ASSIGNMENT RECORDATION COVER SHEET -PATENTS ONLY-

Please record the attached	document.
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- Name of conveying party: 1.
 - George D. Papasouliotis a)
- Mihai Buretea d) Dennis M. Hausmann e)

Seon-Mee Cho b) Ron Rulkens c)

- f) Michael Barnes
- Name and address of receiving party: 2.
 - Name:

Novellus Systems, Inc.

Address:

3970 North First Street

San Jose, California 95134

Nature of conveyance: 3.

\boxtimes	Assignment
\Box	Security Agr

Merger

Change of Name

reement License Agreement

- Execution Date:
- January 24, 2006 a)

d) January 24, 2006

January 24, 2006 b)

January 27, 2006 e)

c) January 24, 2006

- May 9, 2006 f)
- Application Number or Patent Number: 11/318,268 4.

The title of the application is: METAL-FREE CATALYSTS FOR PULSED DEPOSITION LAYER PROCESS FOR CONFORMAL SILICA LAMINATES

Please send all correspondence concerning this document to: 5.

> Beyer Weaver & Thomas, LLP P.O. Box 70250 Oakland, CA 94612-0250

Customer Number: 022434

- Total number of applications and patents involved: 1 б.
- 7. Total fee (37 CFR 3.41): \$40.00

Charge to Deposit Account No. 500388 (Order No. NOVLP147).

Any additional fees are authorized to be charged to Deposit Account No. 500388

(Order No. NOVLP147).

Date: May 12, 2006

E. Austin Jamel

Registration No. 39,489

Total number of pages including this cover sheet, attachments and documents: 16

Attorney Docket No. NOVLP147/NVLS-3006

(Revised 9/03) PATENT

REEL: 017621 FRAME: 0270

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

METAL-FREE CATALYSTS FOR PULSED DEPOSITION LAYER PROCESS FOR CONFORMAL SILICA LAMINATES

(Atty. Docket No. NOVLP147/NVLS-3006), (check one)
☐ for which I have executed a U.S. patent application on even date herewith. (Accompanying Which bears U.S. application No. 11/318,268. (Not accompanying) ☐ which is a U.S. provisional application. (Accompanying)
The second and architecture is a second and the second and an efficiency of additional in bounds.

For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, an undersigned inventor, hereby:

- 1) Sell, assign and transfer to **Novellus Systems, Inc.**, a California corporation having a place of 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.
- 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 2 of 3

WITNESS my hand and official seal.

Notary Signature

4. Inventor Signature:	Date:	
Mihai Buretea		
State of California)	
County of) SS.	
County 01		
On this day of _ , Nota	, in the year 2006, before rary Public, personally appeared Mihai Buretea, persona	ne, illv
known to me (or proved to me on the	basis of satisfactory evidence) to be the person whose name	is:
	and acknowledged to me that he/she executed the same	
	that by his/her signature on the instrument the person, or	the
entity upon behalf of which the person WITNESS my hand and official		
WITHESS my hand and office	ai scai.	
Notary Signature		
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5 Inventor Signature:	Date:	
5. Inventor Signature:	usmann	
State of California)	
) sş.	
County of	<u>)</u>	
On this day of	in the war 2006 before	
On this day of _ Note	, in the year 2006, before a ary Public, personally appeared Dennis M. Hausman	ц¢, nn
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	hich the person acted, executed the instrument.	
WITNESS my hand and officia	al seal.	
Notary Signature		
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6. Inventor Signature: Michael Barne	Date:	
State of California)	
) ss.	
County of)	
0.41		
On this day of	, in the year 2006, before r ry Public, personally appeared Michael Barnes, persona	ne,
known to me (or proved to me on the	basis of satisfactory evidence) to be the person whose name	шу - іс
	and acknowledged to me that he/she executed the same	
	that by his/her signature on the instrument the person, or	
entity upon behalf of which the person		
WITNESS my hand and officia	al seal.	
NT-4		
Notary Signature		

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(Atty. Dock	et No.	NO	VLP147/	NVLS-30	06), (ch	eck one)						
⊠ v	bich l	bear	s U.S. app	cuted a U plication l isional ap	No. 11/3	18,268	. (Not	accompa	en dat anying	te herewi	th. (Accom	panying)
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Signed on the date indicated beside my signature.

1. Inventor Signature:	Date:
George D. Papasouliotis	 -
State of California)	
County of	
On this day of Notary Public personally	_, in the year 2006, before me, y appeared George D. Papasouliotis,
personally known to me (or proved to me on the basis of whose name is subscribed to the within instrument, and act the same in his/her authorized capacity(ies), and that by 1 person, or the entity upon behalf of which the person acted, e WITNESS my hand and official seal.	satisfactory evidence) to be the person knowledged to me that he/she executed his/her signature on the instrument the
Notary Signature	_
2. Inventor Signature: Scon-Mee Cho	Date: <u>Jan. 24, 20</u> 06
State of California)	
County of Santa Classa) ss.	
On this day of Managery Public, personally known to me (or proved to me on the basis of satisfactory ev subscribed to the within instrument, and acknowledged to his/her authorized capacity(ics), and that by his/her signaturentity upon behalf of which the person acted, executed the instrument.	ridence) to be the person whose name is me that he/she executed the same in re on the instrument the person, or the
WITNESS my hand and official seal.	JAN K. ROGERS
Notary Signature Muc K. Rogers	Committeion # 1598855 Notary Public - California Santa Clara County My Comm. Expires Aug 1, 2005
3. Inventor Signature:	Date:
3. Inventor Signature: Ron Rulkens	
State of California)	
County of	
	in the year 2006 before me
On this day of Notary Public, personally ap to me (or proved to me on the basis of satisfactory evide subscribed to the within instrument, and acknowledged to his/her authorized capacity(ies), and that by his/her signature entity upon behalf of which the person acted, executed the ins WITNESS my hand and official seal.	me that he/she executed the same in re on the instrument the person, or the strument.
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Signed on the date indicated beside my signature.

