505741706 10/25/2019

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5788519

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

## **CONVEYING PARTY DATA**

Name	Execution Date
MAO YE	10/14/2019
TAO ZHANG	10/14/2019
JINLING ZHANG	10/14/2019
ZHONGMIN LIU	10/14/2019
JINMING JIA	10/14/2019
HAILONG TANG	10/14/2019
CHANGQING HE	10/14/2019
XIANGAO WANG	10/14/2019
CHENG ZHANG	10/14/2019
HUA LI	10/14/2019
YINFENG ZHAO	10/14/2019
CHENGGONG LI	10/14/2019

## **RECEIVING PARTY DATA**

Name:	DALIAN INSTITUTE OF CHEMICAL PHYSICS, CHINESE ACADEMY OF SCIENCES
Street Address:	NO. 457 ZHONGSHAN ROAD
City:	DALIAN, LIAONING
State/Country:	CHINA
Postal Code:	116023

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	16608444

## **CORRESPONDENCE DATA**

**Fax Number:** (703)991-7071

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.

**Email:** patent@MAIERANDMAIER.COM

Correspondent Name: MAIER & MAIER, PLLC

Address Line 1: 345 SOUTH PATRICK STREET Address Line 4: ALEXANDRIA, VIRGINIA 22314

ATTORNEY DOCKET NUMBER:	12040014US
NAME OF SUBMITTER:	CHRISTOPHER J. MAIER
SIGNATURE:	/Christopher J. Maier/
DATE SIGNED:	10/25/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

## **Total Attachments: 12**

source=Combined\_Declaration\_Assignment#page1.tif source=Combined\_Declaration\_Assignment#page2.tif source=Combined\_Declaration\_Assignment#page3.tif source=Combined\_Declaration\_Assignment#page4.tif source=Combined\_Declaration\_Assignment#page5.tif source=Combined\_Declaration\_Assignment#page6.tif source=Combined\_Declaration\_Assignment#page7.tif source=Combined\_Declaration\_Assignment#page8.tif source=Combined\_Declaration\_Assignment#page9.tif source=Combined\_Declaration\_Assignment#page10.tif source=Combined\_Declaration\_Assignment#page11.tif source=Combined\_Declaration\_Assignment#page11.tif source=Combined\_Declaration\_Assignment#page12.tif

DECLARATION

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

This declaration	ned inventor, i nen is directed to:	жу весяне выс.				
X	The attached appl	leation or				
Ö			ernational application m	amber	, filed (	n
inventor of a cla including the cla material to pater I hereby acknow	imed invention in tims, and any clain tability as defined dedge that any wi	the application. I have amendments made in 37 CFR 1.56. If of false statement	ed to be made by me. ) ave reviewed and under in the application. I ac	stood the co knowledge t	ntents of the above the duty to disclose	identified application, all information which
imprisonaea o	r an more alan m	e (5) years, or both.				
			ASSIGNMENT			
to as ASSIGNOR, XYLENE CO-PI (hereinafter refer Serial No.:	am the owner of us RODUCED LOWG red to as the INVER	eful improvements I CARBON OLEFIN I FROM) for which the tablished by PCT In	o. 457 Zhongshan Road in FLUIDIZED BED RI FROM BENZENE ANI above application for U ternational Patent Appli	EACTOR AND METHANG Inited States	ID METHOD FOR DL AND/OR DIM Letters Patent was	LPRODUCING PARA- ETHYL ETHER filed on:
is No. 457 Zhon:	gshan Road, Daliai	TE OF CHEMICAL 5. Lisoning 116023, same in the United	<u>. PHYSICS, CHINESE</u> <u>China,</u> hereinafter refer States;	ACADEMY red to as Ass	OF SCIENCES, v IGNEE, are desirous	whose post office address of acquiring the entire
do sell, assign ar	id transfer unto sai s of America, inclu	d Assionee, the enti	eration, receipt of which re right, title, and intere ters Patent granted on an	st in and to s	aid Invention and	application throughout
and maintenance documents that i also agrees, with documents and i assurances and to and defense of a	of said application may be required to tout further consident information concer estimony on behalt my patent application	t or any other patent affirm the rights of a cration and at ASSIGN ning the INVENTION I of ASSIGNEE that la on or patent encomp	unents that legally may application(s) in the Ur ASSIGNEE in and to said NEE's expense, to identifitiat are within ASSIGNO wfully may be required assed within the terms of administrators and other than the said of the said	ided States for Invention, and community some community states of Assignor of Assignor of this instrument.	or said INVENTION, all without further of micute to Assigned n or control, and to in respect of the p ment. Assignor's of	including additional consideration. ASSIGNO E at ASSIGNEE's request provide further rosecution, maintenance
Patent referred to and behoof, and	o above to AssiGN for the use and bel	E, as the Assignee of noof of Assignee's le	e Director of the U.S. Pa of the entire right, title a egal representatives and the same would have bee	nd interest in successors, t	and to the same, for the full end of the	or Assigner's sole use eterm for which such
		nber of the firm of N J.S. Patent and Trad	faier & Maier, PLLC to emark Office.	insert or con	aplete any informa	ion in this document
Legal Name of I	nventor: <u>Mao YI</u>	3			*************	****************************
X Inventor's Signa	ture	H	······································	X Date	000.14,	2019
A CONTRACTOR OF THE STATE OF TH		<b>V</b>				

