ((zinc indium gallium zn in ga) adj oxide))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:25
S19	322	(((semiconductor adj oxide) ((zinc indium gallium zn in ga) adj oxide)) near3 channel)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:26
S20	118	S17 and S19	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:26
S21	1	("7638360").PN.	US-PGPUB; USPAT	OR	OFF	2012/04/04 16:33
522	7	("20050017302" "20060244107" "20070048970" "20070072439" "20070184571" "20080254569").PN. OR ("7638360").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:33
S23	2	"US 8134156"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 16:36
S24	3	"US 20070108446"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 16:36
S25	177	("20010046027" "20020011978" "20020044111" "20020056838" "20020106839" "20020109796" "20020110703" "20020132454" "20030047785" "20030207506" "20030047785" "20040038446" "20040127038" "20040132293" "20040252270" "20050017302" "20050082541" "20050084999" "20050104071" "20050164423" "20050199959" "20050231107" "20050233509" "20050250308" "20050259206" "20050275038" "20060035452" "20060043377" "20060054888" "20060108529" "20060113536" "20060113565" "20060113549" "20060113565" "20060113549" "20060113565" "20060170067" "20060170111" "20060183274" "20060197092" "2006028977" "20060238135"	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:36

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		near2 semiconductor))	USPAT; USOCR			16:48
S29 (0	(source drain) with (ozide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:49
S30 [5583	(source drain) with (oxide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S31	371	(buffer with (source drain) with (oxide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S32	118	(buffer with (source drain) with (oxide near2 semiconductor) with channel)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S33 2	24	S32 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:04
534	108	("20010046027" "20020056838" "20020132454" "20030189401" "20030218222" "20040038446" "20040127038" "20050017302" "20050199959" "20060035452" "2006013529" "2006019733" "20060110867" "20060113536" "20060113565" "20060113536" "20060113565" "20060169973" "20060170111" "20060197092" "20060231882" "20060238135" "20060241107" "20060284171" "2006024172" "20060284171" "2006024172" "20060284171" "20070052025" "20070046191" "20070052025" "20070054507" "20070072439" "20070152217" "20070172591" "20070152217" "20070172591" "20070152217" "20070172591" "20070157678" "20070172591" "20070175291" "200701725928" "20070194379" "2007025228" "200700724399 "20080038882" "2008008877" "20080038882" "2008008877" "20080038882" "20080106191" "20080038882" "20080129195" "20080166834" "20080182358" "20080254569" "20080129195" "20080258140" "20080258139" "20080258140" "20080258139" "20080258140" "20080258141" "20080258143" "20080258139" "2008030876" "20080308797" "2008030876" "20080308797" "2008030876" "2008026668" "2008030876" "20080258141" "2008030876" "20080258141" "2008030876" "20080258141" "2008030876" "20080308797" "20080308864" "20080308797" "20080308864" "20080258141" "2008030876" "20080258141" "2008030876" "20080258141" "2008030876" "2009008639" "2008030876" "2009008639" "20090073325" "20090086377" "2009007325" "20090086773" "2009007325" "20090086773" "2009007325" "20090086773" "2009007325" "20090086773" "2009007325" "20090152541" "20090278122" "20090286600" "20100025678" "20110012118" "5731856" "5744864" "5847410" "6294274" 6563174" 6586346" "6727522" 6960812" "7049190" "7061014" "7064346" "7105868" "7211825" "7282782" "7297977"	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:08

		"7301211" "7323356" "7385224").PN. OR ("7402506" "7411209" "7453065" "7453087" "7462862" "7468304" "7501293" "7674650" "7732819" "7915075").PN. OR ("8021917").URPN.				
S35	43	S34 and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:10
S36	0	S34 and ((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:10
S37	54124	((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
S38	217	S37 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
S39	164	S38 not (angle adj implant\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:15
S40	3037	((taper incline decline angle) near3 (side sidewall surface) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:23
S41	178	(tft (thin adj film adj transistor)) and S40	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:24
S42	10	"US 7081641"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 17:29
S43	11	("20050056897" "6569707" "6858527").PN. OR ("7081641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:30
S44	48	((taper near2 angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:40
S45	32689	((taper angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:41
S46	161	S45 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S47	243	((taper angle) near3 ((source drain) adj electrode))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S48	243	(taper angle) near3 ((source drain) adj electrode)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S49	206	(tft (thin adj film adj transistor)) and S48	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:43
S50	69	S25 and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:53
S51	519	(source drain) near3 (tilt adj angle)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56 USE EXHIBIT 100

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	54	S51 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56
S53	5614	S8 S9 S10	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
354	3354	S53 and (tft (thin adj film)) and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
355	145	S53 and (tft (thin adj film)) and ((angle taper) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:00
356	5	"US 7564058"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 18:04
S57	20	("20020043662" "20030148561" "20030213959" "20030234424" "20040189188" "4797108" "5028551" "5151806" "5640067" "6037197" "6121660" "6388270" "6433363" "6448116" "6476416" "6639244" "6709901").PN. OR ("7564058").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:04
S58	8	S57 and angle	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:05
659	218	("20030189401" "20080128689" "20080308796" "20080308806" "7061014" "20060110867" "20060284172" "20080258141" "20090068773" "20060244107" "5847410" "6563174" "20020132454" "20060231882" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090152541" "6294274" "7402506" "7411209" "20110012118" "7915075" "7462862" "20060108529" "20060113565" "20060169973" "20060128974" "20060292777" "20060228974" "20080106191" "5731856" "7385224" "7732819" "20080203387" "2009008639" "20100025678" "20030218222" "20100025678" "20030218222" "20070194379" "2008006877" "20080038882" "2008006877" "20080038882" "2008006877" "2008003882" "2008006877" "20080258140" "20090278122" "20090280600" 7049190" "20070172591" "20080254569" "20070172591" "20080296568" "20010046027" "20080296568" "20060113539" "20070052025" "7211825" "7453065" "7674650" "20080182358" "20090073325" "7453087" "7501293" "20070072439" "7282782"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/18 18:08

		"20070187760" "20080308797" "5744864" "6586346" "6727522" "6960812" "7301211" "20060035452" "20060091793" "20060108636" "20060113549" "20060197092" "20070090365" "20080166834" "20090134399" "7064346" "7468304" "20050199959" "20070108446" "7297977" "20080308804" "20080308805" "20090065771"				
		"20040038446" "20040127038" "20050017302" "20060043377" "20060113536" "20060170111" "20070046191" "20070252928" "20070272922" "20080073653" "20080129195" "20080258143" "20090114910" "7105868" "7323356").PN.				
S60	18460	(tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:28
S61	133336	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:29
S62	10304	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:29
S63	1628	S61 and S62	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:29
S64	34920	((angle taper gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:30
S65	193	S64 and S62	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:30
S66	1	("20120132910").PN.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:00
S67	10	("20110318916" "20120058599" "8021917" "8030663" "8115201").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:01
S68	11	S66 S67	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:01
S69	5731	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT		ON	2012/09/26 22:04
S70	294	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S71	62	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04

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S72	5942	S69 S70 S71	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S73	5403	S72 and (tft (thin\$1film) (thin adj film))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S74	3556	S73 and (angle taper)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S75	878	S73 and ((angle taper) with electrode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:05
S76	133560	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S77	10334	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S78	1631	S76 and S77	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S79	532	S72 and S78	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:06
S80	89	((angle taper gradation stair) near3 (source drain)) and S77 and S72	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:08
S81	5466	(257/59).OCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:19
S82	5099	(257/72).OOLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:19
S83	45	((angle taper gradation stair) near3 (source drain)) and S77 and S81	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S84	40	((angle taper gradation stair) near3 (source drain)) and S77 and S82	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S85	60	S83 S84	US-PGPUB; USPAT;	OR	ON	2012/09/26 22:19

	ļ		USOCR	ļ		
S86	674	(257/e29.277).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:21
S87	311	(257/e21.535).COLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:24
S88	1543	(438/158).OCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:27
S89	15	((angle taper gradation stair) near3 (source drain)) and S77 and S88	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:27
S90	3682	(438/149).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:28
S91	17	((angle taper gradation stair) near3 (source drain)) and S77 and S90	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:28
S95	6242	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S96	356	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S97	75	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S98	6489	S95 S96 S97	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/01 10:27
S99	142606	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S100	11746	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S101	1860	S99 and S100	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S102	600	S98 and S101	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/01 10:27
S103	5191	(semiconductor near5 ((indium in) and (gallium ga) and (zinc zn)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 02:30
S104	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30
S105	1268	S103 and S104	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30

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S106 1	000	(IN\$2ga\$2zn)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	Un	ON	2013/08/12 02:33
5107 2	268	("20030189401" "20050050897" "20060110867" "20080258141" "20080128689" "20080258141" "20090068773" "7061014" "20090189155" "20020132454" "20060231882" "20060244107" "20060284171" "20070054507" "20060284171" "20070254507" "20060284171" "20070254507" "20060284171" "20070254507" "20080224133" "20080258139" "20090114917" "20090152541" "2010044711" "20110318916" "20120132910" "5847410" "6294274" "6563174" "7323368" "7402506" "7411209" 8030663" "8115201" 8158464" "20060168529" "20060113565" "2006016973" "20060228974" "2006016973" "2008050595" "2008016191" "20100065844" "2010117086" "5731856" "20080168254" "2008008387" "2008018828" "2008008387" "20080083950" "20080283135" "20080083950" "20090278122" "20080083950" "20080283135" "20080083950" "20090278312" "200802884569" "20080038929" "2008028838" "20010046027" "2008	US-PGPUB; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01

		"20080258143" "20080308804" "20080308805" "20090065771" "20090114910" "20100092800" "20120058599" "7105868" "7297977" "7323356" "20100003783").PN.				
S108	6320	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S109	368	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S110	77	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S111	6569	S108 S109 S110	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01
S112	143950	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S113	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S114	1895	S112 and S113	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S115	617	S111 and S114	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01
S116	133	("20030189401" "20050050897" "20060110867" "20060284172" "20080128689" "20080258141" "20080308796" "20080308806" "20090068773" "7061014" "20090189155" "20020132454" "20060231882" "20060244107" "20060284171" "2007054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090114917" "20090152541" "20190114917" "20090152541" "20120132910" "5847410" "6294274" "6563174" "7323368" "7402506" "7411209" "8030663" "8115201" "8158464" "20060108529" "20060113565" "20060169973" "20060228974" "20060169973" "2008050595" "20080106191" "20100065844" "20100117086" "5731856" "7385224" "7462862" "7732819" "20070024187" "2008006877"	US-PGPUB; USPAT; FPRS; EPO; JPO; IBM_TDB	OR	ON	2013/08/12

EAST	Search	History
LUNDI	Search	motory

7						
		"20080038882" "20080038929" "20080083950" "20080203387" "20080254569" "20080258140" "2009008639" "20100025678" "7049190" "20090189156" "8134156" "20010046027" "20020056838" "20060113539" "20060208977" "20060238135" "20060208977" "20060238135" "20080296568" "20100109002" "7211825" "7453065" "20080182358" "20090073325" "6532045" "7453087" "7501293" "7674650" "8021917" "20050056897" "20060035452" "20060197092" "20070072439" "20060198636" "20070113549" "20060197092" "20070072439" "20070187760" "20080166834" "20080308797" "20090134399" "20090152506" "5744864" "6586346" "6727522" "6960812" "7064346" "7282782" "7298084" "7301211" "7468304" "20090186445" "8368079" "20050017302" "20050113536" "20040038446" "20050113536" "20050017302" "20070108446" "20060143377" "20060113536" "20070046191" "20070108446" "20080073653" "20070272922" "20070046191" "20080129195" "20080073653" "20070272922" "20080073653" "20070272922" "20080073653" "20070272922" "20080073653" "20080129195" "20080073653" "20080308804" "20120058599" "7105868" "7297977" "7323356" "20120003783").PN.				
S117	2	"US 20130214270"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2013/12/11 01:46
S118	1	("20060033098").PN.	US-PGPUB; USPAT	OR	OFF	2013/12/11 01:57
S119	6558	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/11 02:41
S120	385	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/11 02:41
S121	82	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/11 02:41
S122	6814	S119 S120 S121	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/11 02:41
S123	148280	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
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USPAT; USOGR OR 02: S126 649 S122 and S125 US-RGPUB; USAT; USOGR; PPPS; EPC; JPO; DERWENT; IBM TDB OR ON 20: S127 6765 ((SHUNPE) near2 (YAMAZAKI)).INV. USPAT; USOR; PPS; EPC; JPO; DERWENT; IBM TDB OR ON 20: S128 395 ((KENGO) near2 (AKIMOTO).INV. USPAT US-RGPUB; USPAT OR ON 20: S129 87 ((DAISUKE) near2 (KAWAE)).INV. USPAT US-RGPUB; USPAT OR ON 20: S130 7028 S127 S128 S129 US-RGPUB; USPAT; USOCR; PPC; JPO; DERWENT; IBM_TDB OR ON 20: S131 151627 ((angle taper step gradation stair) near3 (source drain)) US-RGPUB; USPAT; USOCR; PPR; PPO; JPO; DERWENT; IBM_TDB OR ON 20: S132 13059 (ftf (thin adj film adj transistor)) and (fbottom adj gate) bottom\$tgate) US-RGPUB; USPAT; USOCR; PPR; PPO; JPO; DERWENT; IBM_TDB OR ON 20: S133 2067 S131 and S132 US-RGPUB; USPAT; USOCR; PPR; PPS; EPO; JPO; DERWENT; IBM_TDB OR ON 20: S134 680 S130 a	S124	12541	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
Image:	S125	1990	S123 and S124	USPAT;	OR	ON	2013/12/11 02:41
Image: State in the s	S126	649	S122 and S125	USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2013/12/11 02:41
Line USPAT USPAT Instruction Instruction<	S127	6765	((SHUNPEI) near2 (YAMAZAKI)).INV.	51	OR	ON	2014/03/23 19:33
Image: State in the s	S128	395	((KENGO) near2 (AKIMOTO)).INV.	(C C C C C C C C C C C C C C C C C C C	OR	ON	2014/03/23 19:33
Image: Second	S129	87	((DAISUKE) near2 (KAWAE)).INV.	5	OR	ON	2014/03/23 19:33
Image: Source drain USPAT; USOCR USPAT; USOCR Instant \$132 13059 (tft (thin adj film adj transistor)) and (toottom adj gate) bottom\$1gate) US-PGPUB; USOCR OR ON 20 \$133 2067 \$131 and \$132 US-PGPUB; USOCR OR ON 20 \$134 680 \$130 and \$133 US-PGPUB; USOCR; OR ON 20 \$135 9 "2008205451" US-PGPUB; USOCR; OR ON 20 \$136 10 "2005223049" US-PGPUB; USOCR; OR ON 20 \$137 10 "2005223049" US-PGPUB; USOCR; OR ON 20	S130	7028	S127 S128 S129	USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2014/03/23 19:33
((bottom adj gate) bottom\$1gate) USPAT; USOCR Image: Constraint of the symbolic o	S131	151627		USPAT;	OR	ON	2014/03/23 19:33
Image: Single interview of the sector of the sect	S132	13059		USPAT;	OR	ON	2014/03/23 19:33
USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB USPAT; USOCR; FPRS; EPO; JPO; DERWENT; ISOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB ON 20 \$135 9 "2008205451" US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB OR ON 20 \$136 10 "2005223049" US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB OR ON 20	S133	2067	S131 and S132	USPAT;	OR	ON	2014/03/23 19:33
USPAT; USOCR; FPRS; EPO; JFO; DERWENT; IBM_TDBUSPAT; USOCR; FPRS; EPO; JFO; DERWENT; IBM_TDBON20\$13610"2005223049"US-PGPUB; USPAT; USOCR; FPRS; EPO; JFO; DERWENT; IBM_TDBORON20	S134	680	S130 and S133	USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2014/03/23 19:33
USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	S135	9	"2008205451"	USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2014/03/23 19:34
	S136	10	"2005223049"	USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2014/03/23 19:34
	S137	3	"07064112"	USPAT;	OR	ON	2014/03/23 19:34

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			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S138	13059	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S139	6584	(257/59).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S140	48	((angle taper gradation stair) near3 (source drain)) and S138 and S139	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S141	4077	(438/149).OCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S142	18	((angle taper gradation stair) near3 (source drain)) and S138 and S141	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S143	1947	(438/158). OCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S144	17	((angle taper gradation stair) near3 (source drain)) and S138 and S143	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S145	17	S144	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S146	320	(257/e21.535).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S147	72	S140 S142 S144	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM TDB	OR	ON	2014/03/23 19:58
S151	7097	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S152	423	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S153	98	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S154	7378	S151 S152 S153	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25 07:57
S155	157340	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
S156	13935	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
S157	2186	S155 and S156	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
S158	721	S154 and S157	US-PGPUB;	OR	ON	2014/08/25

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		USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			07:57
5159 318	<pre>("20080128689" "20030189401" "20080308796" "20080308806" "7061014" "20060110867" "20060284172" "20080258141" "20090068773" "20050050897" "7323368" "20060244107" "5847410" "6563174" "20020132454" "20060231882" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090152541" "6294274" "7402506" "7411209" "20110318916" "8030663" "8115201" "20120132910" "2009014917" "20100044711" "20060108529" "20060113565" "200801061973" "20080050595" "20080106191" "5731856" "20080106191" "5731856" "20080106191" "5731856" "20080106191" "5731856" "20080106191" "5731856" "2008006839" "20100025678" "2008006839" "20100025678" "2008008639" "20070024187" "2009008639" "20080038822" "20080088929" "20080083950" "20080038929" "20080083950" "200802545669" "20080258140" "20080254569" "20080258140" "20080254569" "2008028842" "20080038929" "20080083950" "20080254569" "2008028914" "20070172591" "20080028977" "20080038929" "20080028977" "20080038929" "2008028977" "2006013393" "20070052025" "7211825" "7453065" "6532045" "7501293" "8021917" "2006013839" "20070158652" "721825" "7453085" "6532045" "7501293" "20080182358" "20080308797" "5744864" "20070073259" "20080182358" "20080308797" "5744864" "20080308797" "5744864" "20080308797" "5744864" "20080308797" "5744864" "20080308797" "5744864" "20080197092" "2007018346" "20080197092" "20070193499" "20060197092" "20070193499" "20060197092" "20070108446" "20070272922" 2008038804" "20080196792" "200701336" "20080196792" "200701336" "20080197092" "2008013356" "20080197092" "2008073653" "20080114910" "7105868" "20080114910" "7105868" "7297977" "73233</pre>	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/2