Page 1 of 3

1. Inventor Signature:				Date:	
1. Inventor Signature:	George D. Papasoul	liotis			
State of California)	SS.		
County of					
On this	day of, Notary]	Public,	personally	in the appeared (year 2006, before me, Jeorge D. Papasouliotis,
whose name is subscribe same in his/her authorize or the entity upon behalf	d to the within ins ed capacity(ies), a	trument, nd that l on acted,	and acknow by his/her si	rledged to n gnature on	vidence) to be the person ne that he/she executed the the instrument the person, it.
Notary Signature					
2. Inventor Signature:	Seon-Mee Cho	· -		Date:	
State of California)			
County of)	SS.		
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Notary Signature					
3. Inventor Signature: _	Kon Rulkens			Date:	1/24/2006
State of California)			
County of SANTA	CLARA		SS.		
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Notary Signature	. K. Rage.	2			Commission # 1598855 Notary Public - California Santa Clara County

4. Inventor Signature:	Date:
Mibai Bu	uretea
State of California)
County of) ss.)
On this day o	of, in the year 2006, before me, Notary Public, personally appeared Mihai Buretea, personally the basis of satisfactory evidence) to be the person whose name is
his/her authorized capacity(ies), a	tent, and acknowledged to me that he/she executed the same in and that by his/her signature on the instrument the person, or the arson acted, executed the instrument.
Notary Signature	-
5. Inventor Signature:	Date:
State of California	. Hausmann)
County of) ss.)
On this day o	f, in the year 2006, before me, Notary Public, personally appeared Dennis M. Hausmann,
personally known to me (or prov whose name is subscribed to the w same in his/her authorized capacit	red to me on the basis of satisfactory evidence) to be the person rithin instrument, and acknowledged to me that he/she executed the ty(ies), and that by his/her signature on the instrument the person, the person acted, executed the instrument.
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6. Inventor Signature:	Date:
State of California)
County of) ss.)
	f, in the year 2006, before me, lotary Public, personally appeared Michael Barnes, personally the basis of satisfactory evidence) to be the person whose name is
subscribed to the within instrum- his/her authorized capacity(ies), a	ent, and acknowledged to me that he/she executed the same in nd that by his/her signature on the instrument the person, or the reson acted, executed the instrument.
Notary Signature	<u>- </u>

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(Atty. Docket No. NOVLP147/NVLS-3006), (check one)
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Page 1 of 3

1. Inventor Signature:George		Date:	
George	D. Papasouliotis		"
State of California)) s	s.	
County of			
On this day,	of	, in the	year 2006, before me, George D. Papasouliotis,
personally known to me (or prowhose name is subscribed to the same in his/her authorized capa or the entity upon behalf of which WITNESS my hand and	oved to me on the b within instrument, an city(ies), and that by the person acted, en	asis of satisfactory nd acknowledged to his/her signature on	evidence) to be the person me that he/she executed the the instrument the person,
Notary Signature	<u>-</u>		
2. Inventor Signature:	lee Cho	Date:	
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Notary Signature			
3. Inventor Signature:Ron Ru	lkens	Date:	
State of California)) ss	š.	
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Notary Signature			

Page 2 of 3

WITNESS my hand and official seal.

Notary Signature ____

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Signed on the date indicated beside my signature.

PATENT

REEL: 017621 FRAME: 0283

1. Inventor Signature:	Date:
1. Inventor Signature:	
State of California)	58.
County of	
, Notary Public, po	, in the year 2006, before me, ersonally appeared George D. Papasouliotis,
personally known to me (or proved to me on the had whose name is subscribed to the within instrument, a same in his/her authorized capacity(ies), and that by or the entity upon behalf of which the person acted, e WITNESS my hand and official seal.	nd acknowledged to me that he/she executed the his/her signature on the instrument the person,
Notary Signature	
2. Inventor Signature: Scon-Mee Cho	Date:
State of California)	SS.
County of	
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Notary Signature	
3. Inventor Signature:Ron Rulkens	Date:
State of California)	ss.
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Notary Signature	

Page 2 of 3

4. Inventor Signature:	Date:
Mihai Buretea	
State of California)	
	SS.
(County of)	
County of	
On this day of	in the year 2006 before me
Notory Public	, in the year 2006, before me, personally appeared Mihai Buretea, personally
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entity upon behalf of which the person acted, exec	cuted the instrument.
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State of California)	
)	SS.
County of)	
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, Notary Public	, personally appeared Dennis M. Hausmann,
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whose name is subscribed to the within instrumer	nt, and acknowledged to me that he/she executed the
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WITNESS my hand and official seal.	d, excelled the librarient.
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NT-4 C:	
Notary Signature	-
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6. Inventor Signature:	Date: 5(9106
Michael Barnes	<u> </u>
State of California)	
)	SS.
County of	
County of	
On this day of	in the year 2006 before me
Notory Dublic	, in the year 2006, before me, personally appeared Michael Barnes, personally
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entity upon behalf of which the person acted, exe	cuted the instrument.
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Notary Signature	_

Page 3 of 3

PATENT REEL: 017621 FRAME: 0285

RECORDED: 05/12/2006