

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4210821

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
YOSHIAKI KAWAJIRI	11/21/2016
ANDREAS SEBASTIAN BOMMARIUS	12/20/2016
JUNGMIN OH	11/20/2016
GAURAV AGRAWAL	11/30/2016
BALAMURALI SREEDHAR	11/22/2016
RECEIVING PARTY DATA	
Name:	GEORGIA TECH RESEARCH CORPORATION
Street Address:	505 TENTH STREET NW
City:	ATLANTA
State/Country:	GEORGIA
Postal Code:	30318
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15316542
CORRESPONDENCE DATA	
Fax Number:	(612)659-9344
<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>	
Phone:	6126599340
Email:	dow.docketing@bipl.net
Correspondent Name:	BROOKS, CAMERON & HUEBSCH, PLLC
Address Line 1:	1201 MARQUETTE AVENUE SOUTH
Address Line 2:	SUITE 400
Address Line 4:	MINNEAPOLIS, MINNESOTA 55403
ATTORNEY DOCKET NUMBER:	76162-US-PCT
NAME OF SUBMITTER:	ALEXANDER MARQUARDT
SIGNATURE:	/Alexander Marquardt/
DATE SIGNED:	01/05/2017
Total Attachments: 6	

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TRUE COPY

TO ALL TO WHOM THESE PRESENTS SHALL COME,

I Do Hereby Certify that the annexed document(s) are TRUE COPIES of the original document(s) which I have compared. The original document(s) contains the authentic signature(s) from the inventor(s).

at Freeport, Texas 77541, USA

this 4th day of January 2017

Jenna Boyd
Jenna Boyd
Office Professional
THE DOW CHEMICAL COMPANY

NOTARIAL CERTIFICATE

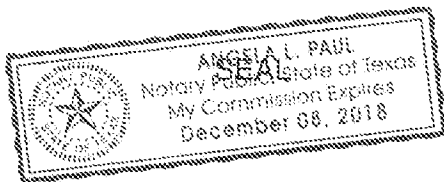
UNITED STATES OF AMERICA)
STATE OF TEXAS) SS
County/Parish of Brazoria)

On this 4th day of January 2017, personally appeared before me,

Jenna Boyd

known or identified to me to be the individual who executed the foregoing document and acknowledged the same as a free act and deed for uses and purposes therein expressed.

Angela L. Paul
Notary Public



This Assignment 110 is in the ENGLISH language and has the same meaning in other languages with the same 110 number and E-Code.
 The Assignment 110 is in the ENGLISH language and has the same meaning in other languages with the same 110 number and E-Code.
 FORM 110 (R 5/97)

INDIVIDUAL ASSIGNMENT AND INVENTOR'S DECLARATION (with Priority Rights)

I/we verify believe I am/we are the original, first and sole/joint inventor(s) of the subject matter which is embraced by and for which a patent is sought on the invention entitled: **PROCESS FOR OPERATING A SIMULATED MOVING BED REACTOR**

which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

Georgia Tech Research Corporation
 Georgia Institute of Technology
 505 Tenth Street NW
 Atlanta, Georgia 30318

an entity organized and existing under the laws of the state of Georgia (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

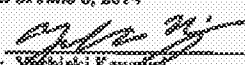
Priority Number	Filing Date	Filing Country
62/008,560	June 6, 2014	United States of America

of the application, on which the claim for priority will be based, and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

I/we authorize Assignee or its designee to translate this Assignment into all languages necessary; and we request that any such Letters Patent be issued to Assignee; and consent to the recording of this Assignment, or a Notarial True Copy thereof, being under covenant not only that I/we have full power to make the same, but also that such assigned rights are not encumbered by any grant, license, or other right heretofore given.

Subscribed and Declared by me/us:

At: _____
 this 21 day of November, 2014
 Effective as of June 6, 2014

Signature: 
 Full Name: Yoshiaki Kawajiri
 Mailing Address: 845 Spring Street NW Unit 315
 Atlanta, Georgia 30308
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Andreas Sebastian Bommarius
 Mailing Address: 1105 Vernon Springs Court
 Atlanta, Georgia 30327
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Jungmin Oh
 Mailing Address: 251 10th Street NW, Apartment A715
 Atlanta, Georgia 30318
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Gaurav Agrawal
 Mailing Address: 1433 Willow Lake Drive NE, Apartment A
 Atlanta, Georgia 30329
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Balamurali Sreedhar
 Mailing Address: 1776 Building
 Midland, Michigan 48667
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: _____
 Mailing Address: _____

This Assignment is in the English language and has the same meaning as other languages with the same 110 number and R Class.