21.00	1000	"20120058599" "20060292726").PN.				
5160	1802	S157 and ("257".clas. "438".clas.)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 08:50
5161	11	("3890632" "4015279" "4054894" "4252574" "4272880" "5041913" "5075244" "5498894" "5652453" "5698885" "6060751").PN. OR ("6600196").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 08:56
5162	23	("2005/0205870").URPN.	USPAT	OR	ON	2014/08/25 09:00
S163	34	S161 S162	USPAT	OR	ON	2014/08/25 09:13
S164	5	("2006/0033098").URPN.	USPAT	OR	ON	2014/08/2 09:46
5165	59	("20010046611" "20020045289" "20020093283" "20020101154" "20020121860" "20020139303" "20030015698" "20030085398" "20030092214" "20030092232" "20030213952" "20030218166" "20040012017" "20040075093" "20040108562" "20040161192" "20040206959" "20050042548" "20050057136" "20050084712" "20050098207" "20050170208" "20050020136" "20060033098" "20060020136" "20060033098" "2006002136" "20060046096" "200600237731" "20060232203" "20060237731" "20060238112" "20060237731" "20060238112" "20060270066" "20060273303" "2007007516" "20070031701" "20080048183" "20080099757" "20090267077" "4981768" "5487953" "6486601" "6589673" "6951694" "7158161" "7387904" "7462883" "7521855" "7545840" "7649197" "7667389" "7683532" "7714501").PN. OR ("8049208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 09:48
5166	17	("2004/0012017").URPN.	USPAT	OR	ON	2014/08/2 09:51
5167	11	("2004/0108562").URPN.	USPAT	OR	ON	2014/08/25 09:53
S168	1	("20090134383").PN.	US-PGPUB; USPAT	OR	OFF	2014/08/2 10:08
5169	9	"2006126363"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/29 10:11
5170	40	(US-20100117077-\$ or US- 20050017302-\$ or US-20060043377-\$ or US-20060197092-\$ or US- 20060228974-\$ or US-20060231882-\$ or US-20070090365-\$ or US-	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2014/08/2 10:56

		20070108446-\$ or US-20070172591-\$ or US-20080038882-\$ or US- 20080283831-\$ or US-20090166616-\$ or US-20090186437-\$ or US- 20100301325-\$ or US-20100117086-\$ or US-20090114917-\$ or US- 20100044711-\$ or US-20050056897-\$ or US-20060027804-\$ or US- 20060292726-\$ or US-20080073653-\$ or US-20130214270-\$ or US- 20060033098-\$ or US-20050205870-\$ or US-20040108562-\$ or US- 20080099757-\$).did. or (US- 20080099757-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (JP- 20090126363-\$).did. or (JP- 2007123861-\$ or JP-2007096055-\$ or JP-07064112-\$ or JP-2005223049- \$).did. or (US-20070072439-\$ or JP- 2007096055-\$ or JP-2008205451- \$).did.				
S171	16	S170 and buffer	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25 10:56
S173	7408	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
S174	447	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
S175	102	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
S176	7696	S173 S174 S175	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:41
S177	161896	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41
S178	14662	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41
S179	2301	S177 and S178	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41
S180	767	S176 and S179	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:41
	<u> </u>	(US-20100117077-\$ or US-	US-PGPUB;	<u></u>	ON	2014/12/23

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		20080283831-\$ or US-20090166616-\$ or US-20090186437-\$ or US- 20100301325-\$ or US-20100117086-\$ or US-20090114917-\$ or US- 20100044711-\$ or US-20050056897-\$ or US-20060027804-\$ or US- 20060292726-\$ or US-20080073653-\$ or US-20130214270-\$ or US- 20060033098-\$ or US-20050205870-\$ or US-20040108562-\$ or US- 20080099757-\$).did. or (US- 20090134383-\$).did. or (US- 2007123861-\$ or JP-2005223049- \$).did. or (US-20070072439-\$ or JP- 2007096055-\$ or JP-2008205451- \$).did.				
S182	3792	(257/43).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:46
S183	2191	(257/e29.151).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:46
S184	2413	(257/e21.414).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S185	2127	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S186	2423	(438/104).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S187	127	S185 and S186	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; I BM_TDB	OR	ON	2014/12/23 22:48
S188	1321	S178 and S182	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:48
S189	453	S178 and S183	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:48
S190	919	S178 and S184	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;		ON	2014/12/23 22:48

			DERWENT; IBM TDB		
S191	2471	S188 S189 S190	US-PGPUB; OR USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM TDB	ON	2014/12/23 22:48
S192	416	S179 and (S185 S186)	US-PGPUB; OR USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	ON	2014/12/23 22:49
S193	4	"42621714".FMID.	US-PGPUB; OR USPAT; FPRS	ON	2014/12/23 22:51
S194	137	(*20010046027" "20020056838" "20020132454" "20030189401" "20030218222" "20040038446" "20040127038" "20050017302" "20050199959" "20060035452" "20060108529" "20060108636" "20060110867" "20060113536" "20060113539" "20060113549" "20060113565" "20060154397" "20060169973" "20060154397" "20060169973" "2006028977" "2006028974" "2006028977" "2006028974" "20060284172" "20060284171" "20060284172" "20060284171" "20060284172" "20070046191" "20070052025" "20070054507" "20070054187" "20070054507" "20070052025" "20070054507" "20070052025" "20070187760" "20070152217" "20070172591" "20070152217" "20070187760" "20070152217" "20070252928" "20070187678" "20070252928" "2008006877" "20070287296" "2008006877" "2008008083950" "2008016191" "2008008083950" "2008016191" "20080128689" "20080129195" "20080254569" "20080129195" "20080258140" "20080122173" "20080258140" "20080122173" "20080258140" "20080122173" "20080258140" "20080122173" "20080258140" "20080122173" "20080258140" "20080122138" "20080258140" "20080122138" "20080258140" "20080122138" "20080258143" "20080258139" "20080258144" "20080258139" "20080308804" "20080258139" "20080308804" "20080308395" "20080308804" "20080308395" "20080308804" "20080308395" "20090134399" "20090186437" "20090186445" "20090186437" "20090186445" "20090186437" "20090186445" "20090280600" "20090189156" "20090280600" "20090305461" "2010003783"	US-PGPUB; OR USPAT; USOCR	ON	2014/12/23

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	1	("20070072439").PN.	US-PGPUB; USPAT		OFF	2015/02/26 01:39
	7544	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
S203	462	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
5204	107	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
S205	7840	S202 S203 S204	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/26 02:17
5206	164051	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
5207	15029	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
S208	2358	S206 and S207	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
S209	787	S205 and S208	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/26 02:17
S210	167	US-7323368-\$.DID. OR US- 20070272922-\$.DID. OR US- 20070158652-\$.DID. OR US- 20080128689-\$.DID. OR US-7298084- \$.DID. OR US-6532045-\$.DID. OR US- 20070108446-\$.DID. OR US- 20070072439-\$.DID. OR US- 20070072439-\$.DID. OR US-5847410- \$.DID. OR US-6586346-\$.DID. OR US- 20030189401-\$.DID. OR US-6960812- \$.DID. OR US-6727522-\$.DID. OR US-	US-PGPUB; USPAT; USOCR; JPO	OR	ON	2015/02/26 02:17

7061014-\$.DID. OR US-20080296568-\$.DID. OR US-20080308806-\$.DID. OR US-20080308805-\$.DID. OR US-20080308804-\$.DID. OR US-20080308797-\$.DID. OR JP-2007123861-\$.DID. OR JP-05172007-\$.DID. OR JP-03231472-\$.DID. OR JP-10151991-\$.DID. OR US-1505377-\$.DID. OR US-20080308796-\$.DID. OR US-20090008639-\$.DID. OR US-20070172591-\$.DID. OR US-20070187760-\$.DID. OR US-20080203387-\$.DID. OR US-20090065771-\$.DID. OR US-7301211-\$.DID. OR US-20060244107-\$.DID. OR US-5744864-\$.DID. OR US-20100025678-\$.DID. OR US-7674650-\$.DID. OR US-6563174-\$.DID. OR US-20070152217-\$.DID. OR US-20060035452-\$.DID. OR US-20040127038-\$.DID. OR US-20080182358-\$.DID. OR US-20060292777-\$.DID. OR US-20070187678-\$.DID. OR US-20060284172-\$.DID. OR JP-08264794-\$.DID. OR JP-10111996-\$.DID. OR JP-2007250983-\$.DID. OR JP-09272007-\$.DID. OR WO-2004114391-\$.DID. OR US-4451680-\$.DID. OR US-7385224-\$.DID. OR US-20080129195-\$.DID. OR US-20080258139-\$.DID. OR US-20070252928-\$.DID. OR US-7501293-\$.DID. OR US-7064346-\$.DID. OR US-20080106191-\$.DID. OR US-5731856-\$.DID. OR US-20060231882-\$.DID. OR US-20080258143-\$.DID. OR US-20080166834-\$.DID. OR US-20060238135-\$.DID. OR US-20060208977-\$.DID. OR US-20090073325-\$.DID. OR US-20090068773-\$.DID. OR US-20080258140-\$.DID. OR US-7402506-\$.DID. OR US-20060284171-\$.DID. OR US-20090152541-\$.DID. OR JP-2003086808-\$.DID. OR JP-03202003-\$.DID. OR JP-60198861-\$.DID. OR JP-10081985-\$.DID. OR JP-63210022-\$.DID. OR JP-63210023-\$.DID. OR JP-08311988-\$.DID. OR JP-63210024-\$.DID. OR US-20080050595-\$.DID. OR US-7105868-\$.DID. OR US-20020056838-\$.DID. OR US-20020132454-\$.DID. OR US-20080083950-\$.DID. OR US-20080258141-\$.DID. OR US-20080224133-\$.DID. OR US-20090134399-\$.DID. OR US-7211825-\$.DID. OR US-20070024187-\$.DID. OR US-20010046027-\$.DID. OR US-20080038882-\$.DID. OR US-7049190-\$.DID. OR US-20040038446-\$.DID. OR US-20060228974-\$.DID. OR US-20060113565-\$.DID. OR US-20090114910-\$.DID. OR US-

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S211	20080038929-\$.DID. OR US- 20070287296-\$.DID. OR JP-63239117- \$.DID. OR JP-10051986-\$.DID. OR JP- 63265818-\$.DID. OR JP-11021988- \$.DID. OR US-220687-\$.DID. OR EP- 09082010-\$.DID. OR US-1737044- \$.DID. OR US-20060113549-\$.DID. OR US-7411209-\$.DID. OR US-7453087- \$.DID. OR US-20080073653-\$.DID. OR US-7468304-\$.DID. OR US- 20070046191-\$.DID. OR US- 20060113536-\$.DID. OR US- 20060113539-\$.DID. OR US- 20060108529-\$.DID. OR US- 20060108529-\$.DID. OR US- 20060113639-\$.DID. OR US- 20060113639-\$.DID. OR US- 20060113639-\$.DID. OR US- 20060113639-\$.DID. OR US- 20060113639-\$.DID. OR US- 20050017302-\$.DID. OR US- 200276356-\$.DID. OR US- 2002076356-\$.DID. OR JP- 2004273614-\$.DID. OR JP- 2004273614-\$.DID. OR JP- 2008205451-\$.DID. OR JP- 20090278122-\$.DID. OR US- 7282782-\$.DID. OR US- 7282782-\$.DID. OR US- 7282782-\$.DID. OR US- 20090278122-\$.DID. OR US- 20090278122-\$.DID. OR US- 20090278122-\$.DID. OR US- 20090278122-\$.DID. OR US- 20090278122-\$.DID. OR US- 20100092800-\$.DID. OR US- 20100092800-\$.DID. OR US- 20100092800-\$.DID. OR US- 2010009280-\$.DID. OR US- 2010002780-\$.DID. OR US- 2010002780-\$.DID. OR US- 20100047711-\$.DID. OR US- 20100047711-\$.DID. OR US- 20100047711-\$.DID. OR US- 20100047711-\$.DID. OR US- 20050050897-\$.DID. OR US- 20060027804-\$.DID. OR US- 20060027804-\$.DID. OR US- 20060027804-\$.DID. OR US- 20060027804-\$.DID. OR US- 20060027804-\$.DID. OR US- 20060027804-\$.DID. OR US- 20060027804-\$.DI	US-PGPUB;	OR	OFF	2015/06/08
UL I I		USPAT			14:15

Ref #	Hits Search Query		DBs	Default Operator	Plurals	Time Stamp	
L190	1	"Term Removed"	USPAT	OR	ON	2015/06/18 00:28	
L220	1028	H01L29/41733.cpc.	US- PGPUB; UP A D	OR	ON	2015/06/18 01:05	
L221	911	H01L29/41733.cpc.	USPAT	OR	ON	2015/06/18 01:05	
L225	1309	(substrate and gate and source and drain and ((sidewall (side adj surface)) near5 step)).clm.	US- PGPUB; USPAT; UPAD	OR	ON	2015/06/18 01:11	
L226	88	(substrate and gate and source and drain and ((sidewall (side adj surface)) near5 step) and (oxide adj semiconductor) and metal).clm.	US- PGPUB; USPAT; UPAD	OR	ON	2015/06/18 01:11	
S92	1300	(257/57).OCLS.	US- PGPUB; USPAT; UPAD	OR	OFF	2012/09/26 22:18	
S93	16	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and oxide and (angle with (bottom top))).clm.	US- PGPUB; USPAT; UPAD	OR	ON	2012/09/26 23:11	
S94	9	(((source adj electrode) with (angle with (bottom top))) and ((drain adj electrode) with (angle with (bottom top)))).clm.		OR	ON	2012/09/26 23:13	
S148	1694	(257/57).OCLS.	US- PGPUB; USPAT; UPAD	OR	OFF	2014/03/23 19:32	
S149	12	(((source adj electrode) with (angle with (bottom top))) and ((drain adj electrode) with (angle with (bottom top)))).clm.	US- PGPUB; USPAT; UPAD	OR	ON	2014/03/23 19:32	
S150	21	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and oxide and (angle with (bottom top))).clm.	US- PGPUB; USPAT; UPAD	OR	ON	2014/03/23 19:32	
S172	1	"Term Removed"	USPAT	OR	ON	2014/08/25 10:56	
S195	1	"Term Removed"		OR	ON	2014/12/23 22:41	
S196	1827	7 (257/57).OOLS.		OR	OFF	2014/12/23 22:41	
S197	179	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and (oxide adj semiconductor) and (step near5 (source drain))).clm.		OR	ON	2014/12/23 22:42	
S198	311	((gate adj electrode) and (source adj electrode) and (drain adj electrode) and (oxide adj semiconductor) and (step with	US- PGPUB; USPAT;		ON	2014/12/23 22:43 JSE EXHIBIT 1	

EAST Search History (Interference)

S199	la	((aste adi alactr	ode) and (source adj	US-	OR	ON	2014/12/23
มษษ	9					UN	
			drain adj electrode) and	PGPUB;			22:43
			onductor) and (step with	USPAT;			
	<u>.</u>	side with (source	e drain))).cim.	UPAD	<u></u>	l	
200	180	("20010030323"	"20010046027"	US-	OR	ON	2014/12/23
		"20020044111"	"20020056838"	PGPUB;			22:43
		20020132454"	"20020185466"	USPAT			
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		"20040038446"	"20040127038"				
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		"20060170111"	"20060197092"				
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		"20060244107"	"20060267141"				
		"20060284171"	"20060284172"				
		"20060292777"	"20070024187"				
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		"20070108446"	"20070152217"				
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			.PN. OR ("20090152506"				
		"20090152541"	"20090186437"				
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		"20090186445 "20090189156"	"20090189155 "20090278122"				
		S	"20100025678"				
		"20090280600"	•				*****
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"8343799").PN. OR ("8686417").URPN.		"5338959" "573185 "5755938" "5847410 "6294274" "6359672 "6563174" "6586346 "6762802" "6767847 "6900872" "6960812 "7061014" "7064346 "7105868" "7199846 "7282782" "7297977 "7323356" "7358592 "7402506" "7411209 "7453087" "7462862 "7501293" "7462862 "7501293" "7462862 "75935964" "7960730 "7998372" "8030195 "8207756" "8236635 "8304765" "8309961	10062436" 20286267" "5256897" 6" "5744864" " "6124606" " "6558987" " "6727522" " "6838308" " "7049190" " "7071037" " "7211825" " "7301211" " "7385224" " "7468304" " "7468304" " "7714329" " "7772021" " "7982215" " "8168544" " "819215"			
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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2816

Symbol				Туре	Version	
H01L	29	4	1733	F	2013-01-01	
H01L	51	0 V	512	1	2013-01-01	
H01L	51	0	508	1	2013-01-01	
H01L	51	0	545	1	2013-01-01	
H01L	29	4	908	1	2013-01-01	
H01L	51	1	05	1	2013-01-01	
H01L	21	0	2554	А	2013-01-01	
H01L	21	0	2565	А	2013-01-01	
H01L	21	0	2631	А	2013-01-01	
H01L	27	1	225	1	2013-01-01	
H01L	29	7	869		2013-01-01	
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H01L	29	7	86		2013-01-01	
H01L	27	1	288		2013-01-01	

CPC Combination Sets										
Symbol	Туре	Set	Ranking	Version						

/JEREMY JOY/ Examiner.Art Unit 2816	06/18/2015		ns Allowed:		
(Assistant Examiner)	(Date)	20			
/MARVIN PAYEN/ Primary Examiner.Art Unit 2816	06/29/2015	O.G. Print Claim(s)	O.G. Print Figure		
(Primary Examiner)	(Date)	1	2		
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U.S. Patent and Trademark Office

Part of Paper No. 20150618

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2816

	US ORIGINAL CLASSIFICATION								INTERNATIONAL	CL	ASS	IFIC	ΑΤΙ	ON	
	CLASS			SUBCLASS			CLAIMED NON-CLAI		CLAIMED						
257			57			Н	0	1	L	29 / 786 (2006.01.01)	Н	0	1	L	21 / 28 (2006.01.01)
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/JEREMY JOY/ Examiner.Art Unit 2816	iner.Art Unit 2816 06/18/2015		ns Allowed:
(Assistant Examiner)			0
/MARVIN PAYEN/ Primary Examiner.Art Unit 2816	06/29/2015	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

U.S. Patent and Trademark Office

Part of Paper No. 20150618

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Issue Classification	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2816

	Claims renumbered in the same order as presented by applicant						CPA T.D.			🔲 R.1.47					
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
-	1	18	17												
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/JEREMY JOY/ Examiner.Art Unit 2816	06/18/2015	Total Claims Allowed:			
(Assistant Examiner)	(Date)	20			
/MARVIN PAYEN/ Primary Examiner.Art Unit 2816	06/29/2015	O.G. Print Claim(s)	O.G. Print Figure		
(Primary Examiner)	(Date)	1	2		

U.S. Patent and Trademark Office

Part of Paper No. 20150618

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)				
Shunpei YAMAZAKI et al.					
Serial No. 14/451,680)				
Filed: August 5, 2014)				
For: SEMICONDUCTOR DEVICE AND)				
MANUFACTURING METHOD)				
THEREOF)				

Confirmation No. 5776

Group Art Unit: 2816

Examiner: Jeremy J. Joy

AFTER FINAL RESPONSE

Honorable Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

The Official Action mailed March 16, 2015, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

The Applicant notes with appreciation the consideration of the Information Disclosure Statement filed on August 29, 2014.

Claims 2-21 are pending in the present application, of which claims 2 and 11 are independent. No claim amendments are being made at this time. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 2 of the Official Action rejects claims 2-21 as obvious based on the combination of U.S. Publication No. 2008/0099757 to Furukawa and U.S. Publication No. 2007/0108446 to Akimoto. The Applicant respectfully traverses the rejection because the Official Action has not made a *prima facie* case of obviousness.

