

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4637632

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
BRYAN E. BARTON	06/12/2013
JASSON T. PATTON	06/19/2013
ERIC J. HUKKANEN	06/17/2013
MARK T. BERNIUS	06/14/2013

RECEIVING PARTY DATA

Name:	DOW GLOBAL TECHNOLOGIES LLC
Street Address:	2040 DOW CENTER
City:	MIDLAND
State/Country:	MICHIGAN
Postal Code:	48674

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14413454

CORRESPONDENCE DATA

Fax Number: (989)636-3237

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.

Phone: 989-636-7934

Email: kswertz@dow.com

Correspondent Name: KATHY WERTZ

Address Line 1: 2040 DOW CENTER

Address Line 4: MIDLAND, MICHIGAN 48674

ATTORNEY DOCKET NUMBER:	72669-US-PCT
NAME OF SUBMITTER:	KATHY WERTZ
SIGNATURE:	/Kathy Wertz/
DATE SIGNED:	10/12/2017

Total Attachments: 4

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This Assignment 110 is in the ENGLISH language and has the same meaning in other languages with the same 110 number and R/D date.

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FORM 110 (R. 3/97)

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: **TWO-STEP SULFONATION PROCESS FOR THE CONVERSION OF POLYMER FIBERS TO CARBON FIBERS**

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:

Dow Global Technologies LLC
 2040 Dow Center
 Midland, Michigan 48674

a limited liability company organized and existing under the laws of **Delaware** (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

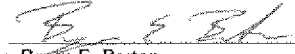
Priority Number	Filing Date	Filing Country
61/670,821	July 12, 2012	United States of America

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 recordal 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: Midland, Michigan 48674 USA
 this 12 day of June, 2013
 Effective as of July 12, 2012

Signature: 
 Full Name: Bryan E. Barton
 Residence: 2804 Georgetown Drive
Midland, Michigan 48642
 Country: United States of America
 Citizenship: United States of America
 P.O. Address: Same as Residence
 Employed By: The Dow Chemical Company
 Of Country: United States of America

At: Midland, Michigan 48674 USA
 this _____ day of _____, 20____
 Effective as of July 12, 2012

Signature: _____
 Full Name: Jasson T. Patton
 Residence: 1302 Whitehall Street
Midland, Michigan 48642
 Country: United States of America
 Citizenship: United States of America
 P.O. Address: Same as Residence
 Employed By: The Dow Chemical Company
 Of Country: United States of America

At: Midland, Michigan 48674 USA
 this _____ day of _____, 20____
 Effective as of July 12, 2012

Signature: _____
 Full Name: Eric J. Hukkanen
 Residence: 5913 N. Heritage Court
Midland, Michigan 48640
 Country: United States of America
 Citizenship: United States of America
 P.O. Address: Same as Residence
 Employed By: The Dow Chemical Company
 Of Country: United States of America

At: Midland, Michigan 48674 USA
 this _____ day of _____, 20____
 Effective as of July 12, 2012

Signature: _____
 Full Name: Mark T. Bernius
 Residence: 301 Colony Lane, Apartment 49
Bowling Green, Ohio 43402
 Country: United States of America
 Citizenship: United States of America
 P.O. Address: Same as Residence
 Employed By: The Dow Chemical Company*
 Of Country: United States of America

() Additional names and signatures are attached.

* at the time of invention.

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2040 Dow Center
Midland, Michigan 48674

a limited liability company organized and existing under the laws of **Delaware** (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
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Subscribed and Declared by me/us:

At: <u>Midland, Michigan 48674 USA</u> this _____ day of _____, 20____ Effective as of July 12, 2012
Signature: _____ Full Name: Bryan E. Barton Residence: 2804 Georgetown Drive Midland, Michigan 48642 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company Of Country: United States of America

At: <u>Midland, Michigan 48674 USA</u> this <u>19</u> day of <u>June</u> , 20 <u>13</u> Effective as of July 12, 2012
Signature: <u>Jasson T. Patton</u> Full Name: Jasson T. Patton Residence: 1302 Whitehall Street Midland, Michigan 48642 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company Of Country: United States of America

At: <u>Midland, Michigan 48674 USA</u> this _____ day of _____, 20____ Effective as of July 12, 2012
Signature: _____ Full Name: Eric J. Hukkanen Residence: 5913 N. Heritage Court Midland, Michigan 48640 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company Of Country: United States of America

At: <u>Midland, Michigan 48674 USA</u> this _____ day of _____, 20____ Effective as of July 12, 2012
Signature: _____ Full Name: Mark T. Bernius Residence: 301 Colony Lane, Apartment 49 Bowling Green, Ohio 43402 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company* Of Country: United States of America

() Additional names and signatures are attached.

