ASSIGNMENT RECORDATION COVER SHEET -PATENTS ONLY-

Commi	ssioner	of Patents:			
	Please:	record the attacl	ed document.		
1.	Name (a) b) c) d)	of conveying par Ron Rulkens George D. Pap Dennis M. Hau Raihan M. Tar	asouliotis Ismann	e) f) g)	Bunsen Nie Adrianne K. Tipton Jeff Tobin
2.	Name a a)	and address of ro Name: Address:	eceiving party: Novellus Syste 3970 North Fi San Jose, Cali:	rst Stree	t
3.	Nature ⊠ □ □	of conveyance: Assignment Security Agree Other	ement		Merger Change of Name License Agreement
	Execut a) b) c) d)	tion Date: April 7, 2005 January 26, 20 January 24, 20 February 1, 20	05	e) f) g)	February 2, 2005 February 2, 2005 March 31, 2005
4.	Applic	ation Number o	r Patent Number	r: 11/02	1,558
	The tit FOR V	le of the applica APOR DEPOS	ition is: METHO ITION OF SIO ₂	ODS FO FILMS	R THE USE OF ALKOXYSILANOL PRECURSORS
5.	Please	send all corresp	ondence concer	ning this	s document to:
			Beyer Weav P.O. Box 70 Oakland, C. Customer N	250 A 9461	2-0250
6.	Total number of applications and patents involved: 1				
7.	Total fee (37 CFR 3.41): \$\frac{\$40.00}{}\$				
		Enclosed. Charge to Dep Any additiona (Order No	il fees are author	o. 50038 rized to T	8 (Order No. NOVLP117). Se charged to Deposit Account No. 500388
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Total number of pages including this cover sheet, attachments and documents: 13

James E. Austin

Registration No. 39,489

Attorney Docket No. NOVLP117/NVLS-2977

PATENT

700170415 **REEL: 016063 FRAME: 0466**

ASSIGNMENT OF PATENT APPLICATION

Whereas I, an undersigned inventor, have invented certain new and useful improvements as set forth in the patent application entitled:

METHODS FOR THE USE OF ALKOXYSILANOL PRECURSORS FOR VAPOR DEPOSITION OF SIO₂ FILMS

(Atty. D	ocket No. NOVLP117/NVLS-2977), (check one)
Ĩ	for which I have executed a U.S. patent application on even date herewith. (Accompanying which bears U.S. application No.11/021,558. (Not accompanying) which is a U.S. provisional application. (Accompanying)
]	For good and valuable consideration, the receipt and sufficiency of which is hereby

acknowledged, I, an undersigned inventor, hereby:

- Sell, assign and transfer to Novellus Systems, Inc., a California corporation having a place of 1) business at 3970 North First Street, San Jose, California 95134 ("ASSIGNEE"), the entire right, title and interest in any and all improvements and inventions disclosed in, applications based upon, and patents granted upon (including foreign patents and the right to claim priority), the above-referenced application.
- Authorize and request the Commissioner of Patents to issue any and all United States Patents resulting from said application or any division, continuation, substitute, renewal, re-examination or reissue thereof to the ASSIGNEE.
- Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, 3) perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
- Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of 4) the ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon the inventor, as well as the inventor's heirs, legal representatives and assigns.
- Warrant and represent that I have not entered and will not enter into any assignment, contract, 5) or understanding that conflicts with this assignment.
- Authorize and request my attorney/agent to insert above the application No. in order to assist with recordal of this assignment.

Signed on the date indicated beside my signature.

