OLIFF BERRIDGE

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(1) Atsushi MURAMATSU       (2) Kiyoshi KANIE         (2) Kiyoshi KANIE       TO         (3) Kazubisa SAITO       1-1         (4) Koji TANOUE       AO         (5) Akira NAGATOMI       AO         B. Additional name(s) of conveying party(ies) attached?       JAI         □ Yes ⊠ No       DO         3. A. Nature of conveyance:       14-         □ Assignment       □ Merger         □ Security Agreement       □ Change of Name         ⊠ Other Record to correct 2 <sup>nd</sup> Assignee's name on an assignment document previously recorded on April 1.       20111, reel 026110/frame 0732         B. Execution Date: (1) and (2): March 7, 2011; (3): February 8, 2011;       B. Additional numbers attached?         (4) A. Patent Application No. 13/002,995       B. Paten         Additional numbers attached?       □ Yes [         C. Title of Application: MANUFACTURING METHOD OF ITO PA         COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCT         TRANSPARENT ELECTROCONDUCTIVE FILM         5. Name and address of party to whom correspondence concerning document should be mailed:         Name: James A. Oliff         (37 CFR 3.         Address: OLIFF & BERRIDGE, PLC P.O. Box 320850         Aldress: OLIFF & BERRIDGE, PLC P.O. Box 320850         Aldress: OLIFF & BERRIDGE, PLC PLO BASO	Patent and Trademark (
Total number of pages including cover sheet, attachments, and document: <u>1</u> 1. A. Name of conveying parties:       2. A. Name         (1) Atsushi MURAMATSU       2. A. Name         (2) Kiyoshi KANIE       1-1         (3) Kazuhisa SAITO       1-1         (4) Koji TANOUE       Additional name(s) of conveying party(ies) attached?       AGO         (5) Akira NAGATOMI       Marger       DO         3. A. Nature of conveyance:       14-         Assignment       Merger       JAI         Security Agreement       Change of Name       JAI         2011; (3): February 8, 2011;       Hand (2): March 7, 2011; (3): February 8, 2011;       JAI         (4) and (5): January 28, 2011       B. Paten       Additional numbers attached?       Yes 5         4. A. Patent Application No. 13/002,995       B. Paten       Additional numbers attached?       Yes 5         5. Name and address of party to whom correspondence concerning document should be mailed:       A.       7. Please chai (37 CFR 3)         Address:       OLIFF & BERRIDGE, PLC P.O. Box 320850       8. Credit any deposit acc P.O. Box 320850         Phone Number: 703-836-6400       Fax Number: 703-836-6400       8. Credit any deposit acc P.O. Box 320850         9. Statement and signature. To the best of my kgeyledge and belief, the foregoing information is true and c       14.	Attorney Docket No. <u>148197</u>
1. A. Name of conveying parties:       2. A. Name         (1) Atsushi MURAMATSU       70         (2) Kiyoshi KANIE       1-1         (3) Kazuhisa SAITO       1-1         (4) Koji TANOUE       AC         (5) Akira NAGATOMI       Mil         B. Additional name(s) of conveying party(ies) attached?       Yes ⊠ No         □ Yes ⊠ No       DO         3. A. Nature of conveyance:       14.         □ Assignment       □ Merger         □ Security Agreement       □ Change of Name         ⊠ Other Record to correct 2 <sup>st</sup> Assignee's name on an       assignment document previously recorded on April 1.         20111. reel 026110/frame 0732       B. Execution Date: (1) and (2): March 7.       2011.; (3): February 8. 2011;         (4) and (5): January 28. 2011       E. Paten         Additional numbers attached?       □ Yes [         C. Title of Application: MANUFACTURING METHOD OF ITO PA         Coatting MATERIAL FOR TRANSPARENT ELECTROCONDUCT         TRANSPARENT ELECTROCONDUCTIVE FILM         5. Name and address of party to whom correspondence concerning document should be mailed:         Name: James A. Oliff         Name: James A. Oliff         S. Name and address of party to whom correspondence concerning document should be mailed:         Name: Janes A. Oliff <td< td=""><td></td></td<>	
(1) Atsushi MURAMATSU       (2) Kiyoshi KANIE         (3) Kazuhisa SAITO       (4) Koji TANOUE         (3) Kazuhisa SAITO       (1-1         (4) Koji TANOUE       (5) Akira NAGATOMI         B. Additional name(s) of conveying party(ies) attached?       [] JAI         [] Yes ⊠ No       DO         3. A. Nature of conveyance:       [] Merger         [] Assignment       [] Merger         [] Security Agreement       [] Change of Name         [] Other Record to correct 2 <sup>nd</sup> Assignee's name on an assignment document previously recorded on April 1.       2011, reel 026110/frame 0732         B. Execution Date: (1) and (2): March 7.       2011; (3): February 8. 2011;         (4) And (5): January 28. 2011       B. Paten         4. A. Patent Application No. 13/002,995       B. Paten         Additional numbers attached?       [] Yes []         C. Title of Application: MANUFACTURING METHOD OF ITO PA         COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCT         TRANSPARENT ELECTROCONDUCTIVE FILM         5. Name and address of party to whom correspondence concerning document should be mailed:         Name: James A. Oliff       7. Please char (37 CFR 3.         Address: OLIFF & BERRIDGE, FLC P. O. Box 320850       8. Credit any deposit acc         Phone Number: 703-836-6400       8. Credit any deposit acc	
(2) Kiyoshi KANIE       TO         (3) Kazuhisa SAITO       1-1         (4) Koji TANOUE       AC         (5) Akira NAGATOMI       AC         B. Additional name(s) of conveying party(ies) attached?       JAI         □ Yes ⊠ No       DO         3. A. Nature of conveyance:       Image:	e and address of receiving parties:
