PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date	
Jainamma KROTZ	05/17/2002	
Daniel D. SMOLKO	05/17/2002	
Howard R. Reese	05/17/2002	
Thomas J. ONOFREY	05/22/2002	
Daguang WANG	05/17/2002	
Theodore M. WINGER	05/17/2002	
John R. HAVENS	05/17/2002	

RECEIVING PARTY DATA

Name:	NANOGEN, INC.
Street Address:	10398 PACIFIC CENTER COURT
City:	SAN DIEGO
State/Country:	CALIFORNIA
Postal Code:	92121

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	11082325

CORRESPONDENCE DATA

Fax Number: (949)823-6994

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

949 760-9600 Phone: tcanett@omm.com Email: Correspondent Name: David B. Murphy

Address Line 1: 610 Newport Center Drive, 17th Floor Address Line 4: Newport Beach, CALIFORNIA 92660

ATTORNEY DOCKET NUMBER: 612,404-456

PATENT

500331857 **REEL: 019675 FRAME: 0150**

Total Attachments: 7 source=ASSIGNMENTDOC#page1.tif source=ASSIGNMENTDOC#page2.tif source=ASSIGNMENTDOC#page3.tif source=ASSIGNMENTDOC#page4.tif source=ASSIGNMENTDOC#page5.tif source=ASSIGNMENTDOC#page6.tif source=ASSIGNMENTDOC#page7.tif	

PATENT REEL: 019675 FRAME: 0151

ASSIGNMENT OF PATENT APPLICATION

WHEREAS, we, JAINAMMA KROTZ, a citizen of India; DANIEL J. SMOLKO, a citizen of the United States; HOWARD R. REESE, a citizen of the United States; THOMAS J. ONOFREY, a citizen of the United States; DAGUANG WANG, a citizen of China; THEODORE M. WINGER, a citizen of France; and JOHN R. HAVENS, a citizen of the United States (hereinafter referred to as "ASSIGNORS"), have invented a certain invention entitled MESOPOROUS PERMEATION LAYERS FOR USE ON ACTIVE ELECTRONIC MATRIX DEVICES for which application for Letters Patent of the United States of America has been filed on December 10, 2001, assigned Serial No. 10/014,895; and

WHEREAS, NANOGEN, INC., a corporation organized and existing under and by virtue of the laws of the Delaware and having its place of business at 10398 Pacific Center Court, San Diego, California 92121 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the exclusive right, title and interest in, to and under said invention and in, to and under any Patent or similar legal protection to be obtained therefor in the United States of America, its territorial possessions and in any and all countries foreign thereto.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign, transfer and set over unto the said ASSIGNEE, its successors and assigns, the full and exclusive right, title and interest to said invention and to all Letters Patent or application or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto to be obtained for said invention by said application, and to any continuation, division, renewal, substitute or reissue thereof or any legal equivalent thereof in the United States or a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; and ASSIGNORS hereby authorize and request the United States Commissioner of Patents and

OC-108817.1

PATENT REEL: 019675 FRAME: 0152

Patent

Attorney Docket: 262/098

Trademarks and any officials of foreign countries whose duty it is to issue patents or any legal equivalent thereof to said ASSIGNEE, its successors and assigns, in accordance with this Assignment.

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;

ASSIGNORS further covenant 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 as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents in the United States or in any foreign country, which may be necessary or desirable to carry out the purposes thereof.

WITNESS my hand at Sai	n Diego, California, this 17 day of May, 2002.	
	_ talkof	
	Jainanima Krotz	
STATE OF CALIFORNIA)	
COUNTY OF SAN DIEGO) ss)	

On 05-17, 2002 before me, the undersigned Notary Public, personally appeared Jainamma Krotz, 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

2

Patent Attorney Docket: 262/098

WITNESS my hand at San Diego	o, California, this 17th day of Man, 2002.
	De Sall
	Daniel Smolko
STATE OF CALIFORNIA)	D. D.S.
COUNTY OF SAN DIEGO)	
appeared Daniel Smolke, person satisfactory evidence to be the person(s and acknowledged to me that he/she/the capacity(ies), and that by his/her/their si upon behalf of which the person(s) acted	·
PAUL WITT Comm. # 1339169 NOTARY PUBLIC - CALIFORNIA San Diego County My Comm. Expires Jan. 12, 2006	Notary Public in and for said County and State
WITNESS my hand at <u>San Diego</u>	California, this 17 day of May, 2002. Howard R. Reese
STATE OF CALIFORNIA)) ss COUNTY OF SAN DIEGO)	s ·
appeared Howard R. Reese , \boxtimes persons satisfactory evidence to be the person(s) and acknowledged to me that he/she/the	