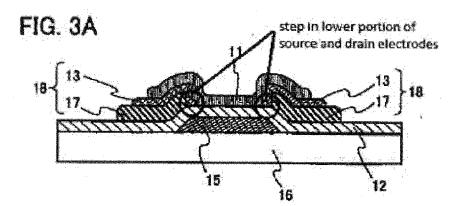
- 2 - Application Serial No. 14/451,680 Attorney Docket No. 0756-10566

As stated in MPEP §§ 2142-2144.04, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Independent claims 2 and 11 already recite *inter alia* a first metal film and a second metal film over the gate insulating film; and an oxide semiconductor film in contact with the first metal film and the second metal film. For the reasons provided below, Furukawa and Akimoto, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action asserts that Furukawa teaches "a first conductive film and a second conductive film over the gate insulating film (Fig. 3A, first and second conductive films 18); an organic semiconductor film in contact with the first and second conductive films (Fig. 3A, oxide semiconductor film 11); wherein a side surface of the first conductive film faces a side surface of the second conductive film; and wherein each of the side surface of the first conductive film has a step in a lower end portion thereof (Fig. 3A; ¶s 0115-0155 and

Application Serial No. 14/451,680 Attorney Docket No. 0756-10566



0183-0185)" (pages 2 and 3, Paper No. 20150226; Office's annotation of FIG. 3A of Furukawa reproduced above). The Official Action concedes that "Furukawa fails to teach the first and second conductive films are first and second metal films and an oxide semiconductor film formed on the first and second metal films rather than the organic semiconductor film" (page 3, Id.). Instead, the Official Action asserts that "Akimoto teaches using a metal films [sic] to form first and second conductive films (source/drain electrodes) and an oxide semiconductor film formed the first and second conductive films (source/drain electrodes) and an oxide semiconductor film formed the first and second conductive films [sic] in a display device similar to that of the applicant (Fig. 1A, first and second metal films 10a/11a, oxide semiconductor film 13; ¶ 0062-0066)" (Id.). The Applicant respectfully disagrees and traverses the assertions of the Official Action.

Furukawa discloses source and drain electrodes 18 each including a lower layer 17 and an upper layer 13 that covers an end portion of the lower layer 17. As shown in Fig. 3A of Furukawa (reproduced above with Office's annotations), an alleged step is formed by covering the end portion of the lower layer 17 with the upper layer 13 in Furukawa. On the other hand, Akimoto only potentially discloses that "[t]he source electrode 10 is formed with a layered film of the first conductive film 10a and the second conductive film 10b, and the drain electrode 11 is formed with a layered film of the first conductive film 11a and the second conductive film 11b." Akimoto at paragraph [0063]. With respect to the material, Akimoto discloses that "[a]s the second conductive film, ZnO (zinc oxide) to which a p-type or n-type impurity of B (boron), AI (aluminum), Ga

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- 3 -

(gallium), P (phosphorous), or As (arsenic) is added can be used." See, Akimoto at paragraph [0064].

In other words, Akimoto's second conductive film is a *metal oxide* film rather than a *metal* film and, as such, the upper layers 10b and 11b of the source and drain electrodes are formed of the metal oxide film. Therefore, there is no teaching in the prior art with respect to "a first *metal* film and a second *metal* film over the gate insulating film," "an oxide semiconductor film in contact with the first *metal* film and the second *metal* film," and the like, as recited in the independent claims. Since the alleged source electrode and drain electrode based on Akimoto are formed of a metal oxide film, not a metal film, in an upper layer thereof, Furukawa and Akimoto cannot be reasonably interpreted to teach the above-mentioned features of the present invention. Instead, it appears the Official Action has included knowledge well beyond that which was within the level of ordinary skill in the art at the time the claimed invention was made. Furthermore, the Official Action appears to have made inferences that could have only been gleaned from Applicant's disclosure based on impermissible hindsight.

Moreover, in view of the above-mentioned deficiency, there is no proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Furukawa and Akimoto or to combine reference teachings to achieve the claimed invention. MPEP § 2142 states that the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is respectfully submitted that the Official Action has failed to carry this burden.

Specifically, the Official Action asserts that it would have been obvious at the time of the invention to incorporate the teachings of Akimoto into the device of Furukawa "because metal films are well known in the art to be used to form source and drain electrodes" (page 4, Paper No. 20150226). However, even if *arguendo* Furukawa was modified to incorporate source 10 and drain 11 electrodes of Akimoto, then the upper layer covering an end portion of the lower layer of Furukawa's source and drain

- 5 - Application Serial No. 14/451,680 Attorney Docket No. 0756-10566

electrodes, including the alleged step portion shown in FIG. 3A above, would be formed of zinc oxide (i.e., a metal oxide) and the asserted rationale for combining Furukawa and Akimoto (i.e., "because metal films are well known in the art to be used to form source and drain electrodes") does not provide a proper reason for incorporating Akimoto's zinc oxide layers.

In any event, the proposed modification set forth by the Official Action, i.e., to replace Furukawa's layer 13 with a *metal oxide* of Akimoto does not arguably result in an oxide semiconductor film in contact with the first metal film and the second metal film, as claimed. Therefore, the Applicant respectfully submits that Furukawa and Akimoto, either alone or in combination, do not teach or suggest the above-mentioned limitations with respect to the first metal film and the second metal film and that the Official Action has not provided a proper or sufficient reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Furukawa and Akimoto or to combine reference teachings to achieve the claimed invention.

Since Furukawa and Akimoto do not teach or suggest all the claim limitations, and since there is no proper reason to combine Furukawa and Akimoto, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

- 6 -

Application Serial No. 14/451,680 Attorney Docket No. 0756-10566

The Commissioner is hereby authorized to charge fees under 37 C.F.R. §§ 1.16, 1.17, 1.20(a), 1.20(b), 1.20(c), and 1.20(d) (except the Issue Fee) which may be required now or hereafter, or credit any overpayment to Deposit Account No. 50-2280.

Respectfully submitted,

Eric J. Robinson Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, Virginia 22033 (571) 434-6789

Electronic Ac	Electronic Acknowledgement Receipt								
EFS ID:	22360993								
Application Number:	14451680								
International Application Number:									
Confirmation Number:	5776								
Title of Invention:	SEMICONDUCTOR DEVICE								
First Named Inventor/Applicant Name:	Shunpei YAMAZAKI								
Customer Number:	31780								
Filer:	Eric J. Robinson/Adele Stamper								
Filer Authorized By:	Eric J. Robinson								
Attorney Docket Number:	0756-10566								
Receipt Date:	15-MAY-2015								
Filing Date:	05-AUG-2014								
Time Stamp:	15:24:29								
Application Type:	Utility under 35 USC 111(a)								

Payment information:

Submitted with	Payment		no					
File Listing:								
Document Number	Document Description		File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)		
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I	Response Arter Final Action		610566.pdf	4976a7379d9dde91eb2dade01520c93867 ea4e52	110	0		
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Information:				BLUEHOUS	SE EXHIBIT 10	002		
					Page 146 of 2	246		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Unit	<u>ed States Patent</u>	TAND TRADEMARK OFFICE	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 22: www.uspto.gov	FOR PATENTS
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	Shunpei YAMAZAKI	0756-10566	5776
	7590 03/16/2015 ectual Property Law Off e Drive	EXAM JOY, JEI		
Fairfax, VA 220	033		ART UNIT	PAPER NUMBER
			2816	
			MAIL DATE 03/16/2015	DELIVERY MODE

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application 14/451,68		Applicant(s	
Office Action Summary	Examiner JEREMY		Art Unit 2816	AIA (First Inventor to File) Status No
The MAILING DATE of this communication app Period for Reply	pears on the	cover sheet with the c	corresponde	nce address
 A SHORTENED STATUTORY PERIOD FOR REPLY THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period V. Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). 	36(a). In no eve will apply and wil a, cause the appl	ent, however, may a reply be tin I expire SIX (6) MONTHS from ication to become ABANDONE	nely filed the mailing date D (35 U.S.C. § 1:	of this communication. 33).
Status				
1) Responsive to communication(s) filed on <u>12/1</u>				
A declaration(s)/affidavit(s) under 37 CFR 1.1	• •			
	s action is no		aat farth dur	ing the interview on
3) An election was made by the applicant in resp ; the restriction requirement and election		•		ing the interview of
 4) Since this application is in condition for alloward 		•		to the merits is
closed in accordance with the practice under E	•	•		
 Disposition of Claims* 5) ○ Claim(s) 2-21 is/are pending in the application 5a) Of the above claim(s) is/are withdraw 6) □ Claim(s) is/are allowed. 7) ○ Claim(s) 2-21 is/are rejected. 8) □ Claim(s) is/are objected to. 9) □ Claim(s) are subject to restriction and/o * If any claims have been determined allowable, you may be eleparticipating intellectual property office for the corresponding a http://www.uspto.gov/patents/init_events/pph/index.jsp or send Application Papers 10) □ The specification is objected to by the Examine 11) □ The drawing(s) filed on is/are: a) □ acc Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 	wn from cor ligible to ben upplication. Fo d an inquiry to er. cepted or b) drawing(s) b	equirement. efit from the Patent Pro e or more information, plea o <u>PPHfeedback@uspto.c</u> o bjected to by the l e held in abeyance. See	ase see <u>aov</u> . Examiner. e 37 CFR 1.8	5(a).
Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign Certified copies: a) All b) Some** c) None of the: Certified copies of the priority documen Certified copies of the priority documen Copies of the certified copies of the priority documen Copies of the certified copies of the priority documen ** See the attached detailed Office action for a list of the certified 	its have bee its have bee prity docume u (PCT Rule	en received. en received in Applicat ents have been receiv e 17.2(a)).	tion No	
Attachment(s) 1) X Notice of References Cited (PTO-892)		3) 🔲 Interview Summary	(PTO-413)	
	CD/OOL)	Paper No(s)/Mail Da		
2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/S Paper No(s)/Mail Date <u>08/29/2014</u> .	อธ/บชย)	4) 🔲 Other:		

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment to the claims filed on 12/11/2014 has been

acknowledged and entered. Claims 20-21 have been added. Final office action on the

merits is as follows:

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis

for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims **2-21** are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over *Furukawa et al.* (**U.S. Patent Pub. No. 2008/0099757**, from hereinafter "*Furukawa*) in view of *Akimoto* (**U.S. Patent Pub. No. 2007/0108446**).

Regarding Claim 2, Furukawa teaches a glass substrate (Fig. 3A, substrate

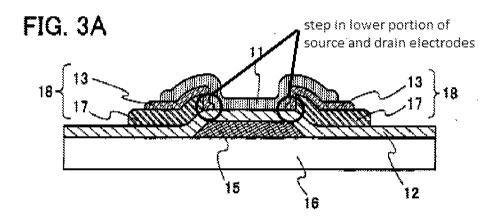
16); a gate electrode over the glass substrate (Fig. 3A, gate electrode 15); a gate

insulating film over the gate electrode (Fig. 3A, gate dielectric 12); a first conductive film

and a second conductive film over the gate insulating film (Fig. 3A, first and second

conductive films 18); an organic semiconductor film in contact with the first and second

conductive films (Fig. 3A, oxide semiconductor film 11); wherein a side surface of the first conductive film faces a side surface of the second conductive film; and wherein each of the side surface of the first conductive film and the side surface of the second conductive film has a step in a lower end portion thereof (Fig. 3A; ¶'s 0115-0155 and 0183-0185).



Furukawa fails to teach the first and second conductive films are first and second metal films and an oxide semiconductor film formed on the first and second metal films rather than the organic semiconductor film as disclosed.

Akimoto teaches using a metal films to form first and second conductive films (source/drain electrodes) and an oxide semiconductor film formed the first and second conductive films in a display device similar to that of the applicant (Fig. 1A, first and second metal films 10a/11a, oxide semiconductor film 13; ¶ 0062-0066).

In view of the teachings of *Akimoto*, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of *Furukawa* to include that the first and second conductive films are metal films and an

oxide semiconductor layer as the active semiconductor channel layer because metal films are well known in the art to be used to form source and drain electrodes as they provide low resistance materials that enhance current flow and perform well during device operation and oxide semiconductors are well known in the art of thin film transistors as they provide adequate channel mobility during device operation. Also, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding Claim 3, as in the combination above, *Furukawa* as modified by *Akimoto* teaches wherein the oxide semiconductor film is positioned on the first and second metal films (*Furukawa* - Fig. 3A, *Akimoto* – Fig. 1A).

Regarding Claim 4, as in the combination above, *Furukawa* as modified by *Akimoto* teaches wherein the first and second metal films are in contact with the gate insulating film (*Furukawa* - Fig. 3A, *Akimoto* – Fig. 1A).

Regarding Claim 5, as in the combination of *Furukawa* and *Akimoto* above, *Akimoto* teaches the oxide semiconductor film comprises zinc (¶ 0066).

Regarding Claim 6, *Furukawa* teaches the step lays flat on the substrate creating about a 90° angle which satisfies the claims in regards to the angle of inclination of the step in relation to the surface of the substrate (Fig. 2A).

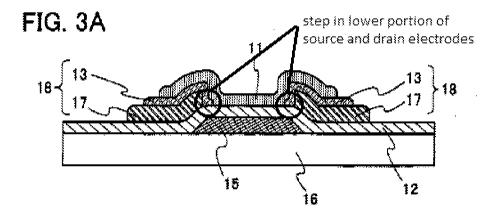
Regarding Claim 7, as in the combination above, *Akimoto* teaches a first buffer layer between the oxide semiconductor film and the first metal film and a second buffer layer between the oxide semiconductor film and the second metal film, wherein each of

the first buffer layer and the second buffer layer has a lower resistivity than the oxide semiconductor film (Fig. 1A, buffer layers 10b/11b; ¶0064).

Regarding Claims 8-10, *Furukawa* teaches the device comprising a pixel portion comprising: the semiconductor device as claimed above and a display element electrically connected to one of the source electrode and the drain electrode and more specifically wherein the display element is a liquid crystal element or a light emitting element (Fig. 8B and 9B, depicting the semiconductor device as taught above with a display element as claimed, LC element 564, light emitting element 637).

Regarding Claim 11, *Furukawa* teaches a glass substrate (Fig. 2A, substrate 16); a gate electrode over the glass substrate (Fig. 2A, gate electrode 15); a gate insulating film over the gate electrode (Fig. 2A, gate dielectric 12); a first conductive film and a second conductive film over the gate insulating film (Fig. 2A, first and second conductive films 18); an organic semiconductor film in contact with the first and second conductive films (Fig. 2A, oxide semiconductor film 11); wherein a side surface of the first conductive film faces a side surface of the second conductive film has a step in a lower end portion thereof, wherein each of the first and second conductive films comprises a first layer and a second layer and wherein the first layer and the second layer comprise different materials (Fig. 2A, layer 13 vs. 17; ¶'s 0084-0099 and 0112-0115).

Page 5



Furukawa fails to teach the first and second conductive films are first and second metal films and an oxide semiconductor film formed on the first and second metal films rather than the organic semiconductor film as disclosed.

Akimoto teaches using a metal films to form first and second conductive films (source/drain electrodes) and an oxide semiconductor film formed the first and second conductive films in a display device similar to that of the applicant (Fig. 1A, first and second metal films 10a/11a, oxide semiconductor film 13; ¶ 0062-0066).

In view of the teachings of *Akimoto*, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of *Furukawa* to include that the first and second conductive films are metal films and an oxide semiconductor layer as the active semiconductor channel layer because metal films are well known in the art to be used to form source and drain electrodes as they provide low resistance materials that enhance current flow and perform well during device operation and oxide semiconductors are well known in the art of thin film transistors as they provide adequate channel mobility during device operation. Also, it

has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding Claim 12, as in the combination above, *Furukawa* as modified by *Akimoto* teaches wherein the oxide semiconductor film is positioned on the first and second metal films (*Furukawa* - Fig. 3A, *Akimoto* – Fig. 1A).

Regarding Claim 13, as in the combination above, *Furukawa* as modified by *Akimoto* teaches wherein the first and second metal films are in contact with the gate insulating film (*Furukawa* - Fig. 3A, *Akimoto* – Fig. 1A).

Regarding Claim 14, as in the combination of *Furukawa* and *Akimoto* above, *Akimoto* teaches the oxide semiconductor film comprises zinc (¶ 0066).

Regarding Claim 15, *Furukawa* teaches the step lays flat on the substrate creating about a 90° angle which satisfies the claims in regards to the angle of inclination of the step in relation to the surface of the substrate (Fig. 2A).

Regarding Claim 16, as in the combination above, *Akimoto* teaches a first buffer layer between the oxide semiconductor film and the first metal film and a second buffer layer between the oxide semiconductor film and the second metal film, wherein each of the first buffer layer and the second buffer layer has a lower resistivity than the oxide semiconductor film (Fig. 1A, buffer layers 10b/11b; ¶0064).

Regarding Claims 17-19, *Furukawa* teaches the device comprising a pixel portion comprising: the semiconductor device as claimed above and a display element electrically connected to one of the source electrode and the drain electrode and more

specifically wherein the display element is a liquid crystal element or a light emitting element (Fig. 8B and 9B, depicting the semiconductor device as taught above with a display element as claimed, LC element 564, light emitting element 637).

Regarding Claims 20-21, as in the combination above, *Furukawa* modified by *Akimoto* teaches wherein the first metal film is a source electrode and wherein the second metal film is a drain electrode (*Furukawa* - Fig. 3A, *Akimoto* – Fig. 1A).

Response to Arguments

3. Applicant's arguments filed 12/11/2014 have been fully considered but they are not persuasive.

(i) In regards to the applicant's arguments that the prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended, the examiner respectfully disagrees. In particular, in the newly formed rejection above, *Furukawa* teaches first and second conductive films acting as source and drain electrodes wherein they have a step as claimed in the lower portion thereof and *Akimoto* teaches that said first and second metal films may comprise metal films to form the source and drain electrodes and an oxide semiconductor active layer as claimed will contact the metal film used for form the first and second conductive films functioning as the source and drain electrodes in the prior art and as disclosed by the applicant. The reasons for the combination are clearly stated above providing rationale for teaching the newly amended claim features and therefore the rejection is deemed proper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY JOY whose telephone number is (571)270-7445. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on (571)272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEREMY JOY/ Examiner, Art Unit 2816 February 26, 2015

/MARVIN PAYEN/ Primary Examiner, Art Unit 2816

Notice of References Cited	Application/Control No. 14/451,680	Applicant(s)/Patent Under Reexamination YAMAZAKI ET AL.					
Notice of Helefences Cited	Examiner	Art Unit					
	JEREMY JOY	2816	Page 1 of 1				

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	А	US-2008/0099757	05-2008	Furukawa et al.	257/40
*	В	US-2007/0108446	05-2007	Akimoto, Kengo	257/061
	С	US-			
	D	US-			
	ш	US-			
	F	US-			
	G	US-			
	н	US-			
	—	US-			
	J	US-			
	К	US-			
	L	US-			
	М	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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BIB DATA SHEET

CONFIRMATION NO. 5776

SERIAL NUM	BER	FILING or			CLASS	GR	OUP ART		ΑΤΤΟ	RNEY DOCKET	
14/451,68	0	DATI 08/05/2	_		257		2816			NO. 0756-10566	
		RULI	Ξ								
APPLICANTS Semiconductor Energy Laboratory Co., Ltd., Atsugi-shi, JAPAN, Assignee (with 37 CFR 1.172 Interest);											
INVENTORS Shunpei YAMAZAKI, Setagaya, JAPAN; Kengo AKIMOTO, Atsugi, JAPAN; Daisuke KAWAE, Yamato, JAPAN;											
** CONTINUING DATA ***********************************											
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Substitute for form 1449/PTO				Complete if Known			
		ISCLO	SURE	Application Number	14/451,680		
INFORMATION DISCLOSURE				Filing Date	August 5, 2014		
STATEN	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI		
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(0367	(Use as many sheets as necessary)			Examiner Name	Jeremy J. Joy		
Sheet	1	of	15	Attorney Docket Number	0756-10566		

	U. S. PATENT DOCUMENTS									
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant					
Initials	110.	Number-Kind Code ^{2 (if known)}		Applicant of Cited Document	Figures Appear					
		US-7,323,368	01-29-2008	TAKAYAMA.T et al.						
		US-2007/0272922	11-29-2007	KIM.C et al.						
		US-2007/0158652	07-12-2007	LEE.J et al.						
		US-2008/0128689	06-05-2008	LEE.J et al.						
		US-7,298,084	11-20-2007	BAUDE.P et al.						
		US-6,532,045	03-11-2003	CHUNG.J et al.						
		US-2007/0108446	05-17-2007	AKIMOTO.K						
		US-2007/0072439	03-29-2007	AKIMOTO.K et al.						
		US-5,847,410	12-08-1998	NAKAJIMA.S						
		US-6,586,346	07-01-2003	YAMAZAKI.S et al.						
		US-2003/0189401	10-09-2003	KIDO.J et al.						
		US-6,960,812	11-01-2005	YAMAZAKI.S et al.						
		US-6,727,522	04-27-2004	KAWASAKI.M et al.						
		US-7,061,014	06-13-2006	HOSONO.H et al.						
No. 474 (sec.		US-2008/0296568	12-04-2008	RYU.M et al.						
		US-2008/0308806	12-18-2008	AKIMOTO.K et al.						
		US-2008/0308805	12-18-2008	AKIMOTO.K et al.						
		US-2008/0308804	12-18-2008	AKIMOTO.K et al.						
		US-2008/0308797	12-18-2008	AKIMOTO.K et al.						

