

05-12-1999

Form PTO-1595  
(Rev. 6-93)

*MAD*  
*4-27-99*

RECORDAT



U.S. DEPARTMENT OF COMMERCE  
Patent & Trademark Office

OMB No. 0651-0011 (exp. 4/94)

PA 101035911

To The Honorable Commissioner of Patents and Trademarks: Please record the attached original document(s) or copy(ies) thereof.

1. Name of conveying party(ies):  
**John J. Hautala and Johannes F. M. Westendorp**

Additional name(s) of conveying party(ies) attached? \_\_\_ Yes XX No

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

Name: TOKYO ELECTRON LIMITED

Internal Address:

Street Address: TBS Broadcast Center

3-6 Akasaka 5-Chome, Minato-Ku

City: Tokyo 107

JAPAN

Additional name(s) & address(es) attached? \_\_\_ Yes XX No

2. Nature of conveyance:

XX Assignment \_\_\_ Merger  
\_\_\_ Security Agreement \_\_\_ Change of Name  
\_\_\_ Other \_\_\_\_\_

Execution Date: March 31 and April 22, 1999  
respectively

Jc136 U.S. PTO  
**09/300583**  
04727799

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: April 27, 1999

A. Patent Application No.(s)

B. Patent No.(s)

**09/300583**

Additional numbers attached? \_\_\_ Yes XX No

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

Name: Beverly A. Lyman, Ph.D., Esquire

Internal Address: Wood, Herron & Evans, L.L.P.

2700 Carew Tower

Street Address: 441 Vine Street

City: Cincinnati State: Ohio Zip: 45202

6. Total number of applications and patents involved: 1

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

XX Enclosed

XX Authorized to be charged to deposit account  
If deficiencies occur

8. Deposit Account Number: 23-3000

(Attach duplicate copy of this page if paying by deposit account)

05/11/1999 DNGUYEN 00000132 09300583

01 FC-581

**40.00**

DO NOT USE THIS SPACE

9. Statement and Signature.

*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 original document.*

Beverly A. Lyman, Reg. No. 41,961

*Beverly A. Lyman*

April 27, 1999

Signature

Date

Total number of pages including cover sheet, attachments, and document(s): 10

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents and Trademarks, Box Assignments  
Washington, D.C. 20231

PATENT  
REEL: 9936 FRAME: 0809

**ASSIGNMENT OF INVENTION**

WHEREAS, I, as a below named inventor, residing at the address stated next to my name, am a sole or joint inventor as indicated below, of certain new and useful improvements in **PECVD OF Ta FILMS FROM TANATALUM HALIDE PRECURSORS,**

AND WHEREAS, **TOKYO ELECTRON LIMITED**, a Japanese corporation with offices at TBS Broadcast Center, 3-6 Akasaka 5-Chome, Minato-Ku, Tokyo 107 Japan, (hereinafter referenced as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto.

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto.

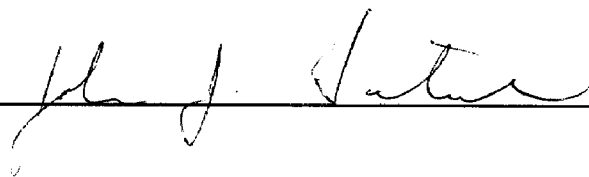
And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense.

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto.

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with the assignment and sale.

This assignment executed on the dates indicated below.

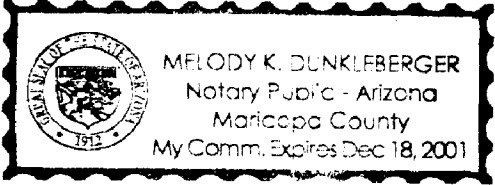
Full Name of sole or first inventor John J. Hautala

Inventor's Signature  Date 3/31/99

Post Office Address 8 Baker Avenue  
Beverly, Massachusetts 01915

STATE OF Arizona )  
 ) ss.  
COUNTY OF Maricopa )

On this 31st day of March, 1999, before me, the undersigned notary public, personally appeared the above named assignor, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged execution of this instrument.



Melody K. Dunkleberger  
Notary Public

Full Name of second or joint inventor Johannes F. M. Westendorp

Inventor's Signature \_\_\_\_\_ Date \_\_\_\_\_

Post Office Address 9 Woodbury Lane  
Rockport, Massachusetts 01966

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 1999, before me, the undersigned notary public, personally appeared the above named assignor, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged execution of this instrument.

\_\_\_\_\_  
Notary Public

**ASSIGNMENT OF INVENTION**

WHEREAS, I, as a below named inventor, residing at the address stated next to my name, am a sole or joint inventor as indicated below, of certain new and useful improvements in **PECVD OF Ta FILMS FROM TANATALUM HALIDE PRECURSORS**,

AND WHEREAS, **TOKYO ELECTRON LIMITED**, a Japanese corporation with offices at TBS Broadcast Center, 3-6 Akasaka 5-Chome, Minato-Ku, Tokyo 107 Japan, (hereinafter referenced as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto.

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto.

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense.

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto.

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with the assignment and sale.

This assignment executed on the dates indicated below.

Full Name of sole or first inventor John J. Hautala

Inventor's Signature \_\_\_\_\_ Date \_\_\_\_\_

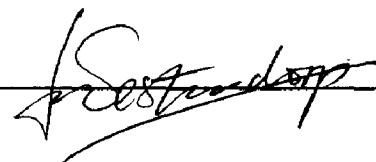
Post Office Address 8 Baker Avenue  
Beverly, Massachusetts 01915

STATE OF \_\_\_\_\_ )  
 ) ss.  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 1999, before me, the undersigned notary public, personally appeared the above named assignor, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged execution of this instrument.

\_\_\_\_\_  
Notary Public

Full Name of second or joint inventor Johannes F. M. Westendorp

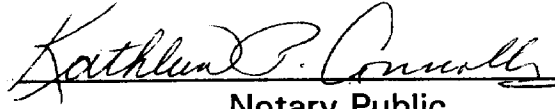
Inventor's Signature  Date 4/22/99

Post Office Address 9 Woodbury Lane  
Rockport, Massachusetts 01966



STATE OF Massachusetts)  
 ) ss.  
COUNTY OF Essex )

On this 22nd day of April, 1999, before me, the undersigned notary public, personally appeared the (above named) assignor, known to me (or proved to me on the basis of satisfactory evidence) <sup>Johannes F. Westendorp (RC)</sup> to be the person whose name is subscribed to the within instrument, and acknowledged execution of this instrument.

  
\_\_\_\_\_  
Notary Public