FORM 110 (R 09/7)

INDIVIDUAL ASSIGNMENT AND INVENTOR'S DECLARATION (with Priority Rights)

I/we verily believe I am/we are the original, first and sole/joint inventor(s) of the subject matter which is embraced by and for which a patent is sought on the invention entitled: **PROCESS FOR OPERATING A SIMULATED MOVING BED REACTOR**

which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

Georgia Tech Research Corporation
Georgia Institute of Technology
505 Tenth Street NW
Atlanta, Georgia 30318

an entity organized and existing under the laws of the state of Georgia (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Conventions and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

Priority Number	Filing Date	Filing Country
62/508,580	June 6, 2014	United States of America

of the application, on which the claim for priority will be based; and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

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Subscribed and Declared by me/us:

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Yoshiaki Kawajiri
 Mailing Address: 199 14th Street NE #2308
 Atlanta, Georgia 30309
 United States of America

At: Atlanta
 this 20th day of December, 2016
 Effective as of June 6, 2014

Signature: Andreas Sebastian Bannarius
 Full Name: Andreas Sebastian Bannarius
 Mailing Address: 1105 Vernon Springs Court
 Atlanta, Georgia 30327
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Jungmin Oh
 Mailing Address: 251 10th Street NW, Apartment A715
 Atlanta, Georgia 30318
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Gaurav Agrawal
 Mailing Address: 1433 Willow Lake Drive NE, Apartment A
 Atlanta, Georgia 30329
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Balasubramani Sreedhar
 Mailing Address: 1776 Building
 Midland, Michigan 48667
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: _____
 Mailing Address: _____

This Assignment, Invention or Patent is in English and for the same purpose in other languages with the same effect and date.
 This Assignment, Invention or Patent is in English and for the same purpose in other languages with the same effect and date.
 FORM 110 (R 5/97)

INDIVIDUAL ASSIGNMENT AND INVENTOR'S DECLARATION (with Priority Rights)

I/we verily believe I am/we are the original, first and sole/joint inventor(s) of the subject matter which is embraced by and for which a patent is sought on the invention entitled **PROCESS FOR OPERATING A SIMULATED MOVING BED REACTOR**

which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto

Georgia Tech Research Corporation
 Georgia Institute of Technology
 305 Tech Street NW
 Atlanta, Georgia 30318

an entity organized and existing under the laws of the state of Georgia (hereinafter referred to as the "Assignee"), my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)), and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

Priority Number	Filing Date	Filing Country
62/008,560	June 6, 2014	United States of America

of the application, on which the claim for priority will be based, and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

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Subscribed and Declared by me/us:

At: _____
 this 30 day of November, 20 14
 Effective as of June 6, 2014

Signature: _____
 Full Name: Yoshiaki Kawajiri
 Mailing Address: 199 14th Street NE #2308
 Atlanta, Georgia 30309
 United States of America

At: _____
 this _____ day of _____, 20 _____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Andreas Sebastian Bonmaris
 Mailing Address: 1105 Vernon Springs Court
 Atlanta, Georgia 30327
 United States of America

At: _____
 this 20 day of November, 20 14
 Effective as of June 6, 2014

Signature: _____
 Full Name: Jungmin Oh
 Mailing Address: 251 10th Street NW, Apartment A715
 Atlanta, Georgia 30318
 United States of America

At: _____
 this _____ day of _____, 20 _____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Gaurav Agrawal
 Mailing Address: 1433 Willow Lake Drive NE, Apartment A
 Atlanta, Georgia 30329
 United States of America

At: _____
 this _____ day of _____, 20 _____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Balamurali Sreedhar
 Mailing Address: 1776 Building
 Midland, Michigan 48667
 United States of America

At: _____
 this _____ day of _____, 20 _____
 Effective as of June 6, 2014

Signature: _____
 Full Name: _____
 Mailing Address: _____

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 FORM 110 (R. 5/97)