	FOREIGN PATENT DOCUMENTS									
Examiner Cite Initials* No. ¹	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant					
	No.1	Country Code ³⁻ -Number ⁴ -Kind Code ⁵ (if known).	MM-DD-YYYY	Applicant of Cited Document	Figures Appear	1.				
		JP-2007-123861A	05-17-2007			Abst.				
		JP-2007-096055A	04-12-2007			Full				
		JP-03-231472A	10-15-1991			Abst.				
		JP-2000-150900A	05-30-2000			Abst.				
		JP-2004-103957A	04-02-2004			Abst.				
		JP-11-505377	05-18-1999			Abst.				

Examiner /Jeremy Joy/ Signature	Date Considered	02/26/2015
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INFORM		ISCL	OSURE	Application Number	14/451,680
				Filing Date	August 5, 2014
STATEM	STATEMENT BY APPLICANT		First Named Inventor	Shunpei YAMAZAKI	
(Lino				Art Unit	2896
(Use	(Use as many sheets as necessary)		Examiner Name	Jeremy J. Joy	
Sheet	2	of	15	Attorney Docket Number	0756-10566

			U. S. PATENT DO	CUMENTS	
Examiner Initials*	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant
millais	No. ¹	Number-Kind Code ^{2 (f known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear
		US-2008/0308796	12-18-2008	AKIMOTO.K et al.	
		US-2009/0008639	01-08-2009	AKIMOTO.K et al.	
		US-2007/0172591	07-26-2007	SEO.O et al.	
		US-2007/0187760	08-16-2007	FURUTA.M et al.	
		US-2008/0203387	08-28-2008	KANG.D et al.	
		US-2009/0065771	03-12-2009	IWASAKI.T et al.	
		US-7,301,211	11-27-2007	YAMAZAKI.S et al.	
		US-2006/0244107	11-02-2006	SUGIHARA.T et al.	
		US-5,744,864	04-28-1998	CILLESSEN.J et al.	
		US-2010/0025678	02-04-2010	YAMAZAKI.S et al.	
		US-7,674,650	03-09-2010	AKIMOTO.K et al.	
		US-6,563,174	05-13-2003	KAWASAKI.M et al.	
		US-2007/0152217	07-05-2007	LAI.C et al.	
		US-2006/0035452	02-16-2006	CARCIA.P et al.	
		US-2004/0127038	07-01-2004	CARCIA.P et al.	
		US-2008/0182358	07-31-2008	COWDERY-CORVAN.P et al.	
		US-2006/0292777	12-28-2006	DUNBAR.T	
		US-2007/0187678	08-16-2007	HIRAO,T et al.	
		US-2006/0284172	12-21-2006	ISHII.H	

	FOREIGN PATENT DOCUMENTS								
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	6			
Initials*	Initials* No.1 Country Code3 -Number4 -Kind Code5 (if known)	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	1-				
		JP-08-264794A	10-11-1996			Full			
		JP-2007-250983A	09-27-2007			Abst.			
		WO-2007/119386	10-25-2007			Eng.			
		JP-05-251705A	09-28-1993			Full			
		WO-2004/114391	12-29-2004			Abst.			
		JP-2003-086000A	03-20-2003			Full			

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		ISCL	OSURE	Application Number	14/451,680
				Filing Date	August 5, 2014
SIAIEW	STATEMENT BY APPLICANT		First Named Inventor	Shunpei YAMAZAKI	
(1)50				Art Unit	2896
(Use	(Use as many sheets as necessary)		Examiner Name	Jeremy J. Joy	
Sheet	3	of	15	Attorney Docket Number	0756-10566

			U. S. PATENT DOCU	MENTS	
Examiner Initials*	Cite No.1	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Reievant Passages or Relevant
nindio	110,	Number-Kind Code ^{2 (If known)}			Figures Appear
		US-7,385,224	06-10-2008	ISHII.H et al.	
		US-2008/0129195	06-05-2008	ISHIZAKI.M et al.	
		US-2008/0258139	10-23-2008	ITO.M et al.	
		US-2007/0252928	11-01-2007	ITO.M et al.	
		US-7,501,293	03-10-2009	ITO.Y et al.	
		US-7,064,346	06-20-2006	KAWASAKI.M et al.	
		US-2008/0106191	05-08-2008	KAWASE.T	
		US-5,731,856	03-24-1998	KIM.D et al.	
		US-2006/0231882	10-19-2006	KIM.I et al.	
		US-2008/0258143	10-23-2008	KIM.S et al.	
		US-2008/0166834	07-10-2008	KIM.Y et al.	
		US-2006/0238135	10-26-2006	KIMURA.H	
		US-2006/0208977	09-21-2006	KIMURA.H	
		US-2009/0073325	03-19-2009	KUWABARA.H et al.	
		US-2009/0068773	03-12-2009	LAI.C et al.	
		US-2008/0258140	10-23-2008	LEE.E et al.	
		US-7,402,506	07-22-2008	LEVY.D et al.	
		US-2006/0284171	12-21-2006	LEVY.D et al.	
	an anather state to	US-2009/0152541	06-18-2009	MAEKAWA.S et al.	

	FOREIGN PATENT DOCUMENTS							
Examiner	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant	T 6		
Initials*	Initials* No.1 Country Code3 -Number4 -Kind C	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear			
		JP-2003-086808A	03-20-2003			Abst.		
		JP-2002-289859A	10-04-2002			Full		
		JP-60-198861A	10-08-1985			Full		
		JP-63-210022A	08-31-1988			Full		
		JP-63-210023A	08-31-1988			Full		
		JP-63-210024A	08-31-1988			Full		

Examiner /Jeremy Joy/ Date Signature /Detemy Joy/ Considered 02/26/2015
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INFORMATION DISCLOSURE				Application Number	14/451,680	
				Filing Date	August 5, 2014	
STATEI	STATEMENT BY APPLICANT		First Named Inventor	Shunpei YAMAZAKI		
(1100.0				Art Unit	2896	
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Sheet	4	of	15	Attorney Docket Number	0756-10566	

			U. S. PATENT DOCU	MENTS	
Examiner	Cite Na. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
initials	NO,	Number-Kind Code ^{2 (if known)}	WINI-DD-TTTT	Applicant of Cited Document	Figures Appear
		US-2008/0050595	02-28-2008	NAKAGAWARA.O et al.	
		US-7,105,868	09-12-2006	NAUSE.J et al.	
		US-2002/0056838	05-16-2002	OGAWA.K	
		US-2002/0132454	09-19-2002	OHTSU.S et al.	
		US-2008/0083950	04-10-2008	PAN.A et al.	
		US-2008/0258141	10-23-2008	PARK.J et al.	
		US-2008/0224133	09-18-2008	PARK.J et al.	
		US-2009/0134399	05-28-2009	SAKAKURA.M et al.	
		US-7,211,825	05-01-2007	SHIH.Y et al.	
		US-2007/0024187	02-01-2007	SHIN.H et al.	
		US-2001/0046027	11-29-2001	TAI.Y et al.	
		US-2008/0038882	02-14-2008	TAKECHI.K et al.	
		US-7,049,190	05-23-2006	TAKEDA.K et al.	
		US-2004/0038446	02-26-2004	TAKEDA.K et al.	
		US-2006/0228974	10-12-2006	THELSS.S et al.	
		US-2006/0113565	06-01-2006	ABE.K et al.	
		US-2009/0114910	05-07-2009	CHANG.C	
		US-2008/0038929	02-14-2008	CHANG.C	
		US-2007/0287296	12-13-2007	CHANG.C	

	FOREIGN PATENT DOCUMENTS							
Examiner Ci	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where			
Initials*	Initials* No.1 Cour	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Relevant Passages or Relevant Figures Appear	I.		
		JP-63-215519A	09-08-1988			Full		
		JP-63-239117A	10-05-1988			Full		
		JP-63-265818A	11-02-1988			Full		
		EP-2226847A	09-08-2010			Eng.		
		EP-1737044A	12-27-2006			Eng.		
		JP-2000-044236A	02-15-2000			Full		

Examiner Signature /Jeremy Joy/ Date 02/	
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Substitute for form 1449/PTO				Co	omplete if Known
		SCL	OSURE	Application Number	14/451,680
INFORMATION DISCLOSURE				Filing Date	August 5, 2014
STATEI	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI
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(Use a	(Use as many sheets as necessary)		Examiner Name	Jeremy J. Joy	
Sheet	5	of	15	Attorney Docket Number	0756-10566

	1			[Pages, Columns, Lines, Where
Examiner Cite Initials* No. ¹	Document Number	Publication Date	Name of Patentee or	Relevant Passages or Relevant	
inidais"	NO.	Number-Kind Code ^{2 (if known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear
		US-2006/0113549	06-01-2006	DEN.T et al.	
		US-7,411,209	08-12-2008	ENDO.A et al.	
		US-2007/0090365	04-26-2007	HAYASHI.R et al.	
		US-7,453,087	11-18-2008	IWASAKI.T	
		US-2008/0073653	03-27-2008	IWASAKI.T	
		US-7,468,304	12-23-2008	KAJI.N et al.	
		US-2007/0054507	03-08-2007	KAJI.N et al.	
		US-2006/0113536	06-01-2006	KUMOMI.H et al.	
		US-2007/0046191	03-01-2007	SAITO.K	
		US-2006/0108529	05-25-2006	SAITO.K et al.	
		US-2006/0113539	06-01-2006	SANO.M et al.	
		US-2006/0108636	05-25-2006	SANO.M et al.	
		US-2007/0052025	03-08-2007	YABUTA.H	
		US-2006/0110867	05-25-2006	YABUTA.H et al.	
		US-2005/0199959	09-15-2005	CHIANG.H et al.	
		US-2005/0017302	01-27-2005	HOFFMAN.R	
		US-7,462,862	12-09-2008	HOFFMAN.R et al.	
		US-2006/0043377	03-02-2006	HOFFMAN.R et al.	
		US-7,297,977	11-20-2007	HOFFMAN.R et al.	

	FOREIGN PATENT DOCUMENTS								
Examiner Cite		Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant				
Initials*	No.'	Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)	MM-DD-YYYY	Applicant of Cited Document	Figures Appear				
		JP-2002-076356A	03-15-2002			Full			
		JP-2004-273732A	09-30-2004			Full			
		JP-2004-273614A	09-30-2004			Full			
		CN-101283444A	10-08-2008			Abst.			
		WO-2007/058329	05-24-2007		110 ⁻ 10.11 0.10	Eng.			
		JP-2008-205451A	09-04-2008			Abst.			

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Substitute for form 144	19/PTO			Complete if Known		
INFORM		ISCLO	SURE	Application Number	14/451,680	
INFORMATION DISCLOSURE				Filing Date	August 5, 2014	
STATEM	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI	
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(036	(Use as many sheets as necessary)		Examiner Name	Jeremy J. Joy		
Sheet	6	of	15	Attorney Docket Number	0756-10566	

			U. S. PATENT DOCU	MENTS	
Examiner Initials*	Cite	Document Number	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where Relevant Passages or Relevant
Initials-	No. ¹	Number-Kind Code ^{2 (II known)}	MM-DD-YYYY	Applicant of Cited Document	Figures Appear
		US-2008/0254569	10-16-2008	HOFFMAN.R et al.	
		US-2006/0197092	09-07-2006	HOFFMAN.R et al.	
		US-7,282,782	10-16-2007	HOFFMAN.R et al.	
		US-2008/0006877	01-10-2008	MARDILOVICH.P et al.	
		US-2003/0218222	11-27-2003	WAGER III.J et al.	
		US-2009/0280600	11-12-2009	HOSONO.H et al.	
		US-2009/0278122	11-12-2009	HOSONO.H et al.	
		US-2007/0194379	08-23-2007	HOSONO.H et al.	
		US-7,323,356	01-29-2008	HOSONO.H et al.	
		US-6,294,274	09-25-2001	KAWAZOE.H et al.	· · · · · ·
		US-7,453,065	11-18-2008	SAITO.K et al.	
		US-7,732,819	06-08-2010	AKIMOTO.K et al.	
		US-2006/0170111	08-03-2006	ISA.T et al.	······································
		US-2006/0169973	08-03-2006	ISA.T et al.	
		US-2009/0152506	06-18-2009	UMEDA.K et al.	
		US-2010/0092800	04-15-2010	ITAGAKI.N et al.	· ·
		US-2010/0109002	05-06-2010	ITAGAKI.N et al.	
		US-2010/0065844	03-18-2010	TOKUNAGA.K	
		US-2005/0056897	03-17-2005	KAWASAKI.M et al.	

	FOREIGN PATENT DOCUMENTS								
Examiner Cite	Cite	Foreign Patent Document	Publication Date	Name of Patentee or	Pages, Columns, Lines, Where	٣e			
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		JP-2005-223049A	08-18-2005	· · · · · · · · · · · · · · · · · · ·		Abst.			
		JP-07-064112A	03-10-1995			Abst.			

Examiner	Date	00/00/0015
Signature /Jeremy Joy/	Considered	02/26/2015

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Substitute for form 1449/PTO				Complete if Known		
INFORMA		SCL		Application Number	14/451,680	
				Filing Date	August 5, 2014	
SIAIEWI	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI	
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(066 a	(Use as many sheets as necessary)			Examiner Name	Jeremy J. Joy	
Sheet	7	of	15	Attorney Docket Number	0756-10566	

			U. S. PATENT DOCU	MENTS	
Examiner Initials*	Cite No. ¹	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant
	NO.	Number-Kind Code ^{2 (If known)}			Figures Appear
		US-8,021,917	09-20-2011	AKIMOTO.K et al.	
		US-2011/0318916	12-29-2011	AKIMOTO.K et al.	
		US-8,030,663	10-04-2011	YAMAZAKI.S et al.	
		US-2012/0058599	03-08-2012	YAMAZAKI.S et al.	
		US-8,115,201	02-14-2012	YAMAZAKI.S et al.	
		US-2012/0132910	05-31-2012	YAMAZAKI.S et al.	
		US-2006/0027804	02-09-2006	YAMAZAKI.S et al.	
		US-2010/0117086	05-13-2010	AKIMOTO.K et al.	
		US-2009/0114917	05-07-2009	YAMAZAKI.S et al.	
		US-2010/0044711	02-25-2010	IMAI.S	
		US-2005/0050897	03-10-2005	LEWIS.S	
		US-2006/0292726	12-28-2006	AKIMOTO.K et al.	
		US-8,134,156	03-13-2012	ΑΚΙΜΟΤΟ.Κ	
		US-8,158,464	04-17-2012	ΑΚΙΜΟΤΟ.Κ	
		US-8,368,079	02-05-2013	ΑΚΙΜΟΤΟ.Κ	
		US-2009/0186445	07-23-2009	ΑΚΙΜΟΤΟ.Κ	
		US-2009/0189155	07-30-2009	ΑΚΙΜΟΤΟ.Κ	
 Conservated the White of the Walescope and 		US-2009/0189156	07-30-2009	ΑΚΙΜΟΤΟ.Κ	
		US-2010/0003783	01-07-2010	ΑΚΙΜΟΤΟ.Κ	

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Examiner Signature	/Jeremy Joy/	Date Considered	02/26/2015
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		SCL		Application Number	14/451,680
INFORMATION DISCLOSURE				Filing Date	August 5, 2014
STATEI	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI
/1 lee :	(Use as many sheets as necessary)			Art Unit	2896
		Examiner Name	Jeremy J. Joy		
Sheet	8	of	15	Attorney Docket Number	0756-10566

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		US-2006/0033098	02-16-2006	SHIH.I et al.					

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Examiner /Jeremy Joy/ Date	e 02/26/2015
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Sheet	9	of	15	Attorney Docket Number	0756-10566

		NON PATENT LITERATURE DOCUMENTS	
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		DEMBO.H et al., "RFCPUS ON GLASS AND PLASTIC SUBSTRATES FABRICATED BY TFT TRANSFER TECHNOLOGY", IEDM 05: TECHNICAL DIGEST OF INTERNATIONAL ELECTRON DEVICES MEETING, December 5, 2005, pp. 1067-1069.	Eng.
		IKEDA.T et al., "FULL-FUNCTIONAL SYSTEM LIQUID CRYSTAL DISPLAY USING CG-SILICON TECHNOLOGY", SID DIGEST '04 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, 2004, Vol. 35, pp. 860-863.	Eng.
		NOMURA.K et al., "ROOM-TEMPERATURE FABRICATION OF TRANSPARENT FLEXIBLE THIN-FILM TRANSISTORS USING AMORPHOUS OXIDE SEMICONDUCTORS", NATURE, November 25, 2004, Vol. 432, pp. 488-492.	Eng.
		TAKAHASHI.M et al., "THEORETICAL ANALYSIS OF IGZO TRANSPARENT AMORPHOUS OXIDE SEMICONDUCTOR", IDW '08 : PROCEEDINGS OF THE 15TH INTERNATIONAL DISPLAY WORKSHOPS, December 3, 2008, pp. 1637-1640.	Eng.
		PRINS.M et al., "A FERROELECTRIC TRANSPARENT THIN-FILM TRANSISTOR", APPL. PHYS. LETT. (APPLIED PHYSICS LETTERS), June 17, 1996, Vol. 68, No. 25, pp. 3650-3652.	Eng.
		NAKAMURA.M et al., "The phase relations in the In2O3-Ga2ZnO4-ZnO system at 1350°C", JOURNAL OF SOLID STATE CHEMISTRY, August 1, 1991, Vol. 93, No. 2, pp. 298-315.	Eng.
		KIMIZUKA.N et al., "Syntheses and Single-Crystal Data of Homologous Compounds, In2O3(ZnO)m (m = 3, 4, and 5), InGaO3(ZnO)3, and Ga2O3(ZnO)m (m = 7, 8, 9, and 16) in the In2O3-ZnGa2O4-ZnO System", JOURNAL OF SOLID STATE CHEMISTRY, April 1, 1995, Vol. 116, No. 1, pp. 170-178.	Eng.
		NOMURA.K et al., "THIN-FILM TRANSISTOR FABRICATED IN SINGLE-CRYSTALLINE TRANSPARENT OXIDE SEMICONDUCTOR", SCIENCE, May 23, 2003, Vol. 300, No. 5623, pp. 1269-1272.	Eng.
		OSADA.T et al., "15.2: Development of Driver-Integrated Panel using Amorphous In-Ga-Zn-Oxide TFT", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 184- 187.	Eng.
		LI.C et al., "Modulated Structures of Homologous Compounds InMO3(ZnO)m (M=In,Ga; m=Integer) Described by Four-Dimensional Superspace Group", JOURNAL OF SOLID STATE CHEMISTRY, 1998, Vol. 139, pp. 347-355.	Eng.

