

12-21-1999

PATENTS ONLY

To the  
Please :

101229647

PATENTS ONLY

tents and Trademarks:  
document or copy thereof.

1. Name of Party(ies), conveying an interest:

MEADE, Thomas J.

KAYYEM, Jon Faiz

FRASER, Scott E.

Name and Address of Party(ies) receiving an interest:

Name: California Institute of Technology

Internal Address:

Office of Patents and Licensing

Street Address:

1201 East California BoulevardCity: PasadenaState: CA Zip: 91125JC564 U.S. PTO  
09/454498

12/06/99

3. Description of the interest conveyed:

☒ Assignment☐ Change of Name

Other \_\_\_\_\_

☐ Security Agreement☐ Merger

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

Additional sheet attached?

☐ Yes☒ No

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

Date

A. Patent Application No.(s)

08/166,036

B. Patent No.(s)

09/454 498

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

Name: Richard F. Trecartin, Esq.

Internal Address:

FLEHR, HOHBACH, TEST,ALBRITTON & HERBERT

Street Address:

Four Embarcadero Center, Suite 3400City: San FranciscoState: CA Zip: 94111

6. Number of applications and patents involved:

one (1)

7. Amount of fee enclosed or authorized to be charged:

\$40.00

8. Deposit account number (attach duplicate copy of this form if paying by deposit account):

06-1300 (Order No. A-58762/RFT/RMS)

DO NOT USE THIS SPACE

12/17/1999 DEUTLER 00000070 061300 09454498

03 FC:581 9. Date of execution of attached document January 20, 24 and 26, 1994

10. I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct. Executed on:

February 7, 1994

Date

Signature

Richard F. Trecartin  
Name of Person Signing

12/91

PASSIGN.CVR

PATENT  
REEL: 010442 FRAME: 0779

ASSIGNMENT

(NOT ACCOMPANYING APPLICATION)

WHEREAS, the undersigned,

(1) Thomas J. Meade, (2) Jon Faiz Kayvem,

(3) Scott E. Fraser, (4) \_\_\_\_\_,

(hereinafter termed "Inventors"), residents of

(1) Altadena, (2) Pasadena,

(3) Newport Beach, (4) \_\_\_\_\_,

respectively, Counties of

(1) Los Angeles, (2) Los Angeles,

(3) Orange, (4) \_\_\_\_\_,

respectively, States of

(1) California, (2) California,

(3) California, (4) \_\_\_\_\_,

respectively, have invented certain new and useful improvements in

NUCLEIC ACID MEDIATED ELECTRON TRANSFER

and have executed an application for a United States patent disclosing and identifying the invention on the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_; and having Serial No. 08/166,036 and filing date of December 10, 1993; and

WHEREAS, California Institute of Technology

a corporation of the State of California, having a place of business at 1201 East California Boulevard, Pasadena, State of California, (hereinafter termed "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the invention disclosed therein, and in and to all embodiments of the invention, heretofore conceived, made or discovered jointly or severally by said Inventors (all collectively hereinafter termed "said invention"), and in and to any and all patents, inventor's certificates and other forms of protection (hereinafter termed "patents") thereon granted in the United States and foreign countries.

NOW, THEREFORE, in consideration of good and valuable consideration acknowledged by said Inventors to have been received in full from said Assignee:

1. Said Inventors do hereby sell, assign, transfer and convey unto said Assignee, the entire right, title and interest (a) in and to said application and said invention; (b) in and to all rights to apply for foreign patents on said invention pursuant to the International Convention for the Protection of Industrial Property or otherwise; (c) in and to any and all applications filed and any and all patents granted on said invention in the United States or any foreign country, including each and every application filed and each and every patent granted on any application which is a division, substitution, or

continuation of any of said applications; and (d) in and to each and every reissue or extensions of any of said patents.

2. Said Inventors hereby jointly and severally covenant and agree to cooperate with said Assignee to enable said Assignee to enjoy to the fullest extent the right title and interest herein conveyed in the United States and foreign countries. Such cooperation by said Inventors shall include prompt production of pertinent facts and documents, giving of testimony, execution of petitions, oaths, specifications, declarations or other papers, and other assistance all to the extent deemed necessary or desirable by said Assignee (a) for perfecting in said Assignee the right, title and interest herein conveyed; (b) for prosecuting any of said applications; (c) for filing and prosecuting substitute, divisional, continuing or additional applications covering said invention; (d) for filing and prosecuting applications for reissuance of any said patents; (e) for interference or other priority proceedings involving said invention; and (f) for legal proceedings involving said invention and any applications therefor and any patents granted thereon, including without limitation opposition proceedings, cancellation proceedings, priority contests, public use proceedings, infringement actions and court actions; provided, however, that the expense incurred by said Inventors in providing such cooperation shall be paid for by said Assignee.

