01-09-2007



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U.S. Department of Commerce **Patent and Trademark Office** Customer No. 59,982

Attorney Docket No. 08350.6663-00000

To the Director of the		1 U 3 3 つ 8 と 1 O ocuments or copy thereof.		Mail Stop	Assignment R	Recordation Service
1. Name of con (1) Bao Fen	veying party(ies):		2.	Name and addre	ess of receiving	g party(ies):
(2) Andrew I (3) Bo Shi	McGilvray		Name:	Caterpillar In	с.	S. PTC
Additional name(s) of	conveying party(ie	s) attached? Yes No	Internal Address		.E. Adams Stro	eet → 749
3. Nature of cor	nveyance:		Street A	ddress: Peoria	3	11/
		Merger	City:	Peoria		• =
Security Agree	ment 🗆	Change of Name	State:	IL	Zip Code:	61629-6490
Joint Research Agreement		Government Interest Assignment	Addition	nal name(s) & Ado	dress(es) attac	hed?
Executive Orde Confirmatory L	icense	Other:		Yes	⊠ No	
(2	I) Bao Feng - Dec 2) Andrew McGilvi 3) Bo Shi - Decem	ay - December 18, 2006				
Application r the application	number(s) or paten on: (1) December	t number(s): If this document is 19, 2006, (2) December 18, 20	being filed to 06, and (3) D	ogether with a ne December 20, 200	w application, 1 16	the execution date
A. Patent Appli	cation Number(s):		В.	Patent Number(s):	
2007 CNGUYEN2 000000						
1508	40.00 UPA	additional numbers attached?	☐ Yes	⊠ No		
5. Name and a concerning of	ddress of party to document should b	whom correspondence e mailed:	6.	Total number of One (1).	applications a	and patents involved
Name: Roland G.	McAndrews		7.	Total fee (37 CF		
Internal Address: F	INNEGAN, HEND DUNNER, L.L.P.	ERSON, FARABOW, GARRET	Т ⊠	Enclosed (Foundation overpayme	Please charge int to deposit a	deficiency or credit ccount 06-0916)
	001 New York Aver			Authorized	I to be charged	to deposit accoun
City: Was	hington, D.C.			Describ Assessed	st No : 06-091	<u> </u>
State:	Zip:	20001-4413	8.	Deposit Accoun	IL INO <u>00-09 I</u>	<u></u>
9. Statement a	and signature.	f, the foregoing information is tr	ue and corre	ct and any attach	ed copy is a tro	ue copy of the origi
To the best of my kni document.	Owledge and boild				December	
Signe	d:	11mm/2				Date
		Roland G. McAndrews Reg. No. 41,450 er of pages including cover she		nts and documen	ts: 10	
	Total number	er of pages including cover sne	ci, aliacinno			