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Sheet	10	of	15	Attorney Docket Number	0756-10566	

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		LEE.J et al., "WORLD'S LARGEST (15-INCH) XGA AMLCD PANEL USING IGZO OXIDE TFT", SID DIGEST '08 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 20, 2008, Vol. 39, pp. 625-628.	Eng.
		NOWATARI.H et al., "60.2: INTERMEDIATE CONNECTOR WITH SUPPRESSED VOLTAGE LOSS FOR WHITE TANDEM OLEDS", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, Vol. 40, pp. 899-902.	Eng.
		KANNO.H et al., "WHITE STACKED ELECTROPHOSPHORECENT ORGANIC LIGHT-EMITTING DEVICES EMPLOYING MOO3 AS A CHARGE-GENERATION LAYER", ADV. MATER. (ADVANCED MATERIALS), 2006, Vol. 18, No. 3, pp. 339-342.	Eng.
		TSUDA.K et al., "Ultra Low Power Consumption Technologies for Mobile TFT-LCDs ", IDW '02 : PROCEEDINGS OF THE 9TH INTERNATIONAL DISPLAY WORKSHOPS, December 4, 2002, pp. 295-298.	Eng.
		JEONG.J et al., "3.1: Distinguished Paper: 12.1-Inch WXGA AMOLED Display Driven by Indium-Gallium-Zinc Oxide TFTs Array", SID DIGEST '08 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 20, 2008, Vol. 39, No. 1, pp. 1-4.	Eng
		KUROKAWA.Y et al., "UHF RFCPUS ON FLEXIBLE AND GLASS SUBSTRATES FOR SECURE RFID SYSTEMS", JOURNAL OF SOLID-STATE CIRCUITS , 2008, Vol. 43, No. 1, pp. 292-299.	Eng
		OHARA.H et al., "Amorphous In-Ga-Zn-Oxide TFTs with Suppressed Variation for 4.0 inch QVGA AMOLED Display", AM-FPD '09 DIGEST OF TECHNICAL PAPERS, July 1, 2009, pp. 227-230, THE JAPAN SOCIETY OF APPLIED PHYSICS.	Eng
		COATES.D et al., "OPTICAL STUDIES OF THE AMORPHOUS LIQUID-CHOLESTERIC LIQUID CRYSTAL TRANSITION:THE "BLUE PHASE"", PHYSICS LETTERS, September 10, 1973, Vol. 45A, No. 2, pp. 115-116.	Eng
	196 - 1960 - 19 1960 - 19 1	CHO.D et al., "21.2:AL AND SN-DOPED ZINC INDIUM OXIDE THIN FILM TRANSISTORS FOR AMOLED BACK- PLANE", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 280-283.	Eng
		LEE.M et al., "15.4:EXCELLENT PERFORMANCE OF INDIUM-OXIDE-BASED THIN-FILM TRANSISTORS BY DC SPUTTERING", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 191-193.	Eng.

Examiner Date Signature /Jeremy Joy/ Considered 02/26/2015	
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Substitute for form 1449/PTO				Complete if Known		
INFORM		ISCL	OSURE	Application Number	14/451,680	
INFORMATION DISCLOSURE				Filing Date	August 5, 2014	
STATEM	STATEMENT BY APPLICANT			First Named Inventor	Shunpei YAMAZAKI	
(1)se	as many shasts as	papassan	Λ	Art Unit	2896	
(Use as many sheets as necessary))	Examiner Name	Jeremy J. Joy	
Sheet	11	of	15	Attorney Docket Number	0756-10566	

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		JIN.D et al., "65.2:DISTINGUISHED PAPER:WORLD-LARGEST (6.5") FLEXIBLE FULL COLOR TOP EMISSION AMOLED DISPLAY ON PLASTIC FILM AND ITS BENDING PROPERTIES", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 983-985.	Eng.
		SAKATA.J et al., "DEVELOPMENT OF 4.0-IN. AMOLED DISPLAY WITH DRIVER CIRCUIT USING AMORPHOUS IN-GA-ZN-OXIDE TFTS", IDW '09 : PROCEEDINGS OF THE 16TH INTERNATIONAL DISPLAY WORKSHOPS, 2009, pp. 689-692.	Eng.
		PARK.J et al., "AMORPHOUS INDIUM-GALLIUM-ZINC OXIDE TFTS AND THEIR APPLICATION FOR LARGE SIZE AMOLED", AM-FPD '08 DIGEST OF TECHNICAL PAPERS, July 2, 2008, pp. 275-278.	Eng.
		PARK.S et al., "CHALLENGE TO FUTURE DISPLAYS: TRANSPARENT AM-OLED DRIVEN BY PEALD GROWN ZNO TFT", IMID '07 DIGEST, 2007, pp. 1249-1252.	Eng.
		GODO.H et al., "TEMPERATURE DEPENDENCE OF CHARACTERISTICS AND ELECTRONIC STRUCTURE FOR AMORPHOUS IN-GA-ZN-OXIDE TFT", AM-FPD '09 DIGEST OF TECHNICAL PAPERS, July 1, 2009, pp. 41- 44.	Eng.
		OSADA.T et al., "DEVELOPMENT OF DRIVER-INTEGRATED PANEL USING AMORPHOUS IN-GA-ZN-OXIDE TFT", AM-FPD '09 DIGEST OF TECHNICAL PAPERS, July 1, 2009, pp. 33-36.	Eng.
		HIRAO.T et al., "NOVEL TOP-GATE ZINC OXIDE THIN-FILM TRANSISTORS (ZNO TFTS) FOR AMLCDS", J. SOC. INF. DISPLAY (JOURNAL OF THE SOCIETY FOR INFORMATION DISPLAY), 2007, Vol. 15, No. 1, pp. 17- 22.	Eng.
		HOSONO.H, "68.3:INVITED PAPER:TRANSPARENT AMORPHOUS OXIDE SEMICONDUCTORS FOR HIGH PERFORMANCE TFT", SID DIGEST '07 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, 2007, Vol. 38, pp. 1830-1833.	Eng.
		GODO.H et al., "P-9:NUMERICAL ANALYSIS ON TEMPERATURE DEPENDENCE OF CHARACTERISTICS OF AMORPHOUS IN-GA-ZN-OXIDE TFT", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 1110-1112.	Eng.
		OHARA.H et al., "21.3:4.0 IN. QVGA AMOLED DISPLAY USING IN-GA-ZN-OXIDE TFTS WITH A NOVEL PASSIVATION LAYER", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 284-287.	Eng.

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Substitute for form 144	9/PTO			Co	mplete if Known
INFORM		SCL	SURE	Application Number	14/451,680
				Filing Date	August 5, 2014
STATEM	ENIBY	APPL	JCANI	First Named Inventor	Shunpei YAMAZAKI
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(Use as many sheets as necessary))	Examiner Name	Jeremy J. Joy
Sheet	12	of	15	Attorney Docket Number	0756-10566

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		MIYASAKA.M, "SUFTLA FLEXIBLE MICROELECTRONICS ON THEIR WAY TO BUSINESS", SID DIGEST '07 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, 2007, Vol. 38, pp. 1673-1676.	Eng.
		CHERN.H et al., "AN ANALYTICAL MODEL FOR THE ABOVE-THRESHOLD CHARACTERISTICS OF POLYSILICON THIN-FILM TRANSISTORS", IEEE TRANSACTIONS ON ELECTRON DEVICES, July 1, 1995, Vol. 42, No. 7, pp. 1240-1246.	Eng.
		KIKUCHI.H et al., "39.1:INVITED PAPER:OPTICALLY ISOTROPIC NANO-STRUCTURED LIQUID CRYSTAL COMPOSITES FOR DISPLAY APPLICATIONS", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 578-581.	Eng.
		ASAOKA.Y et al., "29.1:POLARIZER-FREE REFLECTIVE LCD COMBINED WITH ULTRA LOW-POWER DRIVING TECHNOLOGY", SID DIGEST '09 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 31, 2009, pp. 395-398.	Eng.
		LEE.H et al., "CURRENT STATUS OF, CHALLENGES TO, AND PERSPECTIVE VIEW OF AM-OLED ", IDW '06 : PROCEEDINGS OF THE 13TH INTERNATIONAL DISPLAY WORKSHOPS, December 7, 2006, pp. 663-666.	Eng.
		KIKUCHI.H et al., "62.2:INVITED PAPER:FAST ELECTRO-OPTICAL SWITCHING IN POLYMER-STABILIZED LIQUID CRYSTALLINE BLUE PHASES FOR DISPLAY APPLICATION", SID DIGEST '07 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, 2007, Vol. 38, pp. 1737-1740.	Eng.
		KIKUCHI.H et al., "POLYMER-STABILIZED LIQUID CRYSTAL BLUE PHASES", NATURE MATERIALS, September 2, 2002, Vol. 1, pp. 64-68.	Eng.
		KIMIZUKA.N et al., "SPINEL,YBFE2O4, AND YB2FE3O7 TYPES OF STRUCTURES FOR COMPOUNDS IN THE IN2O3 AND SC2O3-A2O3-BO SYSTEMS [A; FE, GA, OR AL; B: MG, MN, FE, NI, CU,OR ZN] AT TEMPERATURES OVER 1000 °C", JOURNAL OF SOLID STATE CHEMISTRY, 1985, Vol. 60, pp. 382-384.	Eng.
		KITZEROW.H et al., "OBSERVATION OF BLUE PHASES IN CHIRAL NETWORKS", LIQUID CRYSTALS, 1993, Vol. 14, No. 3, pp. 911-916.	Eng.
		COSTELLO.M et al., "ELECTRON MICROSCOPY OF A CHOLESTERIC LIQUID CRYSTAL AND ITS BLUE PHASE", PHYS. REV. A (PHYSICAL REVIEW. A), May 1, 1984, Vol. 29, No. 5, pp. 2957-2959.	Eng.

Examiner /Jeremy Joy/ Signature	Date Considered	02/26/2015
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INFORMA		SCL	SURE	Application Number	14/451,680
				Filing Date	August 5, 2014
STATEM	ENIBY	APPL		First Named Inventor	Shunpei YAMAZAKI
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(Use as many sheets as necessary)				Examiner Name	Jeremy J. Joy
Sheet	13	of	15	Attorney Docket Number	0756-10566

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		MEIBOOM.S et al., "THEORY OF THE BLUE PHASE OF CHOLESTERIC LIQUID CRYSTALS", PHYS. REV. LETT. (PHYSICAL REVIEW LETTERS), May 4, 1981, Vol. 46, No. 18, pp. 1216-1219.	Eng
		PARK.J et al., "High performance amorphous oxide thin film transistors with self-aligned top-gate structure", IEDM 09: TECHNICAL DIGEST OF INTERNATIONAL ELECTRON DEVICES MEETING, December 7, 2009, pp. 191-194.	Eng
		NAKAMURA.M, "Synthesis of Homologous Compound with New Long-Period Structure", NIRIM NEWSLETTER, March 1, 1995, Vol. 150, pp. 1-4.	Full
		HOSONO.H et al., "Working hypothesis to explore novel wide band gap electrically conducting amorphous oxides and examples", J. NON-CRYST. SOLIDS (JOURNAL OF NON-CRYSTALLINE SOLIDS), 1996, Vol. 198-200, pp. 165-169.	Eng
		ORITA.M et al., "MECHANISM OF ELECTRICAL CONDUCTIVITY OF TRANSPARENT InGaZnO4", PHYS. REV. B (PHYSICAL REVIEW. B), January 15, 2000, Vol. 61, No. 3, pp. 1811-1816.	Eng
		Van de Walle.C, "Hydrogen as a Cause of Doping in Zinc Oxide", PHYS. REV. LETT. (PHYSICAL REVIEW LETTERS), July 31, 2000, Vol. 85, No. 5, pp. 1012-1015.	Eng
		ORITA.M et al., "Amorphous transparent conductive oxide InGaO3(ZnO)m (m <4):a Zn4s conductor", PHILOSOPHICAL MAGAZINE, 2001, Vol. 81, No. 5, pp. 501-515.	Eng
		JANOTTI.A et al., "Oxygen Vacancies In ZnO", APPL. PHYS. LETT. (APPLIED PHYSICS LETTERS), 2005, Vol. 87, pp. 122102-1-122102-3.	Eng
		CLARK.S et al., "FIRST PRINCIPLES METHODS USING CASTEP", Zeitschrift fur Kristallographie, 2005, Vol. 220, pp. 567-570.	Eng
		NOMURA.K et al., "AMORPHOUS OXIDE SEMICONDUCTORS FOR HIGH-PERFORMANCE FLEXIBLE THIN- FILM TRANSISTORS", JPN. J. APPL. PHYS. (JAPANESE JOURNAL OF APPLIED PHYSICS), 2006, Vol. 45, No. 5B, pp. 4303-4308.	Eng

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STATEM		APPL		First Named Inventor	Shunpei YAMAZAKI
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		JANOTTI.A et al., "NATIVE POINT DEFECTS IN ZnO", PHYS. REV. B (PHYSICAL REVIEW. B), October 4, 2007, Vol. 76, No. 16, pp. 165202-1-165202-22.	Eng				
		LANY.S et al., "Dopability, Intrinsic Conductivity, and Nonstoichiometry of Transparent Conducting Oxides", PHYS. REV. LETT. (PHYSICAL REVIEW LETTERS), January 26, 2007, Vol. 98, pp. 045501-1-045501-4.	Eng				
		PARK.J et al., "IMPROVEMENTS IN THE DEVICE CHARACTERISTICS OF AMORPHOUS INDIUM GALLIUM ZINC OXIDE THIN-FILM TRANSISTORS BY Ar PLASMA TREATMENT", APPL. PHYS. LETT. (APPLIED PHYSICS LETTERS), June 26, 2007, Vol. 90, No. 26, pp. 262106-1-262106-3.	Eng				
		PARK.J et al., "ELECTRONIC TRANSPORT PROPERTIES OF AMORPHOUS INDIUM-GALLIUM-ZINC OXIDE SEMICONDUCTOR UPON EXPOSURE TO WATER", APPL. PHYS. LETT. (APPLIED PHYSICS LETTERS), 2008, Vol. 92, pp. 072104-1-072104-3.	Eng				
		HSIEH.H et al., "P-29:Modeling of Amorphous Oxide Semiconductor Thin Film Transistors and Subgap Density of States", SID DIGEST '08 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 20, 2008, Vol. 39, pp. 1277-1280.	Eng				
		OBA.F et al., "Defect energetics in ZnO: A hybrid Hartree-Fock density functional study", PHYS. REV. B (PHYSICAL REVIEW. B), 2008, Vol. 77, pp. 245202-1-245202-6.	Eng				
		KIM.S et al., "High-Performance oxide thin film transistors passivated by various gas plasmas", 214TH ECS MEETING, 2008, No. 2317, ECS.	Eng				
		HAYASHI.R et al., "42.1: INVITED PAPER: IMPROVED AMORPHOUS In-Ga-Zn-O TFTS", SID DIGEST '08 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 20, 2008, Vol. 39, pp. 621-624.	Enç				
		SON.K et al., "42.4L: LATE-NEWS PAPER: 4 INCH QVGA AMOLED DRIVEN BY THE THRESHOLD VOLTAGE CONTROLLED AMORPHOUS GIZO (Ga2O3-In2O3-ZnO) TFT", SID DIGEST '08 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 20, 2008, Vol. 39, pp. 633-636.	Eng				
		PARK.SANG-HEE et al., "42.3: Transparent ZnO Thin Film Transistor for the Application of High Aperture Ratio Bottom Emission AM-OLED Display", SID DIGEST '08 : SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS, May 20, 2008, Vol. 39, pp. 629-632.	Eng				

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		FUNG.T et al., "2-D Numerical Simulation of High Performance Amorphous In-Ga-Zn-O TFTs for Flat Panel Displays", AM-FPD '08 DIGEST OF TECHNICAL PAPERS, July 2, 2008, pp. 251-252, THE JAPAN SOCIETY OF APPLIED PHYSICS.	Eng.
		MO.Y et al., "Amorphous Oxide TFT Backplanes for Large Size AMOLED Displays", IDW '08 : PROCEEDINGS OF THE 6TH INTERNATIONAL DISPLAY WORKSHOPS, December 3, 2008, pp. 581-584.	Eng.
		ASAKUMA.N et al., "CRYSTALLIZATION AND REDUCTION OF SOL-GEL-DERIVED ZINC OXIDE FILMS BY IRRADIATION WITH ULTRAVIOLET LAMP", JOURNAL OF SOL-GEL SCIENCE AND TECHNOLOGY, 2003, Vol. 26, pp. 181-184.	Eng.
		FORTUNATO.E et al., "WIDE-BANDGAP HIGH-MOBILITY ZNO THIN-FILM TRANSISTORS PRODUCED AT ROOM TEMPERATURE", APPL. PHYS. LETT. (APPLIED PHYSICS LETTERS), September 27, 2004, Vol. 85, No. 13, pp. 2541-2543.	Eng.
		MASUDA.S et al., "Transparent thin film transistors using ZnO as an active channel layer and their electrical properties", J. APPL. PHYS. (JOURNAL OF APPLIED PHYSICS), February 1, 2003, Vol. 93, No. 3, pp. 1624-1630.	Eng.
		OH.M et al., "IMPROVING THE GATE STABILITY OF ZNO THIN-FILM TRANSISTORS WITH ALUMINUM OXIDE DIELECTRIC LAYERS", J. ELECTROCHEM. SOC. (JOURNAL OF THE ELECTROCHEMICAL SOCIETY), 2008, Vol. 155, No. 12, pp. H1009-H1014.	Eng.
		PARK.J et al., "Dry etching of ZnO films and plasma-induced damage to optical properties", J. VAC. SCI. TECHNOL. B (JOURNAL OF VACUUM SCIENCE & TECHNOLOGY B), March 1, 2003, Vol. 21, No. 2, pp. 800- 803.	Eng.
		UENO.K et al., "FIELD-EFFECT TRANSISTOR ON SITIO3 WITH SPUTTERED AI2O3 GATE INSULATOR", APPL. PHYS. LETT. (APPLIED PHYSICS LETTERS), September 1, 2003, Vol. 83, No. 9, pp. 1755-1757.	Eng.
		NOMURA.K et al., "Carrier transport in transparent oxide semiconductor with intrinsic structural randomness probed using single-crystalline InGaO3(ZnO)5 films", APPL. PHYS. LETT. (APPLIED PHYSICS LETTERS), September 13, 2004, Vol. 85, No. 11, pp. 1993-1995.	Eng.
		CHINESE OFFICE ACTION (APPLICATION NO.200910206768.3) DATED March 15, 2013.	Full

Examiner /Jeremy Joy/ Date 02/26/2015

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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ALL REFERENCES CONSIDERED EXCEPT WHERE WINDER THE ROUGH. /J.J./

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EAST Search History

EAST Search History (Prior Art)

