FORM <b>PTO~1595</b>	REC <b>02</b>	-25-2000 <sup>1</sup>	S. DEPT. OF COMMERCE atent and Trademark Office
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TS99-211/216/335			
To the Honorable Commissioner of Pa	tents and i. 10	1276397 <u>sument</u>	s or copy thereof.
1. Name of conveying party(ies):		2. Name and address of receiving	ng party(ies):
JANE-BAI LAI, CHUNG-SHI LIU SYUN-MING JANG, CHUNG-LO HUI-LING WANG, SZU-AN WU, CHUN - CHING Tンハハ Y Additional name(s) or conveying party(ies) a	NG CHANG, WEN-KUNG CHEN ING-LANG WANG	Name: Taiwan Semicondus Company Internal Address: Street Address:	ctor Manufacturing OLA S.D. 86768
			# 5 T
	rger ange of Name	121 Park Ave. 3 Science-Based Industrial I City: Hsin-Chu Zi Country: Taiwan, R.O.C.	):
other			
Execution Date: 9/15/99		Additional name(s) & address(es	attached? Yes <b>X</b> No
4. Application number(s) or patent r	umber(s): 0948	. ,	,
A. Patent Application No(s)	Additional numbers attac		
5. Name and address of party to who concerning document should be m		6. Total no. of applications and	patents involved:: 1
Name: GEORGE O. SAILE Internal Address:		7. Total fee (37 CFR 3.41): \$	40.00
monda radioss.		Enclosed	
Street Address: 20 MCINTOS	H DRIVE	X Authorized to be char	ged to deposit acct.
City: POUGHKEEPSIE State		8 .Deposit account number: (Attach duplicate copy of this page THIS SPACE	<u>-</u>
9. Statement and signature.  To the best of my knowledge and of the original document  STEPHEN B. ACKER  Name of Person Signing  2000 TTON11 00000031 190033 094894	RMAN C	Signature  Total number of pages compris	Jan. 18, 2000 Date

02/25/ 01 FC

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REEL: 010563 FRAME: 0488

For x U.S. and/or x Foreign Rights  For x Application or U.S. Patent			
By X Inventor(s) or Present Owner			
ASSIGNMENT OF INVENTION			
In consideration of the payment by ASSIGNEE to ASSIGNOR of the sum of One Dollar (\$1.00), the receipt of which is hereby acknowledged, and for other good and valuable consideration,			
ASSIGNOR:			
TANE-BAI LAI  Type or print name of ASSIGNOR  No.7 Lane II Chung Chonged. 8F-5, No.101, Chi-Yu Rd  Address  Fueng-Yuan, Taiwan  R.O.C  Nationality  Nationality  ASSIGNEE:  Taiwan Semiconductor Manufacturing Co.  Ltd. 121 Park Ave. 3  Science-Based Industrial Park			
Hsin-Chu, Taiwan, R.O.C.  R.O.C.  Nationality			
and the successors, assigns and legal representatives of the ASSIGNEE			
(complete one of the following)			
the entire right, title and interest an undivided percent (%) interest for the United States and its territorial possessions (check the following box/f foreign rights are also to be assigned)  x and in all foreign countries			

in and to any and all improvements which are disclosed in the invention entitled:

Methods To Improve Copper-Fluorinated Silica Glass Interconnects

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**PATENT** 

**REEL: 010563 FRAME: 0489** 

	For x U.S. and/or x Foreign Rights
	For x Application or U.S. Patent
	By x Inventor(s) or Present Owner
ASSIGNM	ENT OF INVENTION
	NEE to ASSIGNOR of the sum of One Dollar (\$1.00), the and for other good and valuable consideration,
ASSIGNOR:	
TIEN-I BAO  Type or print name of ASSIGNOR	SYUN-MING JANG
Type or print name of ASSIGNOR	Type or print name of ASSIGNOR
183, Nan-Kun Rd. Address	7F, 83 N. Kuan-Hua St Address
Hsin chu, Taiwan.	Hsin-Chu, Taiwan
R.O.C.	Republic of China
Nationality	Nationality
CHUNG-LONG CHANG Type or print name of ASSIGNOR  No. \( \subsection \) Lame 8 \( \subsection \) Xi-Ping Road.  Address  Dou-Liu city, Yun-Lin County.  Republic of China  Nationality  ASSIGNEE:	Type of fine name of Agricular ang harman function to an - Hu Rd.  Address Hsin - Chu, Taiwan.  Republic of China
Taiwan Semiconductor Manufacturing	n Co
Ltd. 121 Park Ave. 3	
Science-Based Industrial Park Hsin-Chu, Taiwan, R.O.C. R.O.C. Nationality	Taiwan,
and the successors, assigns and legal rep	presentatives of the ASSIGNEE
(compl	ete one of the following)
x the entire right, title and interest	
an undivided percent (	_%) interest for the United States and its territorial possessions
(check the following box/f for x and in all foreign countries	reign rights are also to be assigned)
in and to any and all improvements which	are disclosed in the invention entitled:

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Methods To Improve Copper-Fluorinated Silica Glass Interconnects

