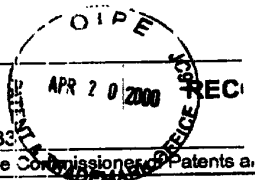


MRL  
4-20-00

04-26-2000

FORM PTO-1585  
1-31-93



U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Docket No. 249/033

101333702

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

<p>1. Name of conveying party(ies): Jing Cheng, Lie Wu, Michael J. Heller, Ed Sheldon, Jonathan Diver, James P. O'Connell, Dan Smolko, Shila Jalali, David Willoughby Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>2. Name and address of receiving party: Name: <u>Nanon</u> Internal Address: _____ City: _____ State: _____ Zip: _____ Street Address: <u>10398 Pacific Center Court</u> City: <u>San Diego</u> State: <u>CA</u> Zip: <u>92121</u> Additional name(s) &amp; address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____ Execution Date: <u>April 2, 2000</u></p>	

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:

<p>A. Patent Application No(s): <u>09/470,448</u></p>	<p>B. Patent No(s): _____ Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
---	--

<p>5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>David B. Murphy, Esq.</u> Internal Address: <u>LYON &amp; LYON LLP</u> <u>633 West Fifth Street, Suite 4700</u> <u>Los Angeles, CA 90071-2066</u></p>	<p>6. Total number of applications and patents involved: <u>1</u> 7. Total fee (37 CFR 3.41): \$ <u>40.00</u> <input checked="" type="checkbox"/> Enclosed <input type="checkbox"/> Charge this Deposit Account if any additional fee is required 8. Deposit Account Number: <u>12-2475</u></p>
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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.  
Date: April 17, 2000  
David Murphy, Reg No. 31,125  
Total number of pages including cover sheet: \_\_\_\_\_

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OC-50522.1

**PATENT**  
**REEL: 010721 FRAME: 0245**

**ASSIGNMENT**

For valuable consideration, we, **Jing Cheng** of **Beijing, China** and a citizen of the **China**; **Lei Wu** of **San Diego, California** and a citizen of **China**; **Michael J. Heller** of **Encinitas, California** and a citizen of the **U.S.A.**; **Ed Sheldon** of **San Diego, California** and a citizen of the **U.S.A.**; **Jonathan Diver** of **San Diego, California** and a citizen of the **U.S.A.**; **James P. O'Connell** of **Solana Beach, California** and a citizen of the **U.S.A.**; **Dan Smolko** of **Jamul, California** a citizen of the **U.S.A.**; **Shila Jalali** of **San Diego, California** and a citizen of the **U.S.A.**; and **David Willoughby** of **San Diego, California** and a citizen of the **U.S.A.** (hereinafter referred to as "Assignors") hereby assign to **NANOGEN**, a corporation organized and existing under and by virtue of the laws of the State of **Delaware** and having its principal place of business at **10398 Pacific Center Court, San Diego, California 92121**, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the invention and improvements which are the subject of an application for United States Patent filed **herein**, U.S. Serial No. **to be assigned** and related applications and patents, entitled **INTEGRATED PORTABLE BIOLOGICAL DETECTION SYSTEM**, this assignment including said application, any and all United States and foreign patents granted for any of said inventions or improvements, including all divisions, continuations, reissues, continuations-in-part and extensions thereof, and the right to claim priority based on the filing date of said application and based on the filing date of any provisional application of which said application claims the benefit under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our names or in its own name for patents and like rights of exclusion and for inventor's certificates for said inventions and improvements; and we agree for ourselves and our heirs, legal representatives and assigns, without further compensation, upon request to perform such lawful acts, to promptly provide Assignee with all pertinent facts and documents relating to said invention or application as may be known and accessible to us, to testify in any interference or litigation related to said invention or application and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

SD-141417.1

applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this Assignment.

The Assignors hereby covenant that no assignment, sale, agreement, or encumbrance has been or will be made or entered into which would conflict with this Agreement.

WITNESS my hand at Beijing  
this 2 day of April, 2000  
~~1999~~



\_\_\_\_\_  
Jing Cheng

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

On \_\_\_\_\_ before me, \_\_\_\_\_, personally appeared  
  Jing Cheng

personally known to me - **OR** -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/s/ she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Notary Public in and for said County and State

WITNESS my hand at San Diego, CA

this 23 day of March, 1999

[Signature]  
Lei Wu

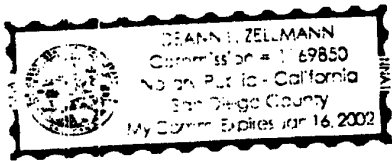
STATE OF CALIFORNIA )  
 ) SS  
COUNTY OF SAN DIEGO )