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

DECLARATION	
As a below named inventor, I hereby declare that:	
This declaration is directed to:  [X] The attached application, or	
The attached application, or United States application or PCT international application number	y filed on
[] United states application of 1 C1 informational approximation	, and on
The above-identified application was made or authorized to be made by mc. I beli inventor of a claimed invention in the application. I have reviewed and understood including the claims, and any claim amendments made in the application. I acknown aterial to patentability as defined in 37 CPR 1.56.	d the contents of the above-identified application,
I hereby acknowledge that any willful false statement made in this declaration is imprisonment of not more than five (5) years, or both.	punishable under 18 USC 1001 by fine or
ASSIGNMENT	
WHEREAS, I, Tao ZHANG, whose post office address is No. 457 Zhongshan Road referred to as ASSIGNOR, am the owner of useful improvements in FLUIDIZED BEI PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE A (hereinafter referred to as the INVENTION) for which the above application for United Serial No.:  ———————————————————————————————————	D REACTOR AND METHOD FOR PRODUCING ND METHANOL AND/OR DIMETHYL ETHER I States Letters Patent was filed on:
WHEREAS, <u>DALIAN INSTITUTE OF CHEMICAL PHYSICS</u> , <u>CHINESE AC</u> is No. 457 Zhongshan Road, <u>Dalian</u> , <u>Liaoning 116023</u> , <u>China</u> , hereinafter referred tright, title and interest in and to the same in the United States;	
NOW, THEREFORE, for good and valuable consideration, receipt of which is he do sell, assign and transfer unto said ASSIGNEE, the entire right, title, and interest in the United States of America, including any and all Letters Patent granted on any direissue of said application.	and to said INVENTION and application throughout
ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be re and maintenance of said application or any other patent application(s) in the United documents that may be required to affirm the rights of ASSIGNEE in and to said INVI also agrees, without further consideration and at ASSIGNEE'S expense, to identify an documents and information concerning the INVENTION that are within ASSIGNOR'S p assurances and testimony on behalf of ASSIGNEE that lawfully may be required of A and defense of any patent application or patent encompassed within the terms of this instrument shalf extend to ASSIGNOR'S heirs, executors, administrators and other leg	States for said INVENTION, including additional intion, all without further consideration. Assignor decommunicate to Assigner at Assigner's request assession or control, and to provide further assigner in respect of the prosecution, maintenance anstrument. Assignor's obligations under this
ALSO, ASSIGNOR hereby authorizes and requests the Director of the U.S. Patent Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and it and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and succ Letters Patent may be granted, as fully and entirely as the same would have been he been made.	nterest in and to the same, for ASSIGNEE'S sole use cossors, to the full end of the term for which such
ASSIGNOR authorizes any member of the firm of Maier & Maier, PLLC to inseneeded to effect its recordal in the U.S. Patent and Trademark Office.	rt or complete any information in this document
Legal Name of Inventor: Tao ZHANG	
x Tao ZHANG x	0ct.14,2019
Inventor's Signature Dat	c

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PAKA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