3. A. Nature of conveyance:       □ Yes ⊠ No         □ Assignment       □ Merger         □ Security Agreement       □ Change of Name         ⊠ Other Record to correct 2 <sup>nd</sup> Assignee's name on an assignment document previously recorded on April 1. 2011L reel 026110/frame 0732       B. Addit         B. Execution Date:       (1) and (2): March 7. 20111; (3): February 8. 2011; (4) and (5): January 28. 2011       B. Patent Application No. 13/002,995         4. A. Patent Application No. 13/002,995       B. Patent Additional numbers attached?       □ Yes [         C. Title of Application:       MANUFACTURING METHOD OF ITO PA COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCTIVE FILM       6. Total number (37 CFR 3. Address: 0 LIFF & BERRIDGE, PLC P.O. Box 320850 Alternandria, VA 22320-4850 Phone Number: 703-836-2787       8. Credit any deposit acc         9. Statement and signature. To the best of my kgwledge and belief, the foregoing information is true and c       8. Credit and component on the foregoing information is true and c	HOKU UNIVERSITY , KATAHIRA 2-CHOME BA-KU, SENDAI-SHI YAGI 980-8577
Assignment       Merger       14- CH         Security Agreement       Change of Name       JAI         Other Record to correct 2 <sup>nd</sup> Assignee's name on an assignment document previously recorded on April 1. 20111, reel 026110/frame 0732       B. Addit         B. Execution Date:       (1) and (2): March 7. 2011; (3): February 8, 2011; (4) and (5): January 28, 2011       B. Paten         4. A. Patent Application No.       13/002,995       B. Paten         Additional numbers attached?       Yes [         C. Title of Application:       MANUFACTURING METHOD OF ITO PA         COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCT TRANSPARENT ELECTROCONDUCTIVE FILM       6. Total numb         5. Name and address of party to whom correspondence concerning document should be mailed: Name:       7. Please char (37 CFR 3)         Address:       OLIFF & BERIDGE, PLC P.O. Box 320850 Alexandria, VA 22320-4850 Phone Number: 703-836-6400 Fax Number: 703-836-2787       8. Credit any deposit acc         9. Statement and signature. To the best of my kggwledge and belief, the foregoing information is true and c       9. Statement and signature.	PAN PWA ELECTRONICS
Statement and signature.       Change of Name         Statement and signature.       To the best of my kgowledge and belief, the foregoing information is true and c	MATERIALS CO., LTD. 1, SOTOKANDA 4-CHOME IYODA-KU, TOKYO 101-002 PAN
2011; (3): February 8, 2011;         (4) and (5): January 28, 2011         4. A. Patent Application No. 13/002,995         B. Paten         Additional numbers attached?         Yes [         C. Title of Application: MANUFACTURING METHOD OF ITO PA         COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCT         TRANSPARENT ELECTROCONDUCTIVE FILM         5. Name and address of party to whom correspondence concerning document should be mailed:         Name: James A. Oliff         Address:         OLIFF & BERRIDGE, PLC         Phone Number: 703-836-6400         Fax Number: 703-836-6400         Fax Number: 703-836-2787	tional name(s) & address(es) attached?
Additional numbers attached?       Yes         C. Title of Application:       MANUFACTURING METHOD OF ITO PA         COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCT       TRANSPARENT ELECTROCONDUCTIVE FILM         5. Name and address of party to whom correspondence concerning document should be mailed:       6. Total number         Name:       James A. Oliff         7.       Please char         (37 CFR 3.         Address:       OLIFF & BERRIDGE, PLC         Phone Number:       703-836-6400         Fax Number:       703-836-2787         9.       Statement and signature.         To the best of my knowledge and belief, the foregoing information is true and c	
C. Title of Application: MANUFACTURING METHOD OF ITO PA COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCT TRANSPARENT ELECTROCONDUCTIVE FILM 5. Name and address of party to whom correspondence concerning document should be mailed: Name: James A. Oliff 6. Total numb 7. Please char (37 CFR 3. Address: OLIFF & BERRIDGE, PLC P.O. Box 320850 Alexandria, VA 22320-4850 Phone Number: 703-836-6400 Fax Number: 703-836-2787 8. Credit any deposit acc 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and c	t No.(s)
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concerning document should be mailed:       7. Please char (37 CFR 3.         Name: James A. Oliff       7. Please char (37 CFR 3.         Address: OLIFF & BERRIDGE, PLC       8. Credit any         Phone Number: 703-836-6400       8. Credit any         Phone Number: 703-836-6400       8. Credit any         Fax Number: 703-836-2787       9. Statement and signature.         To the best of my knowledge and belief, the foregoing information is true and c	
Name: James A. Oliff       7. Please char (37 CFR 3.         Address: OLIFF & BERRIDGE, PLC P.O. Box 320850 Alexandria, VA 22320-4850 Phone Number: 703-836-6400 Fax Number: 703-836-2787       8. Credit any deposit acc         9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and c	per of applications and patents involved: $\underline{1}$
P.O. Box 320850       8. Credit any deposit acc         Alexandria, VA 22320-4850       8. Credit any deposit acc         Phone Number: 703-836-6400       deposit acc         Fax Number: 703-836-2787       9. Statement and signature.         To the best of my knowledge and belief, the foregoing information is true and c	ge Deposit Account No. 15-0461 the total f 41) in the amount of \$40.00.
To the best of my knowledge and belief, the foregoing information is true and c	overpayment or charge any underpayment to count number 15-0461.
To the best of my knowledge and belief, the foregoing information is true and c the original document	
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James A. Oliff, Registration No. 27,075 Sarah Lhymn, Registration No. 65,041	Date: <u>April 28, 2011</u> <b>PATENT</b>