5/2006

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

THIN FILM WITH ORIE	NTED CRAC	KS ON A FLEXIBLE SUBSTRATE	
for which I/We executed an application for United United States Letters Patent on, 20 (S			ed an application for
WHEREAS, Caterpillar Inc., a corporation Department, 100 N.E. Adams Street, Peoria, IL the entire right, title, and interest in and to this interest on this invention	61629-6490 (vention in all	hereinafter referred to as Assignee), countries throughout the world, and i	is desirous of securing in and to the application
NOW THEREFORE, be it known that for other good and valuable consideration the receip have sold, assigned, transferred, and set over, a lawful successors and assigns, my/our entire right No, filed (if any), and this application United States which may be granted thereon, an above provisional application (if any), as well as applications for Letters Patent which may hereaff which may be granted on this invention in any for lower hereby authorize and request the Commissionary foreign country whose duty it is to issue pate invention to Assignee, its successors and assign	ot of which fround do hereby ht, title, and ir, and all divised all reissues all rights to clater be filed for reign country, sioner of Pater ents on application.	m Assignee is hereby acknowledged sell, assign, transfer, and set over unterest in and to this invention, provisions, and continuations thereof, and thereof, and all rights to claim prioritial priority on the basis of this applier this invention in any foreign country and all extensions, renewals, and rents and Trademarks of the United Stations as described above, to issue a	d, I/We, as Assignor(s), nto the Assignee, its sional application Serial all Letters Patent of the cation, and all and all Letters Patent eissues thereof; and attes and any official of all Letters Patent for this
AND, I/WE HEREBY covenant that I/We and I/We have not executed and will not execute			by this Assignment,
AND, I/WE HEREBY further covenant ar Assignee, its successors and assigns, any facts proceeding, sign all lawful papers when called up necessary or desirable to perfect the title to this i divisional, continuation, and reissue applications. Assignee, its successors and assigns, to obtain a and any foreign country, it being understood that the Assignee, its successors and assigns.	known to me/ pon to do so, invention in sa , make all righ and enforce p	us respecting this invention, and test execute and deliver any and all paperaid Assignee, its successors or assigntful oaths and generally do everything the patent protection for this invention.	tify in any legal ers that may be Ins, execute all ng possible to aid tion in the United States
IN TESTIMONY WHEREOF, I/We have	hereunto set	our hands.	
FULL NAME OF SOLE OR FIRST ASSIGNOR Bao Feng	ASSIGNOR'S S	MATURE MATURE	12/9/2006
ADDRESS 1000 Shoreline Ct., Dunlap, IL 61525	L		P. R. China
1000 Cholomic Ct., Damep, 12 0 10 20			

Listing of Inventors Continued on Page 2 hereof ☐ Yes ☐ No

Page 1 of 3

1. WITNESS NAME Lei Feng	WITNESS SIGNATURE	DATE 12/19/2006
		CITIZENSHIP
350/ Hugginsway	street	
Pearland, TX 775	-84	U.S.A.
2. WITNESS NAME DINATURAL GULL	WITNESS SIGNATURE	DATE 13/19/2006
ADDRESS ADDRESS		CITIZENSHIP
ADDRESS HUGGINSINAY 5	<i>t</i>	
PEARLAND, TX 77584		USA
2. FULL NAME OF SECOND ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE	DATE
Andrew McGilvray		
ADDRESS		CITIZENSHIP
418 Harbor Pointe Dr., East Peoria, IL	61611	United Kingdom
1. WITNESS NAME	WITNESS SIGNATURE	DATE
1. WITNESS NAME ADDRESS	WITNESS SIGNATURE	DATE
	WITNESS SIGNATURE	
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2. WITNESS NAME ADDRESS 3. FULL NAME OF THIRD ASSIGNOR, IF ANY BO Shi	WITNESS SIGNATURE ASSIGNOR'S SIGNATURE	DATE CITIZENSHIP DATE CITIZENSHIP
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Page 2 of 3

1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
2. WITNESS NAME ADDRESS	WITNESS SIGNATURE	DATE CITIZENSHIP

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

THIN FILM WITH ORIENTED CRACKS ON A FLEXIBLE SUBSTRATE

for which I/We executed an application for Unite United States Letters Patent on, 20 (S	d States Letters Patent concurrently herewith or fi Serial No); and	iled an application for
Department, 100 N.E. Adams Street, Peoria, IL the entire right, title, and interest in and to this in	on of Delaware whose post office address is Intelle 61629-6490 (hereinafter referred to as Assignee) vention in all countries throughout the world, and a and the Letters Patent to be issued upon this ap), is desirous of securing in and to the application
other good and valuable consideration the receip have sold, assigned, transferred, and set over, a lawful successors and assigns, my/our entire right. No, filed (if any), and this application. United States which may be granted thereon, an above provisional application (if any), as well as applications for Letters Patent which may hereaf which may be granted on this invention in any for I/We hereby authorize and request the Commiss any foreign country whose duty it is to issue pate invention to Assignee, its successors and assign. AND, I/WE HEREBY covenant that I/We and I/We have not executed and will not execute. AND, I/WE HEREBY further covenant are Assignee, its successors and assigns, any facts proceeding, sign all lawful papers when called up necessary or desirable to perfect the title to this is divisional, continuation, and reissue applications, Assignee, its successors and assigns, to obtain a	and agree that I/We will, without further consideration known to me/us respecting this invention, and test on to do so, execute and deliver any and all paper neutron in said Assignee, its successors or assignable all rightful oaths and generally do everything and enforce proper patent protection for this invention any expense incident to the execution of such page 1.	d, I/We, as Assignor(s), unto the Assignee, its sional application Serial all Letters Patent of the ity on the basis of the ication, and all y and all Letters Patent reissues thereof; and tates and any official of all Letters Patent for this at; d by this Assignment, on, communicate with stify in any legal ers that may be gos, execute all ng possible to aid attorn in the United States
		DATE
1. FULL NAME OF SOLE OR FIRST ASSIGNOR	ASSIGNOR'S SIGNATURE	SALE
Bao Feng		CITIZENSHIP
ADDRESS		P. R. China
1000 Shoreline Ct., Dunlap, iL 61525		