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L6	462	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
L7	107	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2015/02/26 02:17
L8	7840	L5 L6 L7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/02/26 02:17
L9	164051	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
L10	15029	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2015/02/26 02:17
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S28 0)	(buffer with (source drain) with (ozide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:48
S29 0)	(source drain) with (ozide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:49
S30 5	5583	(source drain) with (oxide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S31 3	371	(buffer with (source drain) with (oxide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S32 1	118	(buffer with (source drain) with (oxide near2 semiconductor) with channel)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S33 2	24	S32 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:04
S34 1	108	<pre>("20010046027" "20020056838" "20020132454" "20030189401" "20030218222" "20040038446" "20040127038" "20050017302" "20050199959" "20060035452" "20060043377" "2006019733" "20060108529" "20060113536" "20060110867" "20060113549" "20060113565" "20060169973" "20060113565" "20060169973" "20060170111" "20060197092" "2006028977" "2006028974" "2006028977" "2006028974" "20060284172" "20060284171" "20060284172" "20060284171" "20070052025" "20070054507" "20070052025" "20070054507" "20070072439" "20070054507" "20070172591" "20070152217" "20070187760" "20070152217" "20070187760" "20070194379" "20070252928" "20070194379" "20070287296" "2008006877" "20080038882" "2008006877" "20080050595" "20080106191" "20080038882" "20080129195" "20080128689" "20080182358" "20080166834" "20080182358" "20080254569" "20080258139" "20080258140" "20080258141" "20080258143" "2008026568" "20080308796" "20080308797" </pre>	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:08

		"20080308804" "20080308805" "20080308806" "2009008639" "20090065771" "20090086373" "20090073325" "20090114910" "20090134399" "20090152541" "20090278122" "20090280600" "20100025678" "20110012118" "5731856" "5744864" "5847410" "6294274" "6563174" "6586346" "6727522" "6960812" "7049190" "7061014" "7064346" "7105868" "7211825" "7282782" "7297977" "7301211" "7323356" "7385224").PN. OR ("7402506" "7411209" "7453065" "7453087" "7462862" "7468304" "7501293" "7674650" "7732819" "7915075").PN. OR ("8021917").URPN.				
S35	43	S34 and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:10
S36	0	S34 and ((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:10
S37	54124	((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
S38	217	S37 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
S39	164	S38 not (angle adj implant\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:15
S40	3037	((taper incline decline angle) near3 (side sidewall surface) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:23
S41	178	(tft (thin adj film adj transistor)) and S40	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:24
S42	10	"US 7081641"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 17:29
S43	11	("20050056897" "6569707" "6858527").PN. OR ("7081641").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:30
S44	48	((taper near2 angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:40
S45	32689	((taper angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:41
S46	161	S45 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S47	243	((taper angle) near3 ((source drain) adj electrode))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S48	243	(taper angle) near3 ((source drain) adj	US-PGPUB;	OR	ON	2012/04/04 JSE EXHIBIT 100

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		electrode)	USPAT; USOCR			17:42
S49	206	(tft (thin adj film adj transistor)) and S48	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:43
S50	69	S25 and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:53
S51	519	(source drain) near3 (tilt adj angle)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56
S52	54	S51 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56
S53	5614	S8 S9 S10	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
S54	3354	S53 and (tft (thin adj film)) and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
S55	145	S53 and (tft (thin adj film)) and ((angle taper) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:00
S56	5	"US 7564058"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 18:04
S57	20	("20020043662" "20030148561" "20030213959" "20030234424" "20040189188" "4797108" "5028551" "5151806" "5640067" "6037197" "6121660" "6388270" "6433363" "6448116" "6476416" "6639244" "6709901").PN. OR ("7564058").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:04
S58	8	S57 and angle	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:05
S59	218	("20030189401" "20080128689" "20080308796" "20080308806" "7061014" "20060110867" "20060284172" "20080258141" "20090068773" "20060244107" "5847410" "6563174" "20020132454" "20060231882" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090152541" "6294274" "7402506" "7411209" "20110012118" 7915075" "7462862" "20060108529" "20060113565" "20060169973" "20080050595" "20080106191" "5731856" "7385224" "7732819" "20080203387" "2009008639" "20100025678" "20030218222" "20070024187" "2008006877"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/18 18:08

		"20080038882" "20080038929" "20080083950" "20080254569" "20080258140" "20090278122" "20090280600" "7049190" "20070172591" "20080296568" "20010046027" "20020056838" "20060113539" "20060208977" "20060238135" "20070052025" "7211825" "7453065" "7674650" "20080182358" "20090073325" "7453087" "7501293" "20070072439" "7282782" "20070187760" "20080308797" "5744864" "6586346" "6727522" "6960812" "7301211" "20060108636" "20060091793" "20060197092" "20070090365" "20080166834" "20090134399" "7064346" "7468304" "20050199959" "20070108446" "7297977" "20080308804" "20050017302" "20090065771" "20060113536" "20090065771" "20060113536" "20060170111" "20060113536" "20060170111" "20070046191" "20070252928" "20080129195" "2008073653" "20080129195" "2008073653" "20080129195" "2008073653" "20080129195" "20080258143" "20090114910" "7105868" "7323356").PN.				
S60	18460	(tft (thin adj film)) and ((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:28
S61	133336	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:29
S62	10304	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:29
S63	1628	S61 and S62	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:29
S64	34920	((angle taper gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:30
S65	193	S64 and S62	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/18 18:30
S66	1	("20120132910").PN.	US-PGPUB; USPAT	OR	OFF	2012/09/20 22:00
S67	10	("20110318916" "20120058599" "8021917" "8030663" "8115201").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM TDB	OR	ON	2012/09/20 22:01
S68	11	S66 S67	US-PGPUB; USPAT; USOCR;	OR	ON	2012/09/26 22:01

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			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S69	5731	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S70	294	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S71	62	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S72	5942	S69 S70 S71	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S73	5403	S72 and (tft (thin\$1film) (thin adj film))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S74	3556	S73 and (angle taper)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S75	878	S73 and ((angle taper) with electrode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2012/09/26 22:05
S76	133560	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S77	10334	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S78	1631	S76 and S77	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S79	532	S72 and S78	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:06
S80	89	((angle taper gradation stair) near3 (source drain)) and S77 and S72	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:08
S81	5466	(257/59).OCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:19

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S87 31 S88 15 S89 15 S89 15 S90 36 S91 17 S95 62 S96 35 S97 75	0 0 74 11 543 5 682	((angle taper gradation stair) near3 (source drain)) and S77 and S81 ((angle taper gradation stair) near3 (source drain)) and S77 and S82 S83 S84 (257/e29.277).CCLS. (257/e21.535).CCLS. ((438/158).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S88 (438/149).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT; USPAT; US-PGPUB; USPAT; US-PGPUB; USPAT US-PGPUB; USPAT	OR OR OR OR OR OR	ON ON OFF OFF OFF ON OFF	2012/09/26 22:19 2012/09/26 22:19 2012/09/26 22:21 2012/09/26 22:24 2012/09/26 22:27 2012/09/26 22:27 2012/09/26 22:27
S85 60 S86 67 S87 31 S88 15 S88 15 S89 15 S90 36 S91 17 S95 62 S96 35 S97 75	0 74 11 543 5 682 7	(source drain)) and S77 and S82 S83 S84 (257/e29.277).CCLS. (257/e21.535).CCLS. (438/158).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S88 (438/149).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT; USOCR US-PGPUB; USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT; US-PGPUB; USPAT; US-PGPUB; USPAT; US-PGPUB; USPAT US-PGPUB; USPAT;	OR OR OR OR OR	ON OFF OFF ON OFF	22:19 2012/09/26 22:19 2012/09/26 22:21 2012/09/26 22:24 2012/09/26 22:27 2012/09/26 22:27 2012/09/26
S86 67 S87 31 S88 15 S89 15 S90 36 S91 17 S95 62 S96 35 S97 75	74 11 543 5 682 7	(257/e29.277).OCLS. (257/e21.535).OCLS. (438/158).OCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S88 (438/149).OCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT US-PGPUB; USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT	OR OR OR OR OR	OFF OFF OFF ON OFF	22:19 2012/09/26 22:21 2012/09/26 22:24 2012/09/26 22:27 2012/09/26 22:27 2012/09/26
S87 31 S88 15 S89 15 S90 36 S91 17 S95 62 S96 35 S97 75	11 543 5 682 7	(257/e21.535).CCLS. (438/158).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S88 (438/149).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT US-PGPUB; USPAT US-PGPUB; USPAT; USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT;	OR OR OR OR	OFF OFF ON OFF	22:21 2012/09/26 22:24 2012/09/26 22:27 2012/09/26 22:27 2012/09/26
S88 15 S89 15 S90 36 S91 17 S95 62 S96 35 S97 75	543 5 682 7	(438/158).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S88 (438/149).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT US-PGPUB; USPAT; USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT;	OR OR OR	OFF ON OFF	22:24 2012/09/26 22:27 2012/09/26 22:27 2012/09/26
S89 15 S90 36 S91 17 S95 62 S96 35 S97 75	5 682 7	((angle taper gradation stair) near3 (source drain)) and S77 and S88 (438/149).OCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT US-PGPUB; USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT;	OR	ON	22:27 2012/09/26 22:27 2012/09/26
S90 36 S91 17 S95 62 S96 35 S97 75	682 7	(source drain)) and S77 and S88 (438/149).CCLS. ((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT; USOCR US-PGPUB; USPAT US-PGPUB; USPAT;	OR	OFF	22:27 2012/09/26
S91 [17 S95 [62 S96 [35 S97 [75	7	((angle taper gradation stair) near3 (source drain)) and S77 and S90	USPAT US-PGPUB; USPAT;			54
S95 62 S96 35 S97 75		(source drain)) and S77 and S90	USPAT;	OR		3
S96 35 S97 75	242		USOCR		ON	2012/09/26 22:28
S97 75		((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
	56	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S98 64	5	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
	489	S95 S96 S97	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/01 10:27
S99 14	42606	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S100 11	1746	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S101 18	860	S99 and S100	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S102 60	00	S98 and S101	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/01 10:27
S103 51	191	(semiconductor near5 ((indium in) and (gallium ga) and (zinc zn)))	US-PGPUB; USPAT; USOCR;	OR	ON	2013/08/12 02:30

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			FPRS; EPO; JPO; DERWENT; IBM_TDB			
5104	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30
S105	1268	S103 and S104	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30
S106	1058	(IN\$2ga\$2zn)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 02:33
S107	268	("20030189401" "20050050897" "20060110867" "20060284172" "20080128689" "20080258141" "20090068773" "7061014" "20090088773" "7061014" "20090189155" "20020132454" "20060231882" "20060244107" "20060284171" "20070287296" "20070152217" "20070287296" "20080224133" "20080258139" "20090114917" "20090152541" "20120132910" "5847410" "6294274" "6563174" "7323368" "7402506" "7411209" "8030663" "8115201" "8158464" "20060108529" "20060113565" "20060108529" "2008005095" "20060108529" "2008005095" "20080106191" "20100065844" "20100117086" "5731856" "7385224" "7462862" "7732819" "20030218222" "20060027804" "20070024187" "2008006877" "20080083950" "2008008877" "20080083950" "2008023387" "20080083950" 2008023387" "20080083950" 20080258140" "2009008639" "20080258140" "2009008639" "20090278122" "20080083950" 20080258140" "2009008639" "20090278122" "20080083950" 20080258140" "2009008639" "20090278122" "20080254569" "2008023387" "2008028977" "20080258140" "2009008639" "20090278122" "20080280600" "20100025678" "7049190" "20090189156" "8134156" "20010046027" "2008028977" "2006013359" "2008028977" "2006013359" "2008028977" "2006013359" "2008028977" "2006013359" "2008028977" "2006013359" "2008018358" "20090073325" "6532045" "7453087" "7501293" "20060197092" "20070172439" "20060197092" "20090134399" "20070194379" "20090134399"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01

		"20090152506" "5744864" "6586346" "6727522" "6960812" "7064346" "7282782" "7298084" "7301211" "7468304" "20090186445" "8368079" "20040038446" "20040127038" "20050017302" "20050199959" "20060043377" "20060113536" "20060170111" "20060292726" "20070046191" "20070108446" "20070252928" "20070272922" "20080073653" "20080129195" "20080258143" "20080308804" "20080308805" "20090065771" "20090114910" "20100092800" "20120058599" "7105868" "7297977" "7323356" "20100003783").PN.				
	6320	((SHUNPEI) near2 (YAMAZAKI)).INV.	USPAT	OR	ON	2013/08/12 09:01
S109	368	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S110	77	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S111	6569	S108 S109 S110	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01
5112	143950	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S113	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S114	1895	S112 and S113	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S115	617	S111 and S114	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01
5116	133	("20030189401" "20050050897" "20060110867" "20060284172" "20080128689" "20080258141" "20080308796" "20080308806" "20090068773" "7061014" "20090189155" "20020132454" "20060231882" "20060244107" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090114917" "20090152541" "20100044711" "20110318916" "20120132910" "5847410" "6294274" "6563174" "7323368"	US-PGPUB; USPAT; FPRS; EPO; JPO; IBM_TDB	OR	ON	2013/08/12 09:02 DUSE EXHIBIT 10

S117 S118 S119 S120 S121	2 1 6558 385 82	"20080308805" "20090065771" "20090114910" "20100092800" "20120058599" "7105868" "7297977" "7323356" "20100003783").PN. "US 20130214270" ("20060033098").PN. ("20060033098").PN. ((SHUNPEI) near2 (YAMAZAKI)).INV. ((KENGO) near2 (AKIMOTO)).INV. ((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT; USOCR; DERWENT US-PGPUB; USPAT US-PGPUB; USPAT US-PGPUB; USPAT	OR OR OR	ON OFF ON ON ON	2013/12/11 01:46 2013/12/11 01:57 2013/12/11 02:41 2013/12/11 02:41 2013/12/11 02:41
		"7402506" "7411209" "8030663" "8115201" "8158464" "20060108529" "2006013565" "2006016973" "20060228974" "20060292777" "2008050595" "20080106191" "20100065844" "20100117086" "5731856" "7385224" "7462862" "7732819" "20030218222" "20060027804" "20070024187" "20070187678" "20070194379" "2008008877" "20080038950" "20080258140" "2009008639" "20090278122" "2009008639" "20090278122" "2009008639" "20090278122" "2009008639" "20090278122" "2009008639" "20090278122" "2009008639" "20090189156" "7049190" "20090189156" "20080182358" "200070172591" "20080182358" "20090073325" "6532045" "7453087" "7501293" "7674650" "8021917" "20060197092" "20070072439" "200700526897" "20080166834" "2007009365" "200701758652"				

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S122	6814	S119 S120 S121	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/11 02:41
S123	148280	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
S124	12541	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
S125	1990	S123 and S124	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/11 02:41
S126	649	S122 and S125	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/11 02:41
S127	6765	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S128	395	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S129	87	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S130	7028	S127 S128 S129	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; I BM_TDB	OR	ON	2014/03/23 19:33
S131	151627	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S132	13059	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S133	2067	S131 and S132	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S134	680	S130 and S133	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:33
S135	9	"2008205451"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:34

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S136	10	"2005223049"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2014/03/23 19:34
			EPO; JPO; DERWENT; IBM_TDB			
S137	3	"07064112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:34
S138	13059	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S139	6584	(257/59).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S140	48	((angle taper gradation stair) near3 (source drain)) and S138 and S139	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S141	4077	(438/149).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S142	18	((angle taper gradation stair) near3 (source drain)) and S138 and S141	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S143	1947	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S144	17	((angle taper gradation stair) near3 (source drain)) and S138 and S143	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S145	17	S144	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S146	320	(257/e21.535).OCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S147	72	S140 S142 S144	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:58
S151	7097	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S152	423	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S153	98	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
S154	7378	S151 S152 S153	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25 07:57
S155	157340	((angle taper step gradation stair)	US-PGPUB;	OR	ON	2014/08/25 OUSE EXHIBIT 10

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		near3 (source drain))	USPAT; USOCR			07:57
5156 139	935	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
5157 218	86	S155 and S156	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
5158 721	1	S154 and S157	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25 07:57
5159 318	β	<pre>("20080128689" "20030189401" "20080308796" "20080308806" "7061014" "20060110867" "20060284172" "20080258141" "20090068773" "20050050897" "7323368" "20060244107" "5847410" "6563174" "20020132454" "20060231882" "20060284171" "20070054507" "20070152217" "20070287296" "20080224133" "20080258139" "20090152541" "6294274" "7402506" "7411209" "20100138916" "8030663" "8115201" "20120132910" "20090114917" "20100044711" "20060108529" "20060113565" "20060169973" "20080258595" "20080106191" "5731856" "7385224" "7462862" "7732819" "201001170866" "20080203387" "2009008639" "2010025678" "2009008639" "2010025678" "2009008639" "2010025678" "2009008639" "2010025678" "2009008639" "20070194379" "2009008639" "20080233882" "2009008637" "2008023882" "2008006877" "2008023882" "20090278122" "20080258140" "20090278122" "20080258140" "20090278122" "20080258140" "20090278122" "2008028977" "20080138929" "2008028882" "2001046027" "2008028882" "20010278122" "2008028882" "20010278122" "2008028882" "2008038929" "20080286600" "7049190" "20060027804" "20070172591" "200802805683" "20010246027" "200802805683" "20010246027" "200802805683" "20010246027" "200802805683" "20010246027" "200802805668" "200102683135" "20070158652" "721825" "7453065" "6532045" "7298084" "20070187760" "20080308797" "5744864" "20080308797" "5744864" "20080308797" "5744864" "20080308797" "5744864" "20080108636" "20070193439" "20060135452" "72080446" "7282782" "7468304" "2008016834" "20090134399" "20060197092" "2007019446" "20050056897" "20070108446" </pre>	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25

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S162	23	("2005/0205870").URPN.	USPAT	OR	ON	2014/08/25 09:00
S163	34	S161 S162	USPAT	OR	ON	2014/08/25 09:13
S164	5	("2006/0033098").URPN.	USPAT	OR	ON	2014/08/25 09:46
S165	59	("20010046611" "20020045289" "20020093283" "20020101154" "20020121860" "20020139303" "20030015698" "20030085398" "20030092214" "20030092232" "20030213952" "20030218166" "20040012017" "20040075093" "20040108562" "20040161192" "20040206959" "20050042548" "20050057136" "20050042548" "20050098207" "20050042548" "20050098207" "20050170208" "20050098207" "20060033098" "20060020136" "20060033098" "20060023736" "20060046096" "2006028822" "20060232203" "20060237731" "20060238112" "20060237731" "20060238112" "20060270066" "20060273303" "20060270066" "20070031701" "20080048183" "20080099757" "20090267077" "4981768" "5487953" "6486601" "6589673" "6951694" "7158161" "7387904" "7462883" "7521855" "7545840" "7560735" "760534" "7626198" "7649197" "7667389" "7683532" "7714501").PN. OR ("8049208").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 09:48
S166	17	("2004/0012017").URPN.	USPAT	OR	ON	2014/08/25 09:51
S167	11	("2004/0108562").URPN.	USPAT	OR	ON	2014/08/25 09:53
S168	1	("20090134383").PN.	US-PGPUB; USPAT	OR	OFF	2014/08/25 10:08
S169	9	"2006126363"	US-PGPUB; USPAT;	OR	ON	2014/08/25 10:11

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			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S170	40	20050017302-\$ or US-20060043377-\$ or US-20060197092-\$ or US-	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2014/08/25
S171	16		US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25 10:56
S173	7408	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
S174	447	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/12/23 22:41
	102	((Daisuke) near2 (KAWAE)).INV.	USPAT	OR	ON	2014/12/23 22:41
S176	7696	S173 S174 S175	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:41
S177	161896	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41
S178	14662	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/12/23 22:41
S179	2301	S177 and S178	US-PGPUB; USPAT;	OR	ON	2014/12/23 22:41