3. The terms and covenants of this assignment shall inure to the benefit of said Assignee, its successors, assigns and other legal representatives, and shall be binding upon said Inventors, their respective heirs, legal representatives and assigns.

4. Said Inventors hereby jointly and severally warrant and represent that they have not entered and will not enter into any assignment, contract, or understanding in conflict herewith.

IN WITNESS WHEREOF, the said Inventors have executed and delivered this instrument to said Assignee this

(1) 20 day of January, 1994, (2) 26 day of January, 1994,  
(3) 24 day of January, 1994, (4) \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_,  
respectively.

(1) Thomas J. Meade  
Thomas J. Meade

County of LOS ANGELES  
State of CALIFORNIA

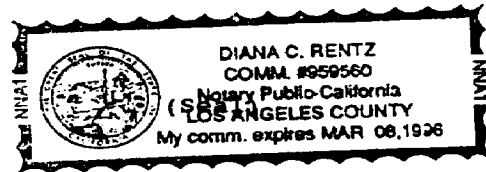
,)  
) ss.  
,)

On this 20TH day of JANUARY, in the year 1994, before me,  
DIANA C. RENTZ, Notary Public of the State of CALIFORNIA,  
personally appeared (1) THOMAS J. MEADE, personally 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 that he/she  
executed the same in his/her authorized capacity(ies), and that by his/her  
signature on the instrument the person, or the entity upon behalf of which the  
person acted, executed the instrument.

WITNESS my hand and official seal.

Signature

Diana C. Rentz



(2) Jon Faiz Kayyem  
Jon Faiz Kayyem

County of LOS ANGELES  
State of CALIFORNIA

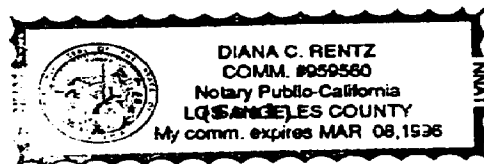
,)  
) ss.  
,)

On this 20TH day of JANUARY, in the year 1994, before me,  
DIANA C. RENTZ, Notary Public of the State of CALIFORNIA,  
personally appeared (2) JON FAIZ KAYYEM, personally 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 that he/she  
executed the same in his/her authorized capacity(ies), and that by his/her  
signature on the instrument the person, or the entity upon behalf of which the  
person acted, executed the instrument.

WITNESS my hand and official seal.

Signature

Diana C. Rentz



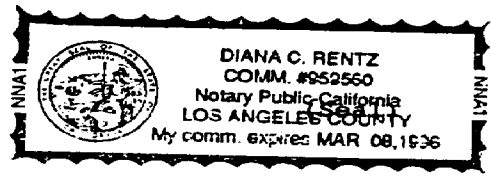
(3) Scott E. Fraser  
Scott E. Fraser

County of Los Angeles, )  
 ) ss.  
State of California .)

On this 24th day of February, in the year 1997, before me,  
Diana C. Rentz, Notary Public of the State of California,  
personally appeared (3) Scott E. Fraser, personally 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 that he/she  
executed the same in his/her authorized capacity(ies), and that by his/her  
signature on the instrument the person, or the entity upon behalf of which the  
person acted, executed the instrument.

WITNESS my hand and official seal.

Signature Diana C. Rentz



(4) \_\_\_\_\_  
(Inventor)

County of \_\_\_\_\_, )  
 ) ss.  
State of \_\_\_\_\_ .)

On this \_\_\_\_\_ day of \_\_\_\_\_, in the year \_\_\_\_\_, before me,  
\_\_\_\_\_, Notary Public of the State of \_\_\_\_\_,  
personally appeared (4) \_\_\_\_\_, personally 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 that he/she  
executed the same in his/her authorized capacity(ies), and that by his/her  
signature on the instrument the person, or the entity upon behalf of which the  
person acted, executed the instrument.

WITNESS my hand and official seal.

Signature \_\_\_\_\_ (Seal)