DECLA	<u>EATION</u>	
As a below named inventor, I hereby declare that: This declaration is directed to:		
X The attached application, or		
United States application or PCT international ap	olication number	, filed on
The above-identified application was made or authorized to be made inventor of a claimed invention in the application. I have reviewed including the claims, and any claim amendments made in the applimaterial to patentability as defined in 37 CPR 1.56.	and understood the contion. Tacknowledge	ontents of the above-identified application, the duty to disclose all information which is
I hereby acknowledge that any willful false statement made in this imprisonment of not more than five (5) years, or both.	declaration is punish	able under 18 USC 1001 by fine or
ASSIG?	MENT	
WHEREAS, I. <u>Inling ZHANG</u> , whose post office address is <u>No. 45</u> referred to as ASSIGNOR, am the owner of useful improvements in <u>FI PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM</u> (hereinafter referred to as the INVENTION) for which the above applic Serial No.:  or established by PCT International P designating the United States of America;	UIDIZED BED REAM BENZENE AND M ation for United States	CTOR AND METHOD FOR PRODUCING ETHANOL AND/OR DIMETHYL ETHER s Letters Patent was filed on:
WHEREAS, <u>DALIAN INSTITUTE OF CHEMICAL PHYSICS</u> , is <u>No. 457 Zhongshan Road</u> , <u>Dalian</u> , <u>Liaoning 116023</u> , <u>China</u> , herei right, title and interest in and to the same in the United States,	CHINESE ACADEM pafter referred to as AS	Y OF SCIENCES, whose post office address SIGNEE, are desirous of acquiring the entire
NOW, THEREFORE, for good and valuable consideration, receit do sell, assign and transfer unto said ANSIGNEE, the entire right, title the United States of America, including any and all Letters Patent greeissue of said application.	and interest in and to	said INVENTION and application throughout
ALSO, Assumon hereby agrees to execute any documents that is and maintenance of said application or any other patent application documents that may be required to affirm the rights of ASSIGNEE in also agrees, without further consideration and at ASSIGNEE's expense documents and information concerning the INVENTION that are within assurances and testimony on behalf of ASSIGNEE that lawfully may be and defense of any patent application or patent encompassed within instrument shall extend to ASSIGNOE's heirs, executors, administrate	a) in the United States and to said INVENTION, by to identify and common a ASSIGNOR'S possessive required of ASSIGNO the terms of this instru-	for said INVENTION, including additional, all without further consideration. ASSIGNOR numicate to ASSIGNEE at ASSIGNEE's request on or control, and to provide further in respect of the prosecution, maintenance unent. ASSIGNOR'S obligations under this
ALSO, ASSIGNOR hereby authorizes and requests the Director of Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire and helpoof, and for the use and helpoof of ASSIGNEE's legal representations. Patent may be granted, as fully and entirely as the same wou been made.	ight, title and interest tatives and successors,	in and to the same, for ASSESNEE'S sole use, to the full end of the term for which such
ASSIGNOR authorizes any member of the firm of Maier & Maie needed to effect its recordal in the U.S. Patent and Trademark Office		amplete any information in this document
Legal Name of Inventor: <u>Jiuling ZHANG</u>	·····	•••••••••••••••••••••••••••••••
x Linling 2H4VG	-Kr	Oct. 14, 2019
Invariance Company		www.co.co.co.co.co.co.co.co.co.co.co.co.co.

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

DECLAS	RATION	
As a below named inventor, I hereby declare that: This declaration is directed to:		
The attached application, or United States application or PCT international application of PCT international applications are provided in the	plication number	, filed on
The above-identified application was made or authorized to be mad inventor of a claimed invention in the application. I have reviewed including the claims, and any claim amendments made in the application to patentability as defined in 37 CFR 1.56.	l and understood the conte	ents of the above-identified application,
I hereby acknowledge that any willful false statement made in this imprisonment of not more than five (5) years, or both.	declaration is punishable	under 18 USC 1001 by fine or
ASSIGN	MENT	
WHEREAS, I, Zhongmin LJU, whose post office address is No. 457 referred to as ASSISNOR, am the owner of useful improvements in PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM thereinafter referred to as the INVERTION) for which the above applic Serial No.:	.UIDIZED BED REACTO M BENZENE AND METI action for United States Le	OR AND METHOD FOR PRODUCING IANOL AND/OR DIMETHYL ETHER tters Patent was filed on:
WHEREAS, DALJAN INSTITUTE OF CHEMICAL PHYSICS, is No. 457 Zhongshan Road, Dalian, Liaoning 116023, China, hereir right, title and interest in and to the same in the United States;	CHINESE ACADEMY Confirm referred to 84 ASSIG	IF SCIENCES, whose post office address REE, are desirous of acquiring the entire
NOW, THEREFORE, for good and valuable consideration, receip do sell, assign and transfer unto said ASSIGNEE, the entire right, title, the United States of America, including any and all Letters Patent gr reissue of said application.	, and interest in and to said	INVENTION and application throughout
ALSO, ASSIGNOR hereby agrees to execute any documents that le and maintenance of said application or any other patent application (documents that may be required to affirm the rights of ASSIGNES in also agrees, without further consideration and at ASSIGNES'S expense documents and information concerning the INVENTION that are within assurances and testimony on behalf of ASSIGNEE that lawfully may be and defense of any patent application or patent encompassed within instrument shall extend to ASSIGNOS's Iteirs, executors, administrato	s) in the United States for and to said INVENTION, all a, to identify and communi- in ASSIGNOR'S possession ( be required of ASSIGNOR in the terms of this instrumen	said INVENTION, including additional without further consideration. ASSIGNOR icate to ASSIGNEE at ASSIGNEE's request or control, and to provide further a respect of the prosecution, maintenance it. ASSIGNOE's obligations under this
ALSO, ASSIGNOR hereby authorizes and requests the Director of Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire 1 and behoof; and for the use and behoof of ASSIGNEE's legal represent Letters Patent may be granted, as fully and entirely as the same wou been made.	right, title and interest in a statives and successors, to	nd to the same, for ASSIGNEE'S sole use the full end of the term for which such
ASSIGNOR authorizes any member of the firm of Maier & Maie needed to effect its recordal in the U.S. Patent and Trademark Office		lete any information in this document
Legal Name of Inventor: Zhongmin LIU		
x Thorgun En	Х.	Oct. 14, 2019
Inventor's Signature	Date	