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	04/01/2011
·	Mail Stop:       Assignment Recordation Services         Assignment Recordation Services       RECORDATION FORM COVER SHEET       U.S. DEPARTMENT OF COMMERCE         Director of the U.S. Patent       PATENTS ONLY       Patent and Trademark Office         P.O. Box 1459       Alexandria, VA 22313-1450       Altorney Docket No. <u>148197</u>
	Please record the atlached document.
`	Total number of pages including cover sheet, attachments, and document: 2
	1. A. Name of conveying parties:       (1) Atsushi MURAMATSU         (2) Kiyoshi KANIE       (3) Kazuhisa SAITO         (3) Kazuhisa SAITO       (4) Koji TANOUE         (5) Akira NAGATOMI       (5) Akira NAGATOMI         B. Additional name(s) of conveying party(ies) attached?       [1] Yes ⊠ No         3. A. Nature of conveyance:       [1] Yes ⊠ No         3. A. Nature of conveyance:       [2] Margar         [3] Security Agreement       [2] Change of Name         [3] Other
	Additional numbers attached?  Yes  No C. Title of Application: <u>MANUFACTURING METHOD OF ITO PARTICLES, AND ITO POWDER,</u> <u>COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCTIVE</u>
	MATERIAL AND TRANSPARENT ELECTROCONDUCTIVE FILM         5. Name and address of party to whom correspondence concerning document should be mailed:       6. Total number of applications and patents involved: 1         7. Please charge Deposit Account No. 15-0461 the total fee (37 CFR 3.41) in the amount of \$40.00.         Address:       OLIFF & BERRIDGE, FLC         P.O. Box 320850         Alexandria, VA 22320-4850         Phone Number: 703-836-6400         Fax Number: 703-836-2787
	<ol> <li>Statement and signature.</li> <li>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the</li> </ol>
	ariginal document

