

## PATENT ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Juwen Gao</td><td>09/21/2011</td></tr><tr><td>Rajkumar Jakkaraju</td><td>09/23/2011</td></tr><tr><td>Michal Danek</td><td>09/21/2011</td></tr><tr><td>Wei Lei</td><td>09/21/2011</td></tr></tbody></table>	Name	Execution Date	Juwen Gao	09/21/2011	Rajkumar Jakkaraju	09/23/2011	Michal Danek	09/21/2011	Wei Lei	09/21/2011	
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RECEIVING PARTY DATA											
<table border="1"><tr><td>Name:</td><td>Novellus Systems, Inc.</td></tr><tr><td>Street Address:</td><td>4000 N. First Street</td></tr><tr><td>City:</td><td>San Jose</td></tr><tr><td>State/Country:</td><td>CALIFORNIA</td></tr><tr><td>Postal Code:</td><td>95134</td></tr></table>	Name:	Novellus Systems, Inc.	Street Address:	4000 N. First Street	City:	San Jose	State/Country:	CALIFORNIA	Postal Code:	95134	
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PROPERTY NUMBERS Total: 1											
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>13242160</td></tr></tbody></table>	Property Type	Number	Application Number:	13242160							
Property Type	Number										
Application Number:	13242160										
CORRESPONDENCE DATA											
Fax Number: (248)641-0270											
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Email: sstevens@hdp.com											
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.</i>											
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ATTORNEY DOCKET NUMBER:	NVLS003604										
NAME OF SUBMITTER:	Michael D. Wiggins										
Total Attachments: 3 source=Assignment#page1.tif source=Assignment#page2.tif source=Assignment#page3.tif											

CH \$40.00 13242160

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PATENT  
REEL: 027175 FRAME: 0131

## ASSIGNMENT

Atty. Docket No. NVLS003604

The undersigned, hereinafter referred to collectively as Assignor, has an interest in the invention entitled:

### SYSTEMS AND METHODS FOR SELECTIVE TUNGSTEN DEPOSITION IN VIAS

which is the subject of a United States or International application for patent

- (a) ☒ executed on even date preparatory to filing (each inventor should sign this Assignment on the same day as he/she signs the Declaration and Power of Attorney);
- (b) ☐ executed on \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_;
- (c) ☐ filed on \_\_\_\_\_, and assigned Serial No. \_\_\_\_\_ or PCT International Application No. \_\_\_\_\_;
- (d) ☐ U.S. Patent No. \_\_\_\_\_, issued \_\_\_\_\_, and  
☐ presently assigned as evidenced at Reel \_\_\_\_\_, Frame \_\_\_\_\_; or
- (e) ☐ entitled above and naming the undersigned inventors in this provisional patent application; and

Novellus Systems Inc. having a business address at 4000 N. First Street, San Jose, California 95134, hereinafter referred to as Assignee, is desirous of acquiring Assignor's interest therein:


NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy whereof is hereby acknowledged, Assignor by these presents does sell, assign and transfer unto Assignee and its successors in interest, the full and exclusive right, title and interest in the United States of America and all foreign countries, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, to the said invention as described in the aforesaid application, said application for patent and all Letters Patent therefor to be held and enjoyed by Assignee to the full end of the term for which said Letters Patent are granted and any extensions thereof as fully and entirely as the same would have been held by Assignor had this assignment and sale not been made, and the right to recover for past infringements of, or liabilities for, any of the rights relating to any of said applications or patents resulting therefrom;

Assignor hereby covenants and agrees to execute all instruments or documents required or requested for the making and prosecution of any applications of any type for patent in the United States and in all foreign countries including, but not limited to, any provisional, continuation, continuation-in-part, divisional, renewal or substitute thereof, and as to letters patent any reissue, re-examination, or extension thereof, and for litigation regarding, or for the purpose of protecting title to the said invention, the United States application for patent, or Letters Patent therefor, and to testify in support thereof, for the benefit of Assignee without further or other compensation than that above set forth;

Assignor hereby covenants that no assignment, sale or agreement or encumbrance has been or will be entered into which would conflict with this Assignment; and

Assignor hereby requests the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications as aforesaid, to issue said Letters Patent, Utility Model Registration or Inventor's Certificate to Assignee.


# ASSIGNMENT

  
Juwen Gao

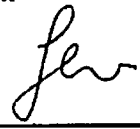
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