Page 1 of 3

1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
	_	
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. FULL NAME OF SECOND ASSIGNOR, IF ANY	ASSIGNOR'S SHONATURE	DATE
Andrew McGilvray	Alerilinas	18 Dec 06.
ADDRESS	04044	CITIZENSHIP
418 Harbor Pointe Dr., East Peoria, IL	61611	United Kingdom
1. WITNESS NAME CHUDNG- DAM	WITNESS SIGNATURE Claydern	DATE 18,06
1. WITNESS NAME CHUDNG- DAM ADDRESS FOLL M. DRAYCOTT PL	WITNESS SIGNATURE ChyDenn PEORIA IL 61615	DATE 18, 0 C CITIZENSHIP U
1. WITNESS NAME CHUBNG- DAM ADDRESS FOR N. DRAYCOTT PL	WITNESS SIGNATURE Chydrin PEORIA IL 61615	CITIZENSHIP
		CITIZENSHIP U
2. WITNESS NAME Michael J. Pollard	WITNESS SIGNATURE Milwel Follows	CITIZENSHIP U Dec. 18, 2006
2. WITNESS NAME Michael J. Pollard	WITNESS SIGNATURE Milwel Follows	CITIZENSHIP U
2. WITNESS NAME Michael J. Pollard	WITNESS SIGNATURE Milwel Follows	CITIZENSHIP U Dec. 18, 2006
2. WITNESS NAME Michael J. Pollard	WITNESS SIGNATURE Milwel Follows	DATE 18,2006 CITIZENSHIP USA 4 Canada
2. WITNESS NAME Michael J. Pollard	WITNESS SIGNATURE Milwel Follows	CITIZENSHIP U Dec. 18, 2006
2. WITNESS NAME Michael J. Pollard ADDRESS 226 W Gentl Dr.	WITNESS SIGNATURE Milwa Jabland Peoria, IL 61615	DATE 18, 2006 CITIZENSHIP USA 4 Canada
2. WITNESS NAME Michael J. Pollard ADDRESS 226 W Geall Dr. 3. FULL NAME OF THIRD ASSIGNOR, IF ANY BO Shi	WITNESS SIGNATURE PEORIA, IL G1615 ASSIGNOR'S SIGNATURE	CITIZENSHIP DATE DEC. 18, 2006 CITIZENSHIP USA 4 Canada DATE CITIZENSHIP
2. WITNESS NAME Michael J. Pollard ADDRESS 226 W Gent Dr. 3. FULL NAME OF THIRD ASSIGNOR, IF ANY BO Shi	WITNESS SIGNATURE PEORIA, IL G1615 ASSIGNOR'S SIGNATURE	DATE 18, 2006 CITIZENSHIP USA 4 Canada

Page 2 of 3

1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2, WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP

Page 3 of 3

PATENT

REEL: 018752 FRAME: 0017

ASSIGNMENT

WHEREAS I/We, the below named inventor(s), [hereinafter referred to as Assignor(s)], have made an invention entitled:

