FORM PTO-1619A

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Conveying Page 1	arty(ies)		Mark it additional na	ames of conveying parties attached Execution Date Month Day Yea	
Name (line 1)	Min Zhang			06/14/00	
Name (line 2) Second Party Name (line 1)	/at-Chen Chou			Execution Date Month Day Ye	
Name (line 2)					
Receiving Pa	rty		Mai	rk if additional names of receiving parties attached	
Name (line 1) Midwest Research Institute If document to be recorded is an assignment and the					
Name (line 2)	receiving party Is not domiciled In the United States, an appointment				
Address (line 1)	425 Volker Boulevard of a domestic representative is attached (Designation must be a				
Address (line 2)				separate document (Assignment)	
Address (line 3)			Missouri State/Country	64110 Zip Code	
Domestic Re	presentative Name and	Addr		or the first Receiving Party only.	
Name [Paul J. White				
Address (line 1)	ine 1) National Renewable Energy Laboratory				
Address (line 2)	1617 Cole Boulevard				
Address (line 3)	Golden, CO 80401				
Address (line 4)					
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FORM PTO-1 Expires 06/30/99 OMB 0661-0027	619A	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT		
Correspondent	Name and Address Area Co	ode and Telephone Number 303/3	84-7575		
Name Pa	aul J. White				
Address (line 1)	enior Patent Counsel				
Address (line 2) N	ational Renewable Energy Laboratory				
Address (line 3)	617 Cole Boulevard				
Address (line 4)	olden, CO 80401				
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09/562,613					
If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor. Month Day Year					
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	CT application number a U.S. Application Number PCT				
has not	been assigned.	PCT	PCT		
Number of Properties Enter the total number of properties involved. # Two (2)					
Fee Amount	Fee Amount for Prope	erties Listed (37 CFR 3.41): \$ 8	0.00		
Method of F Deposit Ac		Deposit Account $\overline{\mathrm{XX}}$			
	ment by deposit account or if additional fees c		4-0460		
	•	on to charge additional fees: Yes	XX No		
Statement and	Signature				
To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein. Paul I White					
Paul J. W Name of	Person Signing	Signature	Date		

ASSIGNMENT

WHEREAS, We, Min Zhang of 14178 W. Warren Drive, Lakewood, County of Jefferson, State of

Colorado; and Yat-Chen Chou of 6F, #112, Meilun Street, Shihlin, Taipei, Taiwan, Republic of China; have

invented certain new and useful improvements in Stable Zymomonas mobilis Xylose and Arabinose

Fermenting Strains, which we are about to make application for Letters Patent of the United States, said

application being identified as NREL IR No. 00-14 and; executed concurrently herewith; and;

WHEREAS, we now own the entire right, title and interest therein; and

WHEREAS, Midwest Research Institute, of 425 Volker Blvd., Kansas City, Missouri 64110, a

corporation fully organized and existing under the laws of the State of Missouri is desirous of acquiring the

entire right, title, and interest therein and thereto;

NOW THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) and

certain other good and valuable consideration to us in hand paid, the receipt of which is hereby

acknowledged, we, the said Min Zhang and Yat-Chen Chou by these presents do sell, assign, and transfer

unto the said Midwest Research Institute, its successors, legal representatives and assigns, our entire right,

title, and interest in and to said invention and the aforesaid application, for the United States of America and

for all foreign countries and to all Letters Patents, continuations and reissues, and extensions to be obtained

therefor; and we further agree to cooperate with the assignee hereunder in the obtaining and sustaining of

any and all such Letters Patent, but at the expense of said assignee.

The Commissioner of Patents is hereby authorized and requested to issue the Letters Patent solely

in accordance with the terms of this assignment to Midwest Research Institute, its successors, legal

representatives and assigns, as the assignee of the entire right, title and interest therein.

1

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal on the date set forth

hereinafter.	^
Witness 2	Min Zhang
Witness	Yat-Chen Chou
COUNTY OF JEFFERSON))	
STATE OF COLORADO)	
known to me to be the person whose name is su executed the same for the purposes and consider	/
Given under my hand and seal of offic	te, this the day of the 2000.
My commission expires: October 4, 20	001.
[Seai]	Brenda E. Brantley
	Brenda E. Brantley, Notary Public State of Colorado My Commission Expires 10/4/2001
Approved and consented to this 2/2	day of Jely 2000.
ATTEST:	MIDWEST DESEADOU INSTITUTE
prema co. prancey	By Paul J. White, Reg. No. 30,436 Its Senior Patent Counsel

ASSIGNMENT

WHEREAS, We, Min Zhang of 14178 W. Warren Drive, Lakewood, County of Jefferson, State of

Colorado; and Yat-Chen Chou of 6F, #112, Meilun Street, Shihlin, Taipei, Taiwan, Republic of China; have

invented certain new and useful improvements in Method of Site-Specific Insertion in Zymomonas

mobilis, which we are about to make application for Letters Patent of the United States, said application

being identified as NREL IR No. 00-25 and; executed concurrently herewith; and;

WHEREAS, we now own the entire right, title and interest therein; and

WHEREAS, Midwest Research Institute, of 425 Volker Blvd., Kansas City, Missouri 64110, a

corporation fully organized and existing under the laws of the State of Missouri is desirous of acquiring the

entire right, title, and interest therein and thereto;

NOW THEREFORE, be it known that for and in consideration of the sum of One Dollar (\$1.00) and

certain other good and valuable consideration to us in hand paid, the receipt of which is hereby

acknowledged, we, the said Min Zhang and Yat-Chen Chou by these presents do sell, assign, and transfer

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for all foreign countries and to all Letters Patents, continuations and reissues, and extensions to be obtained

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any and all such Letters Patent, but at the expense of said assignee.

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in accordance with the terms of this assignment to Midwest Research Institute, its successors, legal

representatives and assigns, as the assignee of the entire right, title and interest therein.

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PATENT

REEL: 011118 FRAME: 0570

hereinafter.	
Witness John John Witness	Min Zhang
Aller Som	Acal Man
Witness	Yat Chen Chou
COUNTY OF JEFFERSON)	
STATE OF COLORADO)	
Before me, a Notary Public in and for known to me to be the person whose name is executed the same for the purposes and cons	or the said County and State, personally appeared Min Zhang subscribed to the foregoing, and acknowledged to me that they sideration therein expressed.
Given under my hand and seal of of	fice, this Hald day of June 2000.
My commission expires: October 4,	2001.
[Seal]	Drenda & Brantley
$\mathcal{L}_{G_{m{p}-1}}^{(m)}$, $\mathcal{L}_{G_{m{p}-1}}^{(m)}$	Brenda E. Brantley, Notary Public State of Colorado My Commission Expires 10/4/2001
Approved and consented to this 2/	th day of Jely 2000.
ATTEST:	
Grenda E. Brantley	MIDWEST RESEARCH INSTITUTE
	By Aul J. White, Reg. No. 30,436
	Its Senior Patent Counsel

2

PATENT REEL: 011118 FRAME: 0571

RECORDED: 08/01/2000