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	For x U.S. and/or x Foreign Rights
	For X Application or U.S. Patent
	By X Inventor(s) or Present Owner
ASSIGNMEN	T OF INVENTION
	EE to ASSIGNOR of the sum of One Dollar (\$1.00), the nd for other good and valuable consideration,
ASSIGNOR:	
	Type or print name of ASSIGNOR  316, Sui-Yuan vd. Touten, Mino-Li, Tainian Address
Cepubliz of China	Republic of China
Chun-Ching Tsan Type or print name of ASSIGNOR  No. 46 Lungton South Rd. Touling Address  City, Yun-Lin, Taiwan	Type or print name of ASSIGNOR  37-10 Lung Pe Road Tien - Chung Village, Lung - Ching County  Address  Tai- Chung County, Taiwan
Republic of China	Nationality Republic of China
ASSIGNEE:	
Taiwan Semiconductor Manufacturing C 121 Park Ave. 3 Science-Based Industrial Park Hsin-Chu, Taiwan, R.O.C. Taiwan, R.O.C.	o. Ltd.
and the successors, assigns and legal repre	
x the entire right, title and interest an undivided percent (%	e one of the following)  ) interest for the United States and its territorial possessions ign rights are also to be assigned)
in and to any and all improvements which ar	e disclosed in the invention entitled:
Statistical In-Process Quality Control Sar Management Operation System And Meth	mpling Based On Product Stability Through A Systematic

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U.S. patent application executed on _	
) U.S. application serial no.	filed on
) U.S. patent no.	issued
(also check (e)	if foreign application(s) is also being assigned)
and any legal equivalent thereof in a fo	preign country, including the right to clam priority
, in and to, all Letters Patent to be obtained for s	said invention by the above application or any continuation
sion, renewal, or substitute, thereof, and as to	eletters patent any re-issue or re-examination thereof.
ASSIGNOR hereby covenants that no assig made or entered into which would conflict with	nment, sale, agreement or encumbrance has been or wind this assignment.
	NEE will, upon its request, be provided promptly with a
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	t and said equivalents thereof which may be necessary
sirable to carry out the purposes thereof.	
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WITNESS WHEREOF, I / We have signed this	ate of signing)
15. Sep. 1999 (Da	ate of signing)
15. Sep. 1999 (Da	ate of signing)
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15. Sep. 1999 (Da	ate of signing) if execution of the application if item (a) was checked above.  Signature of Assignor(s)  Lhung Shi, Liu  Zien Z Bax
15. Sep. 1999 (Da	ate of signing) if execution of the application if item (a) was checked above.  Signature of Assignor(s)  Lhung Shi, Liu  Zien Z Bax
S. Sep. 1999 (Da	ate of signing) if execution of the application if item (a) was checked above.  Signature of ASSIGNOR(S)  Livery Strict Live  Zon Z Ban  Livery Strict Live  Live Strict Live  Livery Strict Live  Livery Strict Live  Livery Stri
15. Sep. 1999 (Da	ate of signing) if execution of the application if item (a) was checked above.  Signature of ASSIGNOR(S)  Livery Strict Live  Zon Z Ban  Livery Strict Live  Live Strict Live  Livery Strict Live  Livery Strict Live  Livery Stri
(Date of signing must be the same as the date of	Ate of signing)  The execution of the application if item (a) was checked above.  Significantly of Assignor(s)  Linuxy Shi Liu  Then Z Ban  Chung Long Clang
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(Date of signing must be the same as the date of	Atte of signing)  The execution of the application if item (a) was checked above.  The Passich R(s)  Thurst Liu  The Z Bar  Chung - Long Chang  Tinformation
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(S. <u>Seps.</u> 1999 (Da RNING Date of signing must be the same as the date of	Type or print the name of the above person authorized to sign on behaviors.
RNING Date of signing must be the same as the date of SSIGNOR is a legal entity complete the following	ate of signing)  I execution of the application if item (a) was checked above.  Signature of Assignor(s)  Linuxy Shi.  Linxy Shi.  Linuxy Shi.  Linuxy Shi.  Linuxy Shi.  Linuxy Shi.  Linx

and which is found in	
(a) X U.S. patent application executed on even of	late herewith
(b) U.S. patent application executed on	
(c) U.S. application serial no.	
(d) U.S. patent no.	
(also check (e) if for	eign application(s) is also being assigned)
(e) and any legal equivalent thereof in a foreig	n country, including the right to clam priority
and, in and to, all Letters Patent to be obtained for continuation, division, renewal, or substitute, thereof, and thereof.	
ASSIGNOR hereby covenants that no assignment be made or entered into which would conflict with this	t, sale, agreement or encumbrance has been or will assignment.
pertinent facts and documents relating to said invention may be known and accessible to ASSIGNOR and will be proceeding related thereto and will promptly execute an any and all papers, instruments or affidavits required to application, said invention and said Letters Patent and or desirable to carry out the purposes thereof.  IN WITNESS WHEREOF, I / We have signed this	estify as to the same in any interference, litigation or and deliver to ASSIGNEE or its legal representatives o apply for, obtain, maintain, issue and enforce said d said equivalents thereof which may be necessary
WARNING Date of signing must be the same as the date of execution	ution of the application if item (a) was checked above.
If ASSIGNOR is a legal entity complete the following inform	Signature of Assignation  Signature of Assignation  Len-Kung Cheng  Ching Tsan  Ying-(ang, wang)  mation  Type or print the name of the above person authorized to sign on behalf of ASSIGNOR

Note:

261). Use next page if notarization is desired.

RECORDED: 01/21/2000

\_\_Notarization of Legalization Page Added.

No witnessing, notarization or legalization is necessary, if the assignment is notarized or legalized then it will only be prima facie evidence (35 USC