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S180	767	S176 and S179	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:41
S181	40	(US-20100117077-\$ or US- 20050017302-\$ or US-20060043377-\$ or US-20060197092-\$ or US- 20060228974-\$ or US-20060231882-\$ or US-20070090365-\$ or US- 20070108446-\$ or US-20070172591-\$ or US-20080038882-\$ or US- 20080283831-\$ or US-20090166616-\$ or US-20090186437-\$ or US- 20100301325-\$ or US-20100117086-\$ or US-20090114917-\$ or US- 20100044711-\$ or US-20050056897-\$ or US-20060027804-\$ or US- 20060292726-\$ or US-20080073653-\$ or US-20130214270-\$ or US- 20060033098-\$ or US-20050205870-\$ or US-20040108562-\$ or US- 20080099757-\$).did. or (US- 20080099757-\$).did. or (US- 20080099757-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (US- 20090134383-\$).did. or (US- 2007123861-\$ or US-2007096055-\$ or JP-07064112-\$ or JP-200723049- \$).did. or (US-20070072439-\$ or JP- 2007096055-\$ or JP-2008205451- \$).did.	US-PGPUB; USPAT; FPRS; JPO; DERWENT	OR	ON	2014/12/23 22:41
S182	3792	(257/43).OCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:46
S183	2191	(257/e29.151).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:46
S184	2413	(257/e21.414).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S185	2127	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S186	2423	(438/104).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/12/23 22:47
S187	127	S185 and S186	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:48
S188	1321	S178 and S182	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:48
S189	453	S178 and S183	US-PGPUB; USPAT; USOCR;	OR	ON	2014/12/23 22:48

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S190	919	S178 and S184	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:48
S191	2471	S188 S189 S190	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:48
5192	416	S179 and (S185 S186)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/12/23 22:49
S193	4	"42621714".FMID.	US-PGPUB; USPAT; FPRS	OR	ON	2014/12/23 22:51
S194	137	("20010046027" "20020056838 "20020132454" "20030189401" "20030218222" "20040038446" "20040127038" "20050017302" "20050199959" "20060035452" "20060143377" "20060018636" "200601108529" "20060113536" "20060113539" "20060113549" "20060113565" "20060154397" "20060169973" "20060154397" "20060197092" "2006028977" "20060228974" "20060284172" "20060228974" "20060284172" "20060238135" "20060244107" "20060284171" "20070052025" "20070054507" "20070054507" "20070054507" "20070052025" "2007018446" "20070152217" "20070187760" "20070187678" "20070252928" "20070272922" "20080038882" "2008008877" "200800383950" "2008016834" "20080128689" "20080129195" "20080128689" "20080129195" "20080254569" "20080258139" "20080258140" "20080258141"		OR	ON	2014/12/23

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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2896

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED				
Symbol	Date	Examiner		

US CLASSIFICATION SEARCHED						
Class	Subclass	Date	Examiner			

SEARCH NOTES						
Search Notes	Date	Examiner				
See search notes from parent applications 12/613,769 and 13/763874	8/25/2014	Jeremy J. Joy				
General keyword and EAST search is attached.	8/25/2014	Jeremy J. Joy				
General keyword and EAST search is attached.	2/26/2015	Jeremy J. Joy				

INTERFERENCE SEARCH							
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner				

	/JEREMY JOY/ Examiner.Art Unit 2816	February 26, 2015

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)	Confirmation No. 5776
Shunpei YAMAZAKI et al.)	Group Art Unit: 2896
Serial No. 14/451,680)	Examiner: Jeremy J. Joy
Filed: August 5, 2014)	
For: SEMICONDUCTOR DEVICE AND)	
MANUFACTURING METHOD)	
THEREOF)	

AMENDMENT

Honorable Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

In response to the Official Action dated September 11, 2014, please consider the following amendments and remarks in connection with the above-identified application.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) A semiconductor device comprising:

a glass substrate;

a gate electrode over the glass substrate;

a gate insulating film over the gate electrode;

a source electrode first metal film and a drain electrode second metal film over the gate insulating film; and

an oxide semiconductor film in contact with the source electrode first metal film and the drain electrode second metal film,

wherein a side surface of the source electrode first metal film faces a side surface of the drain electrode second metal film, and

wherein each of the side surface of the source electrode first metal film and the side surface of the drain electrode second metal film has a step in a lower end portion thereof.

3. (Currently Amended) The semiconductor device according to claim 2, wherein the oxide semiconductor film is positioned on the source electrode first metal film and the drain electrode second metal film.

4. (Currently Amended) The semiconductor device according to claim 2, wherein the source electrode first metal film and the drain electrode second metal film are in contact with the gate insulating film.

5. (Previously Presented) The semiconductor device according to claim 2, wherein the oxide semiconductor film comprises indium, gallium, and zinc.

6. (Currently Amended) The semiconductor device according to claim 2,

wherein a first angle of the step that is made between the side surface of the source electrode first metal film and an upper surface of the glass substrate is greater than or equal to 20° and smaller than or equal to 90°, and

wherein a second angle of the step that is made between the side surface of the drain electrode second metal film and the upper surface of the glass substrate is greater than or equal to 20° and smaller than or equal to 90°.

7. (Currently Amended) The semiconductor device according to claim 2, comprising:

a first buffer layer between the oxide semiconductor film and the source electrode first metal film; and

a second buffer layer between the oxide semiconductor film and the drain electrode second metal film,

wherein each of the first buffer layer and the second buffer layer has lower resistivity than the oxide semiconductor film.

8. (Currently Amended) A display device comprising:

a pixel portion comprising:

the semiconductor device according to claim 2; and

a display element electrically connected to one of the source electrode first metal film and the drain electrode second metal film.

9. (Previously Presented) The display device according to claim 8, wherein the display element is a liquid crystal element.

10. (Previously Presented) The display device according to claim 8, wherein the display element is a light-emitting element.

11. (Currently Amended) A semiconductor device comprising:

a glass substrate;

a gate electrode over the glass substrate;

a gate insulating film over the gate electrode;

a source electrode first metal film and a drain electrode second metal film over the gate insulating film; and

an oxide semiconductor film in contact with the source electrode first metal film and the drain electrode second metal film,

wherein a side surface of the source electrode first metal film faces a side surface of the drain electrode second metal film,

wherein each of the side surface of the source electrode first metal film and the side surface of the drain electrode second metal film has a step in a lower end portion thereof,

wherein each of the source electrode <u>first metal film</u> and the drain electrode <u>second metal film</u> comprises a first layer and a second layer, and

wherein the first layer and the second layer comprises different material from each other.

12. (Currently Amended) The semiconductor device according to claim 11, wherein the oxide semiconductor film is positioned on the source electrode first metal film and the drain electrode second metal film.

13. (Currently Amended) The semiconductor device according to claim 11, wherein the source electrode first metal film and the drain electrode second metal film are in contact with the gate insulating film.

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14. (Previously Presented) The semiconductor device according to claim 11, wherein the oxide semiconductor film comprises indium, gallium, and zinc.

15. (Currently Amended) The semiconductor device according to claim 11,

wherein a first angle of the step that is made between the side surface of the source electrode first metal film and an upper surface of the glass substrate is greater than or equal to 20° and smaller than or equal to 90°, and

wherein a second angle of the step that is made between the side surface of the drain electrode second metal film and the upper surface of the glass substrate is greater than or equal to 20° and smaller than or equal to 90°.

16. (Currently Amended) The semiconductor device according to claim 11, comprising:

a first buffer layer between the oxide semiconductor film and the source electrode first metal film; and

a second buffer layer between the oxide semiconductor film and the drain electrode second metal film,

wherein each of the first buffer layer and the second buffer layer has lower resistivity than the oxide semiconductor film.

17. (Currently Amended) A display device comprising:

a pixel portion comprising:

the semiconductor device according to claim 11; and

a display element electrically connected to one of the source electrode first metal film and the drain electrode second metal film.

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18. (Previously Presented) The display device according to claim 17, wherein the display element is a liquid crystal element.

19. (Previously Presented) The display device according to claim 17, wherein the display element is a light-emitting element.

20. (New) The semiconductor device according to claim 2, wherein the first metal film is a source electrode, and wherein the second metal film is a drain electrode.

21. (New) The semiconductor device according to claim 11, wherein the first metal film is a source electrode, and wherein the second metal film is a drain electrode.

<u>REMARKS</u>

The Official Action mailed September 11, 2014, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicant respectfully submits that this response is being timely filed.

<u>An Information Disclosure Statement was submitted on August 29, 2014 and</u> consideration of this Information <u>Disclosure Statement is respectfully requested</u>.

Claims 2-19 were pending in the present application prior to the above amendment. Claims 2-4, 6-8, 11-13 and 15-17 have been amended to better recite the features of the present invention and new claims 20 and 21 have been added to recite additional protection to which the Applicant is entitled. Accordingly, claims 2-21 are now pending in the present application, of which claims 2 and 11 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 3 of the Official Action rejects claims 2-19 as obvious based on the combination of U.S. Publication No. 2008/0099757 to Furukawa and U.S. Publication No. 2007/0108446 to Akimoto. The Applicant respectfully submits that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2144.04, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some reason, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some reason to do so found either explicitly or implicitly in the references themselves or in the knowledge generally

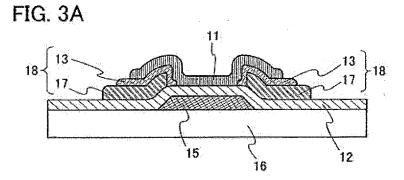
Application Serial No. 14/451,680 Attorney Docket No. 0756-10566

available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

- 8 -

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 2 and 11 have been amended to change "a source electrode" to --a first metal film-- and "a drain electrode" to --a second metal film--. As amended, claims 2 and 11 recite *inter alia* that each of the side surface of the <u>first metal film</u> and the side surface of the <u>second metal</u> film has a step in a lower end portion thereof. The amendment is supported in the original specification, for example, by paragraph [0049]. For the reasons provided below, Furukawa and Akimoto, either alone or in combination, do not teach or suggest the above-referenced features of the present invention.

The Official Action asserts that "Furukawa teaches ... a source electrode and a drain electrode over the gate insulating film (Fig. 3A, source and drain electrode 18); an organic semiconductor film in contact with the source electrode and the drain electrode (Fig. 3A, oxide semiconductor film 11); wherein a side surface of the source electrode faces a side surface of the drain electrode; and wherein each of the side surface of the source of the source electrode has a step in a lower end portion thereof (Fig. 3A; ¶s 0115-0155 and 0183-0185)" (page 3, Paper No. 20140825).



Application Serial No. 14/451,680 Attorney Docket No. 0756-10566

However, Furukawa only potentially teaches that the alleged source and drain electrodes 18 each include a conductive layer 17 and a composite layer 13, while the composite layer contains *an organic compound and an inorganic compound*, not a metal film. See, Furukawa at FIG. 3A (reproduced above) and paragraph [0112]. On the other hand, Furukawa does not teach an oxide semiconductor film in contact with a first *metal* film and a second *metal* film or that each of the side surface of the first *metal* film and the side surface of the second *metal* film has a step in a lower end portion thereof, as recited in the amended independent claims. Furthermore, Akimoto does not cure the deficiency of Furukawa in this regard.

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Therefore, the Applicant respectfully submits that Furukawa and Akimoto, either alone or in combination, do not teach or suggest that each of the side surface of the first metal film and the side surface of the second metal film has a step in a lower end portion thereof. Since Furukawa and Akimoto do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

New claims 20 and 21 have been added to recite additional protection to which the Applicant is entitled. The features of claims 20 and 21 are supported in the present specification, for example, by paragraph [0049]. For the reasons stated above, the Applicant respectfully submits that new claims 20 and 21 are in condition for allowance.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below. The Commissioner is hereby authorized to charge fees under 37 C.F.R. §§ 1.16, 1.17, 1.20(a), 1.20(b), 1.20(c), and 1.20(d) (except the Issue Fee) which may be required now or hereafter, or credit any overpayment to Deposit Account No. 50-2280.

Respectfully submitted,

Eric J. Robinson Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C. 3975 Fair Ridge Drive Suite 20 North Fairfax, Virginia 22033 (571) 434-6789

Electronic Acknowledgement Receipt					
EFS ID:	20936334				
Application Number:	14451680				
International Application Number:					
Confirmation Number:	5776				
Title of Invention:	SEMICONDUCTOR DEVICE				
First Named Inventor/Applicant Name:	Shunpei YAMAZAKI				
Customer Number:	31780				
Filer:	Eric J. Robinson/Jennifer Rosenfeld				
Filer Authorized By:	Eric J. Robinson				
Attorney Docket Number:	0756-10566				
Receipt Date:	11-DEC-2014				
Filing Date:	05-AUG-2014				
Time Stamp:	16:08:34				
Application Type:	Utility under 35 USC 111(a)				

Payment information:

Submitted wi	th Payment	no						
File Listing:								
Document Number	Document Description		File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)		
Amendment/Req. Reconsideration-After		AMENDMENT_11DEC2014.pdf	1226703	no	10			
'	Non-Final Reject	AMENDMENT_TIDEC2014.pdf	10c79fc65af3550675d40f135b377d266688 3f87		10			
Warnings:								
Information: BLUEHOUSE EXHIBIT 1002								
Page 211 of 246								

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. PATENT APPLICATION FEE DETERMINATION RECORD Application or Docket Number Filing Date Substitute for Form PTO-875 14/451,680 08/05/2014 To be Mailed										
	Substitute for Form PTO-875 14/451,680 08/05/2014									
ENTITY: 🛛 LARGE 🗌 SMALL 🗌 MICRO										
APPLICATION AS FILED – PART I										
(Column 1) (Column 2)										
	FOR NUMBER FILED NUMBER EXTRA RATE (\$) FEE (\$)									
	BASIC FEE (37 CFR 1.16(a), (b),	or (c))	N/A		N/A					
	SEARCH FEE (37 CFR 1.16(k), (i), (or (m))	N/A		N/A		N/A			
	EXAMINATION FE (37 CFR 1.16(o), (p),		N/A		N/A		N/A			
	TAL CLAIMS CFR 1.16(i))		min	us 20 = *			X \$ =			
	EPENDENT CLAIM CFR 1.16(h))	IS	mi	inus 3 = *			X \$ =			
	APPLICATION SIZE (37 CFR 1.16(s))	FEE of p for s frac	aper, the a small entity	ation and drawing application size f /) for each additi of. See 35 U.S.C	ee due is \$310 (onal 50 sheets c	\$155 or				
	MULTIPLE DEPEN									
* If t	the difference in colu	umn 1 is less tha	n zero, ente	r "0" in column 2.			TOTAL			
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OME	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x \$80 =		0	
EN	Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0		× \$420 =		0	
AM	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
(Column 1) (Column 2) (Column 3)										
Г		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EX	TRA	RATE (\$)	ADDITIC	ONAL FEE (\$)	
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ENDM	Independent (37 CFR 1.16(h))	*	Minus	***	=		X \$ =			
AMEN	Application S	ize Fee (37 CFR	1.16(s))				 			
A	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
 * If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1. 										
This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering,										

preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450, DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE			
14/451,680	08/05/2014	Shunpei YAMAZAKI	0756-10566			
			CONFIRMATION NO. 5776			
31780		PUBLICA	TION NOTICE			
Robinson Intellectual Prop	erty Law Office, P.C.					
3975 Fair Ridge Drive	2		OC000000071952046*			
Suite 20 North		*:	OC00000071952046*			
Fairfax, VA 22033						

Title:SEMICONDUCTOR DEVICE

Publication No.US-2014-0339556-A1 Publication Date:11/20/2014

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

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Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

	ED STATES PATENT A	and Trademark Office	UNITED STATES DEPAR United States Patent and Address: COMMISSIONER F P.O. Box 1450 Alexandria, Virginia 22: www.uspto.gov	Trademark Office FOR PATENTS
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/451,680	08/05/2014	Shunpei YAMAZAKI	0756-10566	5776
	7590 09/11/2014 ectual Property Law Offic	EXAM	IINER	
3975 Fair Ridge			JOY, JEI	REMY J
Suite 20 North Fairfax, VA 22	033		ART UNIT	PAPER NUMBER
			2896	
			MAIL DATE	DELIVERY MODE
			09/11/2014	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Application No.Applicant(s)14/451,680YAMAZAKI ET AL.							
Office Action Summary	Examiner JEREMY		Art Unit 2896	AIA (First Inventor to File) Status No			
The MAILING DATE of this communication appears on the cover sheet with the correspondence address							
 Period for Reply A SHORTENED STATUTORY PERIOD FOR REPL THIS COMMUNICATION. Extensions of time may be available under the provisions of 37 CFR 1.1 after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period v Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b). 	136(a). In no eve will apply and wi e, cause the appl	ent, however, may a reply be tir Il expire SIX (6) MONTHS from ication to become ABANDONE	nely filed the mailing date D (35 U.S.C. § 13	of this communication. 33).			
Status							
 1) Responsive to communication(s) filed on <u>08/1</u> A declaration(s)/affidavit(s) under 37 CFR 1.⁻ 		were filed on					
2a) This action is FINAL . 2b) 🛛 This	s action is n	on-final.					
3) An election was made by the applicant in resp				ing the interview on			
; the restriction requirement and election		•					
4) Since this application is in condition for allowa		•					
closed in accordance with the practice under <i>I</i>	Ex parte Qu	ayle, 1935 C.D. 11, 4	53 O.G. 213.				
 Disposition of Claims* 5) Claim(s) 2-19 is/are pending in the application 5a) Of the above claim(s) is/are withdrates 6) Claim(s) is/are allowed. 7) Claim(s) 2-19 is/are rejected. 8) Claim(s) is/are objected to. 9) Claim(s) are subject to restriction and/ot * If any claims have been determined allowable, you may be e participating intellectual property office for the corresponding a http://www.uspto.gov/patents/init_events/pph/index.jsp or sendents 10) The specification is objected to by the Examinet 11) The drawing(s) filed on 08/05/2014 is/are: a) Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 	wn from con ligible to ben upplication. Fo d an inquiry to er. accepted drawing(s) b	equirement. efit from the Patent Pro or more information, plea o <u>PPHfeedback@uspto.</u> or b) objected to by e held in abeyance. Se	ase see gov. / the Examin e 37 CFR 1.85	er. 5(a).			
Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign Certified copies: a) All b) Some** c) None of the: 1. Certified copies of the priority document 2. Certified copies of the priority document 3. Copies of the certified copies of the priority document ** See the attached detailed Office action for a list of the certified 	its have bee its have bee prity docum u (PCT Rule	en received. en received in Applicat ents have been receiv e 17.2(a)).	tion No. <u>13/7</u>				
Attachment(s) 1) X Notice of References Cited (PTO-892)		3) 🔲 Interview Summary	· (PTO-413)				
2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/ Paper No(s)/Mail Date	'SB/08b)	Paper No(s)/Mail D 4) Other:	ate				

The present application is being examined under the pre-AIA first to invent provisions.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment to the claims filed on 08/14/2014 has been

acknowledged and entered. Claim 1 has been cancelled and claims 2-19 have been

added. Non-final office action on the merits is as follows:

Specification

2. The specification has not been checked to the extent necessary to determine the

presence of all possible minor errors. Applicant's cooperation is requested in correcting

any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

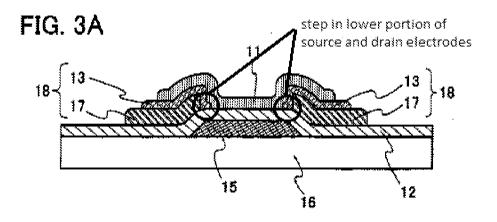
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims **2-19** are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over *Furukawa et al.* (**U.S. Patent Pub. No. 2008/0099757**, from hereinafter "*Furukawa*) in view of *Akimoto* (**U.S. Patent Pub. No. 2007/0108446**).