		Patent
ttornev	Docket:	262/098

WITNESS my hand at San [Diego Californ	ia this 2.7° day of MA°	√ , 2002.
WINESS my hand at <u>oan t</u>	<u>Jogo,</u> Jamon	Thomas J. Onoftey	Imp -
STATE OF CALIFORNIA)	•	
COUNTY OF SAN DIEGO) ss)		
on	personally kno on(s) whose nethey execute ir signature(s) acted, execute all seal.	wn to me - OR -	o me on the basis of the within instrument authorized on(s), or the entity
My Comm. Expires Apr WITNESS my hand at San [ia, this day of	, 2002.
My Comm. Expires Apr		ia, this day of Daguang Wang	, 2002.
WITNESS my hand at San [, 2002.
WITNESS my hand at San I			, 2002.
WITNESS my hand at San [)) ss) d, before me, the conclusion whose name of they executed its regular conclusions and the conclusions are they executed its regular conclusions.	Daguang Wang The undersigned Notary Public of the common proved to me ame(s) is/are subscribed to the same in his/her/their are on the instrument the person	c, personally e on the basis of the within instrument outhorized on(s), or the entity

Δ

MY-26 -02	10:42	FROM-Legal/Finang	nogen		858-410-4770		T-19	2 P.005	/009	F-327
-17-02	11:28	FROM-Legal/Finance Names	SA .	858-	410 -4778		-182 P	.005/011	F-313	3
					W. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	32	rney D	ocket :	Pale 262/0	
	WITI	NESS my hand at <u>San</u>	<u>Diego,</u> Cellfor	mia, this	day of		, 2	002.		
ı				Thoma	s J. Onofre					
STA	ATE OF	CALIFORNIA)		Ė					
CO	UNTY O	F SAN DIEGO) ss }							
ann	_nO Triberse	2007 nomas J. Onofrey, 🗵	2, before me, f	the unders	gned Notan		ic, pers	onally	sele ni	ı
and cap:	acknowl acity(les)	evidence to be the pers ledged to me that he/et), and that by his/her/the of which the person(s)	ne/they execut eir signature(s	ted the san s) on the in:	are sucscap n e i n h isi hen strument tije		uic wid	nm vec zed	unen	!
фи		VESS my hand and office	•	es the man						
				Notany F	oblic in and		dd Cou	ntv and	State	
				MORENA 1	CONC NI CAR			iny ma	Ciac	
	WITN	NESS my hand at <u>San I</u>	<u>Diego. Californ</u>	nia, this <u>//</u>	#day of	Ma	20 ـــــ	02.		
				~O.	مرود واسام	1	la			
				Daguari	g Wang G					
STA	TE OF C	CALIFORNIA) }							
		SAN DIEGO	5		7					
	On Q	64 17 2.02 517-60 2002 guang Wang, ⊠ perso	, before me. th	he undersid	ned Notatv	Publik	. persc	nally		
and a	actory e acknowle city(les).	guang Wang, \(\) person person person by the person begins to me that he/she and that by his/per/the of which the person(s) a	Siney execute ir signature(s)	ed the same You the inst	re subscrip in his/hel/l rument the	to the state of th	on the he with uthoriza n(s), or	basis of instruction in instruction instruction in instruction instruction instruction in instructi	f ment ily	
		ESS my hand and offici		אנגאין	las m	u				
		•		Notity Pu	blic in enti	br said	Coun	ty and S	tate	

ļ

PATENT REEL: 019675 FRAME: 0156

	Patent Attorney Docket: 262/098
•	•
WITNESS my hand at San Diego, California	a, this 17 ¹² day of <u>may</u> , 2002.
	Theodore M. William
	Theodore M. Winger
STATE OF CALIFORNIA)	
COUNTY OF SAN DIEGO)	
On <u>05-17</u> , 2002, before me, the appeared Theodore M. Winger , \boxtimes personally know satisfactory evidence to be the person(s) whose nature and acknowledged to me that he/she/they executed capacity(ies), and that by his/her/their signature(s) upon behalf of which the person(s) acted, executed	own to me - OR proved to me on the basis of time(s) is/are subscribed to the within instrument d the same in his/her/their authorized on the instrument the person(s), or the entity
WITNESS my hand and official seal.	Paul WH
PAUL WITT Comm. # 1339169 NOTARY PUBLIC - CALIFORNIA San Diego County My Comm. Expires Jan. 12, 2006	Notary Public in and for said County and State
WITNESS my hand at San Diego, California	a, this day of, 2002.
	John R. Havens
STATE OF CALIFORNIA)	
COUNTY OF SAN DIEGO)	
On, 2002, before me, the appeared John R. Havens, \(\) personally known to satisfactory evidence to be the person(s) whose na and acknowledged to me that he/she/they executed capacity(ies), and that by his/her/their signature(s) upon behalf of which the person(s) acted, executed WITNESS my hand and official seal.	me(s) is/are subscribed to the within instrument the same in his/her/their authorized on the instrument the person(s), or the entity
•	
	Notary Public in and for said County and State

5

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(les), 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 by and for said Country and State

5



PATENT

RECORDED: 08/09/2007

REEL: 019675 FRAME: 0158