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which invention was made and invented by me/us out of and in the course of my/our employment with my/our respective employers as stated below my/our name(s). I/we acknowledge that I/we hold the invention and all patent and other rights and powers obtainable or exercisable in respect thereof in trust for our respective employers. As trustee(s), and for good and valuable consideration and/or the remuneration received for my/our work, I/we sell, assign and transfer unto:

Georgia Tech Research Corporation
 Georgia Institute of Technology
 505 Tenth Street NW
 Atlanta, Georgia 30318

an entity organized and existing under the laws of the state of Georgia (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or nominee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

Priority Number	Filing Date	Filing Country
629838 360	June 6, 2014	United States of America

of the application, on which the claim for priority will be based, and in and to any Letters Patent that may be issued for the invention in any and all countries. I/we do hereby agree to assist Assignee in the prosecution of the application(s) and in any interference, conflict, opposition or litigation which may arise involving the invention or the patent or patents thereon, and to execute for any and all countries any document relating to applications derived from, corresponding to or equivalent to the above identified application as Assignee may request.

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Subscribed and Declared by me/us:

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Yoshiaki Kawajiri
 Mailing Address: 199 14th Street NE #2309
 Atlanta, Georgia 30309
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Andreas Sebastian Bommaris
 Mailing Address: 1105 Vernon Springs Court
 Atlanta, Georgia 30327
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Jungmin Oh
 Mailing Address: 251 10th Street NW, Apartment A715
 Atlanta, Georgia 30318
 United States of America

At: Boynton TX
 this 30th day of November, 2015
 Effective as of June 6, 2014

Signature: Gourav Agrawal
 Full Name: Gourav Agrawal
 Mailing Address: 1433 Willow Lake Drive NE, Apartment A
 Atlanta, Georgia 30329
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: Balasrashi Smedhar
 Mailing Address: 1776 Building
 Midland, Michigan 48667
 United States of America

At: _____
 this _____ day of _____, 20____
 Effective as of June 6, 2014

Signature: _____
 Full Name: _____
 Mailing Address: _____

This Assignment 110 is in the English language and for the same invention as the language in the same 110 number and 110 number.

FORM 110 (R. 097)

INDIVIDUAL ASSIGNMENT AND INVENTOR'S DECLARATION (with Priority Rights)

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Georgia Tech Research Corporation
Georgia Institute of Technology
505 North Street NW
Atlanta, Georgia 30318

an entity organized and existing under the laws of the state of Georgia (hereinafter referred to as the "Assignee"); my/our entire right, title and interest throughout the world, in and to the invention and all rights and powers to make applications, including provisional applications when permitted by law, for Letters Patent in its own name, or in the name of its designee (or assignee(s)); and all rights and powers to file any corresponding or equivalent applications in any and all countries, including all rights to claim priority under all United States domestic laws, International Convention(s) and Treaties in the name of Assignee, and do hereby authorize Assignee or its designee to insert here the Priority Number, Filing Date, and Filing Country

Priority Number	Filing Date	Filing Country
62/808,560	June 6, 2014	United States of America

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Subscribed and Declared by me/us:

At: _____
this _____ day of _____, 20____
Effective as of June 6, 2014

Signature: _____
Full Name: Yeshiaki Kasujiri
Mailing Address: 199 14th Street NE #2308
Atlanta, Georgia 30309
United States of America

At: _____
this _____ day of _____, 20____
Effective as of June 6, 2014

Signature: _____
Full Name: Andreas Sebastian Bannarius
Mailing Address: 1105 Vernon Springs Court
Atlanta, Georgia 30327
United States of America


At: _____
this _____ day of _____, 20____
Effective as of June 6, 2014

Signature: _____
Full Name: Jungmin Oh
Mailing Address: 251 10th Street NW, Apartment A715
Atlanta, Georgia 30318
United States of America

At: _____
this _____ day of _____, 20____
Effective as of June 6, 2014

Signature: _____
Full Name: Gaurav Agrawal
Mailing Address: 1433 Willow Lake Drive NE, Apartment A
Atlanta, Georgia 30329
United States of America

At: Midland, MI
this 22 day of November, 2016
Effective as of June 6, 2014

Signature: 
Full Name: Balaramshi Sreedhar
Mailing Address: 1827 Eastlawn Dr., #119
Midland, Michigan 48642
United States of America

At: _____
this _____ day of _____, 20____

Signature: _____
Full Name: _____
Mailing Address: _____