REEL: 026215 FRAME: 0371

## ASSIGNMENT

## (Two Assignees)

		(1)	Atsushi MURAMATSU	(4)	Koji TANOUE		
(1-8)	Insert Name(s) of Inventor(s)	(2)	Kiyoshi KANIE	(5)	Akira NAGATOMI		
		(3)	Kazuhisa SAITO	(6)			
( <b>9</b> A)	Insert Name of First	to each	In consideration of the sum of one dollar (\$1. n of the undersigned, each undersigned agrees to ass TOHOKU UNIVERSITY				
(10A)	Assignee Insert Address of First						
(9B)	Assignee Insert Name of Second	(10A)	1-1, Katahira 2-chome, Aoba-ku, Sendai-shi Miy	agi 98	30-8577		
	Assignee	(9B)	DOWA ELECTRONICS MATERIALS CO., LTD.				
(10B)	Insert Address of Second Assignee	(10B)	14-1, Sotokanda, 4-chome, Chiyoda-ku, Tokyo 1	.01-00	21 Japan		
(11)	Insert Identification, such as Title, Case Number or Foreign Application Number	(hereinafter designated as the Assignee) and Assignee's heirs, successors, assigns and legal representatives, the entire right, title and interest for the United States of America as defined in 35 U.S.C. §100, in the invention, and in all applications for patent including any and all provisional, non-provisional, divisional, continuation, international, confirmation, substitute and reissue application(s), and all Letters Patent, extensions, reissues and reexamination certificates that may be granted on the invention known as           (11)         MANUFACTURING METHOD OF ITO PARTICLES, AND ITO POWDER, COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCTIVE MATERIAL AND TRANSPARENT ELECTROCONDUCTIVE FILM           Attorney Docket No.					
(12)	Insert Date of	(10)					
	Signing of	(12) on					
	Application						
(13)	Alternative	(13) Numbe	U.S. Application Serial				
	Identification for filed applications	filed					

1) Each undersigned agrees to execute all papers necessary in connection with the application and any continuing, divisional or reissue applications for the invention, and any patent(s) issuing thereon, and also to execute separate assignments in connection with such applications and patents as the Assignees may deem necessary.

2) Each undersigned agrees to execute all papers necessary in connection with any interference which may be declared concerning this application or continuation or division thereof, or any patent or reissue application based thereon, and to cooperate with the Assignees in every way possible in obtaining evidence and going forward with such interference.

3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignees.

5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all Letters
 Patents of the United States resulting from said application or any divisional, continuing or reissue applications to the said Assignees, as Assignees of the entire interest, and covenants that he has full right to convey the entire interest herein assigned, and that he has not executed, and will not execute, any agreements in conflict herewith, and agrees that this assignment is binding on him and his heirs, successors, assigns and legal representatives.
 6) Each undersigned hereby grants the firm of OLIFF & BERRIDGE, PLC the power to insert on this assignment any further identification that

may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

Date	March 9, 2011	Inventor Signature	Atunto Munder	(SEAL)
Date	March 7, 2011	Inventor Signature	Kijoshi Kat	(SEAL)
Date	Feb. 8, 2011	Inventor Signature	Kazuhisa SAITO	(SEAL)
Date	Jan. 28, 2011	Inventor Signature	Koji Tanoue	(SEAL)
Date	Jan 28, 2011	Inventor Signature	Akira NAGATOMI	(SEAL)
Date		Inventor Signature		(SEAL)

This assignment should preferably be signed before: (a) a Notary Public if within the U.S.A. (b) a U.S. Consul if outside the U.S.A. If neither, then it should be signed before at least two witnesses who also sign here:

Date

Witness

## PATENT REEL: 026215 FRAME: 0372

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT SERVICES BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 04/01/2011

REEL/FRAME: 026110/0732 NUMBER OF PAGES: 2

REEL: 026215

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS). DOCKET NUMBER: 148197

ASSIGNOR: MURAMATSU, ATSUSHI	DOC DATE: 03/07/2011
ASSIGNOR: KANIE, KIYOSHI	DOC DATE: 03/07/2011
ASSIGNOR: SAITO, KAZUHISA	DOC DATE: 02/08/2011
ASSIGNOR: TANOUE, KOJI	DOC DATE: 01/28/2011
ASSIGNOR: NAGATOMI, AKIRA	DOC DATE: 01/28/2011

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O: JAMES A. OLIFF COMPANY: OLIFF & BERRIDGE, PLC

026110/0732 PAGE 2

ASSIGNEE:

TOHOKU UNIVERSITY 1-1, KATAHIRA 2-CHOME AOBA-KU, SENDAI-SHI MIYAGI 980-8577, JAPAN

PLASSE INXYASSIGNEE:

DOWA ELECTRONICS MATERIALS CO., LTD. 14-1. SOTOKANDA 4-CHOME 14-1, SOTOKANDA 4-CHOME COMMA CHIYODA-KU, TOKYO 101-0021, JAPAN

> APPLICATION NUMBER: 13002995 FILING DATE: PATENT NUMBER: ISSUE DATE: TITLE: MANUFACTURING METHOD OF ITO PARTICLES, AND ITO POWDER, COATING MATERIAL FOR TRANSPARENT ELECTROCONDUCTIVE MATERIAL AND TRANSPARENT ELECTROCONDUCTIVE FILM

MARY BENTON, EXAMINER ASSIGNMENT SERVICES BRANCH PUBLIC RECORDS DIVISION

> PATENT REEL: 026215 FRAME: 0374

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