PATENT REEL: 016063 FRAME: 0467

1 Yten Cianatura		Date:	
1. Inventor Signature:			
State of California)		
) s\$.		
County of)	in the year 2005,	before me,
On this day of	y Public personally at	opeared Ron Rulkens, perso	mally known
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entity upon behalf of which the person	i acted, executed the in	strument.	
WITNESS my hand and offici	al seal.		
Notary Signature			
2. Inventor Signature:	and of the	Date: 01/26/09	<u> </u>
2. Inventor Signature: George D. Pa	paspulioris		
State of California)		
County of Santa Clara) SS.		
On this 2 calls day of	マンハンスレッノ	in the year 2005,	before me,
CALCALO LACACA Not	arz Public personal.	v appeared George D.	Papasounous,
- area - H- 1 - way to - to Or Droved	to me on the basis of	satisfactory evidence) w	pe me berson
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WITNESS my hand and offic	ial seal.		Colette Massa Comm #1488876
27 12 m Si - m 20 1 7 1	l li		NOTARY PUBLIC - CALIFORNIA County of Santa Clara
Notary Signature			My Comm. Expires May 11,2000
24	_	المراد الماد	_
3. Inventor Signature:		Date: 124	<u></u>
Dennis I	M. Hausmann	(
State of California)		
) ss.		
County of SANTA CLARA)		
On this 24 th day of No. ROGERS, No.	S GANNARY	in the year 2005.	before me.
On this 27 day of No	stary Public person	ally appeared Dennis M	I. Hausmann,
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4 Towartow Signoture	-2005ed	Date:	02/01/05
4. Inventor Signature:	Raihan M. Tarafdar		
State of California) _) ss		
County of <u>Sanza C</u>	<u> </u>		
known to me (or proved to subscribed to the within his/her authorized capacite entity upon behalf of which with the within his/her authorized capacite entity upon behalf of which within his/her authorized capacite entit	me on the basis of satisfacting instrument, and acknowled by (ies), and that by his/her is his the person acted, executed and official seal. Bursen Nie day of Satisfactor on the basis of satisfactor instrument, and acknowled instrument, and acknowled.	Date: s. Date: signature on the in the instrument. Date: brally appeared Bury evidence) to be dged to me that he signature on the indicate the instrument.	e the person whose name is /she executed the same in
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6. Inventor Signature:	7 7 7	Date	:
State of California)	ss.	
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Notary Signature			

7. Inventor Signature:	Date: $3/21/05$
(Jeff Tobin	
State of California	
) SS.	
County of Savin Cara On this 21 st day of March On this 21 st day of March [And K. Logers S. Notary Public, personally approximately approxi	:- the year 2005 before me
On this 2/St day of 1/1919Ct7	, in the year 2005, below the
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Notary Signature / K. Logers	Notary Public - California
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application.

ASSIGNMENT OF PATENT APPLICATION

Whereas I, an undersigned inventor, have invented certain new and useful improvements as set forth in the patent application entitled:

METHODS FOR THE USE OF ALKOXYSILANOL PRECURSORS FOR VAPOR DEPOSITION OF SIO₂ FILMS

(Atty. Docket No. NOVLP117/NVLS-2977), (check one)
 ☐ for which I have executed a U.S. patent application on even date herewith. (Accompanying which bears U.S. application No.11/021,558. (Not accompanying) ☐ which is a U.S. provisional application. (Accompanying)
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- 2) Authorize and request the Commissioner of Patents to issue any and all United States Patents resulting from said application or any division, continuation, substitute, renewal, re-examination or reissue thereof to the ASSIGNEE.
- 3) Agree to execute all papers and documents and, entirely at the ASSIGNEE's expense, perform any acts which are reasonably necessary in connection with the prosecution of said application, as well as any derivative applications thereof, foreign applications based thereon, and/or the enforcement of patents resulting from such applications.
- 4) Agree that the terms, covenants and conditions of this assignment shall inure to the benefit of the ASSIGNEE, its successors, assigns and other legal representatives, and shall be binding upon the inventor, as well as the inventor's heirs, legal representatives and assigns.
- 5) Warrant and represent that I have not entered and will not enter into any assignment, contract, or understanding that conflicts with this assignment.
- 6) Authorize and request my attorney/agent to insert above the application No. in order to assist with recordal of this assignment.

Signed on the date indicated beside my signature.

