

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3078403

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JIAN CAO	09/15/2014
QIAN WANG	09/11/2014
TIFFANY DAVIS LING	09/11/2014
PINZHI LIU	09/11/2014
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<b>City:</b>	EVANSTON
<b>State/Country:</b>	ILLINOIS
<b>Postal Code:</b>	60208
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	13409211
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	314-232-3568
<b>Email:</b>	tracey.l.paterson@boeing.com
<b>Correspondent Name:</b>	TRACEY L. PATERSON/THE BOEING COMPANY
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<b>Address Line 4:</b>	ST. LOUIS, MISSOURI 63042-2513
<b>ATTORNEY DOCKET NUMBER:</b>	11-0366-US-NP 2012-017-01
<b>NAME OF SUBMITTER:</b>	TRACEY L. PATERSON
<b>SIGNATURE:</b>	/Tracey L. Paterson/
<b>DATE SIGNED:</b>	10/23/2014
<b>Total Attachments: 5</b>	
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**ASSIGNMENT**

Serial No: 13/409,211  
Filing Date: March 1, 2012  
Title of U.S. Patent Application: Cutting Tools with Textured Surfaces

For good and valuable consideration, the receipt and sufficiency of which are hereby agreed, each of the undersigned hereby assigns to Northwestern University, an Illinois not-for-profit corporation, having a place of business at 633 Clark Street, Evanston, Illinois 60208 and its successors and assigns ("Assignee") the entire right, title and interest in and to the inventions of such undersigned disclosed in the application listed above, and in any and all other applications anywhere in the world which the undersigned may file and/or be named as an inventor of, solely or jointly, on said inventions, in any and all patents which may be obtained on any of said applications and in any and all reissues, reexaminations, supplemental examinations, inter partes reviews, oppositions, post-grant reviews, supplementary protection certificates and/or extensions thereof, including without limitation, the right to bring suit and to claim and retain all damages and/or seek other remedies for the past, present and future infringement of any of the foregoing, the right of priority, including without limitation to claim priority benefit of or to said patent applications, and request the Commissioner for Patents in the United States and similar authorities outside the United States to issue said patents to and in the name of the Assignee.

Each of the undersigned states that the application listed above is or was made or authorized to be made by him or her. Each of the undersigned believes himself or herself to be the original inventor or a joint inventor with another undersigned of a claimed invention in the application listed above. Each of the undersigned acknowledges that any willful false statement made by him or her in this paragraph is punishable under 18 U.S.C. §1001 by fine or imprisonment of not more than five years, or both.

Except in favor of Assignee, each of the undersigned warrants that: (i) he or she is the owner of all its rights, titles and interests herein assigned and has the right to make this unconditional and irrevocable assignment to Assignee without obtaining any approval or permission of a third party; and (ii) there are no outstanding encumbrances, liens, prior assignments, licenses, or other obligations or restrictions on the rights, titles and interests herein assigned.

Upon the request of Assignee and at no expense to the undersigned, each of the undersigned hereby agrees to execute any and all applications on said inventions, including without limitation for the reissue, reexamination, supplementary protection certificate or extension thereof and any oath, declaration or affidavit relating thereto that said Assignee may deem necessary or expedient, and to cooperate to the best of the ability of the undersigned with and perform any and all affirmative acts requested by Assignee to prepare, file, prosecute, maintain, defend, enforce and vest in Assignee the rights, titles and interests assigned herein, including without limitation, preparing and executing statements and giving and producing evidence in support thereof, whereby said rights, titles and interests will be held and enjoyed by said Assignee to the full end of the term for which said patents may be granted as fully and entirely as the same would have been held and enjoyed by the undersigned if this assignment had not been made.

ASSIGNEE: Northwestern University:

On behalf of Northwestern University, Assignee, the authorized signatory below, hereby confirms Assignee's acceptance of all rights, privileges, titles and interests conveyed by this Assignment.

Signature: Beverly R. Milligan - Date: 9/15/2014  
Name: Beverly R. Milligan  
Title: Invention Specialist, Innovation and New Ventures Office (INVO)

Undersigned (ASSIGNORS):

Jian Cao 9/15/2014  
Inventor Name: Jian Cao DATE

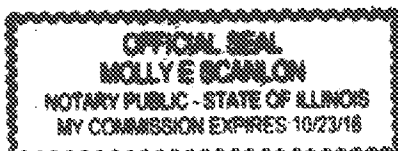
State of Illinois  
County of Cook ss.

On this 5 day of September, 2014, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

Molly E. Carlson  
NOTARY PUBLIC

[NOTARY SEAL]

My Commission Expires: 10/23/16

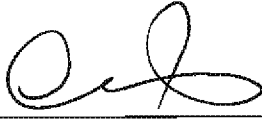


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Filing Date: March 1, 2012

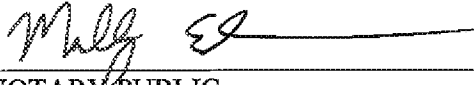
Title of U.S. Patent Application: Cutting Tools with Textured Surfaces

Undersigned (ASSIGNORS) continued:

  
Inventor Name: Qian Wang  
DATE 9/11/14

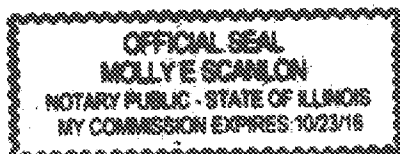
State of IL  
County of Cook ss.

On this 11 day of September, 2014, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.

  
NOTARY PUBLIC

[NOTARY SEAL]

My Commission Expires: 10/23/16



Serial No: 13/409,211

Filing Date: March 1, 2012

Title of U.S. Patent Application: Cutting Tools with Textured Surfaces

Undersigned (ASSIGNORS) continued:

Tiffany Ling 9/11/14  
Inventor Name: Tiffany Davis Ling DATE

State of Minnesota ss.  
County of Hennepin

On this 11th day of September, 2014, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.



[NOTARY SEAL]

Cindy Lee Bendel  
NOTARY PUBLIC

My Commission Expires: 1/31/17

Serial No: 13/409,211

Filing Date: March 1, 2012

Title of U.S. Patent Application: Cutting Tools with Textured Surfaces

Undersigned (ASSIGNORS) continued:



Sep. 11, 2014

Inventor Name: Pinzhi Liu

DATE

State of IL ss.  
County of Cook

On this 11 day of September, 2014, before me, a Notary Public in and for the County and State aforesaid, appeared, to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he or she executed said instrument as his or her free and voluntary act and for the uses and purposes therein expressed.



NOTARY PUBLIC

[NOTARY SEAL]

My Commission Expires: 10/23/16

