

11.20.00

FORM PTO-1619A  
Expires 06/30/99  
OMB 0651-0027

12-15-2000

U.S. Department of Commerce  
Patent and Trademark Office  
**PATENT**



RECORDING 101552594  
PATENTS ONLY

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

**Submission Type**

- ☒ New
- ☐ Resubmission (Non-Recordation)  
Document ID#
- ☐ Correction of PTO Error  
Reel #  Frame #
- ☐ Corrective Document  
Reel #  Frame #

**Conveyance Type**

- ☒ Assignment ☐ Security Agreement
- ☐ License ☐ Change of Name
- ☐ Merger ☐ Other
- U.S. Government**  
(For Use ONLY by U.S. Government Agencies)
- ☐ Departmental File ☐ Secret File

**Conveying Party(ies)**

☒ Mark if additional names of conveying parties attached

Name (line 1) James Nelson Baillargeon Execution Date  
Month Day Year  
11-8-00

Name (line 2)

**Second Party**

Name (line 1) Federico Capasso Execution Date  
Month Day Year  
9-11-00

Name (line 2)

09566348

**Receiving Party**

☐ Mark if additional names of receiving parties attached

Name (line 1) Lucent Technologies, Inc.

Name (line 2)

Address (line 1) 600 Mountain Avenue

Address (line 2) PO Box 636

Address (line 3) Murray Hill New Jersey U.S.A. 07974-0636  
City State/Country Zip Code

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached (Designation must be a separate document from Assignment.)

**Domestic Representative Name and Address**

Enter for the first Receiving Party only.

Name

Address (line 1)

Address (line 2)

Address (line 3)

Address (line 4)

FOR OFFICE USE ONLY

Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington, D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB Information Collection Budget Package 0651-0027, Patent and Trademark Assignment Practice. DO NOT SEND REQUESTS TO RECORD ASSIGNMENT DOCUMENTS TO THIS ADDRESS.

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

**PATENT**  
**REEL: 011331 FRAME: 0592**

**Correspondent Name and Address**

Area Code and Telephone Number 610-346-7112

Name Wendy W. Koba, esq.

Address (line 1) PO Box 556

Address (line 2) Springtown PA 18081

Address (line 3)

Address (line 4)

**Pages**

Enter the total number of pages of the attached conveyance document including any attachments.

#           

**Application Number(s) or Patent Number(s)**

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

**Patent Application Number(s)**


**Patent Number(s)**


If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year  
          

**Patent Cooperation Treaty (PCT)**

Enter PCT application number  
only if a U.S. Application Number  
has not been assigned.

PCT            PCT            PCT             
PCT            PCT            PCT           

**Number of Properties**

Enter the total number of properties involved.

# 1

**Fee Amount**

Fee Amount for Properties Listed (37 CFR 3.41): \$ 40.00

Method of Payment:  
Deposit Account

Enclosed ☐ Deposit Account ☒

(Enter for payment by deposit account or if additional fees can be charged to the account.)

Deposit Account Number:

# 12-2325

Authorization to charge additional fees:

Yes ☐ No ☐

**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. Charges to deposit account are authorized, as indicated herein.*

Wendy W. Koba, esq.  
Name of Person Signing

Wendy W. Koba  
Signature

11/20/00  
Date

RECORDATION FORM COVER SHEET  
CONTINUATION  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
PATENT

Conveying Party(ies)

☐ Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Name (line 1) Roberto Paiella

Execution Date  
Month Day Year

9-8-00

Name (line 2)

Execution Date  
Month Day Year

9-8-00

Name (line 1) Deborah Lee Sivilo

Name (line 2)

Execution Date  
Month Day Year

Name (line 1)

Name (line 2)

Receiving Party(ies)

☐ Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

Name (line 1)

☐ If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from Assignment.)

Name (line 2)

Address (line 1)

Address (line 2)

Address (line 3)

City

State/Country

Zip Code

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Application Number(s) or Patent Number(s)

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)



RECORDATION FORM COVER SHEET  
CONTINUATION  
PATENTS ONLY

U.S. Department of Commerce  
Patent and Trademark Office  
PATENT

Conveying Party(ies)

☒ Mark if additional names of conveying parties attached

Enter additional Conveying Parties

Execution Date  
Month Day Year

Name (line 1) Alfred Yi Cho

9 - 8 - 00

Name (line 2)

Execution Date  
Month Day Year

Name (line 1) Claire F. Gmachl

9 - 6 - 00

Name (line 2)

Execution Date  
Month Day Year

Name (line 1) Albert Lee Hutchinson

9 - 8 - 00

Name (line 2)

Receiving Party(ies)

☐ Mark if additional names of receiving parties attached

Enter additional Receiving Party(ies)

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Application Number(s) or Patent Number(s)

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Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property)

Patent Application Number(s)

Patent Number(s)