THIN FILM WITH ORIENTED CRACKS ON A FLEXIBLE SUBSTRATE

	miles out out of the sense of t		
for which I/We executed an application for United United States Letters Patent on, 20 (S	d States Letters Patent concurrently herewith or file erial No); and	ed an application for	
Department, 100 N.E. Adams Street, Peoria, IL. the entire right, title, and interest in and to this in-	on of Delaware whose post office address is Intelle 81629-6490 (hereinafter referred to as Assignee), vention in all countries throughout the world, and i and the Letters Patent to be issued upon this app	is desirous of securing in and to the application	
other good and valuable consideration the receip have sold, assigned, transferred, and set over, a lawful successors and assigns, my/our entire right No, filed (if any), and this application. United States which may be granted thereon, an above provisional application (if any), as well as applications for Letters Patent which may hereaff which may be granted on this invention in any for lower the commission any foreign country whose duty it is to issue pate	rand in consideration of the sum of One Dollar (\$1 of which from Assigned is hereby acknowledged and do hereby sell, assign, transfer, and set over unit, title, and interest in and to this invention, provise, and all divisions, and continuations thereof, and all reissues thereof, and all rights to claim prioritial rights to claim priority on the basis of this applicate be filed for this invention in any foreign country, and all extensions, renewals, and reign country, and all extensions, renewals, and reign country, and all extensions of the United Stants on applications as described above, to issue as, in accordance with the terms of this Assignment	d. I/We, as Assignor(s), into the Assignee, its sional application Serial all Letters Patent of the try on the basis of the cation, and all y and all Letters Patent elssues thereof; and ates and any official of all Letters Patent for this	
	have the full right to convey the interest assigned any agreement in conflict with this Assignment;	l by this Assignment,	
and I/We have not executed and will not execute any agreement in conflict with this Assignment; AND, I/WE HEREBY further covenant and agree that I/We will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me/us respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.			
IN TESTIMONY WHEREOF, I/We have I	hereunto set our hands.		
1. FULL NAME OF SOLE OR FIRST ASSIGNOR Bao Feng	ASSIGNOR'S SIGNATURE	DATE	
1000 Shoreline Ct., Dunlap, IL 61525		P. R. China	
Listing of inventors Continued on Page 2 hereof Yes No	:		

Page 1 of 3

1. WITNESS NAME	WITNESS SIGNATURE	DATE
ADORESS		CITIZENSHIP
2. WITNESS NAME	WITNESS SIGNATURE	DATE
ADDRESS		CITIZENSHIP
2. FULL NAME OF SECOND ASSIGNOR, IF ANY Andrew McGilvray	ASSIGNOR'S SIGNATURE	DATE
ADDRESS 418 Harbor Pointe Dr., East Peoria, IL	61611	Chizenship United Kingdom
		-
1. WITNESS NAME	WITNESS SIGNATURE	DATE
1. WITNESS NAME ADDRESS	WITNESS SIGNATURE	DATE CITIZENSHIP
	WITNESS SIGNATURE	
	WITNESS SIGNATURE	
	WITNESS SIGNATURE	CITIZENSHIP
ADORESS		CITIZENSHIP
ADORESS 2. WITNESS NAME		CITIZENSHIP
ADORESS 2. WITNESS NAME		CITIZENSHIP
ADDRESS 2. WITNESS NAME ADDRESS		DATE DATE DATE
ADORESS 2. WITNESS NAME	WITNESS SIGNATURE	CITIZENSHIP DATE CITIZENSHIP
2. WITNESS NAME ADDRESS 3. FULL NAME OF THIRD ASSIGNOR, IF ANY	ASSIGNOR'S SIGNATURE LOCATION ASSIGNOR'S SIGNATURE	DATE CITIZENSHIP DATE 12/20/06

Page 2 of 3

PATENT

REEL: 018752 FRAME: 0019

1. WITNESS NAME Chunfu Huang	WITNESS SIGNATURE	DATE 12-20-06
ADDRESS 2118 W. Gerald		citizenship Canada
Peoria, 16 6161	5	
2. WITNESS NAME	WITNESS SIGNATURE	DATE
2. WITNESS NAME Tab Hong	WITNESS SIGNATURE	12/20/06
2. WITNESS NAME		

Page 3 of 3

PATENT

REEL: 018752 FRAME: 0020