Regarding Claim 2, *Furukawa* teaches a glass substrate (Fig. 3A, substrate 16); a gate electrode over the glass substrate (Fig. 3A, gate electrode 15); a gate insulating film over the gate electrode (Fig. 3A, gate dielectric 12); a source electrode and a drain electrode over the gate insulating film (Fig. 3A, source and drain electrode 18); an organic semiconductor film in contact with the source electrode and the drain electrode (Fig. 3A, oxide semiconductor film 11); wherein a side surface of the source electrode faces a side surface of the drain electrode; and wherein each of the side surface of the source electrode has a step in a lower end portion thereof (Fig. 3A; ¶'s 0115-0155 and 0183-0185).



Furukawa fails to teach an oxide semiconductor film formed on the source and drain regions rather than the organic semiconductor film as disclosed.

Akimoto teaches an oxide semiconductor film formed on source and drain regions in a display device similar to that of the applicant (Fig. 1A, oxide semiconductor film 13; ¶ 0065).

In view of the teachings of *Akimoto*, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of *Furukawa* to include an oxide semiconductor layer as the active semiconductor channel layer because oxide semiconductors are well known in the art of thin film transistors as they provide adequate channel mobility during device operation. Also, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding Claim 3, *Furukawa* teaches wherein the oxide semiconductor film is positioned on the source and the drain electrode (Fig. 2A).

Regarding Claim 4, *Furukawa* teaches wherein the source electrode and the drain electrode are in contact with the gate insulating film (Fig. 2A).

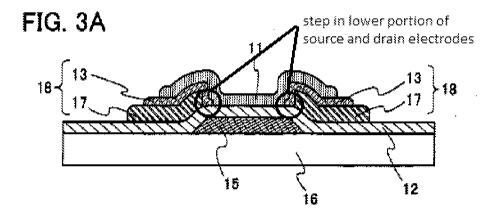
Regarding Claim 5, as in the combination of *Shunpei* and *Akimoto* above, *Akimoto* teaches the oxide semiconductor film comprises zinc (¶ 0066).

Regarding Claim 6, *Furukawa* teaches the step lays flat on the substrate creating about a 90° angle which satisfies the claims in regards to the angle of inclination of the step in relation to the surface of the substrate (Fig. 2A).

Regarding Claim 7, *Furkawa* teaches a first buffer layer between the oxide semiconductor film and the source region and a second buffer layer between the oxide semiconductor film and the drain region, wherein each of the first buffer layer and the second buffer layer has a lower resistivity than the oxide semiconductor film (Fig. 12A, buffer layer 19; ¶0206-0211).

Regarding Claims 8-10, *Furukawa* teaches the device comprising a pixel portion comprising: the semiconductor device as claimed above and a display element electrically connected to one of the source electrode and the drain electrode and more specifically wherein the display element is a liquid crystal element or a light emitting element (Fig. 8B and 9B, depicting the semiconductor device as taught above with a display element as claimed, LC element 564, light emitting element 637).

Regarding Claim 11, *Furukawa* teaches a glass substrate (Fig. 2A, substrate 16); a gate electrode over the glass substrate (Fig. 2A, gate electrode 15); a gate insulating film over the gate electrode (Fig. 2A, gate dielectric 12); a source electrode and a drain electrode over the gate insulating film (Fig. 2A, source and drain electrode 18); an organic semiconductor film in contact with the source electrode and the drain electrode (Fig. 2A, oxide semiconductor film 11); wherein a side surface of the source electrode faces a side surface of the drain electrode; and wherein each of the side surface of the source electrode has a step in a lower end portion thereof, wherein each of the source and drain electrode comprises a first layer and a second layer and wherein the first layer and the second layer comprise different materials (Fig. 2A, layer 13 vs. 17; ¶'s 0084-0099 and 0112-0115).



Furukawa fails to teach an oxide semiconductor film formed on the source and drain regions rather than the organic semiconductor film as disclosed.

Akimoto teaches an oxide semiconductor film formed on source and drain regions in a display device similar to that of the applicant (Fig. 1A, oxide semiconductor film 13; ¶ 0065).

In view of the teachings of *Akimoto*, it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the teachings of *Furukawa* to include an oxide semiconductor layer as the active semiconductor channel layer because oxide semiconductors are well known in the art of thin film transistors as they provide adequate channel mobility during device operation. Also, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Regarding Claim 12, *Furukawa* teaches wherein the oxide semiconductor film is positioned on the source and the drain electrode (Fig. 2A).

Regarding Claim 13, *Furukawa* teaches wherein the source electrode and the drain electrode are in contact with the gate insulating film (Fig. 2A).

Regarding Claim 14, as in the combination of *Furukawa* and *Akimoto* above, *Akimoto* teaches the oxide semiconductor film comprises zinc (¶ 0066).

Regarding Claim 15, *Furukawa* teaches the step lays flat on the substrate creating about a 90° angle which satisfies the claims in regards to the angle of inclination of the step in relation to the surface of the substrate (Fig. 2A).

Regarding Claim 16, *Furkawa* teaches a first buffer layer between the oxide semiconductor film and the source region and a second buffer layer between the oxide semiconductor film and the drain region, wherein each of the first buffer layer and the second buffer layer has a lower resistivity than the oxide semiconductor film (Fig. 12A, buffer layer 19; ¶0206-0211).

Regarding Claims 17-19, *Furukawa* teaches the device comprising a pixel portion comprising: the semiconductor device as claimed above and a display element electrically connected to one of the source electrode and the drain electrode and more specifically wherein the display element is a liquid crystal element or a light emitting element (Fig. 8B and 9B, depicting the semiconductor device as taught above with a display element as claimed, LC element 564, light emitting element 637).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEREMY JOY whose telephone number is (571)270-7445. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Such can be reached on (571)-272-8895. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEREMY JOY/ Examiner, Art Unit 2896 August 25, 2014

/CHEUNG LEE/ Primary Examiner, Art Unit 2896

Notice of References Cited	Application/Control No. 14/451,680	Applicant(s)/Patent Under Reexamination YAMAZAKI ET AL.				
Notice of Hereferices Cited	Examiner	Art Unit				
	JEREMY JOY	2896	Page 1 of 1			

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	А	US-2008/0099757	05-2008	Furukawa et al.	257/40
*	В	US-2007/0108446	05-2007	Akimoto, Kengo	257/061
	С	US-			
	D	US-			
	Е	US-			
	F	US-			
	G	US-			
	н	US-			
	Ι	US-			
	J	US-			
	к	US-			
	L	US-			
	М	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Part of Paper No. 20140825



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BIB DATA SHEET

CONFIRMATION NO. 5776

SERIAL NUM	BER	FILING or			CLASS	GR	OUP ART	UNIT	ΑΤΤΟ	RNEY DOCKET
14/451,68	0	DATI 08/05/2	_		257		2896			NO. 0756-10566
		RULI	Ξ							
	APPLICANTS Semiconductor Energy Laboratory Co., Ltd., Atsugi-shi, JAPAN, Assignee (with 37 CFR 1.172 Interest);									
INVENTORS Shunpei YAMAZAKI, Setagaya, JAPAN; Kengo AKIMOTO, Atsugi, JAPAN; Daisuke KAWAE, Yamato, JAPAN;										
This appli whi	** CONTINUING DATA ***********************************									
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** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 08/13/2014										
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TITLE										
SEMICON	NDUCT	OR DEVICE								
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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	14451680	YAMAZAKI ET AL.
	Examiner	Art Unit
	JEREMY JOY	2896

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED							
Symbol	Date	Examiner					

US CLASSIFICATION SEARCHED							
Class	Subclass	Date	Examiner				

SEARCH NOTES							
Search Notes	Date	Examiner					
See search notes from parent applications 12/613,769 and 13/763874	8/25/2014	Jeremy J. Joy					
General keyword and EAST search is attached.	8/25/2014	Jeremy J. Joy					

INTERFERENCE SEARCH									
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner						

/JEREMY JOY/ Examiner.Art Unit 2896	August 25, 2014

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	7097	((Shunpei) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
٢2	423	((Kengo) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
L3	98	((Daisuke) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/08/25 07:56
L4	7378	123	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25 07:57
L5	157340	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
L6	13935	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
L7	2186	L5 and L6	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 07:57
L8	721	4 and L7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/08/25 07:57
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L40	34	38 39	USPAT	OR	ON	2014/08/25 09:13
L41	5	("2006/0033098").URPN.	USPAT	OR	ON	2014/08/25 09:46
L42	59	("20010046611" "20020045289" "20020093283" "20020101154" "20020121860" "20020139303" "20030015698" "20030085398" "20030092214" "20030092232" "20030213952" "20030218166" "20040012017" "20040075093" "20040108562" "20040161192" "20040206959" "20050042548" "20050057136" "20050084712"	US-PGPUB; USPAT; USOCR	OR	ON	2014/08/25 09:48

EAST Search History

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<u> </u>			DERWENT; IBM_TDB			
51 2		"US 20100117077"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 14:18
52 18	306	"257/43".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
53 12	28	"257/E21.459".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
54 14	431	"438/158".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S5 [53	37	"257/E29.296".OCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S6 [11	194	"257/57".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
S7 12	225	"438/104".CCLS.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:32
58 54	416	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:35
59 27	74	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:35
S10 54	4	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2012/04/04 14:36
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S14	41	("20020153587" "20030013261" "20030047785" "20030111663" "20030207502" "20030218221" "20030218222" "20030219530" "20040023432" "4887255" "5744864" "6225655" "6255130" "6362499" "6563174" "7067843").PN. OR ("7282782").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:20
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S28	0	(buffer with (source drain) with (ozide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:48
S29	0	(source drain) with (ozide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 16:49
S30	5583	(source drain) with (oxide near2 semiconductor) with channel	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S31	371	(buffer with (source drain) with (oxide near2 semiconductor))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S32	118	(buffer with (source drain) with (oxide near2 semiconductor) with channel)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:03
S33	24	S32 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:04
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S36	0	S34 and ((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:10
S37	54124	((angle taper) near5 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
538	217	S37 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:13
S39	164	S38 not (angle adj implant\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:15
540	3037	((taper incline decline angle) near3 (side sidewall surface) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:23
S41	178	(tft (thin adj film adj transistor)) and S40	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04/04/04/04/04/04/04/04/04/04/04/04/
542	10	"US 7081641"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 17:29
		("20050056897" "6569707"	US-PGPUB;	OR	ON	2012/04/04

S44	48	((taper near2 angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:40
S45	32689	((taper angle) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:41
S46	161	S45 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S47	243	((taper angle) near3 ((source drain) adj electrode))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S48	243	(taper angle) near3 ((source drain) adj electrode)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:42
S49	206	(tft (thin adj film adj transistor)) and S48	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:43
S50	69	S25 and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:53
S51	519	(source drain) near3 (tilt adj angle)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56
S52	54	S51 and S17	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:56
S53	5614	S8 S9 S10	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
S54	3354	S53 and (tft (thin adj film)) and (angle taper)	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 17:59
S55	145	S53 and (tft (thin adj film)) and ((angle taper) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/04/04 18:00
S56	5	"US 7564058"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2012/04/04 18:04
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			USPAT; USOCR			18:30
S66	1	("20120132910").PN.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:00
S67	10	("20110318916" "20120058599" "8021917" "8030663" "8115201").PN.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:01
S68	11	S66 S67	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:01
S69	5731	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S70	294	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S71	62	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2012/09/26 22:04
S72	5942	S69 S70 S71	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S73	5403	S72 and (tft (thin\$1film) (thin adj film))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB		ON	2012/09/26 22:04
S74	3556	S73 and (angle taper)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:04
S75	878	S73 and ((angle taper) with electrode)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:05
S76	133560	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S77	10334	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:06
S78	1631	S76 and S77	US-PGPUB;	OR	ON	2012/09/26

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			USPAT; USOCR			22:06
S79	532	S72 and S78	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/09/26 22:06
S80	89	((angle taper gradation stair) near3 (source drain)) and S77 and S72	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:08
S81	5466	(257/59).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:19
S82	5099	(257/72).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:19
S83	45	((angle taper gradation stair) near3 (source drain)) and S77 and S81	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S84	40	((angle taper gradation stair) near3 (source drain)) and S77 and S82	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S85	60	S83 S84	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:19
S86	674	(257/e29.277).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:21
S87	311	(257/e21.535).OCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:24
S88	1543	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:27
S89	15	((angle taper gradation stair) near3 (source drain)) and S77 and S88	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:27
S90	3682	(438/149).CCLS.	US-PGPUB; USPAT	OR	OFF	2012/09/26 22:28
S91	17	((angle taper gradation stair) near3 (source drain)) and S77 and S90	US-PGPUB; USPAT; USOCR	OR	ON	2012/09/26 22:28
S95	6242	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S96	356	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S97	75	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/07/01 10:27
S98	6489	S95 S96 S97	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/01 10:27
S99	142606	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S100	11746	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT;	OR		2013/07/01 10:27 OUSE EXHIBIT 10

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			USOCR			
5101	1860	S99 and S100	US-PGPUB; USPAT; USOCR	OR	ON	2013/07/01 10:27
S102	600	S98 and S101	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/07/01 10:27
S103	5191	(semiconductor near5 ((indium in) and (gallium ga) and (zinc zn)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 02:30
S104	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30
S105	1268	S103 and S104	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 02:30
S106	1058	(IN\$2ga\$2zn)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; I BM_TDB	OR	ON	2013/08/12 02:33
S107	268	("20030189401" "20050050897" "20060110867" "20060284172" "20080128689" "20080258141" "20090068773" "7061014" "20090189155" "20020132454" "20060231882" "20060244107" "20060284171" "20070054507" "20060284171" "20070287296" "20080224133" "20080258139" "20090114917" "20090152541" "20190044711" "20110318916" "20120132910" "5847410" "6294274" "6563174" "7323368" "7402506" "7411209" "8030663" "8115201" "8158464" "20060108529" "20060113565" "20060169973" "20060228974" "20060169973" "20060228974" "20080106191" "20100065844" "20100117086" "5731856" "7385224" "7462862" "7732819" "20070024187" "2008006877" "20070024187" "2008006877" "20080038882" "2008023387" "20080254569" "20080258140" "2009008639" "20090278122" "20090280600" "2010025678" "20090280600" "2010025678" "20090280600" "2010025678" "7049190" "20090189156"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01

		"8134156" "20010046027" "20020056838" "20060113539" "20060208977" "20060238135" "20070052025" "20070172591" "20080296568" "20100109002" "7211825" "7453065" "20080182358" "20090073325" "6532045" "7453087" "7501293" "7674650" "8021917" "20060136368" "20060135452" "20060197092" "20070072439" "20070187760" "20080166834" "20090152506" "5744864" "20090152506" "5744864" "6586346" "6727522" "6960812" "7064346" "20040127038" "20050017302" "20050199959" "20050017302" "20060113536" "20050017302" "20050199959" "20060143377" "20060113536" "20070252928" "2007018446" "20070046191" "2007018446" "20070252928" "20070272922" "20080073653" "20080129195" "20080258143" "20090065771" "2008038805" "20090065771" "2008038805" </th <th></th> <th></th> <th></th> <th></th>				
S108	6320	"20100003783").PN. ((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB;	OR	ON	2013/08/12
S109	368	((KENGO) near2 (AKIMOTO)).INV.	USPAT US-PGPUB; USPAT	OR	ON	09:01 2013/08/12 09:01
S110	77	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/08/12 09:01
S111	6569	S108 S109 S110	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/08/12 09:01
S112	143950	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S113	11923	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S114	1895	S112 and S113	US-PGPUB; USPAT; USOCR	OR	ON	2013/08/12 09:01
S115	617	S111 and S114	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2013/08/12 09:01

			BM_TDB			
S116	133	("20030189401" "20050050897"	US-PGPUB;	OR	ON	2013/08/12
		20060110867" "20060284172"	USPAT;			09:02
		"20080128689" "20080258141"	FPRS;			
		"20080308796" "20080308806"	EPO; JPO;			
		"20090068773" "7061014"	IBM_TDB			
		"20090189155" "20020132454"	_			
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		"20060284171" "20070054507"				
		"20070152217" "20070287296"				
		"20080224133" "20080258139"				
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		"20070187760" "20080166834"				
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		"20090186445" "8368079"				
		"20040038446" "20040127038" "20050017302" "20050199959"				
		"20060043377" "20060113536"				
		"20060170111" "20060292726"				
		"20070046191" "20070108446"				
		"20070252928" "20070272922"				
		"20080073653" "20080129195"				
		"20080258143" "20080308804"				
		"20080308805" "20090065771"				
		"20090114910" "20100092800"				******
		"20120058599" "7105868"				
		"7297977" "7323356"				
			28	1	:1	3

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	L	"20100003783").PN.		L	<u></u>	
S117	2	"US 20130214270"	US-PGPUB; USPAT; USOCR; DERWENT	OR	ON	2013/12/11 01:46
S118	1	("20060033098").PN.	US-PGPUB; USPAT	OR	OFF	2013/12/11 01:57
S119	6558	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/11 02:41
S120	385	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/1 ⁻ 02:41
S121	82	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2013/12/1 ⁻ 02:41
S122	6814	S119 S120 S121	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM TDB	OR	ON	2013/12/1 ⁻ 02:41
S123	148280	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/1 ⁻ 02:41
S124	12541	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/1 ⁻ 02:41
S125	1990	S123 and S124	US-PGPUB; USPAT; USOCR	OR	ON	2013/12/1 ⁻ 02:41
S126	649	S122 and S125	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/12/1 ⁻ 02:41
S127	6765	((SHUNPEI) near2 (YAMAZAKI)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S128	395	((KENGO) near2 (AKIMOTO)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S129	87	((DAISUKE) near2 (KAWAE)).INV.	US-PGPUB; USPAT	OR	ON	2014/03/23 19:33
S130	7028	S127 S128 S129	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:33
S131	151627	((angle taper step gradation stair) near3 (source drain))	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S132	13059	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33
S133	2067	S131 and S132	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:33

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S134	680	S130 and S133	US-PGPUB:	OR	ON	2014/03/23
			USPAT; USOCR; FPRS; EPO; JPO; DERWENT;			19:33
			IBM_TDB			
S135	9	"2008205451"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:34
S136	10	"2005223049"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:34
S137	3	"07064112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:34
S138	13059	(tft (thin adj film adj transistor)) and ((bottom adj gate) bottom\$1gate)	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S139	6584	(257/59).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S140	48	((angle taper gradation stair) near3 (source drain)) and S138 and S139	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S141	4077	(438/149).OCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:57
S142	18	((angle taper gradation stair) near3 (source drain)) and S138 and S141	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:57
S143	1947	(438/158).CCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S144	17	((angle taper gradation stair) near3 (source drain)) and S138 and S143	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S145	17	S144	US-PGPUB; USPAT; USOCR	OR	ON	2014/03/23 19:58
S146	320	(257/e21.535).OCLS.	US-PGPUB; USPAT	OR	OFF	2014/03/23 19:58
S147	72	S140 S142 S144	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/03/23 19:58

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