## ASSIGNMENT AND AGREEMENT

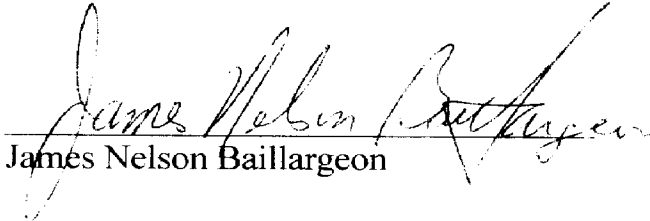
For value received, we, James Nelson Baillargeon of Springfield in the County of Union and State of New Jersey, Federico Capasso of Westfield in the County of Union and State of New Jersey, Alfred Yi Cho of Summit in the County of Union and State of New Jersey, Claire F. Gmachl of New Providence in the County of Union and State of New Jersey, Albert Lee Hutchinson of Piscataway in the County of Middlesex and State of New Jersey, Roberto Paiella of Short Hills in the County of Essex and State of New Jersey and Deborah Lee Sivco of Warren in the County of Somerset and State of New Jersey, hereby sell, assign and transfer to Lucent Technologies Inc., a corporation of the State of Delaware, having an office at 600 Mountain Avenue, Murray Hill, New Jersey 07974-0636, U.S.A., and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related to **Self-Mode-Locking Quantum Cascade Laser** described in an application for Letters Patent of the United States, **Serial No. 09/566,348** filed May 8, 2000 and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to Lucent Technologies Inc. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize Lucent Technologies Inc. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Lucent Technologies Inc. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

We request that any and all patents for said inventions be issued to Lucent Technologies Inc. in the United States and in all countries foreign to the United States, or to such nominees as Lucent Technologies Inc. they may designate.

We agree that, when requested, we shall, without charge to Lucent Technologies Inc. but at its expense, sign all papers, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

  
James Nelson Baillargeon

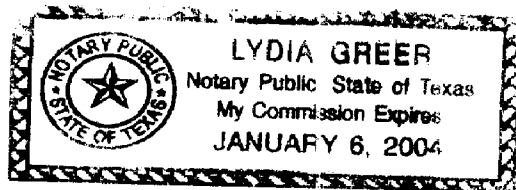
Date: Nov 8, 2000

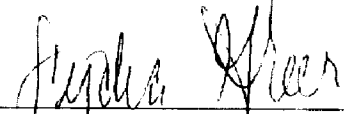
United States of America )

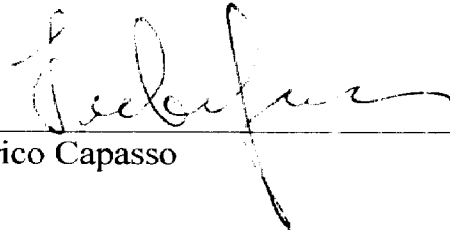
State of TEXAS ) ss.

County of IT BEND )

On this 08<sup>th</sup> day of November, 2000, before me personally came James Nelson Baillargeon, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.



  
Notary Public



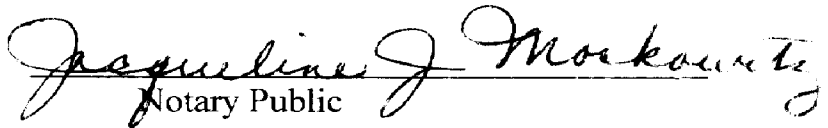
Federico Capasso

Date: 9/11/00

United States of America )

State of NY ) ss :County of Union )

On this 11th day of September, 2000, before me personally came Federico Capasso, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

  
Notary Public

**JACQUELINE J. MOSKOWITZ**  
**NOTARY PUBLIC OF NEW JERSEY**  
My Commission Expires 01/22/2003

Alfred Yi Cho  
Alfred Yi Cho

Date: 2001

United States of America )

State of New Jersey ) ss.:

County of Essex )

On this 5th day of September, 2001, before me personally came Alfred Yi Cho, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Angelina Cagliostro  
Notary Public

**ANGELINA CAGLIOSTRO**  
**A NOTARY PUBLIC OF NEW JERSEY**  
**My Commission Expires 1/21/2004**



Claire F. Gmachl  
Claire F. Gmachl

Date: September 20, 2000

United States of America )

State of Delaware ) ss.:

County of Delaware )

On this 20<sup>th</sup> day of September 2000, before me personally came Claire F. Gmachl, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Angelina Cagliostro  
Notary Public

**ANGELINA CAGLIOSTRO**  
**A NOTARY PUBLIC OF NEW JERSEY**  
**My Commission Expires 1/21/2004**

Albert Lee Hutchinson  
Albert Lee Hutchinson

Date: 9/21/00

United States of America )

State of Tennessee ) ss.

County of Davidson )

On this 21st day of September, 2000, before me personally came Albert Lee Hutchinson, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Angelina Cagliostro  
Notary Public

**ANGELINA CAGLIOSTRO**  
**A NOTARY PUBLIC OF NEW JERSEY**  
**My Commission Expires 1/21/2004**

Roberto Paiella

Date: 9/2

United States of America )

State of Florida ) ss.:

County of Franklin )

On this 2nd day of September, 2002, before me personally came, Roberto Paiella to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

Angelina Cagliostro  
Notary Public

ANGELINA CAGLIOSTRO  
A NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires 1/21/2004

Deborah Lee Sivco  
Deborah Lee Sivco

Date:                     

United States of America )

State of                      ) ss.:

County of                      )

On this                      day of September, 2000, before me personally came Deborah Lee Sivco, to me known to be the individual described in and who executed the foregoing instrument, and acknowledged execution of the same.

                                      
Notary Public

**ANGELINA CAGLIOSTRO**  
**A NOTARY PUBLIC OF NEW JERSEY**  
**My Commission Expires 1/21/2004**