

RECORDATION FORM COVER SHEET PATENTS ONLY

To The Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Nader Engheta September 7, 2004
First Assignor Date of Execution

Andrea Ali September 7, 2004
Second Assignor Date of Execution

Third Assignor Date of Execution

Fourth Assignor Date of Execution

Fifth Assignor Date of Execution

Sixth Assignor Date of Execution

Additional name(s) of conveying party(ies) attached? ☐ YES ☒ NO

2. Name and address of receiving party(ies)

Name: The Trustees of The University of Pennsylvania

Street Address: 3160 Chestnut Street, Suite 200

City: Philadelphia

State: Pennsylvania ZIP: 19104

Additional name(s) & address attached? ☐ YES ☒ NO

3. Nature of Conveyance (check only one):

☒ New Assignment

☐ License Agreement

☐ Change of Name

☐ Merger

☐ Security Agreement

☐ Other:

4. Identification of Application number(s), parent number(s) OR date of execution of application to which assignment refers:

Application Nos.:

10/859,422

Patent Nos.:

Date application was signed by the first
named executing inventor

(Fill-in this date only if assignment is filed
together with a new application)

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

Name: Michael P. Dunnam
WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia, Pennsylvania 19103-7301
215-568-3100

6. Total number of applications and patents involved: 1

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

☐ Enclosed

☒ Authorized to be charged to Deposit Account Number
23-3050

8. Please charge any deficiency or credit any overpayment to
Deposit Account Number 23-3050

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.

Patricia A. Turner - Patent Prosecution Paralegal
Name of Person Signing

Signature

Date

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 4

Mail documents to be recorded with required cover sheet information to:

Mail Stop Assignment Recordation Services
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

CH \$40.00 233060 10869422

DOCKET NO.: UPN-4375**PATENT**
Joint Inventors
Application No. 10/859,422**ASSIGNMENT**

WHEREAS, we Nader Engheta and Andrea Alù, hereinafter referred to as the assignors, residing respectively at 292 Rosedale Avenue, Wayne, Pennsylvania 19087 and Via della Cava Aurelia 82, 00165 Rome, Italy are the joint inventors of certain inventions or improvements for which we have made application for Letters Patent to the United States, identified as Application No. 10/859,422, filed June 2, 2004, entitled Waveguides And Scattering Devices Incorporating Epsilon-Negative And/Or Mu-Negative Slabs; and

Incorporating (NE) (AA)

WHEREAS, The Trustees Of The University Of Pennsylvania, hereinafter referred to as the assignee, of 3160 Chestnut Street, Suite 200, Philadelphia, Pennsylvania 19104, a corporation of Pennsylvania, is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, and intending to be legally bound hereby, we, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, including the full right to sue for and collect damages for past violations of provisional rights having arisen from any publication of said application or any continuations, divisions, or renewals of or substitutes for said application. We further assign to and authorize said assignee, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said assignee, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said assignee or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything

DOCKET NO.: UPN-4375

PATENT
Joint Inventors
Application No. 10/859,422

possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

AND we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

AND this Assignment may be executed in multiple counterparts, each of which shall be deemed to be an original of this Assignment. Additionally, we hereby authorize our attorneys to collect the signature pages of each executed counterpart and to attach those signature pages to a single copy of this instrument, which single copy and attached signature pages together shall constitute an original of this Assignment.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

Sept. 7, 2004
 Date

Nader Engheta (L.S.)
 Nader Engheta (NE) (AA)

STATE OF Pennsylvania:
 COUNTY OF Philadelphia: SS

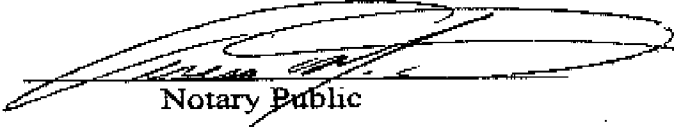
On this 7 day of Sept, year of 2004, before me personally came the above named Nader Engheta to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.

Notary Public
 COMMONWEALTH OF PENNSYLVANIA
 NOTARIAL SEAL
 TERESA M. DUNN, Notary Public
 City of Philadelphia, Phila. County
 My Commission Expires August 12, 2007

DOCKET NO.: UPN-4375

PATENT
Joint Inventors
Application No. 10/859,422Sept. 7, 2004
DateAndrea Alù (L.S.)
Andrea AlùSTATE OF Pennsylvania :COUNTY OF Philadelphia : SS

On this 7 day of Sept., year of 2004 before me personally came the above named Andrea Alù to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.


Notary Public

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
TERESA M. DUNN, Notary Public
City of Philadelphia, Phila. County
My Commission Expires August 12, 2007