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYLETHER

DECLARATI	<u>(QN</u>
As a below named inventor, I hereby declare that:	
This declaration is directed to:    X  The attached application, or	
United States application or PCT international application	ion number, filed on
The above-identified application was made or authorized to be made by inventor of a claimed invention in the application. I have reviewed and including the claims, and any claim amendments made in the application material to patentability as defined in 37 CFR 1.56.	understood the contents of the above-identified application,
I hereby acknowledge that any willful false statement made in this declar imprisonment of not more than five (5) years, or both.	aration is punishable under 18 USC 1001 by fine or
ASSIGNME	······································
WHEREAS, I. Jinming JIA, whose post office address is No. 457 Zhongs referred to as ASSIGNOR, am the owner of useful improvements in FLUID PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BEI (hereinafter referred to as the INVENTION) for which the above application Serial No.:  [] or established by PCT International Patent designating the United States of America;	IZED BED REACTOR AND METHOD FOR PRODUCING NZENE AND METHANOL AND/OR DIMETHYL ETHER for United States Letters Patent was filed on:
WHEREAS, <u>DALIAN INSTITUTE OF CHEMICAL PHYSICS</u> , <u>CHIR</u> is <u>No. 457 Zhongshan Road</u> , <u>Dalian</u> , <u>Liaoning 116023</u> , <u>China</u> , hereinafter right, title and interest in and to the same in the United States;	VESE ACADEMY OF SCIENCES, whose post office address referred to as ASSIGNEE, are desirous of acquiring the entire
NOW, THEREFORE, for good and valuable consideration, receipt of vdo sell, assign and transfer unto said AssignEE, the entire right, title, and it the United States of America, including any and all Letters Patent granted reissue of said application.	interest in and to said INVENTION and application throughout
ALSO, ASSIGNOR hereby agrees to execute any documents that legally and maintenance of said application or any other patent application(s) in t documents that may be required to affirm the rights of ASSIGNEE in and to also agrees, without further consideration and at ASSIGNEE's expense, to be documents and information concerning the INVENTION that are within ASSIGNEE and testimony on behalf of ASSIGNEE that lawfully may be required defense of any patent application or patent encompassed within the te instrument shall extend to ASSIGNOR'S heirs, executors, administrators and	he United States for said INVENTION, including additional said INVENTION, all without further consideration. ASSIGNOR dentify and communicate to ASSIGNEE at ASSIGNEE's request SIGNOR'S possession or control, and to provide further uired of ASSIGNOR in respect of the prosecution, maintenance trus of this instrument. ASSIGNOR'S obligations under this
ALSO, ASSIGNOR hereby authorizes and requests the Director of the U Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, and behoof, and for the use and behoof of ASSIGNEE's legal representative Letters Patent may be granted, as fully and entirely as the same would have been made.	title and interest in and to the same, for Asstonee's sole use and successors, to the full end of the term for which such
ASSIGNOR authorizes any member of the firm of Maier & Maier, PLI needed to effect its recordal in the U.S. Patent and Trademark Office.	LC to insert or complete any information in this document
Legal Name of Inventor:	
x Jirming JIA	x Oct. 14, 2019
X Jinming JIA Inventor's Signature	Date

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLETIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

DECLARATION	
As a below named inventor, I hereby declare that: This declaration is directed to:	
The attached application, or United States application or PCT international application number	, filed on
The above-identified application was made or authorized to be made by me. I believe I am the inventor of a claimed invention in the application. I have reviewed and understood the contendating the claims, and any claim amendments made in the application. I acknowledge the material to patentability as defined in 37 CFR 1.56.  I hereby acknowledge that any willful false statement made in this declaration is punishable imprisonment of not more than five (5) years, or both.	ents of the above identified application, aduly to disclose all information which i
ASSIGNMENT	
WHEREAS, I, Hailong TANG, whose post office address is No. 457 Zhongshan Road, Dalian referred to as ASSIGNOR, am the owner of useful improvements in FLUIDIZED BED REACTY FARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METI (hereinafter referred to as the INVENTION) for which the above application for United States Le Serial No.:  [] or established by PCT International Patent Application No.:	OR AND METHOD FOR PRODUCING 1ANOL AND/OR DIMETHYL ETHER tters Patent was filed on:
WHEREAS, DALIAN INSTITUTE OF CHEMICAL PHYSICS, CHINESE ACADEMY Of is No. 457 Zhongshan Road, Dalian, Liaoning 116023, China, hereinafter referred to as Assicingly, title and interest in and to the same in the United States;	I <u>F SCIENCES</u> , whose post office address NSE, are desirous of acquiring the entire
NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowled sell, assign and transfer unto said Assumer, the entire right, title, and interest in and to said the United States of America, including any and all Letters Patent granted on any division, conteissne of said application.	I INVENTION and application throughout
ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in c and maintenance of said application or any other patent application(s) in the United States for documents that may be required to affirm the rights of ASSIGNEE in and to said INVENTION, all also agrees, without further consideration and at ASSIGNEE'S expense, to identify and communidocuments and information concerning the INVENTION that are within ASSIGNOR'S possession c assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in and defense of any patent application or patent encompassed within the terms of this instrument instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal represent	said INVENTION, including additional without further consideration. Assignous icate to Assignous at Assignous's request or control, and to provide further a respect of the prosecution, maintenance at. Assignous's obligations under this
ALSO, ASSIGNOR hereby authorizes and requests the Director of the U.S. Patent and Trader Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in an and behoof, and for the use and behoof of ASSIGNEE's legal representatives and successors, to the Letters Patent may be gramed, as fully and entirely as the same would have been held by ASSIGNEE made.	nd to the same, for ASSIGNEE'S sole use the full end of the term for which such
ASSIGNOR authorizes any member of the firm of Maier & Maier, PLLC to insert or completeded to effect its recordal in the U.S. Patent and Trademark Office.	ete any information in this document
Legal Name of Inventor: Hailong TANG	***************************************
x Hailong TANG x	Oct. 14,2019
Townston's Christians	The state of the s