On 3/23/00 before me, DEANN L. ZELMANN, personally appeared  
Lei Wu

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

[Signature]  
Notary Public in and for said County and State



WITNESS my hand at San Diego, California  
this 17th day of March, 1999

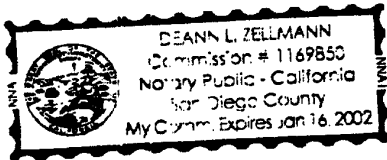
Ed Sheldon  
Ed Sheldon

STATE OF CALIFORNIA )  
                                      ) SS  
COUNTY OF SAN DIEGO  )

On 3/17/00 before me, DEANN L. ZELLMANN, personally appeared  
Ed Sheldon

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann  
Notary Public in and for said County and State

WITNESS my hand at San Diego, CA

this 16 day of March, ~~1999~~ <sup>2000</sup>

Michael J. Heller  
Michael J. Heller

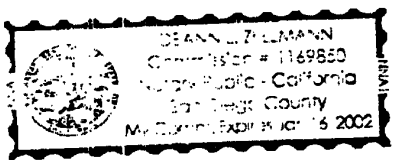
STATE OF CALIFORNIA )  
  ) ss  
COUNTY OF SAN DIEGO )

Or. 3/15/00 before me, DEANN L. ZELLMAN, personally appeared  
Michael J. Heller

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Deann L. Zellman  
Notary Public in and for said County and State



WITNESS my hand at Jonathan Diver, CAMBRIDGE MA

this 2<sup>nd</sup> day of MARCH 2000

Jonathan Diver  
Jonathan Diver

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

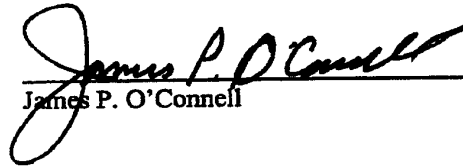
On \_\_\_\_\_ before me, \_\_\_\_\_, personally appeared  
Jonathan Diver

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

\_\_\_\_\_  
Notary Public in and for said County and State

WITNESS my hand at San Diego, California,  
this 16 day of March, ~~1999~~ <sup>2000</sup>

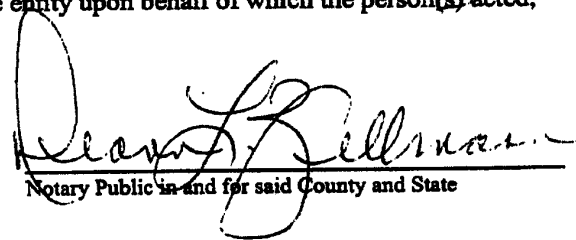
  
James P. O'Connell

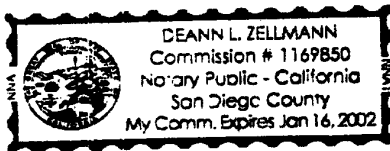
STATE OF CALIFORNIA )  
  ) ss  
COUNTY OF SAN DIEGO )

On 3/16/00 before me, DEANN L. ZELMANN personally appeared  
James P. O'Connell

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

  
Notary Public in and for said County and State





WITNESS my hand at San Diego, California,  
this 21 day of March, <sup>2000</sup>~~1999~~.

*Daniel D. Smolko*  
Dan Smolko

STATE OF CALIFORNIA )  
                                      ) ss  
COUNTY OF SAN DIEGO )

On 3/21/00 before me, DEANN L. ZELLMANN, personally appeared  
Dan Smolko

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

*Deann L. Zellmann*  
Notary Public in and for said County and State



WITNESS my hand at San Diego, CA,  
this 16th day of March, ~~1999~~ 2000

Shila Jalali  
Shila Jalali

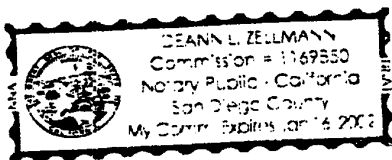
STATE OF CALIFORNIA )  
  ) ss  
COUNTY OF SAN DIEGO )

On 3/16/00 before me, DEANN L ZELLMANN, personally appeared  
Shila Jalali

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies); and that by his/her/their signature(s) on the instrument the person(s); or the entity upon behalf of which the person(s)-acted, executed the instrument.

WITNESS my hand and official seal.

Deann L Zellmann  
Notary Public in and for said County and State



WITNESS my hand at San Diego, CA

this 17th day of March 1999  
2000

David Willoughby  
David Willoughby

STATE OF CALIFORNIA )  
                                  ) ss  
COUNTY OF SAN DIEGO )

On 3/17/00 before me, DEANN L. ZELLMANN, personally appeared  
David Willoughby

personally known to me - OR -  proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Deann L. Zellmann  
Notary Public in and for said County and State