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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:

Dow Global Technologies LLC
2040 Dow Center
Midland, Michigan 48674

a limited liability company organized and existing under the laws of **Delaware** (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

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At: <u>Midland, Michigan 48674 USA</u> this _____ day of _____, 20____ Effective as of July 12, 2012
Signature: _____ Full Name: Bryan E. Barton Residence: 2804 Georgetown Drive Midland, Michigan 48642 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company Of Country: United States of America

At: <u>Midland, Michigan 48674 USA</u> this _____ day of _____, 20____ Effective as of July 12, 2012
Signature: _____ Full Name: Jasson T. Patton Residence: 1302 Whitehall Street Midland, Michigan 48642 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company Of Country: United States of America

At: <u>Midland, Michigan 48674 USA</u> this <u>17</u> day of <u>June</u> , 20 <u>13</u> Effective as of July 12, 2012
Signature:  Full Name: Eric J. Hukkanen Residence: 5913 N. Heritage Court Midland, Michigan 48640 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company Of Country: United States of America

At: <u>Midland, Michigan 48674 USA</u> this _____ day of _____, 20____ Effective as of July 12, 2012
Signature: _____ Full Name: Mark T. Bernius Residence: 301 Colony Lane, Apartment 49 Bowling Green, Ohio 43402 Country: United States of America Citizenship: United States of America P.O. Address: Same as Residence Employed By: The Dow Chemical Company* Of Country: United States of America

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Midland, Michigan 48674

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Subscribed and Declared by me/us:

At: <u>Midland, Michigan 48674 USA</u>
this _____ day of _____, 20____
Effective as of July 12, 2012
Signature: _____
Full Name: <u>Bryan E. Barton</u>
Residence: <u>2804 Georgetown Drive</u> <u>Midland, Michigan 48642</u>
Country: <u>United States of America</u>
Citizenship: <u>United States of America</u>
P.O. Address: <u>Same as Residence</u>
Employed By: <u>The Dow Chemical Company</u>
Of Country: <u>United States of America</u>

At: <u>Midland, Michigan 48674 USA</u>
this _____ day of _____, 20____
Effective as of July 12, 2012
Signature: _____
Full Name: <u>Jasson T. Patton</u>
Residence: <u>1302 Whitehall Street</u> <u>Midland, Michigan 48642</u>
Country: <u>United States of America</u>
Citizenship: <u>United States of America</u>
P.O. Address: <u>Same as Residence</u>
Employed By: <u>The Dow Chemical Company</u>
Of Country: <u>United States of America</u>

At: <u>Midland, Michigan 48674 USA</u>
this _____ day of _____, 20____
Effective as of July 12, 2012
Signature: _____
Full Name: <u>Eric J. Hukkanen</u>
Residence: <u>5913 N. Heritage Court</u> <u>Midland, Michigan 48640</u>
Country: <u>United States of America</u>
Citizenship: <u>United States of America</u>
P.O. Address: <u>Same as Residence</u>
Employed By: <u>The Dow Chemical Company</u>
Of Country: <u>United States of America</u>

At: <u>Midland, Michigan 48674 USA</u>
this <u>14</u> day of <u>June</u> , 20 <u>13</u>
Effective as of July 12, 20 <u>12</u>
Signature: <u>Mark T. Bernius</u>
Full Name: <u>Mark T. Bernius</u>
Residence: <u>301 Colony Lane, Apartment 49</u> <u>Bowling Green, Ohio 43402</u>
Country: <u>United States of America</u>
Citizenship: <u>United States of America</u>
P.O. Address: <u>Same as Residence</u>
Employed By: <u>The Dow Chemical Company*</u>
Of Country: <u>United States of America</u>

() Additional names and signatures are attached.

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