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

	DECLARATION			
As a below named inventor, I hereby declare that:				
This declaration is directed to:				
The attached application, or United States application or PCT interns	ational application numbe	<b>f</b> i.	filed on	
had.	<b>(</b> )	***************************************		
The above-identified application was made or authorized inventor of a claimed invention in the application. I have including the claims, and any claim amendments made in material to patentability as defined in 37 CFR 1.56.	reviewed and understood	the contents of t	he above-identifie	d application,
I hereby acknowledge that any willful false statement me imprisonment of not more than five (5) years, or both.	ide in this declaration is p	unishable under	18 USC 1001 by f	ine or
	ASSIGNMENT			
WHEREAS, I, Changqing HE, whose post office address i referred to as ASSIGNOR, am the owner of useful improvem PARA-XYLENE CO-PRODUCED LOWCARBON OLES (hereinafter referred to as the INVENTION) for which the abserial No.:  [ or established by PCT Interdesignating the United States of America;	eents in FLUIDIZED BEE FIN FROM BENZENE A ove application for United	REACTOR AND METHANOL States Letters Pai	D METHOD FOR . AND/OR DIME! tent was filed on:	PRODUCING THYL ETHER
WHEREAS, <u>DALIAN INSTITUTE OF CHEMICAL P</u> is <u>No. 457 Zhongshan Road</u> , <u>Dalian</u> , <u>Liaoning 116023</u> , Chright, title and interest in and to the same in the United Sta	<u>ina,</u> hereinafter referred to			
NOW, THEREFORE, for good and valuable considerated sell, assign and transfer unto said ASSUNES, the entire the United States of America, including any and all Letter reissue of said application.	right, title, and interest in a	and to said Inven	ITON and applicatio	on throughout
ALSO, ASSIGNOR hereby agrees to execute any docume and maintenance of said application or any other patent ap documents that may be required to affirm the rights of ASS also agrees, without further consideration and at ASSIGNEE documents and information concerning the INVENTION that assurances and testimony on behalf of ASSIGNEE that lawfund defense of any patent application or patent encompass instrument shall extend to ASSIGNOR's heirs, executors, ad-	plication(s) in the United atomer in and to said INVE is expense, to identify and tare within ASSIGNOR'S pourly may be required of Ased within the terms of this	States for said INV NTION, all without communicate to ossession or contro ISIGNOR in respect instrument. Assi	VENTION, including a further considerate Assignes at Assignes at Assignes, and to provide for the prosecution IGNOR's obligations.	additional ion. ASSIGNOR SNEE'S request further n, maintenance
ALSO, ASSIGNOR hereby authorizes and requests the D Patent referred to above to ASSIGNEE, as the ASSIGNEE of and behoof, and for the use and behoof of ASSIGNEE's legal Letters Patent may be granted, as fully and entirely as the been made,	he entire right, title and in if representatives and succ	terest in and to the essors, to the full	e same, for Assion end of the term for	REE'S sole use which such
ASSIGNOR authorizes any member of the firm of Maineeded to effect its recordal in the U.S. Patent and Tradem		t or complete any	information in this	5 document
Legal Name of Inventor: Changging HE	***************************************			*****
x Changeing HZ	X	0ct.14	, 2019	
Inventor's Signature	Date			******************

