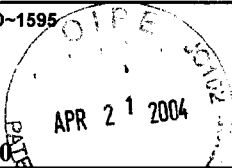


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TS01-460

102729455

To the Honorable Commissioner of Patent.

Original documents or copy thereof.

1. Name of conveying party(ies):

4-21-04

SHIH CHI LIN, CHIH CHUNG LEE, GUEY BAO HUANG, SZU AN WU, YING LANG WANG, CHUN CHUN YEH

2. Name and address of receiving party(ies):

Name: Taiwan Semiconductor Manufacturing Co. Ltd

Internal Address:

Street Address:

No. 8, Li-Hsin Rd. 6  
Science-Based Industrial Park  
Hsin-Chu, Taiwan 300-77  
Taiwan, R.O.C.

Additional name(s) or conveying party(ies) attached?  Yes  No

3. Nature of conveyance

- Assignment  Merger
- Security Agreement  Change of Name
- other \_\_\_\_\_

Additional name & address attached?  Yes  No

Execution Date: 10/11/01 & 9/12/03

4. Application number(s) or patent number(s): 10/270,973

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No(s)

B. Patent No.(s)

Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: GEORGE O. SAILE

Internal Address: \_\_\_\_\_

Street Address: 28 DAVIS AVENUE

City: POUGHKEEPSIE State: NY ZIP: 12603

6. Total no. of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 40.00

Enclosed

Authorized to be charged to deposit acct.

8. Deposit account number: 19-0033

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Name of Person Signing

Signature

4/19/04

Date

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For  U.S. and/or  Foreign Rights

For  Application or  U.S. Patent

By  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,

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**Taiwan, 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 if foreign rights are also to be assigned)
- and in all foreign countries

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

**A Novel Shallow Trench Isolation Process**

For  U.S. and/or  Foreign Rights

For  Application or  U.S. Patent

By  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,

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**Hsin-Chu, Taiwan, R.O.C.**  
**Taiwan, 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 if foreign rights are also to be assigned)
- and in all foreign countries

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

**A Novel Shallow Trench Isolation Process**

and which is found in

- (a)  U.S. patent application executed on even date herewith
- (b)  U.S. patent application executed on \_\_\_\_\_
- (c)  U.S. application serial no. \_\_\_\_\_ filed on \_\_\_\_\_
- (d)  U.S. patent no. \_\_\_\_\_ issued \_\_\_\_\_  
*(also check (e) if foreign application(s) is also being assigned)*
- (e)  and any legal equivalent thereof in a foreign country, including the right to claim priority

and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, renewal, or substitute, thereof, and as to letters patent any re-issue or re-examination thereof.

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

ASSIGNOR further covenants that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

IN WITNESS WHEREOF, I / We have signed this

2001/10/11 (Date of signing)

WARNING Date of signing must be the same as the date of execution of the application if item (a) was checked above.

Shih-Chi Lin  
Signature of ASSIGNOR(S)

Chih Chung Lee

Guoy Bao Huang

Ying-Lang Wang

If ASSIGNOR is a legal entity complete the following information

\_\_\_\_\_  
Type or print the name of the above person authorized to sign on behalf of ASSIGNOR

\_\_\_\_\_  
Title

Note: No witnessing, notarization or legalization is necessary, if the assignment is notarized or legalized then it will only be prima facie evidence (35 USC 261). Use next page if notarization is desired.

\_\_\_\_\_  
Notarization or Legalization Page Added.

and which is found in

- (a)  U.S. patent application executed on even date herewith
- (b)  U.S. patent application executed on \_\_\_\_\_
- (c)  U.S. application serial no. \_\_\_\_\_ filed on \_\_\_\_\_
- (d)  U.S. patent no. \_\_\_\_\_ issued \_\_\_\_\_  
*(also check (e) if foreign application(s) is also being assigned)*
- (e)  and any legal equivalent thereof in a foreign country, including the right to claim priority

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IN WITNESS WHEREOF, I / We have signed this  
4/12/03 (Date of signing)

WARNING Date of signing must be the same as the date of execution of the application if item (a) was checked above.

Chun chun yeh  
Signature of ASSIGNOR(S)  
✓ SZU-AN Wu  
Chih Chung Lee  
Ying-Lang Wang

If ASSIGNOR is a legal entity complete the following information

\_\_\_\_\_  
Type or print the name of the above person authorized to sign on behalf of ASSIGNOR

\_\_\_\_\_  
Title

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Notarization or Legalization Page Added.