Page 1 of 4

PATENT REEL: 016063 FRAME: 0471

· Tton Cionofyro	Date:
1. Inventor Signature:	
State of California)	SS.
County of	**************************************
On this day of	, in the year 2005, before me, ersonally appeared Ron Rulkens, personally known
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his/her authorized capacity(ies), and that by his	her signature on the institution the person, or the
entity upon behalf of which the person acted, exe	cuted the instrument.
WITNESS my hand and official seal.	
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Notary Signature	
O. T	Date:
2. Inventor Signature:	<u> </u>
State of California)	
)	SS.
County of	
On this day of	in the year 2005, before me,
, Notary Public	, personally appeared George D. Papasouliotis,
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 instrume	ent, and acknowledged to me that he/she executed the
same in his/her authorized capacity(ies), and the	at by his/her signature on the instrument the person,
or the entity upon behalf of which the person act	ed, executed the instrument.
WITNESS my hand and official seal.	
ST. I. O'C. MANUAL	
Notary Signature	
3. Inventor Signature:	Date:
Dennis M. Hausmann	
State of California	99
)	SS.
County of)	
On this day of	ic, personally appeared Dennis M. Hausmann,
Notary Publ	ic, personally appeared Dennis M. Hausmann,
nerconally known to me (or proved to me on	the basis of satisfactory evidence) to be the person
whose name is subscribed to the within instrume	ent, and acknowledged to me that he/she executed the
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or the entity upon behalf of which the person ac	ted, executed the instrument.
WITNESS my hand and official seal.	
Notary Signature	

4 T			Date:
4. Inventor Signature:R	aihan M. Tarafdar		·
State of California County of)	ss.	
County 01			
On this day	Notary Public ne	rsonaliv anneare	the year 2005, before me, ed Raihan M. Tarafdar, personally
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Notary Signature	<u> </u>		
			Date:
5. Inventor Signature:	en Nie	<u> </u>	Date
State of California	en Nie	SS	
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Notary Signature			
6. Inventor Signature: State of California	anne K. Tipton		Date: 2-2-05
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County of da	y of	^j	in the year 2005, before me,
enhanthed to the within ins	te on the basis of sate trument, and acknows), and that by his/ ne person acted, exec	isfactory evider wledged to me her signature o	red Adrianne K. Tipton, personally ace) to be the person whose name is that he/she executed the same in the instrument the person, or the ment.
Notary Signature		<u> </u>	

7. Inventor Signature:	Date:			
Jeff To	bin			
State of California)) ss.			
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to the within instrument, and authorized capacity(ies), and the behalf of which the person acted	is of satisfactory evidence) to be the person whose name is subscribed acknowledged to me that he/she executed the same in his/heat by his/her signature on the instrument the person, or the entity upon d, executed the instrument.			
WITNESS my hand and Notary Signature	official seal.			

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Signed on the date indicated beside my signature.

Page 1 of 4

PATENT REEL: 016063 FRAME: 0475

1 Inventor Signature			Date:
4. Inventor Signature: _	Raihan M. Tarafdar		
State of California)	SS.	
County of			
On this	day of	personally appe	in the year 2005, before me, eared Raihan M. Tarafdar, personally
known to me (or proved subscribed to the within his/her authorized capac entity upon behalf of whi	to me on the basis of a instrument, and ack it it is instrument, and that by h	sansractory evid nowledged to n is/her signature	ne that he/she executed the same in on the instrument the person, or the
Notary Signature			
5. Inventor Signature:			Date:
State of California	Bunsen Nie		
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County of			in the year 2005, before me,
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6. Inventor Signature: State of California	Adrianne K. Tipton		Date:
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Notary Signature			_

7. Inventor Signature:		Date:	<u> </u>
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State of California)		
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County of day	Notary Public nersonally	, in the year 20 appeared Jeff Tobin, per	sonally known to
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BEYER WEAVER & THOMAS, LLP

INTELLECTUAL PROPERTY LAW

500 12th Street, Suite 200, Oakland, CA 94607 Telephone: (510) 663-1100 Facsimile: (510) 663-0920 www.beyerlaw.com

FACSIMILE COVER SHEET

April 12, 2005

Receiver: Assignment Branch

TEL #: 703-308-9723

FAX#: 703-306-5995

Sender: James E. Austin
Our Ref. No.: NOVLP117

om Ref. No.: No v Di II,

Re: 11/021,558

Pages Including Cover Sheet(s): 14

MESSAGE:

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