Title of Invention. FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

DECLARATION	
As a below named inventor, I hereby declare that:	
This declaration is directed to:  The situched application, or	
United States application or PCT international application ma	mber, filed on
The above-identified application was made or authorized to be made by me. I inventor of a claimed invention in the application. I have reviewed and unders including the claims, and any claim amendments made in the application. I aci material to patentability as defined in 37 CFR 1.56.	tood the contents of the above-identified application,
I hereby acknowledge that any willful false statement made in this declaration imprisonment of not more than five (5) years, or both.	is punishable under 18 USC 1001 by fine or
ASSIGNMENT	
WHEREAS, I, Xiangao WANG, whose post office address is No. 157 Zhongshe referred to as Assignor, am the owner of useful improvements in FLUIDIZED I PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZEN (hereinafter referred to as the INVENTION) for which the above application for Ur Serial No or established by PCT International Patent Applie designating the United States of America.	BED REACTOR AND METHOD FOR PRODUCING E AND METHANOL AND/OR DIMETHYL ETHER itted States Letters Patent was filed on:
WHEREAS, <u>DALIAN INSTITUTE OF CHEMICAL PHYSICS, CHINESE</u> is <u>No. 457 Zhongshan Road</u> , <u>Dalian</u> , <u>Liaoning 116023</u> , <u>China</u> , hereinafter referright, title and interest in and to the same in the United States;	ACADEMY OF SCIENCES, whose post office address ed to as Assignee, are desirous of acquiring the entire
NOW, THEREFORE, for good and valuable consideration, receipt of which do sell, assign and transfer unto said ASSIGNES, the entire right, title, and interest the United States of America, including any and all Letters Patent granted on any reissue of said application.	t in and to said INVENTION and application throughout
ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be and maintenance of said application or any other patent application(s) in the Unidocuments that may be required to affirm the rights of ASSIGNEE in and to said I also agrees, without further consideration and at ASSIGNEE'S expense, to identify documents and information concerning the INVENTION that are within ASSIGNOR assurances and testimony on behalf of ASSIGNEE that lawfully may be required and defense of any patent application or patent encompassed within the terms of instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other	ited States for said INVENTION, including additional NVENTION, all without further consideration. ASSIGNOR rand communicate to ASSIGNEE at ASSIGNEE's request 's possession or control, and to provide further of ASSIGNOR in respect of the prosecution, maintenance this instrument. ASSIGNOR'S obligations under this
ALSO, ASSIGNOR hereby authorizes and requests the Director of the U.S. Pat Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title an and behoof, and for the use and behoof of ASSIGNEE'S legal representatives and selectors Patent may be granted, as fully and entirely as the same would have been been made.	id interest in and to the same, for AssiGNEE's sole use successors, to the full end of the term for which such
ASSIGNOR authorizes any member of the firm of Maier & Maier, PLLC to i needed to effect its recordal in the U.S. Patent and Trademark Office.	insert or complete any information in this document
Legel Name of Inventor: _Xiangao WANG	
X Xinugao WANG	x 06.14,2019
Inventor's Signature	Date Control of the C

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

DECLARATION
As a below named inventor, Thereby declare that:
This declaration is directed to:
The attached application, or United States application or PCT international application number, filed on
med states apprearing of i C3 intertactional authority authority, fred in
The above-identified application was made or authorized to be made by me. I believe I am the original inventor or an original joint inventor of a claimed invention in the application. I have reviewed and understood the contents of the above-identified application, including the claims, and any claim amendments made in the application. I acknowledge the duty to disclose all information which is material to patentability as defined in 37 CFR 1.56.
Thereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.
ASSIGNMENT
WHEREAS, I, Cheng ZHANG, whose post office address is No. 457 Zhongshan Road, Dalian, Liaoning 116023, China, hereinafter referred to as ASSIGNOR, am the owner of useful improvements in FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER (hereinafter referred to as the INVENTION) for which the above application for United States Letters Patent was filed on:  Scrial No.:
WHEREAS, DALIAN INSTITUTE OF CHEMICAL PHYSICS, CHINESE ACADEMY OF SCIENCES, whose post office address is No. 457 Zhongshan Road, Dalian, Liaoning 116023, China, hereinafter referred to as ASSIGNEE, are desirous of acquiring the entire right, title and interest in and to the same in the United States;
NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, I, ASSIGNOR, by these presented o sell, assign and transfer unto said ASSIGNEE, the entire right, fitle, and interest in and to said INVENTION and application throughout the United States of America, including any and all Letters Patent granted on any division, continuation, continuation-in-part and reissue of said application.
ALSO, ASSIGNOR hereby agrees to execute any documents that legally may be required in connection with the filing, prosecution and maintenance of said application or any other patent application(s) in the United States for said INVENTION, including additional documents that may be required to affirm the rights of ASSIGNEE in and to said INVENTION, all without further consideration. ASSIGNOR also agrees, without further consideration and at ASSIGNEE's expense, to identify and communicate to ASSIGNEE's request documents and information concerning the INVENTION that are within ASSIGNOR'S possession or control, and to provide further assurances and testimony on behalf of ASSIGNEE that lawfully may be required of ASSIGNOR in respect of the prosecution, maintenance and defense of any patent application or patent encompassed within the terms of this instrument. ASSIGNOR'S obligations under this instrument shall extend to ASSIGNOR'S heirs, executors, administrators and other legal representatives.
ALSO, ASSIGNOR hereby authorizes and requests the Director of the U.S. Patent and Trademark office to issue any and all Letters Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entire right, title and interest in and to the same, for ASSIGNEE'S sole use and behoof; and for the use and behoof of ASSIGNEE'S legal representatives and successors, to the full end of the term for which such Letters Patent may be granted, as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made.
ASSIGNOR authorizes any member of the firm of Maier & Maier, PLLC to insert or complete any information in this document needed to effect its recordal in the U.S. Patent and Trademark Office.
Legal Name of Inventor: Cheng ZHANG
X Chan ZHANG X Oct. 14, 2019 Inventor's Signature Date

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

		DEC	LARATION				
	nventor, I hereby dec	lare that:					
This declaration is o	attached application	· riv					
	ted States application		al application nu	mber	, file	d on	
Secret	and the second of the second		and the state of t				
The above-identified inventor of a claimed including the claims, material to patentabi	l invention in the app and any claim amen lity as defined in 37 (	dication. I have revi dments made in the CFR 1.56.	izwed and unders application. I ac	stood the content knowledge the d	ts of the about to discl	ove-identif ose all info	ied application, smation which i
I hereby acknowledgingerisonment of not			n this declaration	ı is punishable u	inder 18 US	C 1001 by	fine or
		AS	SIGNMENT				
WHEREAS, I. Hua I as Assignor, and the XYLENE CO-PROE (hereinafter referred to	owner of useful impr <u>UCED LOWCARBO</u> o as the INVENTION) I	ovements in <u>FLUIDI</u> ON OLEFIN FROM for which the above i	IZED BED REAC BENZENE AND application for U	TOR AND ME METHANOL / nited States Lette	THOD FOR AND/OR DI ers Patent w	PRODUC METHYL as filed on:	ING PARA- ETHER 
Serial No.:designating the Unite	grestablish	ed by FCT Internatio	mal Patent Applic	ation No.:		filed:	
is No. 457 Zhongsha right, title and interes	t in and to the same i	ning 116023, China, in the United States;	hereinafter refeir	ed to as Assigne	E, are desin	ws of acqu	uring the entire
NOW, THEREPC do sell, assign and tre the United States of a reissue of said applica-	America, including ar	INEE, the entire right	, title, and interes	t in and to said I	NVENTION a	nd applicat	tion throughout
ALSO, Assignors and maintenance of a documents that may also agrees, without documents and informassurances and testin and defense of any p instrument shall extended.	be required to affirm further consideration mation concerning the tony on behalf of Ass atent application or pa	other patent application rights of ASSIGNI and at ASSIGNEE'S ex elevention that are signer that lawfully a atent cocompassed w	ation(s) in the Un EE in and to said I pense, to identify within Assuctors may be required of thin the terms of	ited States for sa NVENTION, all w and communica 's possession or of ASSIGNOR in r (this instrument.	id INVENTIC ithout furth me to Assig control, and espect of the ASSIGNOR	es, including or consider NEE at ASS to provide oprosecution	ng additional ation. Assignor toners's request further on, maintenance
ALSO, ASSIGNOR Patent referred to abound behoof, and for t Letters Patent may b been made.	he use and behoof of	se Assignee of the ea Assignee's legal rep	ntire right, title ar resentatives and	id interest in and successors, to the	to the same a full end of	for Assic the term for	INEE'S sole use or which such
ASSIGNOR authorized to effect its n	orizes any member of scordal in the U.S. Pa			insert or complet	e any infor	nation in th	iis document
Legal Name of Inver	tor: <u>Hus LI</u>						
x Hua Inventor's Signature	11			x	012	14. 21	0 (9
Inventor's Signature	40.004	·		Date			<b>y</b>

Title of Invention: FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER

REAL STATES	AKAHUN		
As a below named inventor, I hereby declare that:			
This declaration is directed to:  [X] The attached application, or			
United States application or PCT international	application number	Filed on	
[] Entire States approximate a C. v. monatuma	apprearon nation	, GPA: 701	
The above-identified application was made or authorized to be a inventor of a claimed invention in the application. I have review including the claims, and any claim amendments made in the appropriate to patentability as defined in 37 CFR 1.56.	wed and understood the c	ontents of the above-identified applicatio	n,
I hereby acknowledge that any willful false statement made in imprisonment of not more than five (5) years, or both.	this declaration is punish	able under 18 USC 1001 by fine or	
ASSI	GNMENT		
WHEREAS, I. <u>Yinfeng ZHAO</u> , whose post office address is <u>No.</u> referred to as ASSIGNOR, am the owner of useful improvements in <u>PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN FI</u> (hereinafter referred to as the INVENTION) for which the above ap Serial No.:	TELUIDIZED BED REA ROM BENZENE AND M plication for United State	CTOR AND METHOD FOR PRODUCIN ETHANOL AND/OR DIMETHYL ETHI s Letters Patent was filed on:	VG ER
WHEREAS, DALIAN INSTITUTE OF CHEMICAL PHYSIC is No. 457 Zhongshan Road, Dalian, Liaoning 116023. China, he right, title and interest in and to the same in the United States;			
NOW, THEREFORE, for good and valuable consideration, re do sell, assign and transfer unto said ASSIGNEE, the entire right. t the United States of America, including any and all Letters Paten reissue of said application.	itle, and interest in and to	said INVENTION and application throughout	
ALSO, ASSIGNOR hereby agrees to execute any documents the and maintenance of said application or any other patent application documents that may be required to affirm the rights of ASSIGNEE also agrees, without further consideration and at ASSIGNEE'S expedicuments and information concerning the INVENTION that are wassurances and testimony on behalf of ASSIGNEE that lawfully mand defense of any patent application or patent encompassed with instrument shall extend to ASSIGNOR's heirs, executors, administrations.	on(s) in the United States in and to said INVENTION ense, to identify and committin Assignon's possessing be required of Assignon the terms of this instri	for said INVENTION, including additional, all without further consideration. ASSIGN numicate to ASSIGNEE at ASSIGNEE's requestion or control, and to provide further in respect of the prosecution, maintenantment. ASSIGNOR's obligations under this	iOF st
ALSO, ASSIGNOR hereby authorizes and requests the Director Patent referred to above to ASSIGNEE, as the ASSIGNEE of the entiand behoof, and for the use and behoof of ASSIGNEE's legal represent Patent may be granted, as fully and entirely as the same when made.	ire right, title and interest sentatives and successors	in and to the same, for ASSIGNEE's sole use, to the full end of the term for which such	ē
ASSIGNOR authorizes any member of the firm of Maier & M needed to effect its recordal in the U.S. Patent and Trademark Of		omplete any information in this document	
Legal Name of Inventor: Yinteng ZHAO			
x Yinteng ZHAO Inventor's Signature	X	Oct. 14, 2019	
Inventor's Signature	Date	organisma and the Salah distribution of the Salah Sala	,=",-

Title of Invention: <u>FLUIDIZED BED REACTOR AND METHOD FOR PRODUCING PARA-XYLENE CO-PRODUCED</u>
<u>LOWCARBON OLEFIN FROM BENZENE AND METHANOL AND/OR DIMETHYL ETHER</u>

1111	<u>CLARATION</u>	
As a below named inventor, I hereby declare that: This declaration is directed to:		
X The attached application, or		
United States application or PCT internation	mal application number	, filed on
The above-identified application was made or authorized to inventor of a claimed invention in the application. I have reincluding the claims, and any claim amendments made in the material to patentability as defined in 37 CFR 1.56.	viewed and understood the o	ontents of the above-identified application,
I hereby acknowledge that any willful false statement made imprisonment of not more than five (5) years, or both.	in this declaration is punish	able under 18 USC 1001 by fine or
Δ	SSIGNMENT	
WHEREAS, I, Chenggong I.I, whose post office address is N referred to as ASSIGNOR, am the owner of useful improvemen PARA-XYLENE CO-PRODUCED LOWCARBON OLEFIN (hereinafter referred to as the INVENTION) for which the above Serial No.:    or established by PCT Internat designating the United States of America.	ts in <u>FLUIDIZED BED REA</u> (FROM BENZENE AND M : application for United States	CTOR AND METHOD FOR PRODUCING ETHANOL AND/OR DIMETHYL ETHER Letters Patent was filed on:
WHEREAS, <u>DALIAN INSTITUTE OF CHEMICAL PHY</u> is No. 457 Zbongshan Road, Dalian, Liaoning 116023, China right, title and interest in and to the same in the United States	, hereinafter referred to as As	
NOW, THEREFORE, for good and valuable consideration do sell, assign and transfer unto said ASSIGNEE, the entire right the United States of America, including any and all Letters Pareissue of said application.	n, title, and interest in and to	said INVENTION and application throughout
ALSO, ASSIGNOR hereby agrees to execute any documents and maintenance of said application or any other patent application and maintenance of said application or any other patent application and at ASSIGNEE'S educaments and information concerning the INVENTION that are assurances and testimony on behalf of ASSIGNEE that lawfully and defense of any patent application or patent encompassed instrument shalf extend to ASSIGNOR'S being, executors, admini	cation(s) in the United States NEE in and to said INVENTION, expense, to identify and comm e within ASSIGNOR'S possession of may be required of ASSIGNOR within the terms of this instru	for said INVENTION, including additional all without further consideration. ASSIGNOR nunicate to ASSIGNEE at ASSIGNEE's request ou or control, and to provide further it in respect of the prosecution, maintenance ment. ASSIGNOR'S obligations under this
ALSO, ASSIGNOR hereby authorizes and requests the Direct Patent referred to above to ASSIGNEE, as the ASSIGNEE of the and behoof, and for the use and behoof of ASSIGNEE's legal reLetters Patent may be granted, as fully and entirely as the sambeen made.	entire right, title and interest i epresentatives and successors,	n and to the same, for ASSIGNEE'S sole use to the full end of the term for which such
ASSIGNOR authorizes any member of the firm of Maier a needed to effect its recordal in the U.S. Patent and Trademark		mplete any information in this document
Legal Name of Inventor: Chenggong U		
x Changgong LI	X	Oct. 14, 2019
Inventor's Signature	Date	

**RECORDED: 10/25/2019**